

## Release Notes for Gen10 Service Pack for ProLiant, v2020.09.0

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### **BIOS (Login Required) - System ROM**

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Online ROM Flash Component for Linux - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u38-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u38-2.36\_2020\_07\_16-1.1.x86\_64.rpm

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 System ROM - U38

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.34\_04-08-2020

#### **Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: RPMS/x86\_64/firmware-system-u39-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u39-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 4200 Gen10/ProLiant XL420 Gen10 System ROM - U39

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: RPMS/x86\_64/firmware-system-u40-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u40-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 4510 Gen10/ProLiant XL450 Gen10 System ROM - U40

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.



Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: RPMS/x86\_64/firmware-system-u45-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u45-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant BL460c Gen10 (I41) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-i41-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-i41-2.36\_2020\_07\_16-1.1.x86\_64.rpm

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant BL460c Gen10 System ROM - I41

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.34\_04-08-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

#### **Known Issues:**

None

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

### **Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u31-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u31-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant DL20 Gen10 (U43) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u43-2.18\_2020\_06\_24-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u43-2.18\_2020\_06\_24-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL20 Gen10 System ROM - U43

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant DL325 Gen10 (A41) Servers

Version: 2.42\_07-17-2020 **(Recommended)**

Filename: RPMS/x86\_64/firmware-system-a41-2.42\_2020\_07\_17-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-a41-2.42\_2020\_07\_17-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL325 Gen10 System ROM - A41

**Release Version:**

2.42\_07-17-2020

**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).



Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Linux - HPE ProLiant DL325 Gen10 Plus (A43) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: RPMS/x86\_64/firmware-system-a43-1.30\_2020\_07\_18-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-system-a43-1.30\_2020\_07\_18-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-system-a43-1.30\_2020\_07\_18-1.1.x86\_64\_part2.compsig

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL325 Gen10 Plus System ROM - A43

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled

to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Linux - HPE ProLiant DL360 Gen10 (U32) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u32-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u32-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL360 Gen10 System ROM - U32

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

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Online ROM Flash Component for Linux - HPE ProLiant DL380 Gen10 (U30) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u30-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u30-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL380 Gen10 System ROM - U30

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

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Online ROM Flash Component for Linux - HPE ProLiant DL385 Gen10 (A40) Servers

Version: 2.42\_07-17-2020 **(Recommended)**

Filename: RPMS/x86\_64/firmware-system-a40-2.42\_2020\_07\_17-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-a40-2.42\_2020\_07\_17-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL385 Gen10 System ROM - A40

**Release Version:**

2.42\_07-17-2020

**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Linux - HPE ProLiant DL385 Gen10 Plus (A42) Servers

Version: 1.30\_07-18-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-a42-1.30\_2020\_07\_18-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-system-a42-1.30\_2020\_07\_18-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-system-a42-1.30\_2020\_07\_18-1.1.x86\_64\_part2.compsig

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL385 Gen10 Plus System ROM - A42

#### **Release Version:**

1.30\_07-18-2020

#### **Last Recommended or Critical Revision:**

1.30\_07-18-2020

#### **Previous Revision:**

1.26\_05-11-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.



**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Linux - HPE ProLiant DL560 Gen10/DL580 Gen10 (U34) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u34-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u34-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant MicroServer Gen10 Plus (U48) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u48-2.18\_2020\_06\_24-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u48-2.18\_2020\_06\_24-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant MicroServer Gen10 Plus System ROM - U48

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant ML110 Gen10 (U33) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u33-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u33-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML110 Gen10 System ROM - U33

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant ML30 Gen10 (U44) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u44-2.18\_2020\_06\_24-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u44-2.18\_2020\_06\_24-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML30 Gen10 System ROM - U44

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security

Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

See the release document U44\_2.18\_06\_24\_2020 in Download Product Binaries page from Product Summary of the firmware product.

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Online ROM Flash Component for Linux - HPE ProLiant ML350 Gen10 (U41) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u41-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u41-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML350 Gen10 System ROM - U41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**



None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant XL225n Gen10 Plus (A46) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: RPMS/x86\_64/firmware-system-a46-1.30\_2020\_07\_18-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-system-a46-1.30\_2020\_07\_18-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-system-a46-1.30\_2020\_07\_18-1.1.x86\_64\_part2.compsig

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant XL225n Gen10 Plus System ROM - A46

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-14-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

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Online ROM Flash Component for Linux - HPE ProLiant XL230k Gen10 (U37) Server

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u37-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u37-2.36\_2020\_07\_16-1.1.x86\_64.rpm

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant XL230k Gen10 System ROM - U37

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.34\_04-08-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044574.compsig; cp044574.exe

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 System ROM - U38

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044674.compsig; cp044674.exe

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE Apollo 4200 Gen10/ProLiant XL420 Gen10 System ROM - U39

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.36\_06-23-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

#### **Known Issues:**

None

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

### **Fixes**

#### **Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044676.compsig; cp044676.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 4510 Gen10/ProLiant XL450 Gen10 System ROM - U40

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044577.compsig; cp044577.exe

**Important Note!****Important Notes:**

None

**Deliverable Name:**



HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant BL460c Gen10 (I41) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044580.compsig; cp044580.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant BL460c Gen10 System ROM - I41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

### **Fixes**

#### **Important Notes:**

None

#### **Firmware Dependencies:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

#### **Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044662.compsig; cp044662.exe

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPE ProLiant DL20 Gen10 System ROM - U43

### **Release Version:**

2.18\_06-24-2020

### **Last Recommended or Critical Revision:**

2.16\_05-25-2020

### **Previous Revision:**

2.16\_05-25-2020

### **Firmware Dependencies:**

None

### **Enhancements/New Features:**

None

### **Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

## **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

## **Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL325 Gen10 (A41) Servers  
Version: 2.42\_07-17-2020 (**Recommended**)  
Filename: cp044639.compsig; cp044639.exe

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL325 Gen10 System ROM - A41

**Release Version:**

2.42\_07-17-2020

**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL325 Gen10 Plus (A43) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: cp041360.exe; cp041360\_part1.compsig; cp041360\_part2.compsig

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL325 Gen10 Plus System ROM - A43

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**



Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL360 Gen10 (U32) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044667.compsig; cp044667.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL360 Gen10 System ROM - U32

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

---

Online ROM Flash Component for Windows x64 - HPE ProLiant DL380 Gen10 (U30) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044661.compsig; cp044661.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL380 Gen10 System ROM - U30

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL385 Gen10 (A40) Servers  
Version: 2.42\_07-17-2020 (**Recommended**)  
Filename: cp044653.compsig; cp044653.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL385 Gen10 System ROM - A40

**Release Version:**

2.42\_07-17-2020

**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL385 Gen10 Plus (A42) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: cp041357.exe; cp041357\_part1.compsig; cp041357\_part2.compsig

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL385 Gen10 Plus System ROM - A42

#### **Release Version:**

1.30\_07-18-2020

#### **Last Recommended or Critical Revision:**

1.30\_07-18-2020

#### **Previous Revision:**

1.26\_05-11-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.



Filename: cp044683.compsig; cp044683.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant MicroServer Gen10 Plus (U48) Servers  
Version: 2.18\_06-24-2020 **(Optional)**  
Filename: cp044719.compsig; cp044719.exe

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant MicroServer Gen10 Plus System ROM - U48

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant ML110 Gen10 (U33) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044689.compsig; cp044689.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML110 Gen10 System ROM - U33

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant ML30 Gen10 (U44) Servers  
Version: 2.18\_06-24-2020 **(Optional)**  
Filename: cp044716.compsig; cp044716.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML30 Gen10 System ROM - U44

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security

Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

See the release document U44\_2.18\_06\_24\_2020 in Download Product Binaries page from Product Summary of the firmware product.

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Online ROM Flash Component for Windows x64 - HPE ProLiant ML350 Gen10 (U41) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044686.compsig; cp044686.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML350 Gen10 System ROM - U41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

---

Online ROM Flash Component for Windows x64 - HPE ProLiant XL225n Gen10 Plus (A46) Server  
Version: 1.30\_07-18-2020 **(Recommended)**  
Filename: cp041721.exe; cp041721\_part1.compsig; cp041721\_part2.compsig

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant XL225n Gen10 Plus System ROM - A46

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-14-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.



Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

---

Online ROM Flash Component for Windows x64 - HPE ProLiant XL230k Gen10 (U37) Server  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: cp044284.compsig; cp044284.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant XL230k Gen10 System ROM - U37

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U38\_2.36\_07\_16\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 System ROM - U38

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U39\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 4200 Gen10/ProLiant XL420 Gen10 System ROM - U39

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U40\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 4510 Gen10/ProLiant XL450 Gen10 System ROM - U40

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U45\_2.36\_07\_16\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant BL460c Gen10 (I41) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: I41\_2.36\_07\_16\_2020.fwpkg

**Important Note!****Important Notes:**

None



**Deliverable Name:**

HPE ProLiant BL460c Gen10 System ROM - I41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U31\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

## **Fixes**

### **Important Notes:**

None

### **Firmware Dependencies:**

None

### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant DL20 Gen10 (U43) Servers  
Version: 2.18\_06-24-2020 **(Optional)**  
Filename: U43\_2.18\_06\_24\_2020.fwpkg

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPE ProLiant DL20 Gen10 System ROM - U43

### **Release Version:**

2.18\_06-24-2020

### **Last Recommended or Critical Revision:**

2.16\_05-25-2020

### **Previous Revision:**

2.16\_05-25-2020

### **Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

Version: 2.42\_07-17-2020 **(Recommended)**  
Filename: A41\_2.42\_07\_17\_2020.fwpkg

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL325 Gen10 System ROM - A41

#### **Release Version:**

2.42\_07-17-2020

#### **Last Recommended or Critical Revision:**

2.42\_07-17-2020

#### **Previous Revision:**

2.40\_05-11-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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ROM Flash Firmware Package - HPE ProLiant DL360 Gen10 (U32) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U32\_2.36\_07\_16\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL360 Gen10 System ROM - U32

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

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ROM Flash Firmware Package - HPE ProLiant DL380 Gen10 (U30) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U30\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL380 Gen10 System ROM - U30

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**



**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

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ROM Flash Firmware Package - HPE ProLiant DL385 Gen10 (A40) Servers

Version: 2.42\_07-17-2020 **(Recommended)**

Filename: A40\_2.42\_07\_17\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL385 Gen10 System ROM - A40

**Release Version:**

2.42\_07-17-2020

**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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ROM Flash Firmware Package - HPE ProLiant DL560 Gen10/DL580 Gen10 (U34) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U34\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant MicroServer Gen10 Plus (U48) Servers  
Version: 2.18\_06-24-2020 **(Optional)**  
Filename: U48\_2.18\_06\_24\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant MicroServer Gen10 Plus System ROM - U48

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant ML110 Gen10 (U33) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U33\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML110 Gen10 System ROM - U33

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

## **Fixes**

### **Important Notes:**

None

### **Firmware Dependencies:**

None

### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant ML30 Gen10 (U44) Servers  
Version: 2.18\_06-24-2020 **(Optional)**  
Filename: U44\_2.18\_06\_24\_2020.fwpkg

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPE ProLiant ML30 Gen10 System ROM - U44

### **Release Version:**

2.18\_06-24-2020

### **Last Recommended or Critical Revision:**

2.16\_05-25-2020

### **Previous Revision:**

2.16\_05-25-2020

### **Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

See the release document U44\_2.18\_06\_24\_2020 in Download Product Binaries page from Product Summary of the firmware product.

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ROM Flash Firmware Package - HPE ProLiant ML350 Gen10 (U41) Servers  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U41\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML350 Gen10 System ROM - U41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant XL225n Gen10 Plus (A46) Servers  
Version: 1.30\_07-18-2020 (**Recommended**)  
Filename: A46\_1.30\_07\_18\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant XL225n Gen10 Plus System ROM - A46

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-14-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

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ROM Flash Firmware Package - HPE ProLiant XL230k Gen10 (U37) Server  
Version: 2.36\_07-16-2020 **(Optional)**  
Filename: U37\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant XL230k Gen10 System ROM - U37

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Universal Firmware Package - HPE ProLiant DL325 Gen10 Plus (A43) Servers  
Version: 1.30\_07-18-2020 **(Recommended)**  
Filename: A43\_1.30\_07\_18\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL325 Gen10 Plus System ROM - A43

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

### **Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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ROM Flash Universal Firmware Package - HPE ProLiant DL385 Gen10 Plus (A42) Servers

Version: 1.30\_07-18-2020 (**Recommended**)

Filename: A42\_1.30\_07\_18\_2020.fwpkg

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL385 Gen10 Plus System ROM - A42

#### **Release Version:**

1.30\_07-18-2020

#### **Last Recommended or Critical Revision:**

1.30\_07-18-2020

#### **Previous Revision:**

1.26\_05-11-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Driver - Chipset**

Identifiers for AMD EPYC Processors for Windows

Version: 3.0.0.0 (B) **(Optional)**

Filename: cp040146.compsig; cp040146.exe



## **Enhancements**

Add support for HPE ProLiant Gen10 Plus servers.

---

Identifiers for Intel Xeon E-2xxx Processor for Windows

Version: 10.1.18015.8142 (**Optional**)

Filename: cp039323.compsig; cp039323.exe

## **Enhancements**

Add support for the HPE ProLiant MicroServer Gen10 Plus Server.

---

Identifiers for Intel Xeon Scalable Processors (First and Second Generation) for Windows

Version: 10.1.18015.8142 (**Optional**)

Filename: cp040561.compsig; cp040561.exe

## **Enhancements**

Add support for Intel devices 203A, 203D, 2078, and 207A.

## **Driver - Lights-Out Management**

[Top](#)

HPE iLO Native Driver for ESXi 7.0

Version: 10.6.0 (**Recommended**)

Filename: ilo-driver\_700.10.6.0.10-1OEM.700.1.0.15843807\_16345029.zip

## **Enhancements**

Support for VMware ESXi 7.0 and ESXi 7.0 U1

## **Driver - Network**

[Top](#)

Broadcom NetXtreme-E Driver for Windows Server 2016

Version: 216.0.143.3 (**Optional**)

Filename: cp043516.compsig; cp043516.exe

## **Important Note!**

HPE recommends the firmware provided in *Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

Broadcom NetXtreme-E Driver for Windows Server 2019

Version: 216.0.143.3 (**Optional**)

Filename: cp043517.compsig; cp043517.exe

## **Important Note!**

HPE recommends the firmware provided in *Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

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HPE Blade Emulex 10/20GbE Driver for VMware vSphere 6.5

Version: 2020.03.09 (**Optional**)

Filename: cp042919.compsig; cp042919.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5*, version 2019.12.01 or later, for use with this driver.

## **Fixes**

This product corrects a vmnic flapping issue which impacts network connectivity.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter

- HPE FlexFabric 20Gb 2-port 650M Adapter

HPE Blade Emulex 10/20GbE Driver for Windows Server 2012 R2  
Version: 12.0.1195.0 (**Optional**)  
Filename: cp039927.compsig; cp039927.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

PE Blade Emulex 10/20GbE Driver for Windows Server 2016  
Version: 12.0.1195.0 (**Optional**)  
Filename: cp039928.compsig; cp039928.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

HPE Blade Emulex 10/20GbE Drivers for Red Hat Enterprise Linux 7  
Version: 12.0.1261.0-1 (**Optional**)  
Filename: kmod-be2net\_bl-12.0.1261.0-1.rhel7u6.x86\_64.compsig; kmod-be2net\_bl-12.0.1261.0-1.rhel7u6.x86\_64.rpm;  
kmod-be2net\_bl-12.0.1261.0-1.rhel7u7.x86\_64.compsig; kmod-be2net\_bl-12.0.1261.0-1.rhel7u7.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

HPE Blade Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 12

Version: 12.0.1261.0-1 (**Optional**)

Filename: be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; be2net\_bl-kmp-default-12.0.1261.0\_k4.4.103\_6.38-1.sles12sp3MU5.x86\_64.compsig; be2net\_bl-kmp-default-12.0.1261.0\_k4.4.103\_6.38-1.sles12sp3MU5.x86\_64.rpm

## **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

## **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

HPE Blade Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 15

Version: 12.0.1261.0-1 (**Optional**)

Filename: be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

## **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

## **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

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HPE Blade Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.5  
Version: 2019.12.20 **(Optional)**  
Filename: cp039936.compsig; cp039936.zip

**Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

HPE Blade Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.7  
Version: 2019.12.20 **(Optional)**  
Filename: cp039935.compsig; cp039935.zip

**Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

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HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2012 R2  
Version: 12.0.1171.0 **(Optional)**

Filename: cp039930.compsig; cp039930.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2016

Version: 12.0.1171.0 (**Optional**)

Filename: cp039931.compsig; cp039931.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

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HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2019

Version: 12.0.1171.0 (**Optional**)

Filename: cp039932.compsig; cp039932.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HP FlexFabric 20Gb 2-port 650FLB Adapter

- HP FlexFabric 20Gb 2-port 650M Adapter

HPE Blade Emulex 10/20GbE iSCSI Drivers for Red Hat Enterprise Linux 7

Version: 12.0.1259.0-1 (Optional)

Filename: kmod-be2iscsi\_bl-12.0.1259.0-1.rhel7u6.x86\_64.compsig; kmod-be2iscsi\_bl-12.0.1259.0-1.rhel7u6.x86\_64.rpm; kmod-be2iscsi\_bl-12.0.1259.0-1.rhel7u7.x86\_64.compsig; kmod-be2iscsi\_bl-12.0.1259.0-1.rhel7u7.x86\_64.rpm

**Important Note!**

HPE recommends the firmware provided in HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64), version 2019.12.01 for use with these drivers.

**Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

**Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

HPE Blade Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 15

Version: 12.0.1259.0-1 (**Optional**)

Filename: be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

**Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

**Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

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HPE Blade Intel ixgbe Drivers for Red Hat Enterprise Linux 7

Version: 5.6.4-1 (B) (**Optional**)

Filename: kmod-hp-ixgbe\_bl-5.6.4-1.rhel7u6.x86\_64.compsig; kmod-hp-ixgbe\_bl-5.6.4-1.rhel7u6.x86\_64.rpm; kmod-hp-ixgbe\_bl-5.6.4-1.rhel7u7.x86\_64.compsig; kmod-hp-ixgbe\_bl-5.6.4-1.rhel7u7.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

**Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel ixgbe Drivers for Red Hat Enterprise Linux 8

Version: 5.6.4-1 (B) **(Optional)**

Filename: kmod-hp-ixgbe\_bl-5.6.4-1.rhel8u0.x86\_64.compsig; kmod-hp-ixgbe\_bl-5.6.4-1.rhel8u0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 12

Version: 5.6.4-1 (B) **(Optional)**

Filename: hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.4.73\_5-1.sles12sp3.x86\_64.compsig; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.4.73\_5-1.sles12sp3.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter



- HPE FlexFabric 20Gb 2-port 650M Adapter

#### HPE Blade Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 12

Version: 12.0.1259.0-1 (Optional)

Filename: be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.4.103\_6.38-1.sles12sp3MU5.x86\_64.compsig; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.4.103\_6.38-1.sles12sp3MU5.x86\_64.rpm

#### Important Note!

HPE recommends the firmware provided in HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64), version 2019.12.01 for use with these drivers.

#### Fixes

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

#### Enhancements

These drivers have been updated to maintain compatibility with the latest firmware.

#### Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

#### HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 15

Version: 5.6.4-1 (B) (Optional)

Filename: hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

#### Important Note!

HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for Linux, version 1.0.14 or later, for use with these drivers.

#### Fixes

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

#### Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

#### HPE Blade Intel ixgben Driver for VMware vSphere 6.5

Version: 2019.12.20 (Optional)

Filename: cp039952.compsig; cp039952.zip

#### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file. HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for VMware, version 1.0.7 or later, for use with this driver.

#### Fixes

This product corrects a recursion termination condition so that recursion correctly ends in the case of PCIe link down. This product addresses an issue where the ixgben driver has high CPU overhead when an SFP+ module is absent.

#### Enhancements

Initial release.

#### Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

#### HPE Blade Intel ixgben Driver for VMware vSphere 6.7

Version: 2019.12.20 (Optional)

Filename: cp039953.compsig; cp039953.zip

#### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibstdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file. HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for VMware, version 1.0.7 or later, for use with this driver.

#### Fixes

This product corrects a recursion termination condition so that recursion correctly ends in the case of PCIe link down. This product addresses an issue where the ixgben driver has high CPU overhead when an SFP+ module is absent.

#### Enhancements

Initial release.

#### Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

#### HPE Blade Intel ixgben Driver for VMware vSphere 7.0

Version: 2020.06.01 (Optional)

Filename: cp041435.compsig; cp041435.zip

#### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibstdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file. HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for VMware, version 1.1.2 or later, for use with this driver.

#### Enhancements

Initial release.

#### Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

#### HPE Blade Intel ixgbev Drivers for Red Hat Enterprise Linux 7

Version: 4.6.2-1 (B) (Optional)

Filename: kmod-hp-ixgbev\_bl-4.6.2-1.rhel7u6.x86\_64.compsig; kmod-hp-ixgbev\_bl-4.6.2-1.rhel7u6.x86\_64.rpm; kmod-hp-ixgbev\_bl-4.6.2-1.rhel7u7.x86\_64.compsig; kmod-hp-ixgbev\_bl-4.6.2-1.rhel7u7.x86\_64.rpm

#### Important Note!

HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for Linux, version 1.0.14 or later, for use with these drivers.

#### Fixes

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

#### Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter

- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade Intel ixgbevf Drivers for Red Hat Enterprise Linux 8

Version: 4.6.2-1 (B) (Optional)

Filename: kmod-hp-ixgbevf\_bl-4.6.2-1.rhel8u0.x86\_64.compsig; kmod-hp-ixgbevf\_bl-4.6.2-1.rhel8u0.x86\_64.rpm

**Important Note!**

HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for Linux, version 1.0.14 or later, for use with these drivers.

**Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

**Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade Intel ixgbevf Drivers for SUSE Linux Enterprise Server 12

Version: 4.6.2-1 (B) (Optional)

Filename: hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.4.73\_5-1.sles12sp3.x86\_64.compsig; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.4.73\_5-1.sles12sp3.x86\_64.rpm

**Important Note!**

HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for Linux, version 1.0.14 or later, for use with these drivers.

**Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

**Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade Intel ixgbevf Drivers for SUSE Linux Enterprise Server 15

Version: 4.6.2-1 (B) (**Optional**)

Filename: hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade Intel ixn Driver for Windows Server 2012 R2  
Version: 3.14.132.0 (Optional)  
Filename: cp039939.compsig; cp039939.exe

**Important Note!**

HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions, version 1.0.0.5 or later, for use with this driver.

Enhancements  
Initial release.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel ixn Driver for Windows Server 2016  
Version: 4.1.131.0 (Optional)  
Filename: cp039940.compsig; cp039940.exe

**Important Note!**

HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions, version 1.0.0.5 or later, for use with this driver.

Enhancements  
Initial release.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade Intel vxn Driver for Windows Server 2016  
Version: 2.0.210.0 (Optional)  
Filename: cp039944.compsig; cp039944.exe

**Important Note!**

HPE recommends the firmware provided in HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions, version 1.0.0.5 or later, for use with this driver.

Enhancements  
Initial release.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade Intel vxn Driver for Windows Server 2019  
Version: 2.1.138.0 (**Optional**)  
Filename: cp039945.compsig; cp039945.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.5 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 4.1.143.0 or later.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.5  
Version: 2019.12.20 **(Optional)**  
Filename: cp039954.compsig; cp039954.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.0.8 or later, for use with this driver.

### **Fixes**

This product addresses a VMkernel critical error (PSOD) seen during N-Port ID Virtualization (NPIV) VM power off.

This product addresses a PSOD seen with FCoE.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.7  
Version: 2019.12.20 **(Optional)**  
Filename: cp039955.compsig; cp039955.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.0.8 or later, for use with this driver.

### **Fixes**

This product addresses a VMkernel critical error (PSOD) seen during N-Port ID Virtualization (NPIV) VM power off.

This product addresses a PSOD seen with FCoE.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 7.0

Version: 2020.06.01 **(Optional)**

Filename: cp041436.compsig; cp041436.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.1.1 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 7

Version: 7.14.63.1-1 (B) **(Optional)**

Filename: kmod-netxtreme2\_bl-7.14.63.1-1.rhel7u6.x86\_64.compsig; kmod-netxtreme2\_bl-7.14.63.1-1.rhel7u6.x86\_64.rpm; kmod-netxtreme2\_bl-7.14.63.1-1.rhel7u7.x86\_64.compsig; kmod-netxtreme2\_bl-7.14.63.1-1.rhel7u7.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux*, version 1.0.9 or later, for use with these drivers.

### **Fixes**

These drivers correct an issue where iSCSI target discovery fails to complete when booting from SAN or a local HD.

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 8

Version: 7.14.63.1-1 (B) **(Optional)**

Filename: kmod-netxtreme2\_bl-7.14.63.1-1.rhel8u0.x86\_64.compsig; kmod-netxtreme2\_bl-7.14.63.1-1.rhel8u0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux*, version 1.0.9 or later, for use with these drivers.

### **Fixes**

These drivers correct an issue where iSCSI target discovery fails to complete when booting from SAN or a local HD.

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 12

Version: 7.14.63.1-1 (B) **(Optional)**

Filename: netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.4.73\_5-1.sles12sp3.x86\_64.compsig; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.4.73\_5-1.sles12sp3.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux*, version 1.0.9 or later, for use with these drivers.

### **Fixes**

These drivers correct an issue where iSCSI target discovery fails to complete when booting from SAN or a local HD.

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 15

Version: 7.14.63.1-1 (B) **(Optional)**

Filename: netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux*, version 1.0.9 or later, for use with these drivers.

### **Fixes**

These drivers correct an issue where iSCSI target discovery fails to complete when booting from SAN or a local HD.

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for Windows Server x64 Editions



Version: 7.13.171.0 (D) **(Optional)**  
Filename: cp045325.compsig; cp045325.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.8 or later, for use with these drivers.

### **Enhancements**

This product now privately supports Windows 10.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for Red Hat Enterprise Linux 7 Update 7  
Version: 2.11.5.13-3 (B) **(Optional)**  
Filename: iscsiuiobl-2.11.5.13-3.rhel7u7.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.rhel7u7.x86\_64.rpm

### **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for Red Hat Enterprise Linux 8 Update 0  
Version: 2.11.5.13-3 (B) **(Optional)**  
Filename: iscsiuiobl-2.11.5.13-3.rhel8u0.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.rhel8u0.x86\_64.rpm

### **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter

- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP4

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiobl-2.11.5.13-3.sles12sp4.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.sles12sp4.x86\_64.rpm

### **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP0

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiobl-2.11.5.13-3.sles15sp0.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.sles15sp0.x86\_64.rpm

### **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP1

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiobl-2.11.5.13-3.sles15sp1.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.sles15sp1.x86\_64.rpm

### **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter

- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Broadcom NetXtreme-E Driver for Windows Server 2012 R2  
Version: 214.0.247.1 **(Optional)**  
Filename: cp041785.compsig; cp041785.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.5 or later, for use with this driver.

### **Fixes**

This product correct an issue which .max SRIOV VFs are not loading when Windows hypervisor and Windows VMs are used.

This product correct an issue which VF driver won't install on some devices.

This product correct an issue which FW hangs while allocating more PF-Vports

This product correct an issue which fail bono commands right away if HW is surprise removed

This product correct an issue which few VPORTS available in SF mode when SR-IOV is used.

### **Enhancements**

This product now supports the following network adapters.

- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Driver for Windows Server 2016  
Version: 216.0.143.3 **(Optional)**  
Filename: cp043303.compsig; cp043303.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which live firmware upgrade fails when run on both interfaces of the adapter simultaneously.
- This product corrects a timeout issue which configures network connection.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Driver for Windows Server 2019

Version: 216.0.143.3 (**Optional**)

Filename: cp043304.compsig; cp043304.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which live firmware upgrade fails when run on both interfaces of the adapter simultaneously.
- This product corrects a timeout issue which configures network connection.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7

Version: 1.10.1-216.0.169.4 (**Optional**)

Filename: kmod-bnxt\_en-1.10.1-216.0.169.4.rhel7u7.x86\_64.compsig; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel7u7.x86\_64.rpm; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel7u8.x86\_64.compsig; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64*, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which offload is not happening on bond(vf and virtio) interface after the fail over with VF as the active slave
- This product corrects an issue which driver loading failed on kdump kernel.
- This product corrects an issue which RoCE driver causes input-output memory management unit(IOMMU) warnings
- This product corrects an issue which RoCE Link Aggregation (RoCE LAG) when Maximum Transmission Unit(MTU) was changed.

- This product corrects an issue which Link up failed after resuming from hibernation
- This product corrects an issue which Virtual Function RoCE driver causes Virtual Machine to be rebooted

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 7 Update 8
- This product now sets Maximum Transmission Unit(MTU) default value from firmware returned value
- This product now not support user establishing connections using RDMA communication manager(CM) when Priority-based Flow Control (PFC) configured VLAN ID is 0

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8

Version: 1.10.1-216.0.169.4 **(Optional)**

Filename: kmod-bnxt\_en-1.10.1-216.0.169.4.rhel8u0.x86\_64.compsig; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel8u0.x86\_64.rpm; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel8u1.x86\_64.compsig; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64*, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which offload is not happening on bond(vf and virtio) interface after the fail over with VF as the active slave
- This product corrects an issue which driver loading failed on kdump kernel.
- This product corrects an issue which RoCE driver causes input-output memory management unit(IOMMU) warnings
- This product corrects an issue which RoCE Link Aggregation (RoCE LAG) when Maximum Transmission Unit(MTU) was changed.
- This product corrects an issue which Link up failed after resuming from hibernation
- This product corrects an issue which Virtual Function RoCE driver causes Virtual Machine to be rebooted
- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 8 Update 1
- This product now sets Maximum Transmission Unit(MTU) default value from firmware returned value

- This product now not support user establishing connections using RDMA communication manager(CM) when Priority-based Flow Control (PFC) configured VLAN ID is 0

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 1.10.1-216.0.169.4 **(Optional)**

Filename: bnxt\_en-kmp-default-1.10.1\_k4.12.14\_120-216.0.169.4.sles12sp5.x86\_64.compsig; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_120-216.0.169.4.sles12sp5.x86\_64.rpm; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_94.41-216.0.169.4.sles12sp4.x86\_64.compsig; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_94.41-216.0.169.4.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64*, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which offload is not happening on bond(vf and virtio) interface after the fail over with VF as the active slave
- This product corrects an issue which driver loading failed on kdump kernel.
- This product corrects an issue which RoCE driver causes input-output memory management unit(IOMMU) warnings
- This product corrects an issue which RoCE Link Aggregation (RoCE LAG) when Maximum Transmission Unit(MTU) was changed.
- This product corrects an issue which Link up failed after resuming from hibernation
- This product corrects an issue which Virtual Function RoCE driver causes Virtual Machine to be rebooted

### **Enhancements**

- This product now supports SUSE Linux Enterprise Server 12 Service Pack 5.
- This product now sets Maximum Transmission Unit(MTU) default value from firmware returned value.
- This product now not support user establishing connections using RDMA communication manager(CM) when Priority-based Flow Control (PFC) configured VLAN ID is 0

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter

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HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15

Version: 1.10.1-216.0.169.4 **(Optional)**

Filename: bnxt\_en-kmp-default-1.10.1\_k4.12.14\_195-216.0.169.4.sles15sp1.x86\_64.compsig; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_195-216.0.169.4.sles15sp1.x86\_64.rpm; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_23-216.0.169.4.sles15sp0.x86\_64.compsig; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_23-216.0.169.4.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64*, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which offload is not happening on bond(vf and virtio) interface after the fail over with VF as the active slave
- This product corrects an issue which driver loading failed on kdump kernel.
- This product corrects an issue which RoCE driver causes input-output memory management unit(IOMMU) warnings
- This product corrects an issue which RoCE Link Aggregation (RoCE LAG) when Maximum Transmission Unit(MTU) was changed.
- This product corrects an issue which Link up failed after resuming from hibernation
- This product corrects an issue which Virtual Function RoCE driver causes Virtual Machine to be rebooted.
- This product corrects an issue which HPSUM selects driver for SUSE Linux Enterprise Server 15 while SPP deployment running with SUSE Linux Enterprise Server 15 Service Pack 1 platform.

### **Enhancements**

- This product now not support user establishing connections using RDMA communication manager(CM) when Priority-based Flow Control (PFC) configured VLAN ID is 0
- This product now sets Maximum Transmission Unit(MTU) default value from firmware returned value

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp043310.compsig; cp043310.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware*, version 5.11.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue where RDMA Ethernet Controller error description on ESXi Host.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp043311.compsig; cp043311.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware*, version 5.11.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue where RDMA Ethernet Controller error description on ESXi Host.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for VMware vSphere 7.0

Version: 2020.09.14 **(Optional)**

Filename: cp043308.compsig; cp043308.zip

### **Important Note!**



This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware*, version 5.11.0 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 7 Update 7

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-rhel7u7.x86\_64.compsig; libbnxt\_re-216.0.88.3-rhel7u7.x86\_64.rpm; README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7*, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot.
- This product corrects an issue which errors/performance may degrade after hot plug operation is performed.

### **Enhancements**

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled.
- This product now supports rdma-core v22.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 7 Update 8

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-rhel7u8.x86\_64.compsig; libbnxt\_re-216.0.88.3-rhel7u8.x86\_64.rpm; README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7*, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrade after hot plug operation is performed

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 8

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-rhel8u0.x86\_64.compsig; libbnxt\_re-216.0.88.3-rhel8u0.x86\_64.rpm; README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8*, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrades after hot plug operation is performed

### **Enhancements**

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled
- This product now supports rdma-core v22

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 8 Update 1.

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-rhel8u1.x86\_64.compsig; libbnxt\_re-216.0.88.3-rhel8u1.x86\_64.rpm; README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8*, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrades after hot plug operation is performed

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 12 SP4

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-sles12sp4.x86\_64.compsig; libbnxt\_re-216.0.88.3-sles12sp4.x86\_64.rpm;  
README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12*, version 1.10.0-214.0.259.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrades after hot plug operation is performed

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 12 SP5

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-sles12sp5.x86\_64.compsig; libbnxt\_re-216.0.88.3-sles12sp5.x86\_64.rpm;  
README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12*, version 1.10.1-216.0.153.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot

- This product corrects an issue which errors/performance may degrades after hot plug operation is performed

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 15

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-sles15sp0.x86\_64.compsig; libbnxt\_re-216.0.88.3-sles15sp0.x86\_64.rpm;  
README

## **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15*, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

## **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot.
- This product corrects an issue which errors/performance may degrades after hot plug operation is performed.

## **Enhancements**

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled.
- This product now supports rdma-core v22.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter

- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 15 SP1

Version: 216.0.88.3 **(Optional)**

Filename: libbxt\_re-216.0.88.3-sles15sp1.x86\_64.compsig; libbxt\_re-216.0.88.3-sles15sp1.x86\_64.rpm;  
README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15*, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media..

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrade after hot plug operation is performed
- This product corrects an issue which HPSUM selects driver for SUSE Linux Enterprise Server 15 while SPP deployment running with SUSE Linux Enterprise Server 15 Service Pack 1 platform.

### **Enhancements**

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled
- This product now supports rdma-core v22

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NX1 1Gb Driver for Windows Server x64 Editions

Version: 214.0.0.4 **(Optional)**

Filename: cp043306.compsig; cp043306.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NX1 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product corrects an issue which system crashed while enable/disable cycle when running along with certain video driver.

- This product correct an issue which the Gets statistics from a network adapter command (Get-NetAdapterStatistics) does not work with WS2019.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HP Ethernet 1Gb 2-port 330i Adapter (22BD)
- HP Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HP Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom tg3 Ethernet Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 3.138b-1 **(Optional)**

Filename: kmod-tg3-3.138b-1.rhel7u7.x86\_64.compsig; kmod-tg3-3.138b-1.rhel7u7.x86\_64.rpm; kmod-tg3-3.138b-1.rhel7u8.x86\_64.compsig; kmod-tg3-3.138b-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86\_64*, version 2.25.1 or later, for use with these drivers.

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 330i Adapter (22BD)
- HP Ethernet 1Gb 4-port 331i Adapter (22BE)
- HP Ethernet 1Gb 4-port 331FLR Adapter
- HP Ethernet 1Gb 4-port 331T Adapter
- HP Ethernet 1Gb 2-port 332i Adapter (22E8)
- HP Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom tg3 Ethernet Drivers for Red Hat Enterprise Linux 8

Version: 3.138b-1 **(Optional)**

Filename: kmod-tg3-3.138b-1.rhel8u0.x86\_64.compsig; kmod-tg3-3.138b-1.rhel8u0.x86\_64.rpm; kmod-tg3-3.138b-1.rhel8u1.x86\_64.compsig; kmod-tg3-3.138b-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86\_64*, version 2.25.1 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product now supports Red Hat Enterprise Linux 8 Update 1.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom tg3 Ethernet Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 3.138b-2 (**Optional**)

Filename: README; tg3-kmp-default-3.138b\_k4.12.14\_120-2.sles12sp5.x86\_64.compsig; tg3-kmp-default-3.138b\_k4.12.14\_120-2.sles12sp5.x86\_64.rpm; tg3-kmp-default-3.138b\_k4.12.14\_94.41-2.sles12sp4.x86\_64.compsig; tg3-kmp-default-3.138b\_k4.12.14\_94.41-2.sles12sp4.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86\_64*, version 2.25.1 or later, for use with these drivers.

### **Enhancements**

This product now supports SUSE Linux Enterprise Server 12 SP5.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 330i Adapter (22BD)
- HP Ethernet 1Gb 4-port 331i Adapter (22BE)
- HP Ethernet 1Gb 4-port 331FLR Adapter
- HP Ethernet 1Gb 4-port 331T Adapter
- HP Ethernet 1Gb 2-port 332i Adapter (22E8)
- HP Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom tg3 Ethernet Drivers for SUSE Linux Enterprise Server 15

Version: 3.138a-2 (**Optional**)

Filename: README; tg3-kmp-default-3.138a\_k4.12.14\_195-2.sles15sp1.x86\_64.compsig; tg3-kmp-default-3.138a\_k4.12.14\_195-2.sles15sp1.x86\_64.rpm; tg3-kmp-default-3.138a\_k4.12.14\_23-2.sles15sp0.x86\_64.compsig; tg3-kmp-default-3.138a\_k4.12.14\_23-2.sles15sp0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86\_64*, version 2.25.1 or later, for use with these drivers.

### **Fixes**

This product fixes an issue where the SLES15 driver be selected by HPSUM deployment for SLES15sp1 OS  
This product now exports vendor and packager tag in RPM metadata  
This product addresses the issue where the SLES15 component always be selected by HPSUM deployment



## **Enhancements**

This product now supports sles15 sp1

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

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HPE Emulex 10/20 GbE Driver for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp044545.compsig; cp044545.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5*, version 2019.03.01 or later, for use with this driver.

## **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp044546.compsig; cp044546.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE Driver for Windows Server 2012 R2  
Version: 12.0.1195.0 (C) **(Optional)**  
Filename: cp044540.compsig; cp044540.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE Driver for Windows Server 2016  
Version: 12.0.1195.0 (C) **(Optional)**  
Filename: cp044541.compsig; cp044541.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE Driver for Windows Server 2019  
Version: 12.0.1195.0 (C) **(Optional)**  
Filename: cp044542.compsig; cp044542.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2012 R2  
Version: 12.0.1171.0 (C) **(Optional)**  
Filename: cp044560.compsig; cp044560.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2016

Version: 12.0.1171.0 (C) **(Optional)**

Filename: cp044561.compsig; cp044561.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2019

Version: 12.0.1171.0 (C) **(Optional)**

Filename: cp044562.compsig; cp044562.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 12.0.1280.17-1 (B) **(Optional)**

Filename: kmod-be2net-12.0.1280.17-1.rhel7u7.x86\_64.compsig; kmod-be2net-12.0.1280.17-1.rhel7u7.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE Drivers for Red Hat Enterprise Linux 8

Version: 12.0.1280.17-1 (B) **(Optional)**

Filename: kmod-be2net-12.0.1280.17-1.rhel8u0.x86\_64.compsig; kmod-be2net-12.0.1280.17-1.rhel8u0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.03.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 12.0.1280.17-1 (B) **(Optional)**

Filename: be2net-kmp-default-12.0.1280.17\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; be2net-kmp-default-12.0.1280.17\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 15

Version: 12.0.1280.17-1 (B) **(Optional)**

Filename: be2net-kmp-default-12.0.1280.17\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; be2net-kmp-default-12.0.1280.17\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; be2net-kmp-default-12.0.1280.17\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; be2net-kmp-default-12.0.1280.17\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp044543.compsig; cp044543.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp044544.compsig; cp044544.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 12.0.1259.0-1 (B) **(Optional)**

Filename: kmod-be2iscsi-12.0.1259.0-1.rhel7u7.x86\_64.compsig; kmod-be2iscsi-12.0.1259.0-1.rhel7u7.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Drivers for Red Hat Enterprise Linux 8

Version: 12.0.1259.0-1 (B) **(Optional)**

Filename: kmod-be2iscsi-12.0.1259.0-1.rhel8u0.x86\_64.compsig; kmod-be2iscsi-12.0.1259.0-1.rhel8u0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.03.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter



- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 12.0.1259.0-1 (B) **(Optional)**

Filename: be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 15

Version: 12.0.1259.0-1 (B) **(Optional)**

Filename: be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter

- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Intel E1R Driver for Windows Server 2012 R2

Version: 12.14.8.1 (**Optional**)

Filename: cp040854.compsig; cp040854.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This driver supports the following HPE Intel E1R network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366T Adapter
- HP Ethernet 1Gb 2-port 367i Adapter

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HPE Intel E1R Driver for Windows Server 2016

Version: 12.15.184.7 (**Optional**)

Filename: cp040879.compsig; cp040879.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Fixes**

This product correct an issue which override and copy constructor to MSIX\_AFFINITY\_MANAGEMENT class to eliminate KW issues with double freeing memory.

This product correct an issue which fixed e1r compile to exclude Nahum Icelake defines.

This product correct an issue which fixed conversion of timestamp into 64bit value.

This product correct an issue which fix for NDIS Miniport Kernel Pointer Leakage

### **Enhancements**

This product now remove supports Synergy and Blade Server.

This product add Wrapping and fix Support To Cometlake,and added thermal sensor support for fiber NIC.

### **Supported Devices and Features**

This driver supports the following HPE Intel E1R network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366T Adapter

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HPE Intel E1R Driver for Windows Server 2019  
Version: 12.18.9.1 **(Optional)**  
Filename: cp040874.compsig; cp040874.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Fixes**

This product correct an issue which override and copy constructor to MSIX\_AFFINITY\_MANAGEMENT class to eliminate KW issues with double freeing memory.  
This product correct an issue which fixed e1r compile to exclude Nahum Icelake defines.  
This product correct an issue which fixed conversion of timestamp into 64bit value.  
This product correct an issue which fix for NDIS Miniport Kernel Pointer Leakage

### **Enhancements**

This product now remove supports Synergy and Blade Server.

This product add Wrapping and fix Support To Cometlake,and added thermal sensor support for fiber NIC.

### **Supported Devices and Features**

This driver supports the following HPE Intel E1R network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366T Adapter

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HPE Intel i40e Drivers for Red Hat Enterprise Linux 7 x86\_64  
Version: 2.11.27-1 **(Optional)**  
Filename: kmod-hp-i40e-2.11.27-1.rhel7u7.x86\_64.compsig; kmod-hp-i40e-2.11.27-1.rhel7u7.x86\_64.rpm;  
kmod-hp-i40e-2.11.27-1.rhel7u8.x86\_64.compsig; kmod-hp-i40e-2.11.27-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS
- This product corrects an issue which querying DCB configuration data failed on Intel Carlsville controller if driver probe or set at 2.5/5G speed.

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40e Drivers for Red Hat Enterprise Linux 8

Version: 2.11.27-1 (**Optional**)

Filename: kmod-hp-i40e-2.11.27-1.rhel8u0.x86\_64.compsig; kmod-hp-i40e-2.11.27-1.rhel8u0.x86\_64.rpm; kmod-hp-i40e-2.11.27-1.rhel8u1.x86\_64.compsig; kmod-hp-i40e-2.11.27-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS.
- This product corrects an issue which querying DCB configuration data failed on Intel Carlsville controller if driver probe or set at 2.5/5G speed.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40e Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 2.11.27-1 (**Optional**)

Filename: hp-i40e-kmp-default-2.11.27\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-i40e-kmp-default-2.11.27\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-i40e-kmp-default-2.11.27\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS
- This product corrects an issue which querying DCB configuration data failed on Intel Carlsville controller if driver probe or set at 2.5/5G speed.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40e Drivers for SUSE Linux Enterprise Server 15

Version: 2.11.27-1 (**Optional**)

Filename: hp-i40e-kmp-default-2.11.27\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-i40e-kmp-default-2.11.27\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-i40e-kmp-default-2.11.27\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS
- This product corrects an issue which querying DCB configuration data failed on Intel Carlsville controller if driver probe or set at 2.5/5G speed.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40ea Driver for Windows Server 2012 R2

Version: 1.12.171.0 **(Optional)**

Filename: cp043119.compsig; cp043119.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

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HPE Intel i40ea Driver for Windows Server 2016

Version: 1.12.171.0 **(Optional)**

Filename: cp043120.compsig; cp043120.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.

- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

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HPE Intel i40ea Driver for Windows Server 2019  
Version: 1.12.171.0 **(Optional)**  
Filename: cp043121.compsig; cp043121.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

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HPE Intel i40eb Driver for Windows Server 2012 R2  
Version: 1.12.171.0 **(Optional)**  
Filename: cp043237.compsig; cp043237.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40eb Driver for Windows Server 2016

Version: 1.12.171.0 **(Optional)**

Filename: cp043236.compsig; cp043236.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter



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HPE Intel i40eb Driver for Windows Server 2019  
Version: 1.12.171.0 **(Optional)**  
Filename: cp043238.compsig; cp043238.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

**Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

**Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40en Driver for VMware vSphere 6.5  
Version: 2020.09.14 **(Optional)**  
Filename: cp042675.compsig; cp042675.zip

**Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

**Fixes**

This product corrects an issue which PCI device information passing to intnetcli Command-Line Interface (Intel® ESXCLI Plug-In Managing tool ).

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter

- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel i40en Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp042676.compsig; cp042676.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue which PCI device information passing to inlnetcli Command-Line Interface (Intel® ESXCLI Plug-In Managing tool ).

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel i40en Driver for VMware vSphere 7.0

Version: 2020.05.29 **(Optional)**

Filename: cp041295.compsig; cp041295.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.50 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Driver for Windows Server 2012 R2

Version: 1.7.119.0 **(Optional)**

Filename: cp040867.compsig; cp040867.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

**Prerequisites**

This driver requires host driver version 1.11.101.0 or later.

**Enhancements**

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy Intel iavf Driver for Windows Server 2012 R2](#).

**Supported Devices and Features**

This product supports the following HPE Intel i40ea network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

This product supports the following HPE Intel i40eb network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Driver for Windows Server 2016

Version: 1.7.119.0 **(Optional)**

Filename: cp040868.compsig; cp040868.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

**Prerequisites**

This driver requires host driver version 1.11.101.0 or later.

## **Enhancements**

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy Intel iavf Driver for Windows Server 2016](#).

## **Supported Devices and Features**

This product supports the following HPE Intel i40ea network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

This product supports the following HPE Intel i40eb network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Driver for Windows Server 2019

Version: 1.7.119.0 **(Optional)**

Filename: cp040869.compsig; cp040869.exe

## **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

## **Prerequisites**

This driver requires host driver version 1.11.101.0 or later.

## **Enhancements**

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy Intel iavf Driver for Windows Server 2019](#).

## **Supported Devices and Features**

This product supports the following HPE Intel i40ea network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

This product supports the following HPE Intel i40eb network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 3.9.5-1 **(Optional)**

Filename: kmod-hp-iavf-3.9.5-1.rhel7u7.x86\_64.compsig; kmod-hp-iavf-3.9.5-1.rhel7u7.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel7u8.x86\_64.compsig; kmod-hp-iavf-3.9.5-1.rhel7u8.x86\_64.rpm; README

## **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel iavf Drivers for Red Hat Enterprise Linux 8

Version: 3.9.5-1 **(Optional)**

Filename: kmod-hp-iavf-3.9.5-1.rhel8u0.x86\_64.compsig; kmod-hp-iavf-3.9.5-1.rhel8u0.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel8u1.x86\_64.compsig; kmod-hp-iavf-3.9.5-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel iavf Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 3.9.5-1 **(Optional)**

Filename: hp-iafv-kmp-default-3.9.5\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-iafv-kmp-default-3.9.5\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-iafv-kmp-default-3.9.5\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-iafv-kmp-default-3.9.5\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel iavf Drivers for SUSE Linux Enterprise Server 15

Version: 3.9.5-1 **(Optional)**

Filename: hp-iafv-kmp-default-3.9.5\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-iafv-kmp-default-3.9.5\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-iafv-kmp-default-3.9.5\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-iafv-kmp-default-3.9.5\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel igb Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 6.2.3-1 **(Optional)**

Filename: kmod-hp-igb-6.2.3-1.rhel7u7.x86\_64.compsig; kmod-hp-igb-6.2.3-1.rhel7u7.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel7u8.x86\_64.compsig; kmod-hp-igb-6.2.3-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8

### **Supported Devices and Features**

These drivers support the following Intel network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igb Drivers for Red Hat Enterprise Linux 8

Version: 6.2.3-1 **(Optional)**

Filename: kmod-hp-igb-6.2.3-1.rhel8u0.x86\_64.compsig; kmod-hp-igb-6.2.3-1.rhel8u0.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel8u1.x86\_64.compsig; kmod-hp-igb-6.2.3-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

These drivers support the following Intel network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igb Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 6.2.3-1 **(Optional)**

Filename: hp-igb-kmp-default-6.2.3\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-igb-kmp-default-6.2.3\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-igb-kmp-default-6.2.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

These drivers support the following Intel network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igb Drivers for SUSE Linux Enterprise Server 15

Version: 6.2.3-1 **(Optional)**

Filename: hp-igb-kmp-default-6.2.3\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-igb-kmp-default-6.2.3\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-igb-kmp-default-6.2.3\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

These drivers support the following Intel network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igbn Driver for VMware vSphere 6.5

Version: 2019.12.20 **(Optional)**

Filename: cp040825.compsig; cp040825.zip

### **Important Note!**



This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.0 or later, for use with this driver.

### **Fixes**

This product addresses an issue where race condition during NIC adapter reset.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igbn Driver for VMware vSphere 6.7  
Version: 2019.12.20 (**Optional**)  
Filename: cp040829.compsig; cp040829.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.0 or later, for use with this driver.

### **Fixes**

This product addresses an issue where race condition during NIC adapter reset.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366i Adapter

- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igbn Driver for VMware vSphere 7.0

Version: 2020.05.29 **(Optional)**

Filename: cp041296.compsig; cp041296.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.50 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel ixgbe Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 5.7.1-1 **(Optional)**

Filename: kmod-hp-ixgbe-5.7.1-1.rhel7u7.x86\_64.compsig; kmod-hp-ixgbe-5.7.1-1.rhel7u7.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel7u8.x86\_64.compsig; kmod-hp-ixgbe-5.7.1-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 7 Update 8
- This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbe Drivers for Red Hat Enterprise Linux 8

Version: 5.7.1-1 **(Optional)**

Filename: kmod-hp-ixgbe-5.7.1-1.rhel8u0.x86\_64.compsig; kmod-hp-ixgbe-5.7.1-1.rhel8u0.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel8u1.x86\_64.compsig; kmod-hp-ixgbe-5.7.1-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbe Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 5.7.1-1 **(Optional)**

Filename: hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbe Drivers for SUSE Linux Enterprise Server 15

Version: 5.7.1-1 **(Optional)**

Filename: hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgben Driver for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp042679.compsig; cp042679.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

## **Fixes**

This product corrects an issue which notification from Link Partner when executed Link Flow Control settings.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgben Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp042680.compsig; cp042680.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

## **Fixes**

This product corrects an issue which notification from Link Partner when executed Link Flow Control settings.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgben Driver for VMware vSphere 7.0

Version: 2020.05.29 **(Optional)**

Filename: cp041297.compsig; cp041297.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.50 or later, for use with this driver.

## **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbevf Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 4.7.1-1 **(Optional)**

Filename: kmod-hp-ixgbevf-4.7.1-1.rhel7u7.x86\_64.compsig; kmod-hp-ixgbevf-4.7.1-1.rhel7u7.x86\_64.rpm;  
kmod-hp-ixgbevf-4.7.1-1.rhel7u8.x86\_64.compsig; kmod-hp-ixgbevf-4.7.1-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 7 Update 8
- This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbevf Drivers for Red Hat Enterprise Linux 8

Version: 4.7.1-1 **(Optional)**

Filename: kmod-hp-ixgbevf-4.7.1-1.rhel8u0.x86\_64.compsig; kmod-hp-ixgbevf-4.7.1-1.rhel8u0.x86\_64.rpm;  
kmod-hp-ixgbevf-4.7.1-1.rhel8u1.x86\_64.compsig; kmod-hp-ixgbevf-4.7.1-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbevf Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 4.7.1-1 **(Optional)**

Filename: hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbevf Drivers for SUSE Linux Enterprise Server 15

Version: 4.7.1-1 **(Optional)**

Filename: hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixn Driver for Windows Server 2012 R2  
Version: 3.14.214.0 **(Optional)**  
Filename: cp042027.compsig; cp042027.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This component supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel ixn Driver for Windows Server 2016  
Version: 4.1.199.0 **(Optional)**  
Filename: cp042028.compsig; cp042028.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

This product contains Windows system update supported improvements.



## **Supported Devices and Features**

This component supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel ixn Driver for Windows Server 2019  
Version: 4.1.197.0 **(Optional)**  
Filename: cp042029.compsig; cp042029.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

This product contains Windows system update supported improvements.

## **Supported Devices and Features**

This component supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel ixS Driver for Windows Server 2012 R2  
Version: 3.14.214.0 **(Optional)**  
Filename: cp042030.compsig; cp042030.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

This product contains Windows system update supported improvements.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixS Driver for Windows Server 2016  
Version: 4.1.199.0 **(Optional)**  
Filename: cp042031.compsig; cp042031.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixS Driver for Windows Server 2019  
Version: 4.1.197.0 **(Optional)**  
Filename: cp042032.compsig; cp042032.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel vxn Driver for Windows Server 2012 R2  
Version: 1.2.199.0 **(Optional)**  
Filename: cp042033.compsig; cp042033.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 3.14.214.0 or later.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

This component supports the following HPE Intel ixt network adapters:

- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter

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HPE Intel vxn Driver for Windows Server 2016

Version: 2.1.192.0 **(Optional)**

Filename: cp042034.compsig; cp042034.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

**Prerequisites**

This driver requires host driver version 4.1.199.0 or later.

**Enhancements**

This product contains Windows system update supported improvements.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel vxn Driver for Windows Server 2019

Version: 2.1.191.0 **(Optional)**

Filename: cp042035.compsig; cp042035.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

**Prerequisites**

This driver requires host driver version 4.1.179.0 or later.

**Enhancements**

This product contains Windows system update supported improvements.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel vxs Driver for Windows Server 2012 R2  
Version: 1.2.199.0 (**Optional**)  
Filename: cp042036.compsig; cp042036.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

**Prerequisites**

This driver requires host driver version 3.14.214.0 or later.

**Enhancements**

This product contains Windows system update supported improvements.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel vxs Driver for Windows Server 2016  
Version: 2.1.192.0 (**Optional**)  
Filename: cp042037.compsig; cp042037.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

**Prerequisites**

This driver requires host driver version 4.1.199.0 or later.

**Enhancements**

This product contains Windows system update supported improvements.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel vxs Driver for Windows Server 2019  
Version: 2.1.191.0 **(Optional)**  
Filename: cp042038.compsig; cp042038.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 4.1.179.0 or later.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2012 R2  
Version: 2.40.22511.0 **(Optional)**  
Filename: cp042797.compsig; cp042797.exe

### **Fixes**

1. This product correct an issue which caused memory corruption in case the OS provided continues memory across multiple pages that did not start with offset zero on aligned memory address.
2. This product correct an issue that prevented the device from being updated with the new driver because the driver was already in the driver store.
3. This product correct an issue which occasionally prevented the VF counters from being displayed correctly in perfmon.
4. This product correct an issue which caused the driver to report zero link speeds supported when working with firmware older than 1x.18.0240.
5. This product correct an issue which fixed a memory leak issue in error flow during driver initialization.

### **Enhancements**

1. The number of VMs is limited to 124 VMs with VMQ(Virtual Machine Queue) mode.
2. The driver supports up to 200 vPorts in ConnectX-4 Lx and 254 vPorts in ConnectX-5 with SRIOV(Single Root I/O Virtualization).

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter

- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2016

Version: 2.40.22511.0 **(Optional)**

Filename: cp042798.compsig; cp042798.exe

### **Fixes**

1. This product correct an issue which caused memory corruption in case the OS provided continues memory across multiple pages that did not start with offset zero on aligned memory address.
2. This product correct an issue that prevented the device from being updated with the new driver because the driver was already in the driver store.
3. This product correct an issue which occasionally prevented the VF counters from being displayed correctly in perfmon.
4. This product correct an issue which caused the driver to report zero link speeds supported when working with firmware older than 1x.18.0240.
5. This product correct an issue which fixed a memory leak issue in error flow during driver initialization.

### **Enhancements**

1. The number of VMs is limited to 124 VMs with VMQ(Virtual Machine Queue) mode.
2. The driver supports up to 200 vPorts in ConnectX-4 Lx and 254 vPorts in ConnectX-5 with SRIOV(Single Root I/O Virtualization).

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2019

Version: 2.40.22511.0 **(Optional)**

Filename: cp042799.compsig; cp042799.exe

### **Fixes**

1. This product correct an issue which caused memory corruption in case the OS provided continues memory across multiple pages that did not start with offset zero on aligned memory address.
2. This product correct an issue that prevented the device from being updated with the new driver because the driver was already in the driver store.
3. This product correct an issue which occasionally prevented the VF counters from being displayed correctly in perfmon.
4. This product correct an issue which caused the driver to report zero link speeds supported when working with firmware older than 1x.18.0240.

5. This product correct an issue which fixed a memory leak issue in error flow during driver initialization.

### **Enhancements**

1. The number of VMs is limited to 124 VMs with VMQ(Virtual Machine Queue) mode.
2. The driver supports up to 200 vPorts in ConnectX-4 Lx and 254 vPorts in ConnectX-5 with SRIOV(Single Root I/O Virtualization).

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 7 Update 7 (x86\_64)

Version: 4.14 **(Optional)**

Filename: kmod-kernel-mft-mlnx-4.14.0-1.rhel7u7.x86\_64.compsig; kmod-kernel-mft-mlnx-4.14.0-1.rhel7u7.x86\_64.rpm; mft-4.14.0-105.rhel7u7.x86\_64.compsig; mft-4.14.0-105.rhel7u7.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Supported Devices and Features**

#### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 7 (x86\_64) supported by this binary rpm are: 3.10.0-1062.el7 - (x86\_64) and future update kernels.

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HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 7 Update 8 (x86\_64)

Version: 4.14 **(Optional)**

Filename: kmod-kernel-mft-mlnx-4.14.0-1.rhel7u8.x86\_64.compsig; kmod-kernel-mft-mlnx-4.14.0-1.rhel7u8.x86\_64.rpm; mft-4.14.0-105.rhel7u8.x86\_64.compsig; mft-4.14.0-105.rhel7u8.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86\_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86\_64) and future update kernels.

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HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 8 Update 1 (x86\_64)

Version: 4.14 **(Optional)**

Filename: kmod-kernel-mft-mlnx-4.14.0-1.rhel8u1.x86\_64.compsig; kmod-kernel-mft-mlnx-4.14.0-1.rhel8u1.x86\_64.rpm; mft-4.14.0-105.rhel8u1.x86\_64.compsig; mft-4.14.0-105.rhel8u1.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1 (x86\_64) supported by this binary rpm are: 4.18.0-147.el8 - (x86\_64) and future update kernels.

---

HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 8 Update 2 (x86\_64)

Version: 4.14 **(Optional)**

Filename: kmod-kernel-mft-mlnx-4.14.0-1.rhel8u2.x86\_64.compsig; kmod-kernel-mft-mlnx-4.14.0-1.rhel8u2.x86\_64.rpm; mft-4.14.0-105.2.rhel8u2.x86\_64.compsig; mft-4.14.0-105.2.rhel8u2.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1 (x86\_64) supported by this binary rpm are: 4.18.0-147.el8 - (x86\_64) and future update kernels.

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HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 12 SP4 (AMD64/EM64T)

Version: 4.14 **(Optional)**

Filename: kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; mft-4.14.0-105.sles12sp4.x86\_64.compsig; mft-4.14.0-105.sles12sp4.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.



## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-94.41-default and future update kernels.

---

HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 12 SP5 (AMD64/EM64T)

Version: 4.14 **(Optional)**

Filename: kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; mft-4.14.0-105.1.sles12sp5.x86\_64.compsig; mft-4.14.0-105.1.sles12sp5.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-120-default and future update kernels.

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HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 15 SP1 (AMD64/EM64T)

Version: 4.14 **(Optional)**

Filename: kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; mft-4.14.0-105.sles15sp1.x86\_64.compsig; mft-4.14.0-105.sles15sp1.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-195-default and future update kernels.

---

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 7 Update 7 (x86\_64)

Version: 5.0 **(Recommended)**

Filename: kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u7.x86\_64.compsig; kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u7.x86\_64.rpm; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u7.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u7.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

### **Enhancements**

**Changes and new features in HPE Mellanox RoCE driver version 5.0:**

**For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

### **Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 7 (x86\_64) supported by this binary rpm are: 3.10.0-1062.el7 - (x86\_64) and future update kernels.

---

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 7 Update 8 (x86\_64)

Version: 5.0 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u8.x86\_64.compsig; kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u8.x86\_64.rpm; mlnx-ofa\_kernel-5.0-

OFED.5.0.2.1.8.1.g5f67178.rhel7u8.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u8.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

#### **The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perf test applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

### **Enhancements**

#### **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

##### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

### **Supported Devices and Features**

#### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86\_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 8 Update 1 (x86\_64)

Version: 5.0 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u1.x86\_64.compsig; kmod-mlnx-  
ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u1.x86\_64.rpm; mlnx-  
ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u1.x86\_64.compsig; mlnx-  
ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u1.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-  
ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

### **Enhancements**

**Changes and new features in HPE Mellanox RoCE driver version 5.0:**

**For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

### **Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1(x86\_64) supported by this binary rpm are:  
4.18.0-147.el8 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 8 Update 2 (x86\_64)

Version: 5.0 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u2.x86\_64.compsig; kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u2.x86\_64.rpm; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.2.rhel8u2.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.2.rhel8u2.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) mads intensively ,the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

### **Enhancements**

**Changes and new features in HPE Mellanox RoCE driver version 5.0:**

**For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 2(x86\_64) supported by this binary rpm are:  
4.18.0-193.el8 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T)

Version: 5.0 (**Recommended**)

Filename: mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles12sp4.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles12sp4.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_94.41-OFED.5.0.2.1.8.1.g5f67178.sles12sp4.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_94.41-OFED.5.0.2.1.8.1.g5f67178.sles12sp4.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

### **Enhancements**

**Changes and new features in HPE Mellanox RoCE driver version 5.0:**

**For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-94.41-default - (AMD64/EM64T) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T)

Version: 5.0 (**Recommended**)

Filename: mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.1.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.1.sles12sp5.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_120-OFED.5.0.2.1.8.1.g5f67178.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_120-OFED.5.0.2.1.8.1.g5f67178.sles12sp5.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

#### **The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) mads intensively ,the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

### **Enhancements**

## **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

### **Supported Devices and Features**

#### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-120-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T)

Version: 5.0 (**Recommended**)

Filename: mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_195-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_195-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Please refer the following advisory for more details about the python dependency on SLES15SP1. <https://si.houston.hpecorp.net/si/DocumentationRequests/details.aspx?DRId=SID5293&slim=yes&offset=0>

### **Fixes**

#### **The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.



- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perfest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

## **Enhancements**

### **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

#### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-195-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 7 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.compsig; kmod-mlnx-  
ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.rpm; mlnx-ofa\_kernel-4.9-  
OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.compsig; mlnx-ofa\_kernel-4.9-  
OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.rpm

## **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

### **The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using `-add-kernel-support`) were resulting in improper installation of the drivers.
- A typo in `perfctest` package where help messages wrongly displayed the conversion result between Gb/s and MB/s ( $20^2$  instead of  $2^{20}$ ).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The `mlx5` driver maintains a subdirectory for every open eth port in `/sys/kernel/debug/`. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when `esp6_offload` module did not load successfully.
- Added dependency of package `mpi-selectors` on `perl-Getopt-Long` system package. On minimal installs of RPM-based OSs, installing `mpi-selectors` will also install the required system package `perl-Getopt-Long`.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with `Errata-kernel` on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP made intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under `sysfs` for PFs in `SwitchDev` mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following `NetDev` operations: `.ndo_xdp_flush` and `.ndo_xdp_xmit`.
- Usage of `--excludedocs` Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through `udev` triggers to preserve the startup process of previous `MLNX_OFED` versions.
- Reference count (`refcount`) for RDMA connection ID (`cm_id`) was not incremented in `rdma_resolve_addr()` function, resulting in a `cm_id` use-after-free access. A fix was applied to increment the `cm_id` `refcount`.
- A race condition which caused kernel panic when moving two ports to `SwitchDev` mode at the same time.
- Allowed accessing `sysfs` hardware counters in `SwitchDev` mode
- Function `smp_processor_id()` is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- `ConnectX-3` adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running `fwreset` would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in `SwitchDev` mode, the VF netdevice would be treated as representor netdevice. This caused the `mlx5_core` driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

**The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

**Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

**Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets
  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

**Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.

- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 7 (x86\_64) supported by this binary rpm are: 3.10.0-1062.el7 - (x86\_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 8 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.rpm; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.

- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.

- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

**Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

**Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

**Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86\_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 8 update 1 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.rpm; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using `--add-kernel-support`) were resulting in improper installation of the drivers.
- A typo in perfest package where help messages wrongly displayed the conversion result between Gb/s and MB/s ( $20^2$  instead of  $2^{20}$ ).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in `/sys/kernel/debug/`. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package `mpi-selectors` on `perl-Getopt-Long` system package. On minimal installs of RPM-based OSs, installing `mpi-selectors` will also install the required system package `perl-Getopt-Long`.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: `.ndo_xdp_flush` and `.ndo_xdp_xmit`.

- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

#### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

#### **Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.



- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
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- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- **For All HCA's**

**Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
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- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

**Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1 (x86\_64) supported by this binary rpm are: 4.18.0-147.el8 - (x86\_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 8 update 2 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.rpm; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.rpm

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## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
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- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
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- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
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- **For ConnectX-5 Adapters and above**

#### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
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- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
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  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
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  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

#### **Added support for the following features:**

- Output `ibdev2netdev` tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of `ethtool`.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
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- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 2 (x86\_64) supported by this binary rpm are: 4.18.0-193.el8 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T)

Version: 4.9 (**Recommended**)

Filename: `mlnx-ofa_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86_64.compsig`; `mlnx-ofa_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86_64.rpm`; `mlnx-ofa_kernel-kmp-default-4.9_k4.12.14_94.41-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86_64.compsig`; `mlnx-ofa_kernel-kmp-default-4.9_k4.12.14_94.41-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86_64.rpm`

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (`mlnx-ofa_kernel` RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

#### The following issues have been fixed in version 4.9:

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s ( $20^2$  instead of  $2^{20}$ ).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

#### **Enhancements**

**The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

**Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.
- **For ConnectX-4 Adapters and above**

**Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- **For All HCA's**

**Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.

- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-94.41-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T)

Version: 5.0 (**Recommended**)

Filename: mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.1.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.1.sles12sp5.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_120-OFED.5.0.2.1.8.1.g5f67178.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_120-OFED.5.0.2.1.8.1.g5f67178.sles12sp5.x86\_64.rpm

## **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

### **The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) mads intensively ,the kernel crashed.
- perfctest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server

- communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
  - Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

## **Enhancements**

### **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

#### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-120-default - (AMD64/EM64T) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T)

Version: 5.0 (**Recommended**)

Filename: mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_195-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_195-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.rpm

## **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Please refer the following advisory for more details about the python dependency on SLES15SP1. <https://si.houston.hpecorp.net/si/DocumentationRequests/details.aspx?DRId=SID5293&slim=yes&offset=0>

## **Fixes**



### **The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

### **Enhancements**

#### **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

##### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

### **Supported Devices and Features**

#### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-195-default - (AMD64/EM64T) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 7 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.rpm; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.

- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

#### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

#### **Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets
  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

#### **Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.

- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 7 (x86\_64) supported by this binary rpm are: 3.10.0-1062.el7 - (x86\_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 8 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.rpm; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).

- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
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- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
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- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.

- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.
- **For ConnectX-4 Adapters and above**

**Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets
  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- **For All HCA's**

**Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

**Supported Devices and Features**

## **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86\_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86\_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 8 update 1 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.compsig; kmod-mlnx-  
ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.rpm; mlnx-ofa\_kernel-4.9-  
OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.compsig; mlnx-ofa\_kernel-4.9-  
OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.rpm

## **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-`ofa_kernel` RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in `mlx5_core` driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using `-add-kernel-support`) were resulting in improper installation of the drivers.
- A typo in `perftest` package where help messages wrongly displayed the conversion result between Gb/s and MB/s ( $20^2$  instead of  $2^{20}$ ).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The `mlx5` driver maintains a subdirectory for every open eth port in `/sys/kernel/debug/`. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when `esp6_offload` module did not load successfully.
- Added dependency of package `mpi-selectors` on `perl-Getopt-Long` system package. On minimal installs of RPM-based OSs, installing `mpi-selectors` will also install the required system package `perl-Getopt-Long`.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.

- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

#### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

#### **Added support for the following features:**



- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- **For All HCA's**

**Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

**Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1 (x86\_64) supported by this binary rpm are: 4.18.0-147.el8 - (x86\_64) and future update kernels.

PE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 8 update 2 (x86\_64)

Version: 4.9 (Recommended)

Filename: kmod-mlx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.compsig; kmod-mlx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.rpm; mlx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.compsig; mlx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

#### Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

#### Fixes

The following issues have been fixed in version 4.9:

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.

- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## Enhancements

The following changes and new features are added in version 4.9:

- For ConnectX-5 Adapters and above

Added support for the following features:

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.
- For ConnectX-4 Adapters and above

Added support for the following features:

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
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  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- For All HCA's

Added support for the following features:

- Output `ibdev2netdev` tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of `ethtool`.
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- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## Supported Devices and Features

### SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 8 update 2 (x86\_64) supported by this binary rpm are: 4.18.0-193.el8 - (x86\_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T)

Version: 4.9 (Recommended)

Filename: `mlnx-ofa_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86_64.compsig`; `mlnx-ofa_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86_64.rpm`; `mlnx-ofa_kernel-kmp-default-4.9_k4.12.14_94.41-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86_64.compsig`; `mlnx-ofa_kernel-kmp-default-4.9_k4.12.14_94.41-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86_64.rpm`

### Important Note!

Mellanox Ethernet + RoCE Linux driver (`mlnx-ofa_kernel` RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### Fixes

The following issues have been fixed in version 4.9:

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- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.

- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## Supported Devices and Features

### SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-94.41-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T)

Version: 4.9 (Recommended)

Filename: mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp5.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_120-OFED.4.9.0.1.7.1.gd3d963b.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_120-OFED.4.9.0.1.7.1.gd3d963b.sles12sp5.x86\_64.rpm

### Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### Fixes

The following issues have been fixed in version 4.9:

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.

- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## Enhancements

The following changes and new features are added in version 4.9:

- For ConnectX-5 Adapters and above

Added support for the following features:

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.



- For ConnectX-4 Adapters and above

Added support for the following features:

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- For All HCA's

Added support for the following features:

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-120-default - (AMD64/EM64T) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T)

Version: 4.9 (Recommended)

Filename: mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles15sp1.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_195-OFED.4.9.0.1.7.1.gd3d963b.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_195-OFED.4.9.0.1.7.1.gd3d963b.sles15sp1.x86\_64.rpm

#### Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

#### Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

#### Fixes

The following issues have been fixed in version 4.9:

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perfest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.

- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open vSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## Enhancements

The following changes and new features are added in version 4.9:

- For ConnectX-5 Adapters and above

Added support for the following features:

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.
- For ConnectX-4 Adapters and above

Added support for the following features:

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.

- roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets
  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- For All HCA's

Added support for the following features:

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-195-default - (AMD64/EM64T) and future update kernels.

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HPE QLogic FastLinQ 10/25/50 GbE Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 8.50.25.0-1 (Optional)

Filename: kmod-qlgc-fastlinq-8.50.25.0-1.rhel7u7.x86\_64.compsig; kmod-qlgc-fastlinq-8.50.25.0-1.rhel7u7.x86\_64.rpm; kmod-qlgc-fastlinq-8.50.25.0-1.rhel7u8.x86\_64.compsig; kmod-qlgc-fastlinq-8.50.25.0-1.rhel7u8.x86\_64.rpm; README

Important Note!

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64, version 1.9.0 or later, for use with these drivers.

Fixes

- This product corrects an issue which system crash after unloading and reloading only roce driver

- This product corrects an issue which VF RDMA system crash in overnight reboot test on multiple VMs
- This product corrects an issue which VMs crash randomly upon advanced property disable/enable with Max VFs enumerated on all PFs
- This product corrects an issue which iSCSI BFS system fails to reboot if one port is down and reboot is attempted

#### Enhancements

- This product now supports Red Hat Enterprise Linux 7 Update 8
- This product now adds PCIe Advanced Error Recovery (AER) support
- This product now supports RoCE bonding mode

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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#### HPE QLogic FastLinQ 10/25/50 GbE Drivers for Red Hat Enterprise Linux 8

Version: 8.50.25.0-1 (Optional)

Filename: kmod-qlgc-fastlinq-8.50.25.0-1.rhel8u0.x86\_64.compsig; kmod-qlgc-fastlinq-8.50.25.0-1.rhel8u0.x86\_64.rpm; kmod-qlgc-fastlinq-8.50.25.0-1.rhel8u1.x86\_64.compsig; kmod-qlgc-fastlinq-8.50.25.0-1.rhel8u1.x86\_64.rpm; README

#### Important Note!

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64, version 1.9.0 or later, for use with these drivers.

#### Fixes

- This product corrects an issue which system crash after unloading and reloading only roce driver
- This product corrects an issue which VF RDMA system crash in overnight reboot test on multiple VMs
- This product corrects an issue which VMs crash randomly upon advanced property disable/enable with Max VFs enumerated on all PFs
- This product corrects an issue which iSCSI BFS system fails to reboot if one port is down and reboot is attempted

#### Enhancements

- This product now supports Red Hat Enterprise Linux Server 8 update 1.
- This product now adds PCIe Advanced Error Recovery (AER) support
- This product now supports RoCE bonding mode

### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 8.50.25.0-1 (Optional)

Filename: qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### Important Note!

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64, version 1.9.0 or later, for use with these drivers.

### Fixes

- This product corrects an issue which system crash after unloading and reloading only roce driver
- This product corrects an issue which VF RDMA system crash in overnight reboot test on multiple VMs
- This product corrects an issue which VMs crash randomly upon advanced property disable/enable with Max VFs enumerated on all PFs
- This product corrects an issue which iSCSI BFS system fails to reboot if one port is down and reboot is attempted

### Enhancements

- This product now supports SUSE Linux Enterprise Server 12 Service Pack 5
- This product now adds PCIe Advanced Error Recovery (AER) support
- This product now supports RoCE bonding mode

### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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## HPE QLogic FastLinQ 10/25/50 GbE Drivers for SUSE Linux Enterprise Server 15

Version: 8.50.25.0-1 (Optional)

Filename: qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; qlgc-fastlinq-kmp-default-8.50.25.1\_k5.3.18\_22-1.sles15sp2.x86\_64.compsig; qlgc-fastlinq-kmp-default-8.50.25.1\_k5.3.18\_22-1.sles15sp2.x86\_64.rpm; README

### Important Note!

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64, version 1.9.0 or later, for use with these drivers.

### Fixes

- This product corrects an issue which system crash after unloading and reloading only roce driver
- This product corrects an issue which VF RDMA system crash in overnight reboot test on multiple VMs
- This product corrects an issue which VMs crash randomly upon advanced property disable/enable with Max VFs enumerated on all PFs
- This product corrects an issue which iSCSI BFS system fails to reboot if one port is down and reboot is attempted

### Enhancements

- This product now supports SUSE Linux Enterprise Server 15 SP2.
- This product now adds PCIe Advanced Error Recovery (AER) support.
- This product now supports RoCE bonding mode.

### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
  - HPE Ethernet 10Gb 2-port 521T Adapter
  - HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Adapter
  - HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
  - HPE StoreFabric CN1300R Converged Network Adapter
  - HPE StoreFabric CN1200R-T Converged Network Adapter
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## HPE QLogic FastLinQ 10/25/50 GbE Drivers for Windows Server x64 Editions

Version: 8.50.10.0 (Optional)

Filename: cp043122.compsig; cp043122.exe

### Important Note!

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions, version 5.2.3.0 or later, for use with these drivers.

### Fixes

- This product correct an issue which fixes the Virtual Function (VF) sleep duration on the channel while it waits for Physical Function(PF) response.
- This product correct an issue which System crashed when Single Root I/O Virtualization(SR-IOV) enabled on few partitions and disabled on few partitions using OneView.
- This product correct an issue which operating system boot failure after update Firmware to 08.50.27.
- This product correct an issue which System crashed is seen while upgrading drivers on enabled Network Partitioning (NPAR) and Single Root I/O Virtualization(SR-IOV) with enterprise data Center mode.
- This product correct an issue which Virtual Machines (VMs) crash randomly upon advanced property disable/enable with Max virtual functions (VFs) enumerated on all Physical Functions(PFs).
- This product correct an issue which System crashed seen while disabling Network Driver Interface Specification (NDIS) driver while running RoCEv2 IPv6 traffic on Management OS.

### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ OCP3 Adapter
- HPE Ethernet 10Gb 2-port 523T OCP3 Adapter
- HPE Ethernet 10Gb 2-port 523T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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## HPE QLogic FastLinQ 10/25/50 GbE Multifunction Driver for VMware vSphere 6.5

Version: 2020.09.14 (Optional)

Filename: cp044296.compsig; cp044296.zip

### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.



HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware, version 4.12.0 or later, for use with this driver.

#### Fixes

This product corrects an issue where Fibre Channel over Ethernet (FCoE) frame with CRC size and End Of Frame(EOF) size.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Multifunction Driver for VMware vSphere 6.7

Version: 2020.09.14 (Optional)

Filename: cp044297.compsig; cp044297.zip

#### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware, version 4.12.0 or later, for use with this driver.

#### Fixes

This product corrects an issue where Fibre Channel over Ethernet (FCoE) frame with CRC size and End Of Frame(EOF) size.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Multifunction Driver for VMware vSphere 7.0

Version: 2020.05.29 (Optional)

Filename: cp041271.compsig; cp041271.zip

#### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vib depot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware, version 4.11.50 or later, for use with this driver.

#### Enhancements

Initial release.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ Open-iSCSI Driver for Red Hat Enterprise Linux 7 Update 7

Version: 2.0-873.113-1 (Optional)

Filename: qlgc-open-iscsi-2.0\_873.113.rhel7u7-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.rhel7u7-1.x86\_64.rpm; README

#### Enhancements

This product now supports Red Hat Linux 7 Update 7.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ Open-iSCSI Driver for Red Hat Enterprise Linux 8 Update 0

Version: 2.0-873.113-1 (Optional)

Filename: qlgc-open-iscsi-2.0\_873.113.rhel8u0-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.rhel8u0-1.x86\_64.rpm; README

Enhancements

Initial release.

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 12 SP4

Version: 2.0-873.113-1 (D) (Optional)

Filename: qlgc-open-iscsi-2.0\_873.113.sles12sp4-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.sles12sp4-1.x86\_64.rpm; README

Enhancements

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 12 SP4](#).

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 15 SP0

Version: 2.0-873.113-1 (D) (Optional)

Filename: qlgc-open-iscsi-2.0\_873.113.sles15sp0-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.sles15sp0-1.x86\_64.rpm; README

#### Enhancements

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 15 SP0](#).

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 15 SP1

Version: 2.0-873.113-1 (Optional)

Filename: qlgc-open-iscsi-2.0\_873.113.sles15sp1-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.sles15sp1-1.x86\_64.rpm; README

#### Enhancements

Initial release.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for Red Hat Enterprise Linux 7 Update 7

Version: 2.11.5.13-3 (Optional)

Filename: iscsiui-2.11.5.13-3.rhel7u7.x86\_64.compsig; iscsiui-2.11.5.13-3.rhel7u7.x86\_64.rpm

#### Enhancements

This product now supports Red Hat Linux 7 Update 7.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for Red Hat Enterprise Linux 8 Update 0

Version: 2.11.5.13-3 (Optional)

Filename: iscsiui-2.11.5.13-3.rhel8u0.x86\_64.compsig; iscsiui-2.11.5.13-3.rhel8u0.x86\_64.rpm

#### Enhancements

Initial release.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for Red Hat Enterprise Linux 8 Update 1

Version: 2.11.5.13-3 (Optional)

Filename: iscsiuiio-2.11.5.13-3.rhel8u1.x86\_64.compsig; iscsiuiio-2.11.5.13-3.rhel8u1.x86\_64.rpm; README

#### Enhancements

Initial release.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP4

Version: 2.11.5.13-3 (B) (Optional)

Filename: iscsiuiio-2.11.5.13-3.sles12sp4.x86\_64.compsig; iscsiuiio-2.11.5.13-3.sles12sp4.x86\_64.rpm; README

#### Fixes

This product addresses an iSCSI discovery failure with VLAN.

#### Enhancements

This product no longer supports ProLiant Blade servers and devices. Blade servers and devices are now supported by the [HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP4](#).

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP4](#).

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP0

Version: 2.11.5.13-3 (B) (Optional)

Filename: iscsiui0-2.11.5.13-3.sles15sp0.x86\_64.compsig; iscsiui0-2.11.5.13-3.sles15sp0.x86\_64.rpm; README

#### Fixes

This product addresses an iSCSI discovery failure with VLAN.

#### Enhancements

This product no longer supports ProLiant Blade servers and devices. Blade servers and devices are now supported by the [HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP0](#).

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP0](#).

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP1

Version: 2.11.5.13-3 (Optional)

Filename: iscsiui0-2.11.5.13-3.sles15sp1.x86\_64.compsig; iscsiui0-2.11.5.13-3.sles15sp1.x86\_64.rpm

## Enhancements

Initial release.

## Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.5

Version: 2020.09.14 (Optional)

Filename: cp042872.compsig; cp042872.zip

### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for VMware, version 1.27.0 or later, for use with this driver.

### Fixes

This product corrects an issue where Purple Screen Of Death(PSOD) when ethernet link connected to 533FLR-T/536FLR-T Adapters.

## Supported Devices and Features

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter



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## HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.7

Version: 2020.09.14 (Optional)

Filename: cp042873.compsig; cp042873.zip

### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for VMware, version 1.27.0 or later, for use with this driver.

### Fixes

This product corrects an issue where Purple Screen Of Death(PSOD) when ethernet link connected to 533FLR-T/536FLR-T Adapters.

### Supported Devices and Features

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter

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## HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 7.0

Version: 2020.05.29 (Optional)

Filename: cp041163.compsig; cp041163.zip

### Important Note!

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for VMware, version 1.26.50 or later, for use with this driver.

### Enhancements

Initial release.

## Supported Devices and Features

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter

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## HPE QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 7.14.70-1 (Optional)

Filename: kmod-netxtreme2-7.14.70-1.rhel7u7.x86\_64.compsig; kmod-netxtreme2-7.14.70-1.rhel7u7.x86\_64.rpm; kmod-netxtreme2-7.14.70-1.rhel7u8.x86\_64.compsig; kmod-netxtreme2-7.14.70-1.rhel7u8.x86\_64.rpm; README

### Important Note!

HPE recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64, version 2.27.0 or later, for use with these drivers.

### Fixes

- This product corrects an issue which system crash after unloading bnx2i driver
- This product corrects an issue which driver asserts due to stats update timeout
- This product corrects an issue which activity LED behavior is not consistent on 10GbT cards on the windows environment

### Enhancements

This product now supports Red Hat Enterprise Linux 7 Update 8

## Supported Devices and Features

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
  - HP Ethernet 10Gb 2-port 530T Adapter
  - HP Ethernet 10Gb 2-port 533FLR-T Adapter
  - HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
  - HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
  - HP StoreFabric CN1100R Dual Port Converged Network Adapter
  - HPE StoreFabric CN1100R-T Converged Network Adapter
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## HPE QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 8

Version: 7.14.70-1 (Optional)

Filename: kmod-netxtreme2-7.14.70-1.rhel8u0.x86\_64.compsig; kmod-netxtreme2-7.14.70-1.rhel8u0.x86\_64.rpm; kmod-netxtreme2-7.14.70-1.rhel8u1.x86\_64.compsig; kmod-netxtreme2-7.14.70-1.rhel8u1.x86\_64.rpm; README

### Important Note!

HPE recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64, version 2.27.0 or later, for use with these drivers.

### Fixes

- This product corrects an issue which system crash after unloading bnx2i driver
- This product corrects an issue which driver asserts due to stats update timeout
- This product corrects an issue which activity LED behavior is not consistent on 10GbT cards on the windows environment

### Enhancements

This product now supports Red Hat Enterprise Linux 8 Update 1

### Supported Devices and Features

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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## HPE QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 7.14.70-1 (Optional)

Filename: netxtreme2-kmp-default-7.14.70\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; netxtreme2-kmp-default-7.14.70\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; netxtreme2-kmp-default-7.14.70\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; netxtreme2-kmp-default-7.14.70\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### Important Note!

HPE recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64, version 2.27.0 or later, for use with these drivers.

## Fixes

- This product corrects an issue which system crash after unloading bnx2i driver
- This product corrects an issue which driver asserts due to stats update timeout
- This product corrects an issue which activity LED behavior is not consistent on 10GbT cards on the windows environment

## Enhancements

This product now supports SUSE Linux Enterprise Server 12 Service Pack 5

## Supported Devices and Features

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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## HPE QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 15

Version: 7.14.70-1 (Optional)

Filename: netxtreme2-kmp-default-7.14.70.1\_k5.3.18\_22-1.sles15sp2.x86\_64.compsig; netxtreme2-kmp-default-7.14.70.1\_k5.3.18\_22-1.sles15sp2.x86\_64.rpm; netxtreme2-kmp-default-7.14.70\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; netxtreme2-kmp-default-7.14.70\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; README

## Important Note!

HPE recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64, version 2.27.0 or later, for use with these drivers.

## Fixes

- This product corrects an issue which system crash after unloading bnx2i driver
- This product corrects an issue which driver asserts due to stats update timeout
- This product corrects an issue which activity LED behavior is not consistent on 10GbT cards on the windows environment

## Enhancements

This product now supports SUSE Linux Enterprise Server 15 SP2.

## Supported Devices and Features

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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## HPE QLogic NX2 10/20 GbE Multifunction Drivers for Windows Server x64 Editions

Version: 7.13.187.0 (Optional)

Filename: cp043244.compsig; cp043244.exe

### Important Note!

HP recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions, version 5.2.3.0 or later, for use with these drivers.

### Fixes

- This product correct an issue which Blue Screen of Death (BSOD) that thread's saved floating-point state is invalid when executed Network stress.
- This product correct an issue which failed to generate Internet Small Computer System Interface(iSCSI) Crash dump in Secure Boot enabled.

## Supported Devices and Features

This driver supports the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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## Intel i350 Driver for Windows Server 2016

Version: 12.15.184.7 (Optional)

Filename: cp041189.compsig; cp041189.exe

#### Important Note!

HPE recommends the firmware provided in Intel Online Firmware Upgrade Utility for Windows Server x64 Editions, version 5.2.0.0 or later, for use with this driver.

#### Enhancements

Initial release.

#### Supported Devices and Features

This driver supports the following HPE Intel Powerville network adapters:

- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- Intel(R) I350 Gigabit Network Connection

#### Intel i350 Driver for Windows Server 2019

Version: 12.18.9.1 (Optional)

Filename: cp041190.compsig; cp041190.exe

#### Important Note!

HPE recommends the firmware provided in Intel Online Firmware Upgrade Utility for Windows Server x64 Editions, version 5.2.0.0 or later, for use with this driver.

#### Enhancements

Initial release.

#### Supported Devices and Features

This driver supports the following HPE Intel E1R network adapters:

- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- Intel(R) I350 Gigabit Network Connection

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#### Linux Intel Drivers build bundle for Red Hat Enterprise Linux

Version: 1.0.3.0 (Optional)

Filename: hp-i40e-2.11.27-1.all.src.rpm; hp-iavf-3.9.5-1.all.src.rpm; hp-igb-6.2.3-1.all.src.rpm; hp-ixgbe-5.7.1-1.all.src.rpm; hp-ixgbev-4.7.1-1.all.src.rpm; i40e-README; iavf-README; ice-README; igb-README; irdma-README; ixgbe-README; ixgbev-README; kmod-hp-i40e-2.11.27-1.rhel7u7.x86\_64.rpm; kmod-hp-i40e-2.11.27-1.rhel7u8.x86\_64.rpm; kmod-hp-i40e-2.11.27-1.rhel8u0.x86\_64.rpm; kmod-hp-i40e-2.11.27-1.rhel8u1.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel7u7.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel7u8.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel8u0.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel8u1.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel7u7.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel7u8.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel8u0.x86\_64.rpm;

kmod-hp-igb-6.2.3-1.rhel8u1.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel7u7.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel7u8.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel8u0.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel8u1.x86\_64.rpm; kmod-hp-ixgbev-4.7.1-1.rhel7u7.x86\_64.rpm; kmod-hp-ixgbev-4.7.1-1.rhel7u8.x86\_64.rpm; kmod-hp-ixgbev-4.7.1-1.rhel8u0.x86\_64.rpm; kmod-hp-ixgbev-4.7.1-1.rhel8u1.x86\_64.rpm

#### Enhancements

##### Gen10PlusSnap3

inux Intel Drivers build bundle for SUSE Linux Enterprise Server

Version: 1.0.3.0 (Optional)

Filename: hp-i40e-2.11.27-1.all.src.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-iavf-3.9.5-1.all.src.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-igb-6.2.3-1.all.src.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-ixgbe-5.7.1-1.all.src.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-ixgbev-4.7.1-1.all.src.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; i40e-README; iavf-README; ice-README; igb-README; irdma-README; ixgbe-README; ixgbev-README

#### Enhancements

##### Gen10PlusSnap3

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Marvell FastLinQ 10/25/50 GbE Drivers for Windows Server x64 Editions

Version: 8.50.10.0 (Optional)

Filename: cp043118.compsig; cp043118.exe

#### Important Note!

HPE recommends the firmware provided in Marvell FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions, version 5.2.3.0 or later, for use with these drivers.

#### Fixes

- This product correct an issue which fixes the Virtual Function (VF) sleep duration on the channel while it waits for Physical Function(PF) response.
- This product correct an issue which System crashed when Single Root I/O Virtualization(SR-IOV) enabled on few partitions and disabled on few partitions using OneView.
- This product correct an issue which operating system boot failure after update Firmware to 08.50.27.

- This product correct an issue which System crashed is seen while upgrading drivers on enabled Network Partitioning (NPAR) and Single Root I/O Virtualization(SR-IOV) with enterprise data Center mode.
- This product correct an issue which Virtual Machines (VMs) crash randomly upon advanced property disable/enable with Max virtual functions (VFs) enumerated on all Physical Functions(PFs).
- This product correct an issue which System crashed seen while disabling Network Driver Interface Specification (NDIS) driver while running RoCEv2 IPv6 traffic on Management OS.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCU OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HLCU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HQCU OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HLCU Adapter

Mellanox CX5 and CX6DX Driver for Windows Server 2016

Version: 2.40.22511.0 **(Optional)**

Filename: cp043353.compsig; cp043353.exe

#### **Enhancements**

This product now supports the following network adapters:

- HPE Ethernet 100Gb 2-port QSFP56 MCX623106AS-CDAT Adapter

#### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter

Mellanox CX5 and CX6DX Driver for Windows Server 2019

Version: 2.40.22511.0 **(Optional)**

Filename: cp043354.compsig; cp043354.exe

#### **Enhancements**

This product now supports the following network adapters:

- HPE Ethernet 100Gb 2-port QSFP56 MCX623106AS-CDAT Adapter

#### **Supported Devices and Features**



This driver supports the following network adapters:

- HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter

net-mst kernel module driver component for VMware ESXi 6.5 and 6.7

Version: 2019.09.11 (**Recommended**)

Filename: cp041339.compsig; cp041339.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the HPE vibstdepot.hpe.com webpage, plus an HPE specific CPXXXX.xml file.

### **Prerequisites**

NA

### **Fixes**

NMST version 4.12.0.105

### **Enhancements**

NMST version 4.12.0.105:

This version adds support for the following adapters:

- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter (Part Number: P21930-B21)
- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter (Part Number: P11341-B21)
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter (Part Number: P13188-B21)
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter (Part Number: P10112-B21)
- HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter (Part Number: P21927-B21)
- HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter (Part Number: P06154-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter (Part Number: P06250-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter (Part Number: P06251-B21)
- HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter (Part Number: P23664-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter (Part Number: P23665-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter (Part Number: P23666-B21)
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter (Part Number: P25960-B21)
- HPE Ethernet 200Gb 1-port QSFP56 MCX623105AS-VDAT Adapter (Part Number: P10180-B21)

### **Supported Devices and Features**

PE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P10180-B21	HPE Ethernet 200Gb 1-port QSFP56 MCX623105AS-VDAT Adapter	MT_0000000435
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

net-mst kernel module driver component for VMware ESXi 7.0

Version: 2020.05.20 **(Recommended)**

Filename: cp044401.compsig; cp044401.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the HPE vibspot.hpe.com webpage, plus an HPE specific CPXXXX.xml file.

### **Prerequisites**

NA

### **Fixes**

**Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P10180-B21	HPE Ethernet 200Gb 1-port QSFP56 MCX623105AS-VDAT Adapter	MT_0000000435
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

nmlx4\_en Driver Component for VMware 6.5  
 Version: 2019.06.14 (Recommended)  
 Filename: cp040179.compsig; cp040179.zip

**Important Note!**  
**Known Issues:**

- ConnectX-3 Pro 10G adapter cards incorrectly report support for 40G speed when running the "esxcli network nic get" command.

- When the port is DOWN, the management interface "port type" field indicates one of the port types supported by the device, in the following order: TP, FIBER, DA, NONE. If the port supports several cable types, the first type in the list mentioned above will be printed.
- When the port is UP, the management interface port type field (nmlx\_en\_MgmtIFPortType) indicates which one of all possible supported types is currently connected.
- Management interface port type field reports SFP-to-RJ45 cable as FIBER.
- Management interface auto negotiation field is equivalent to "esxcli network nic get -n vmnicX" field "Pause Autonegotiate".

For further information on the release notes for ESXi 6.5 Driver Version 3.16.11.10 follow the below link:  
[https://www.mellanox.com/page/products\\_dyn?product\\_family=29&mtag=vmware\\_driver](https://www.mellanox.com/page/products_dyn?product_family=29&mtag=vmware_driver)

#### Fixes

No Fixes were included in version 3.16.11.10.

#### Enhancements

Changes and New Features in version 3.16.11.10:

- Resolved an issue that caused the network adapter traffic to stop.
- Fixed an internal multicast loopback issue that broke LACP(Link Aggregation Control Protocol) bonding protocol.

#### Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004

mlx4\_en driver component for VMware ESXi 6.7

Version: 2020.05.26 (**Recommended**)

Filename: cp035114.compsig; cp035114.zip

#### **Important Note!**

##### **Known issues in version 3.17.70.1:**

- ConnectX-3 Pro 10G adapter cards wrongly report support for 40G speed when running the "esxcli network nic get" command.
- When the port is DOWN, the management interface port type field (nmlx\_en\_MgmtIFPortType) indicates one of the port types supported by the device, in the following order: TP, FIBER, DA, NONE. If the cable supports several types, the first type in the list mentioned above will be printed.
- When the port is UP, the management interface port type field (nmlx\_en\_MgmtIFPortType) indicates which one of all possible supported types is currently connected.
- Management interface port type field (nmlx\_en\_MgmtIFPortType) reports SFP-to-RJ45 cable as FIBER.
- Management interface auto negotiation field (nmlx\_en\_MgmtIFAutoNegMode) is equivalent to "esxcli network nic get -n vmnicX" field "Pause Autonegotiate"

#### **Fixes**

## **No Fixes are included in version 3.17.70.1:**

### **Enhancements**

#### **Changes and New features in version 3.17.70.1:**

- Adapter card's PSID is now displayed in the Privstats (Private statistics).

nmlx5\_en Driver Component for VMware 6.5  
Version: 2020.03.09 (**Recommended**)  
Filename: cp043371.compsig; cp043371.zip

### **Important Note!**

#### **Known Issues in version 4.16.70.1:**

- The maximum number of established active RDMA connections (QPs) is currently 5000.
- Setting ETS value to 0 may cause WQE timeout.
- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- ECN statistic counters accumulatorsPeriod and ecnMarkedRoce-Packets display wrong values and cannot be cleared.
- The hardware can offload only up to 256 Bytes of headers.
- The "esxcli network sriovnic vf stats" command is not supported.
- Traffic cannot be sent between PV and SR-IOV VF connected to different ports on the same HCA.
- Setting the "Allow Guest MTU Change" option in vSphere Client is currently not functional. Although guest MTU changes in SR-IOV are allowed, they do not affect the port's MTU and the guest's MTU remains the same as the PF MTU.
- Geneve options length support is limited to 56 Bytes. Received packets with options length bigger than 56 Bytes are dropped.
- Interaction with ConnectX-4/ConnectX-4 Lx older firmware versions might result in the following internal firmware errors:
  - Device health compromised
  - synd 0x1: firmware internal error
  - extSync 0x94ee
- The 'esxcli mellanox uplink link info -u <vmnic\_name>' command reports the 'Auto negotiation' capability always as 'true'.
- Wake-on-LAN does not notify when invalid parameters are provided.
- Nested ESXi might not function properly.
- Device RSS fails to hash traffic to sufficient RX rings with Broadcast traffic.
- In stress condition 'Watchdog' may appear leading to link going up and down.
- VGT traffic over VXLAN interfaces is currently not supported.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Although the max\_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port:
  - ConnectX-4: up to 127
  - ConnectX-5: up to 63

### **Fixes**

#### **The following issues have been fixed in version 4.16.70.1:**

- The "esxcli network sriovnic vf stats" command was not supported. When running this command on a vmknic, a failure message was displayed.

## **Enhancements**

### **Changes and New Features in smart component version 2020.03.09:**

- Added support for the following adapters:
  - HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter (HPE Part Number: P24837-B21)
  - HPE Ethernet 10Gb 2-port 548SFP+ (HPE Part Number: P11338-B21)

### **New features and changes in version 4.16.70.1:**

- An event will be sent to notify the administrator if the power required by the network adapter is higher than that available on the PCIe slot.
- Support for trusting Differentiated Services Code Point (DSCP) and setting default value for RoCE traffic.
- A new counter that enables the user to query per Virtual Function counters.
- RX out-of-buffer counter to indicate any lack of software receive buffers.
- Module parameter to enforce specific RoCE version.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE000000006
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P10109-B21	HPE Eth 10 / 25Gb 2P 641SFP28 Adapter	HPE000000039
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE000000054
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE000000014
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE000000036

nmlx5\_en Driver Component for VMware 6.7

Version: 2020.03.09 (**Recommended**)

Filename: cp043197.compsig; cp043197.zip

## **Important Note!**

### **Known Issues in version 4.17.70.1:**

- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- SRI-OV is not supported while ENS is enabled.
- The maximum number of established active RDMA connections (QPs) is currently 5000.

- Enhanced Network Stack(ENS) is currently not supported in ConnectX-6 Dx adapter cards.
- Setting ETS value to 0 may cause WQE timeout.
- A PSOD may occur during vMotion over ENS VMK.
- During ENS uplink detachment from the ENS DVS, the below error message regarding the queue still being allocated or that the requested queue is not in use may appear.
- Live unload of the driver is not supported. Doing so may cause a PSOD if the max\_vfs parameter is set.
- ECN statistic counters accumulatorsPeriod and ecnMarkedRoce-Packets display wrong values and cannot be cleared.
- The maximum value of RSS must be lower than the number of CPU cores.
- The hardware can offload only up to 256B of headers.
- The "esxcli network sriovnic vf stats" command is not supported. When running this command on a vmknic, a failure message is displayed.
- There is no traffic between PV and SR-IOV VF connected to different ports on the same HCA.
- Setting the "Allow Guest MTU Change" option in vSphere Client is currently not functional. Although guest MTU changes in SR-IOV are allowed, they do not affect the port's MTU and the guest's MTU remains the same as the PF MTU.
- When a guest is assigned an IB PCI passthru device or an IB VF, VMware Tools networking information for the guest may be incorrect. This affects how the guest networking information, such as interfaces and their IPs, is displayed in vCenter.
- Operations on vmnics which are in passthru mode are not supported.
- The 'esxcli mellanox uplink link info -u <vmnic\_name>' command reports the 'Auto negotiation' capability always as 'true'.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Wake-on-LAN does not notify when invalid parameters are provided.
- Nested ESXi might not function properly.
- Device RSS fails to hash traffic to sufficient RX rings with Broadcast traffic.
- In stress condition 'Watchdog' may appear, leading to uplink going up and down.
- During ENS uplink detachment from the ENS DVS, the below error message regarding the queue still being allocated or that the requested queue is not in use may appear. *"Driver covers for OS issue and the messages are for information only."*
- Although the max\_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port devices:
  - ConnectX-4: up to 127
  - ConnectX-5: up to 127

For further information on the release notes for ESXi 6.7 Driver Version 4.17.70.1 follow the below link:  
[https://www.mellanox.com/page/products\\_dyn?product\\_family=29&mtag=vmware\\_driver](https://www.mellanox.com/page/products_dyn?product_family=29&mtag=vmware_driver)

## **Fixes**

### **The following issues have been fixed in version in 4.17.70.1:**

- The "esxcli network sriovnic vf stats" command was not supported. When running this command on a "vmknic", a failure message was displayed.
- IPV6 as inner packet was not supported.

## **Enhancements**

### **Changes and New Features in smart component version 2020.03.09:**

- Added support for the following adapters:
  - HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter (HPE Part Number: P24837-B21)
  - HPE Ethernet 10Gb 2-port 548SFP+ Adapter (HPE Part Number: P11338-B21)

### **New features and changes in version 4.17.70.1:**

- Disabled the option of shutting down the link due to power limitation.

- Support for trusting Differentiated Services Code Point (DSCP) and setting default value for RoCE traffic.
- New counter that enables the user to query per Virtual Function counters.
- RX out-of-buffer counter to indicate any lack of software receive buffers.
- Module parameter to enforce specific RoCE version.

### **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

nmlx5\_en Driver Component for VMware 7.0  
Version: 2020.05.26 **(Recommended)**  
Filename: cp043205.compsig; cp043205.zip

### **Important Note!**

#### **Known Issues in version 4.19.70.1:**

- SR-IOV is not supported while ENS is enabled.
- Live unload of the driver is not supported. Doing so may cause a PSOD if the max\_vfs parameter is set.
- The maximum number of established active RDMA connections (QPs) is currently 5000.
- ENS is currently not supported in ConnectX-6 Dx adapter cards.  
**Workaround:** Use non ENS DVS for ConnectX-6 Dx cards.
- Setting ETS value to 0 may cause WQE timeout.  
**Workaround:** Set ETS value of 1 instead of 0.
- The 'esxcli mellanox uplink link info -u <vmnic\_name>' command reports the 'Auto negotiation' capability always as 'true'.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Although the max\_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port devices:
  - ConnectX-4 / ConnectX-5: up to 127

### **Fixes**



**No fixes are included in version 4.19.70.1:**

**Enhancements**

**No Changes and New Features are included in smart component version 2020.05.26:**

**New features and changes in version 4.19.70.1:**

- Disabled the option of shutting down the link due to power limitation.
- Support for trusting Differentiated Services Code Point (DSCP) and setting default value for RoCE traffic.
- New counter that enables the user to query per Virtual Function counters.
- RX out-of-buffer counter to indicate any lack of software receive buffers.
- support for Data Center Bridging Capability Exchange (DCBx) protocol. DCBx works with LLDP to allow switches to exchange information about their Data Center Bridging (DCB) capabilities and configuration and automatically negotiate common Priority-Based Flow Control (PFC) parameters.
- Module parameter to enforce specific RoCE version.
- Support for setting the minimal bandwidth guarantee for traffic classes (TCs).

**Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000003

VMware ESXi 6.5 and 6.7 MST Drivers Offline Bundle for Mellanox Adapters  
Version: 4.12.0.105 **(Recommended)**  
Filename: MLNX-NMST-ESX-6.5.0-4.12.0.105.zip

**Prerequisites**

NA

**Enhancements**

VM65/67 nmst 4.12.0.105

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VMware ESXi 7.0 MST Drivers Offline Bundle for Mellanox Adapters  
Version: 4.14.3.3 **(Recommended)**  
Filename: Mellanox-NATIVE-NMST\_4.14.3.3-1OEM.700.1.0.15525992\_16211416.zip

**Prerequisites**

NA

**Enhancements**

VM70 nmst 4.14.3.3

**Driver - Storage**

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HPE Smart Array S100i SR Gen10 Plus SW RAID Driver for Windows Server 2016, and Windows Server 2019

Version: 106.64.4.1384 **(Recommended)**

Filename: cp039949.compsig; cp039949.exe

**Enhancements**

Initial Release

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HPE Smart Array S100i SR Gen10 SW RAID Driver for Windows Server 2012 R2, Windows Server 2016, and Windows Server 2019

Version: 106.12.6.0 **(Recommended)**

Filename: cp043250.compsig; cp043250.exe

**Fixes**

Addressed an issue where the HPE Smart Array s100i Software RAID may experience potential data inconsistency during initial configuration or operation of a RAID volume configured in RAID 0/1/5/10 Fault Tolerant Modes.

This issue does not impact systems that have not enabled Smart Array s100i support.

- For additional information, reference [Customer Bulletin a00097789en\\_us](#).

**IMPORTANT INFORMATION:**

- An array configured with a single RAID 0 logical drive is NOT affected.
- An array configured with a single RAID 1 logical drive is NOT affected.

**Enhancements**

Added support for AMD.

## Driver - Storage Controller

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HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for Red Hat Enterprise Linux 7 (64-bit)

Version: 1.2.14-016 (**Recommended**)

Filename: kmod-smartpqi-1.2.14-016.rhel7u7.x86\_64.compsig; kmod-smartpqi-1.2.14-016.rhel7u7.x86\_64.rpm;  
kmod-smartpqi-1.2.14-016.rhel7u8.x86\_64.compsig; kmod-smartpqi-1.2.14-016.rhel7u8.x86\_64.rpm

### **Enhancements**

Smartpqi driver 1.2.14-016 now supports Red Hat Enterprise Linux 7.7 and 8.2 and it is recommended for used with HPE Gen10 Smart Array controllers FW 3.0

### **Supported Devices and Features**

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux7 (64-bit) supported by this binary rpm are:  
3.10.0-957.el7- Red Hat Enterprise Linux 7 Update 6 (64-bit) and future errata kernels for update 6.

HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for Red Hat Enterprise Linux 8 (64-bit)

Version: 1.2.14-016 (**Recommended**)

Filename: kmod-smartpqi-1.2.14-016.rhel8u1.x86\_64.compsig; kmod-smartpqi-1.2.14-016.rhel8u1.x86\_64.rpm;  
kmod-smartpqi-1.2.14-016.rhel8u2.x86\_64.compsig; kmod-smartpqi-1.2.14-016.rhel8u2.x86\_64.rpm

### **Enhancements**

Smartpqi driver 1.2.14-016 now supports Red Hat Enterprise Linux 7.7 and 8.2 and it is recommended for used with HPE Gen10 Smart Array controllers FW 3.0

### **Supported Devices and Features**

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux8 (64-bit) supported by this binary rpm are:  
-default- Red Hat Enterprise Linux 8 Update 0 (64-bit).

HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for SUSE LINUX Enterprise Server 12 (64-bit)

Version: 1.2.14-016 (**Recommended**)

Filename: smartpqi-kmp-default-1.2.14-016.sles12sp4.x86\_64.compsig; smartpqi-kmp-default-1.2.14-016.sles12sp4.x86\_64.rpm; smartpqi-kmp-default-1.2.14-016.sles12sp5.x86\_64.compsig; smartpqi-kmp-default-1.2.14-016.sles12sp5.x86\_64.rpm

### **Enhancements**

Smartpqi driver 1.2.14-016 now supports SUSE Linux Enterprise Service 12.5 and 15.1 and it is recommended for used with HPE Gen10 Smart Array controllers FW 3.0

### **Supported Devices and Features**

SUPPORTED KERNELS:

4.12.14-94.41.1 - SUSE LINUX Enterprise Server 12 (64-bit) SP4 plus future errata.

HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for SUSE LINUX Enterprise Server 15 (64-bit)

Version: 1.2.14-017 **(Recommended)**

Filename: smartpqi-kmp-default-1.2.14-017.sles15sp1.x86\_64.compsig; smartpqi-kmp-default-1.2.14-017.sles15sp1.x86\_64.rpm; smartpqi-kmp-default-1.2.14-017.sles15sp2.x86\_64.compsig; smartpqi-kmp-default-1.2.14-017.sles15sp2.x86\_64.rpm

### **Enhancements**

Add support for SUSE Linux Enterprise Services 15 SP2

---

HPE ProLiant Gen10 Smart Array Controller Driver for VMware ESXi 6.5 (Bundle file)

Version: 1.0.4.3008 **(Recommended)**

Filename: VMW-ESX-6.5.0-smartpqi-1.0.4.3008-offline\_bundle-14862448.zip

### **Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

HPE ProLiant Gen10 Smart Array Controller Driver for VMware ESXi 6.7 (Bundle file)

Version: 1.0.4.3008 **(Recommended)**

Filename: VMW-ESX-6.7.0-smartpqi-1.0.4.3008-offline\_bundle-14862538.zip

### **Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

HPE ProLiant Gen10 Smart Array Controller Driver for VMware vSphere 6.5 (Driver Component).

Version: 2019.12.01 **(Recommended)**

Filename: cp040982.compsig; cp040982.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CPXXXX.xml file.

### **Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

HPE ProLiant Gen10 Smart Array Controller Driver for VMware vSphere 6.7 (Driver Component).

Version: 2019.12.01 **(Recommended)**

Filename: cp040981.compsig; cp040981.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CPXXXX.xml file.

### **Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete

HPE Smart Array Gen10 Controller Driver for Windows Server 2012 R2, Windows Server 2016, and Windows Server 2019

Version: 106.178.0.1009 **(Recommended)**

Filename: cp043158.compsig; cp043158.exe

### **Enhancements**

Smartpqi driver 106.178.0.1009 supports the latest versions of Microsoft Windows OS environments and it is recommended for used with HPE Gen10 Smart Array controllers FW 3.0

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HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2012 R2 edition.

Version: 6.714.18.0 **(Recommended)**

Filename: cp034410.compsig; cp034410.exe

### **Enhancements**

- Added support for the Apollo 4510 system

HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2016 edition.

Version: 6.714.18.0 **(Recommended)**

Filename: cp034411.compsig; cp034411.exe

### **Enhancements**

- Added support for the Apollo 4510 system

HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2019 edition.

Version: 6.714.18.0 **(Recommended)**

Filename: cp038009.compsig; cp038009.exe

### **Enhancements**

Initial Microsoft Windows Server 2019 release

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.5

Version: 7.706.09.00 **(Recommended)**

Filename: Release\_Notes\_Isi-mr3-7.706.09.00-1OEM\_6.5.txt; VMW-ESX-6.5.0-Isi\_mr3-7.706.09.00-12102431.zip

### **Fixes**

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.5 (Driver Component)

Version: 2019.12.13 **(Recommended)**

Filename: cp042803.compsig; cp042803.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

## **Fixes**

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.7

Version: 7.706.09.00 (**Recommended**)

Filename: Release\_Notes\_lsi-mr3-7.706.09.00-1OEM.txt; VMW-ESX-6.7.0-lsi\_mr3-7.706.09.00-offline\_bundle-12095481.zip

## **Fixes**

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.7 (Driver Component)

Version: 2019.12.13 (**Recommended**)

Filename: cp042807.compsig; cp042807.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

## **Fixes**

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

HPE Smart Array P824i-p MR controller Driver for 64-bit Red Hat Enterprise Linux 7

Version: 07.706.05.00-14 (**Recommended**)

Filename: kmod-megaraid\_sas-07.706.05.00-14.rhel7u5.x86\_64.compsig; kmod-megaraid\_sas-07.706.05.00-14.rhel7u5.x86\_64.rpm; kmod-megaraid\_sas-07.706.05.00-14.rhel7u6.x86\_64.compsig; kmod-megaraid\_sas-07.706.05.00-14.rhel7u6.x86\_64.rpm

## **Enhancements**

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize & Expander)

## **Supported Devices and Features**

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 7 (64-bit) supported by this binary rpm are:

3.10.0-693.el7 - Red Hat Enterprise Linux 7 Update 4 (64-bit) and future errata kernels for update 4.

3.10.0-862.el7- Red Hat Enterprise Linux 7 Update 5 (64-bit) and future errata kernels for update 5.

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HPE Smart Array P824i-p MR controller Driver for 64-bit SUSE LINUX Enterprise Server 12

Version: 07.706.05.00-14 (**Recommended**)

Filename: lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles12sp3.x86\_64.compsig; lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles12sp3.x86\_64.rpm; lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles12sp4.x86\_64.compsig; lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles12sp4.x86\_64.rpm

## **Enhancements**

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize and Expander)

## **Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 (64-bit) supported by this binary rpm are:  
4.4.21-69-default - SUSE LINUX Enterprise Server 12 (64-bit) SP2 plus future errata.  
4.4.73-5.1 - SUSE LINUX Enterprise Server 12 (64-bit) SP3 plus future errata.

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HPE Smart Array P824i-p MR controller Driver for 64-bit SUSE LINUX Enterprise Server 15

Version: 07.706.05.00-14 (**Recommended**)

Filename: lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles15sp0.x86\_64.compsig; lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles15sp0.x86\_64.rpm

**Enhancements**

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize & Expander)

**Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 15 (64-bit) supported by this binary rpm are:  
4.12.14-23 - SUSE LINUX Enterprise Server 15 (64-bit) SP0 plus future errata.

**Driver - Storage Fibre Channel and Fibre Channel Over Ethernet**

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HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2012R2/2016

Version: 12.6.165.0 (b) (**Recommended**)

Filename: cp041717.compsig; cp041717.exe

**Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Hyper-V Virtual Machines (VMs) could not access storage arrays if those Virtual Machine (VM) had been shut down and restarted over 512 times.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hyper-V Virtual Machines (VMs) could not access storage arrays if those Virtual Machine (VM) had been shut down and restarted over 512 times.

### **Enhancements**

Updated to driver version 12.6.165.0

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
elxdrv-vc-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version\x64\win2019
```

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter



- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

---

HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2019

Version: 12.6.165.0 (b) **(Recommended)**

Filename: cp041729.compsig; cp041729.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Hyper-V Virtual Machines (VMs) could not access storage arrays if those Virtual Machine (VM) had been shut down and restarted over 512 times.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Fixes**

Fixed the following:

- Hyper-V Virtual Machines (VMs) could not access storage arrays if those Virtual Machine (VM) had been shut down and restarted over 512 times.

## **Enhancements**

Updated to driver version 12.6.165.0

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
elxdrv-vc-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version\x64\win2019
```

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

## **Fixes**

Fixed the following:

- Memory dumps were not generated during a crash dump in a boot from SAN environment

### **Enhancements**

Updated to version 9.4.1.20

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE Storage Fibre Channel Over Ethernet Adapter Kit for the x64 Emulex Storport Driver for Windows 2012R2 and Windows 2016

Version: 12.0.1192.0 (c) **(Recommended)**

Filename: cp044554.compsig; cp044554.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>

2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Enhancements**

Updated to driver version 12.0.1192.0

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
brcmdrvr-fcoe-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Broadcom\Drivers\FCoE-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Broadcom\Drivers\FCoE-version\x64\win2012
```

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

HPE Storage Fibre Channel Over Ethernet Adapter Kit for the x64 Emulex Storport Driver for Windows 2019

Version: 12.0.1192.0 (d) (**Recommended**)

Filename: cp044553.compsig; cp044553.exe

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Added support for following:

Updated to driver version 12.0.1192.0

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
brcmdrvr-fcoe-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Broadcom\Drivers\FCoE-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Broadcom\Drivers\FCoE-version\x64\win2012
```

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2012R2/2016

Version: 12.4.243.4 (**Recommended**)

Filename: cp042265.compsig; cp042265.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Updated to driver version 12.4.243.4

Added the following support :

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
elxdvr-fc-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

C:\Users\Administrator\Documents\Emulex\Drivers\FC-version\x64\win2019

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

---

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2019

Version: 12.4.243.4 (**Recommended**)

Filename: cp042264.compsig; cp042264.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>



## **Enhancements**

Updated to driver version 12.4.243.4

Added the following support :

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
elxdrv-rc-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version\x64\win2019
```

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

---

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2012 R2

Version: 9.3.3.20 (**Recommended**)

Filename: cp042971.compsig; cp042971.exe

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Updated to version 9.3.3.20

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

---

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2016

Version: 9.3.3.20 (**Recommended**)

Filename: cp042212.compsig; cp042212.exe

## **Important Note!**

Release Notes:

[HPE StoreFabric QLogic Adapters Release Notes](#)

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Updated to version 9.3.3.20

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- 

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2019

Version: 9.3.3.20 (**Recommended**)

Filename: cp042213.compsig; cp042213.exe

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Updated to version 9.3.3.20

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- 

Red Hat Enterprise Linux 7 Update 7 Server FCoE Driver Kit for HPE Emulex(BRCM) Converged Network Adapters(CNAs) and mezzanine Converged Network Adapters(CNAs)

Version: 12.0.1259.0 (c) (**Recommended**)

Filename: kmod-brcmfcoe-12.0.1259.0-1.rhel7u7.x86\_64.compsig; kmod-brcmfcoe-12.0.1259.0-1.rhel7u7.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Updated to Driver version 12.0.1259.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

Red Hat Enterprise Linux 7 Update 7 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: kmod-elx-lpfc-12.6.275.14-1.rhel7u7.x86\_64.compsig; kmod-elx-lpfc-12.6.275.14-1.rhel7u7.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for Fibre Channel Host bus adapters and Converge Network Adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 7 Server Fibre Channel Driver Kit for HPE Emulex Mezzanine Host Bus Adapters

Version: 12.4.270.3 (**Recommended**)

Filename: kmod-elx-lpfc-12.4.270.3-1.rhel7u7.x86\_64.compsig; kmod-elx-lpfc-12.4.270.3-1.rhel7u7.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Enhancements**

Updated to driver version 12.4.270.3

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

---

Red Hat Enterprise Linux 7 Update 7 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.07.6-k1a **(Recommended)**

Filename: kmod-qlgc-qla2xxx-10.01.00.64.07.6\_k1a-1.rhel7u7.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.64.07.6\_k1a-1.rhel7u7.x86\_64.rpm

## **Important Note!**



Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

### **Enhancements**

Initial driver for RedHat Enterprise Linux Server 7 update 7 version 10.01.00.64.07.6-k1a

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 7 Server Fibre Channel Driver Kit for HPE QLogic Mezzanine Host Bus Adapters

Version: 10.01.00.57.07.6-k1 (**Recommended**)

Filename: kmod-qlgc-qla2xxx-10.01.00.57.07.6\_k1-1.rhel7u7.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.57.07.6\_k1-1.rhel7u7.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpgsql" driver are supported.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Updated driver version to 10.01.00.57.07.6-k1

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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Red Hat Enterprise Linux 7 Update 8 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: kmod-elx-lpfc-12.6.275.14-1.rhel7u8.x86\_64.compsig; kmod-elx-lpfc-12.6.275.14-1.rhel7u8.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 8 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.07.6-k1a **(Recommended)**

Filename: kmod-qlgc-qla2xxx-10.01.00.64.07.6\_k1a-1.rhel7u8.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.64.07.6\_k1a-1.rhel7u8.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpgsqlc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpsc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpsc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

## **Enhancements**

Initial driver for RedHat Enterprise Linux Server 7 update 8 version 10.01.00.64.07.6-k1a

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
  - HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
  - HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
  - HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter
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Red Hat Enterprise Linux 8 Update 1 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.08.0-k1 (**Recommended**)

Filename: kmod-qlgc-qla2xxx-10.01.00.64.08.0\_k1-1.rhel8u1.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.64.08.0\_k1-1.rhel8u1.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

## **Enhancements**

Initial driver for RedHat Enterprise Linux Server 8 update 1 version 10.01.00.64.08.0-k1

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 8 Update 1 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: kmod-elx-lpfc-12.6.275.14-1.rhel8u1.x86\_64.compsig; kmod-elx-lpfc-12.6.275.14-1.rhel8u1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.



It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
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This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 8 update 1 Server Fibre Channel Driver Kit for HPE QLogic Mezzanine Host Bus Adapters

Version: 10.01.00.57.08.0-k1 (**Recommended**)

Filename: kmod-qlgc-qla2xxx-10.01.00.57.08.0\_k1-1.rhel8u1.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.57.08.0\_k1-1.rhel8u1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Updated Driver for RedHat Enterprise Linux Server 8 update 1 version 10.01.00.57.08.0-k1

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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Red Hat Enterprise Linux 8 Update 2 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.08.0-k1 **(Recommended)**

Filename: kmod-qlgc-qla2xxx-10.01.00.64.08.0\_k1-1.rhel8u2.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.64.08.0\_k1-1.rhel8u2.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

### **Enhancements**

Initial driver for RedHat Enterprise Linux Server 8 update 2 version 10.01.00.64.08.0-k1

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter
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Red Hat Enterprise Linux 8 Update 2 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: kmod-elx-lpfc-12.6.275.14-1.rhel8u2.x86\_64.compsig; kmod-elx-lpfc-12.6.275.14-1.rhel8u2.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
  - HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
  - HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
  - HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter
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SUSE Linux Enterprise Server 12 Service Pack 4 FCoE Driver Kit for HPE Emulex(BRCM) Converged Network Adapters(CNAs) and mezzanine Converged Network Adapters(CNAs)

Version: 12.0.1259.0 (c) **(Recommended)**

Filename: brcmfcoe-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; brcmfcoe-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due Toa Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Updated to Driver version 12.0.1259.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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SUSE Linux Enterprise Server 12 Service Pack 4 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm



## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

For Emulex Fibre Channel Driver installation on SuSE Linux Enterprise Server 12 service pack 3 requires user to install latest Errata Kernel available, otherwise the driver may not complete the installation and throw dependency messages

### **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Enhancements**

Updated to driver version 12.6.275.14

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

#### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

SUSE Linux Enterprise Server 12 Service Pack 4 Fibre Channel Driver Kit for HPE Emulex Mezzanine Host Bus Adapters

Version: 12.4.270.3 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.4.270.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; elx-lpfc-kmp-default-12.4.270.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

For Emulex Fibre Channel Driver installation on SuSE Linux Enterprise Server 12 service pack 3 requires user to install latest Errata Kernel available, otherwise the driver may not complete the installation and throw dependency messages

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

For Emulex Fibre Channel Driver installation on SuSE Linux Enterprise Server 12 service pack 3 requires user to install latest Errata Kernel available, otherwise the driver may not complete the installation and throw dependency messages

### **Enhancements**

Updated to driver version 12.4.270.3

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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SUSE Linux Enterprise Server 12 Service Pack 4 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.12.4-k1b (**Recommended**)

Filename: qlgc-qla2xxx-kmp-default-10.01.00.64.12.4\_k1b\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.64.12.4\_k1b\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpgsql" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpsc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpsc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

## **Enhancements**

Initial Driver of SuSE Linux Enterprise Server 12 Service Pack 4 version 10.01.00.64.12.4-k1b

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
  - HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
  - HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
  - HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter
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SUSE Linux Enterprise Server 12 Service Pack 4 Fibre Channel Driver Kit for HPE QLogic Mezzanine Host Bus Adapters

Version: 10.01.00.57.12.4-k1 **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.57.12.4\_k1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.57.12.4\_k1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Updated Driver for:

SUSE Linux Enterprise Server 12 service pack 4 (SLES12 sp4) version 10.01.00.57.12.4-k1

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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SUSE Linux Enterprise Server 12 Service Pack 5 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 **(Recommended)**

Filename: elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 12 Service Pack 5 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.12.5-k1 **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.64.12.5\_k1\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.64.12.5\_k1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)



Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpeqgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2extended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

### **Enhancements**

Initial Driver of SuSE Linux Enterprise Server 12 Service Pack 5 version 10.01.00.64.12.5-k1

Added support for the following:

- Allow ql2extended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 15 Service Pack 1 FCoE Driver Kit for HPE Emulex(BRCM) Converged Network Adapters(CNAs) and mezzanine Converged Network Adapters(CNAs)

Version: 12.0.1259.0 (c) **(Recommended)**

Filename: brcmfcoe-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; brcmfcoe-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Enhancements**

Updated to Driver version 12.0.1259.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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SUSE Linux Enterprise Server 15 Service Pack 1 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

SUSE Linux Enterprise Server 15 Service Pack 1 Fibre Channel Driver Kit for HPE Emulex Mezzanine Host Bus Adapters

Version: 12.4.270.3 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.4.270.3\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; elx-lpfc-kmp-default-12.4.270.3\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>

2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Enhancements**

Updated to driver version 12.4.270.3

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

SUSE Linux Enterprise Server 15 Service Pack 1 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.15.1-k1 **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.64.15.1\_k1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.64.15.1\_k1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA)

- Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

### **Enhancements**

Initial Driver of SuSE Linux Enterprise Server 15 Service Pack 1 version 10.01.00.64.15.1-k1

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN100Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter



- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 15 Service Pack 1 Fibre Channel Driver Kit Host Bus Adapters for HPE QLogic Mezzanine Host Bus Adapters

Version: 10.01.00.57.15.1-k1 **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.57.15.1\_k1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.57.15.1\_k1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

#### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpglqc" driver are supported.

#### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

#### **Enhancements**

Updated Driver for:

SuSE Linux Enterprise Server 15 Service Pack 1 version 10.01.00.57.15.1-k1

#### **Supported Devices and Features**

This driver supports the following HPE adapters:

##### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

##### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
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SUSE Linux Enterprise Server 15 Service Pack 2 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.20 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.6.275.20\_k5.3.18\_22-1.sles15sp2.x86\_64.compsig; elx-lpfc-kmp-default-12.6.275.20\_k5.3.18\_22-1.sles15sp2.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.20

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

Version: 10.01.00.64.15.2-k1b **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.64.15.2\_k1b\_k5.3.18\_22-1.sles15sp2.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.64.15.2\_k1b\_k5.3.18\_22-1.sles15sp2.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpglqc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

## **Enhancements**

Initial Driver of SuSE Linux Enterprise Server 15 Service Pack 2 version 10.01.00.64.15.2-k1b

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

## **Driver - System**

[Top](#)

HPE Non-Volatile Memory Drivers for Microsoft Windows Server 2012 R2 and 2016

Version: 3.0.1.2 **(Recommended)**

Filename: cp038534.compsig; cp038534.exe

## **Important Note!**

This Smart Component version 3.0.1.2 contains the HPE NVM Bus Driver HpeNvmBus.sys version 3.0.1.2 and the HPE NVM Disk Driver HpeNvmDisk0101 version 3.0.1.0.

## **Enhancements**

These Non-Volatile Memory drivers enable support for Persistent Memory technology on select HPE Servers running Microsoft Windows Server 2012 R2 and 2016.

- Added support for HPE Persistent Memory devices (featuring Intel Optane DC Persistent Memory), on WS2012R2 and WS2016.

- Added support for HPE 16GB NVDIMM devices, on WS2012R2.
- Changed block sector size from 512B to 4096B. Old data won't be accessible and must be backed up first if it needs to be preserved.

For more information about Persistent Memory technology offered on HPE Servers, please consult the following links:

- <https://www.hpe.com/us/en/servers/persistent-memory.html>
- <https://persistentmemory.hpe.com/windows/nvdimm>

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## Driver - System Management

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HPE CRU Native Driver for ESXi 7.0

Version: 7.0.10 **(Recommended)**

Filename: cru\_driver\_700.10.16\_10EM.700.0.0.14828939\_signed\_component\_15675715.zip

### **Enhancements**

Support for VMware ESXi 7.0

LO 5 Automatic Server Recovery Driver for Windows Server 2012 R2

Version: 4.7.0.0 **(Optional)**

Filename: cp041378.compsig; cp041378.exe

### **Important Note!**

Installing the iLO 5 Channel Interface Driver, version 4.1.0.0 or earlier, will overwrite this driver. To avoid the overwrite, use version 4.1.0.0(B) or later of the iLO 5 Channel Interface Driver.

### **Fixes**

Corrected an issue with driver versions 4.4.0.0 and 4.6.0.0, in which an operating system hang and reboot followed by another operating system hang could improperly result in an ASR Reset instead of the expected Windows bugcheck and memory dump.

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iLO 5 Automatic Server Recovery Driver for Windows Server 2016 and Server 2019

Version: 4.7.0.0 **(Optional)**

Filename: cp041379.compsig; cp041379.exe

### **Important Note!**

Installing the iLO 5 Channel Interface Driver, version 4.1.0.0 or earlier, will overwrite this driver. To avoid the overwrite, use version 4.1.0.0(B) or later of the iLO 5 Channel Interface Driver.

### **Fixes**

Corrected an issue with driver versions 4.4.0.0 and 4.6.0.0, in which an operating system hang and reboot followed by another operating system hang could improperly result in an ASR Reset instead of the expected Windows bugcheck and memory dump.

iLO 5 Channel Interface Driver for Windows Server 2012 R2

Version: 4.6.0.0 **(Optional)**  
Filename: cp040013.compsig; cp040013.exe

### **Enhancements**

Add support for iLO 5 version 2.x firmware.

iLO 5 Channel Interface Driver for Windows Server 2016 and Server 2019  
Version: 4.6.0.0 (C) **(Optional)**  
Filename: cp041932.compsig; cp041932.exe

### **Enhancements**

TBD

## **Driver - Video**

[Top](#)

Matrox G200eH3 Video Controller Driver for Windows Server 2012 R2

Version: 9.15.1.224 (B) **(Optional)**

Filename: cp040214.compsig; cp040214.exe

### **Enhancements**

Add support for iLO 5 version 2.x firmware.

Matrox G200eH3 Video Controller Driver for Windows Server 2016 and Server 2019  
Version: 9.15.1.224 (B) **(Optional)**  
Filename: cp040215.compsig; cp040215.exe

### **Enhancements**

- Add support for iLO 5 version 2.x firmware.
- Add support for HPE ProLiant Gen10 Plus servers.

## **Firmware - Blade Infrastructure**

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HPE BladeSystem c-Class Virtual Connect Firmware, Ethernet plus 8Gb 20-port and 8/16Gb 24-port FC Edition  
Component for Windows

Version: 4.85 (**Recommended**)

Filename: cp043332.exe

### **Prerequisites**

The 4.85 version of HPE Virtual Connect Release Notes contains the prerequisites and can also be found in the following URL: <http://www.hpe.com/info/vc/manuals>

### **Fixes**

The list of issues resolved in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL: <http://www.hpe.com/info/vc/manuals>

### **Enhancements**

The list of enhancements in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL: <http://www.hpe.com/info/vc/manuals>

### **Supported Devices and Features**

HPE Virtual Connect FlexFabric 10Gb/24-port Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 24-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 20-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect Flex-10/10D Module for c-Class BladeSystem

HPE Virtual Connect FlexFabric-20/40 F8 Module for HPE BladeSystem c-Class

HPE Virtual Connect 16Gb 24-port Fibre Channel Module for c-Class BladeSystem

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HPE BladeSystem c-Class Virtual Connect Firmware, Ethernet plus 8Gb 20-port and 8/16Gb 24-port FC Edition Component for Linux

Version: 4.85 (**Recommended**)

Filename: RPMS/x86\_64/firmware-vceth-4.85-1.1.x86\_64.rpm

### **Prerequisites**

The 4.85 version of HPE Virtual Connect Release Notes contains the prerequisites and can be found in the following URL: <http://www.hpe.com/info/vc/manuals>

### **Fixes**

The list of issues resolved in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL: <http://www.hpe.com/info/vc/manuals>



## **Enhancements**

The list of enhancements in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL: <http://www.hpe.com/info/vc/manuals>

## **Supported Devices and Features**

HPE Virtual Connect FlexFabric 10Gb/24-port Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 24-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 20-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect Flex-10/10D Module for c-Class BladeSystem

HPE Virtual Connect FlexFabric-20/40 F8 Module for HPE BladeSystem c-Class

HPE Virtual Connect 16Gb 24-port Fibre Channel Module for c-Class BladeSystem

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Online HP 6Gb SAS BL Switch Firmware Smart Component for Linux (x86/x64)

Version: 4.3.6.0 (B) **(Optional)**

Filename: RPMS/i586/firmware-solex6gb-solex-4.3.6.0-2.1.i586.rpm

## **Important Note!**

**Note:** If version 4.3.6.0 was previously installed, then it is not necessary to upgrade to version 4.3.6.0 (B).

## **Enhancements**

- Added support for SUSE Linux Enterprise Server 15 OS

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Online HPE 6Gb SAS BL Switch Firmware Smart Component for Windows (x86/x64)

Version: 4.3.6.0 (C) **(Optional)**

Filename: cp038273.exe

## **Enhancements**

- Improved integration with Smart Update Manager

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Online HPE BladeSystem c-Class Onboard Administrator Firmware Component for Linux

Version: 4.96 (**Recommended**)

Filename: RPMS/x86\_64/firmware-oa-4.96-1.1.x86\_64.rpm

## **Important Note!**

### **Important Notes**

- **Firmware Upgrade**
  - Starting OA 4.50 release, a standardized code signing and validation mechanism has been introduced to enhance the firmware image authenticity.
  - For customers using Firmware ROM image to upgrade OA:
    - For OAs with firmware version less than 3.50, first update to OA 3.50 and then continue updating to OA 4.50 or above.
  - For customers using Smart Components to upgrade OA:
    - OA firmware update mechanisms which rely on HPE Smart Components (example: EFM), will not be affected by this change. The Smart Component will automatically perform the intermediate upgrade to OA 3.50 before performing the OA 4.50 or above upgrade.
- **EFM**
  - The OA only supports SPP ISO images that are less than 4 GB in size, whether hosted directly via the Enclosure DVD feature or an attached USB key, or mounted remotely via a specified URL. If an ISO image exceeds 4 GB, the CLI SHOW FIRMWARE MANAGEMENT command displays ISO URL Status as "Invalid URL."
  - If an SPP ISO image exceeds 4 GB, it is necessary to create a custom ISO image that excludes components unnecessary to the OA EFM blade firmware update process. At a minimum, the custom ISO must contain the firmware components for HPE ProLiant BL servers. (When using HPE SUM to create the custom ISO image, select Firmware as the Component Type, and select HPE ProLiant BL Series as the Server Type.) For information about creating a custom ISO image compatible for OA EFM functionality, see the *HPE BladeSystem Onboard Administrator User Guide*. More HPE SUM information can be found via HPE Smart Update Manager online help or at <https://www.hpe.com/servers/hpsum/documentation>.
- **FIPS**
  - Onboard Administrator 4.71 is FIPS certified as referenced in the 140-2 In Process list located at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140InProcess.pdf>.
- **IPv6**
  - When the Enable DHCPv6 or Enable SLAAC enclosure IPv6 settings are disabled on the Onboard Administrator, the respective DHCPv6 or SLAAC addresses of the iLOs in the enclosure are retained until these addresses expire automatically based on their respective configurations. A manual reset of the iLO releases these addresses immediately

## **Prerequisites**

To access the OA web interface, you must have the OA IP address and a compatible web browser. You must access the

application through HTTPS (HTTP packets exchanged over an SSL/TLS-encrypted session).

The OA web interface requires an XSLT-enabled browser with support for JavaScript 1.3 or the equivalent.

Supported browsers include:

- Microsoft Internet Explorer 11
- Mozilla Firefox 67.0.4(64-bit)

- Google Chrome 77.0.3865.90 (Official Build) (64-bit)

## **Fixes**

### **General**

- Addressed an issue where SNMP queries to Onboard Administrator OIDs were not successfully completed when VLAN is configured for Blades and Interconnects.
- Addressed an issue in the Device and Rack Summary GUI page to eliminate the duplicate display of FLB and Mezz adapters information.
- Addressed an issue where Interconnects were not receiving IP address from EBIPA (or) external DHCP server.
- Addressed an issue where Blade Location information was not displayed correctly in SHOW SERVER STATUS ALL CLI command.
- Addressed an issue where DNS record update was getting delayed in DNS server when a user configured a domain name in Onboard Administrator.

### **Security**

- None

### **Issues and workarounds**

#### **Browsers**

- OA GUI is not accessible in Chrome versions 43.0.2357.10 to 44.0.2383. The issue was caused by a "regression" in Chrome (or WebKit). Customers should use an alternative browser like Firefox or Internet Explorer or try a different version of Chrome.
- SSO-to-iLO connection from the OA using an iLO host name fails with Microsoft Internet Explorer 11 on Windows 8. On a Windows 8 system with Internet Explorer 10 or Internet Explorer 11, if the OA web GUI session is loaded using a host name instead of an IP address, an attempt to open an iLO window using SSO from the OA web GUI might result in the iLO page loading in the OA web GUI window instead of the intended new window. This issue was determined to be a bug in Internet Explorer and is expected to be fixed in a future release or update for Internet Explorer. To work around this issue, either use an IP address to load the OA Web GUI, or turn off Protected Mode for the appropriate zone in Internet Explorer's settings. This issue occurs only on Internet Explorer browsers.

#### **FIPS**

Certificates smaller than 2048 bits in size are not compliant with FIPS requirements as enforced by the OA firmware starting with OA 4.20. When the OA running OA firmware version 4.40 or greater is operating in FIPS Mode ON/DEBUG and is configured with a 1024-bit LDAP certificate that was installed when running a previous version of OA firmware, FIPS Mode ON/DEBUG is considered to be operating in a degraded state due to the presence of the non-compliant certificate. While operating in this FIPS-Degraded Mode operational state, attempts to set FIPS Mode OFF from the OA GUI Network Access>FIPS tab will fail and show the error message The selected FIPS mode is already enabled. When the non-compliant certificate is removed, the FIPS-Degraded operational status is cleared, FIPS Mode can then be successfully set to OFF from the GUI interface. Note that the OA CLI command SET FIPS MODE OFF can be successfully used to set FIPS Mode OFF even with non-compliant 1024-bit LDAP certificates installed in the OA.

#### **IRC**

Unable to open .net IRC console for Gen10 Blades, Gen9 Blades also have the same issue. The Java applet and Webstart however, loads but the virtual media mounting fails. The work around is

to launch the IRC through IRC Application (HPE Lights-Out Stand Alone Remote Console) which is installed on terminal client.

## **EFM**

To use EFM on Gen 10 Blades, please select options/filters "Make Bootable ISO file" and "Enclosure Firmware Management" while creating custom SPP ISO on HPE SUM 8.0.0. Please refer to HPE SUM 8.0.0 User guide for further details.

## **CAC**

- In the CAC mode SSH, Telnet and XML Reply protocols will be disabled.
- Linked enclosure login will not work if the linked enclosure is in CAC mode.
- If accurate Service account details are not provided, LDAP user login with certificate will fail.
- It is highly recommended to establish a recovery plan before getting started with CAC. If something goes wrong with the OA configuration, the OA may be recovered through the serial port or Insight Display panel and USB KEY. Both methods require physical access to the OA. However, if an LCD PIN has been configured (and forgotten) and local accounts have been disabled or CAC has been incorrectly configured then, the only way to recover is through a serial port. The two most common situations where OA recovery is needed are when LDAP has been configured incorrectly with local accounts disabled or when CAC has been configured without certificate access.

## **Configurable SSH Port Number**

If a Standby OA is running firmware version less than 4.85 and it is updated to firmware version greater than or equal to 4.85 using synchronize firmware feature from Active OA, after the firmware update and reboot of the Standby OA, SSH port will not open in the configured port number. The work around is to reboot the Standby OA and SSH port will open in the configured port in next boot. This issue will not occur in the case where SSH port is configured to default port 22 in the Active OA.

## **Enhancements**

Onboard Administrator 4.96 provides support for the following enhancements:

### **Hardware additions**

- None

Features: **additions and changes**

### **General**

- AlertMail feature now supports two priorities that a user can select for the AlertMail messages..
- Enclosure Firmware Management (EFM) feature is optimized to speed up the EFM update operation.
- The SSL certificate of Onboard Administrator now supports Fully Qualified Domain Name (FQDN) in **Common Name (CN) field and IP address in SAN field.**
- Common Access Card (CAC) Authentication feature is enhanced to support a configurable timeout for the SSL session.

### **Security**

- Onboard Administrator supports two new TLS\_DHE\_RSA ciphers
- FIPS TOP-SECRET mode ciphers are now supported in FIPS **ON** and **OFF** modes.
- CLI commands SHOW SSH CIPHER, ENABLE SSH CIPHER and DISABLE SSH CIPHER are added to Show, Enable and Disable SSH ciphers in FIPS ON and OFF modes.

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Online HPE BladeSystem c-Class Onboard Administrator Firmware Component for Windows

Version: 4.96 (**Recommended**)

Filename: cp042537.exe

## **Important Note!**

### **Important Notes**

- **Firmware Upgrade**
  - Starting OA 4.50 release, a standardized code signing and validation mechanism has been introduced to enhance the firmware image authenticity.
  - For customers using Firmware ROM image to upgrade OA:
    - For OAs with firmware version less than 3.50, first update to OA 3.50 and then continue updating to OA 4.50 or above.
  - For customers using Smart Components to upgrade OA:
    - OA firmware update mechanisms which rely on HPE Smart Components (example: EFM), will not be affected by this change. The Smart Component will automatically perform the intermediate upgrade to OA 3.50 before performing the OA 4.50 or above upgrade.
- **EFM**
  - The OA only supports SPP ISO images that are less than 4 GB in size, whether hosted directly via the Enclosure DVD feature or an attached USB key, or mounted remotely via a specified URL. If an ISO image exceeds 4 GB, the CLI SHOW FIRMWARE MANAGEMENT command displays ISO URL Status as "Invalid URL."
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- **FIPS**
  - Onboard Administrator 4.71 is FIPS certified as referenced in the 140-2 In Process list located at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140inProcess.pdf>.
- **IPv6**
  - When the Enable DHCPv6 or Enable SLAAC enclosure IPv6 settings are disabled on the Onboard Administrator, the respective DHCPv6 or SLAAC addresses of the iLOs in the enclosure are retained until these addresses expire automatically based on their respective configurations. A manual reset of the iLO releases these addresses immediately.

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To access the OA web interface, you must have the OA IP address and a compatible web browser. You must access the

application through HTTPS (HTTP packets exchanged over an SSL/TLS-encrypted session).

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- Addressed an issue where Blade Location information was not displayed correctly in SHOW SERVER STATUS ALL CLI command.
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### **Security**

- None

### **Issues and workarounds**

#### **Browsers**

- OA GUI is not accessible in Chrome versions 43.0.2357.10 to 44.0.2383. The issue was caused by a "regression" in Chrome (or WebKit). Customers should use an alternative browser like Firefox or Internet Explorer or try a different version of Chrome.
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## **Enhancements**

Onboard Administrator 4.96 provides support for the following enhancements:

### **Hardware additions**

- None

Features: **additions and changes**

### **General**

- AlertMail feature now supports two priorities that a user can select for the AlertMail messages.
- Enclosure Firmware Management (EFM) feature is optimized to speed up the EFM update operation.
- The SSL certificate of Onboard Administrator now supports Fully Qualified Domain Name (FQDN) in **Common Name** (CN) field and IP address in **SAN** field.
- Common Access Card (CAC) Authentication feature is enhanced to support a configurable timeout for the SSL session.

### **Security**

- Onboard Administrator supports two new TLS\_DHE\_RSA ciphers.
- FIPS TOP-SECRET mode ciphers are now supported in FIPS **ON** and **OFF** modes.

- CLI commands SHOW SSH CIPHER, ENABLE SSH CIPHER and DISABLE SSH CIPHER are added to Show, Enable and Disable SSH ciphers in FIPS ON and OFF modes.

## Firmware - Lights-Out Management

[Top](#)

\*REMOVED\* Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5

Version: 1.40 (**Recommended**)

Filename: RPMS/x86\_64/firmware-ilo5-1.40-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-ilo5-1.40-1.1.x86\_64.rpm

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support
- Embedded Remote Support (ERS)

### **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.4.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0



NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

## **Fixes**

**REMOVED** - HPE Integrated Lights-Out 5 (iLO 5) v1.40 is NO LONGER AVAILABLE for download and has been replaced with version 1.40(a). Click the "Obtain software" link to download version 1.40(a). More information is also available in the [Customer Advisory](#).

The following issues are resolved in this version:

- User interface fixes and improvements.
- Fixed an issue where power supply status changes may be delayed.
- Device Inventory could display a parse error under Internet Explorer 11 when certain PCI Cards are installed.
- Improved shared network port out-of-band LOM resuscitation to reduce the scope and the frequency of system power-on/power-off during systems shutdown/reboot.
- iLO communication issues in certain configurations where a server is set to Auto-Power-On after an AC power cycle.

### SECURITY FIXES:

- HPESBHF03907

For the latest security bulletins and vulnerabilities, please visit:  
<https://support.hpe.com/hpesc/public/home> Security best practices:

Please refer to the HPE Integrated Lights-Out 5 Security Technology Brief for the latest on security best practices at:  
<http://www.hpe.com/support/ilo5-security-en>

## **Enhancements**

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- Ability to edit Maintenance Windows in Firmware & OS Software section
- Added Password Complexity feature to Security > Access Settings
- Enable/disable for overlay video showing Server Health Summary
- Downgrade Policy - Specifies how iLO handles requests to downgrade any of the firmware types that you can update through iLO.
- Virtual NIC functionality (disabled by default)
- Enabled One-button Secure Erase via Intelligent Provisioning
- LDAP/Directory settings configurable via Redfish
- Security Dashboard - displays the status of important security features, the Overall Security Status for the system, and the current configuration for the Security State and Server Configuration Lock features.
- Support for Gemalto SafeNet and SafeNet AT key managers
- InfoSight Optimized AHS Download
- Show NVMe wear level
- Workload performance advisor: provides server tuning recommendations to improve server performance

\*REMOVED\* Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5

Version: 1.40 (**Recommended**)

Filename: cp035625.compsig; cp035625.exe

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support
- Embedded Remote Support (ERS)

### **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.4.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

### **Fixes**

**REMOVED** - HPE Integrated Lights-Out 5 (iLO 5) v1.40 is NO LONGER AVAILABLE for download and has been replaced with version 1.40(a). Click the "Obtain software" link to download version 1.40(a). More information is also available in the [Customer Advisory](#).

The following issues are resolved in this version:

- User interface fixes and improvements.
- Fixed an issue where power supply status changes may be delayed.
- Device Inventory could display a parse error under Internet Explorer 11 when certain PCI Cards are installed.
- Improved shared network port out-of-band LOM resuscitation to reduce the scope and the frequency of system power-on/power-off during systems shutdown/reboot.
- iLO communication issues in certain configurations where a server is set to Auto-Power-On after an AC power cycle.

SECURITY FIXES:

- HPESBHF03907

For the latest security bulletins and vulnerabilities, please visit:  
<https://support.hpe.com/hpesc/public/home> Security best practices:

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<http://www.hpe.com/support/ilo5-security-en>

## **Enhancements**

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- Ability to edit Maintenance Windows in Firmware & OS Software section
- Added Password Complexity feature to Security > Access Settings
- Enable/disable for overlay video showing Server Health Summary
- Downgrade Policy - Specifies how iLO handles requests to downgrade any of the firmware types that you can update through iLO.
- Virtual NIC functionality (disabled by default)
- Enabled One-button Secure Erase via Intelligent Provisioning
- LDAP/Directory settings configurable via Redfish
- Security Dashboard - displays the status of important security features, the Overall Security Status for the system, and the current configuration for the Security State and Server Configuration Lock features.
- Support for Gemalto SafeNet and SafeNet AT key managers
- InfoSight Optimized AHS Download
- Show NVMe wear level
- Workload performance advisor: provides server tuning recommendations to improve server performance

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\*REMOVED\* Online ROM Flash Firmware Package - HPE Integrated Lights-Out 5

Version: 1.40 (**Recommended**)

Filename: ilo5\_140.fwpkg

## **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
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- HPONCFG Linux 5.4.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

## **Fixes**

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The following issues are resolved in this version:

- User interface fixes and improvements.

- Fixed an issue where power supply status changes may be delayed.
- Device Inventory could display a parse error under Internet Explorer 11 when certain PCI Cards are installed.
- Improved shared network port out-of-band LOM resuscitation to reduce the scope and the frequency of system power-on/power-off during systems shutdown/reboot.
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- Ability to edit Maintenance Windows in Firmware & OS Software section
- Added Password Complexity feature to Security > Access Settings
- Enable/disable for overlay video showing Server Health Summary
- Downgrade Policy - Specifies how iLO handles requests to downgrade any of the firmware types that you can update through iLO.
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- Support for Gemalto SafeNet and SafeNet AT key managers
- InfoSight Optimized AHS Download
- Show NVMe wear level
- Workload performance advisor: provides server tuning recommendations to improve server performance

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Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5

Version: 2.30 (**Recommended**)

Filename: RPMS/x86\_64/firmware-ilo5-sha512-2.30-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-ilo5-sha512-2.30-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-ilo5-sha512-2.30-1.1.x86\_64\_part2.compsig

### **Important Note!**

IPv6 network communications - Dedicated network connection only  
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 IPv6 Static Address Assignment

IPv6 SLAAC Address Assignment  
IPv6 Static Route Assignment  
IPv6 Static Default Gateway Entry  
DHCPv6 Stateful Address Assignment  
DHCPv6 Stateless DNS, Domain Name, and NTP Configuration  
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Scriptable Virtual Media  
CLI/RIBCL Key Import over IPv6  
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Networking Features not supported by IPv6 in this release  
IPv6 Over Shared Network Port Connections  
IPMI  
NETBIOS-WINS  
Enterprise Secure Key Manager (ESKM) Support

## **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 3.0
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.20.0 or later
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.3.0 or later
- LOCFG v5.20.0 or later
- HPLMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

## **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adapter not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webservice to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

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Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5

Version: 2.30 (**Recommended**)

Filename: RPMS/x86\_64/firmware-ilo5-2.30-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-ilo5-2.30-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-ilo5-2.30-1.1.x86\_64\_part2.compsig

## **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI

NETBIOS-WINS  
Enterprise Secure Key Manager (ESKM) Support  
Embedded Remote Support (ERS)

## **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.2.0
- HPONCFG Linux 5.3.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

## **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adaptor not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webserver to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.



- User can now configure iLO to avoid access over an HTTP connection

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Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5

Version: 2.30 (**Recommended**)

Filename: cp043711.exe; cp043711\_part1.compsig; cp043711\_part2.compsig

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support

### **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 3.0
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.20.0 or later
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.3.0 or later
- LOCFG v5.20.0 or later
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

## **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adapter not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webservice to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

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Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5

Version: 2.30 **(Recommended)**

Filename: cp040154.exe; cp040154\_part1.compsig; cp040154\_part2.compsig

## **Important Note!**

IPv6 network communications - Dedicated network connection only  
Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration

- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation
- Networking Features not supported by IPv6 in this release
  - IPv6 Over Shared Network Port Connections
  - IPMI
  - NETBIOS-WINS
  - Enterprise Secure Key Manager (ESKM) Support
  - Embedded Remote Support (ERS)

## **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.2.0
- HPONCFG Linux 5.3.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

## **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adaptor not responsive" issue.

- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webserver to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

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Online ROM Flash Firmware Package - HPE Integrated Lights-Out 5

Version: 2.30 **(Recommended)**

Filename: ilo5\_230\_SHA512.fwpkg

**Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support

## **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 3.0
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.20.0 or later
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.3.0 or later
- LOCFG v5.20.0 or later
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

## **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adapter not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webserver to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

Version: 2.30 (**Recommended**)

Filename: ilo5\_230.fwpkg

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support
- Embedded Remote Support (ERS)

### **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.2.0
- HPONCFG Linux 5.3.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

### **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.

- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adapter not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webservice to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

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## **Firmware - Network**

[Top](#)

Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64

Version: 1.9.4 **(Optional)**

Filename: firmware-nic-is-bcm-nxe-1.9.4-1.1.x86\_64.compsig; firmware-nic-is-bcm-nxe-1.9.4-1.1.x86\_64.rpm

## **Important Note!**

HPE recommends the *Broadcom NetXtreme-E Drivers for Linux*, versions 1.10.1-216.0.169.4 or later, for use with this firmware.

## **Prerequisites**

This package requires the appropriate driver for your network adapter be installed on all Ethernet ports brought up (*ifup ethX* or *ifconfig ethX up* or *wicked ifup ethX*) before firmware can be updated.

If local system doesn't configure any network interface for the adapter that are necessary to create the network config file to bring up interface.  
 - For example in sles15sp1, To create ifcfg-ethX files under /etc/sysconfig/network/.

**Enhancements**

Initial release.

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware  
 Version: 5.11.6 **(Optional)**  
 Filename: CP043168.compsig; CP043168.zip

**Important Note!**

HPE recommends *Broadcom NetXtreme-E Drivers for VMware*, versions 216.0.54.0 or later, for use with this firmware.

This software package contains NVM Image version 216.0.333.11 with the following firmware versions:

NIC	Bootcode Version	NCSI Version	MBA Version	UEFI Version	CCM Version	RoCE Version
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter	214.4.91.1	214.4.42.1	2214.0.241.0	214.0.305.0	216.0.52.1	214.0.194.0
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter						
HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter						
HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter						
HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter						
HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter						

**Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

**Enhancements**



Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 5.2.3.0 (**Optional**)

Filename: cp043169.compsig; cp043169.exe

### **Important Note!**

HPE recommends *Broadcom NetXtreme-E Driver for Windows*, versions 216.0.143.3 or later, for use with this firmware.

This software package contains NVM Image version 216.0.333.11 with the following firmware versions:

<b>NIC</b>	<b>Bootcode Version</b>	<b>NCSI Version</b>	<b>MBA Version</b>	<b>UEFI Version</b>	<b>CCM Version</b>	<b>RoCE Version</b>
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter	214.4.91.1	214.4.42.1	2214.0.241.0	214.0.305.0	216.0.52.1	214.0.194.0
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter						
HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter						
HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter						
HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter						
HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter						

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

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HPE Blade Intel Online Firmware Upgrade Utility for Linux

Version: 1.0.14 **(Optional)**

Filename: firmware-nic-intel-bl-1.0.14-1.1.x86\_64.compsig; firmware-nic-intel-bl-1.0.14-1.1.x86\_64.rpm

### **Important Note!**

HPE recommends the *HPE Blade Intel ixgbe Drivers for Linux*, versions 5.6.4 or later, for use with this firmware.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Fixes**

This product addresses an issue where the "Firmware Image Properties," "Device Level Configuration," and "Link Speed Status" options in NIC HII menu disappear when F7 is pressed.

### **Enhancements**

Initial release.

This product now supports the following operating systems:

- Red Hat Enterprise Linux 7 Update 7
- Red Hat Enterprise Linux 8 Update 0
- SUSE Linux Enterprise Server 15 SP1

### **Supported Devices and Features**

This package supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

[BIOS \(Login Required\) - System ROM](#)

[Driver - Chipset](#)

[Driver - Lights-Out Management](#)

[Driver - Network](#)

[Driver - Storage](#)

[Driver - Storage Controller](#)

[Driver - Storage Fibre Channel and Fibre Channel Over Ethernet](#)

[Driver - System](#)

[Driver - System Management](#)

[Driver - Video](#)

[Firmware - Blade Infrastructure](#)

[Firmware - Lights-Out Management](#)

[Firmware - Network](#)

[Firmware - NVDIMM](#)

[Firmware - PCIe NVMe Storage Disk](#)

[Firmware - SAS Storage Disk](#)

[Firmware - SATA Storage Disk](#)

[Firmware - Storage Controller](#)

[Firmware - Storage Fibre Channel](#)

[Firmware - System](#)

[Software - Lights-Out Management](#)

[Software - Management](#)

[Software - Storage Controller](#)

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## **BIOS (Login Required) - System ROM**

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Online ROM Flash Component for Linux - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u38-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u38-2.36\_2020\_07\_16-1.1.x86\_64.rpm

### **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 System ROM - U38

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u39-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u39-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE Apollo 4200 Gen10/ProLiant XL420 Gen10 System ROM - U39

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u40-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u40-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HP Apollo 4510 Gen10/ProLiant XL450 Gen10 System ROM - U40

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u45-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u45-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**



None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant BL460c Gen10 (I41) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-i41-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-i41-2.36\_2020\_07\_16-1.1.x86\_64.rpm

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HP ProLiant BL460c Gen10 System ROM - I41

### **Release Version:**

2.36\_07-16-2020

### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

### **Previous Revision:**

2.34\_04-08-2020

### **Firmware Dependencies:**

None

### **Enhancements/New Features:**

None

### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

## **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

## **Fixes**

### **Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u31-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u31-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

Filename: RPMS/x86\_64/firmware-system-u43-2.18\_2020\_06\_24-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u43-2.18\_2020\_06\_24-1.1.x86\_64.rpm

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HP ProLiant DL20 Gen10 System ROM - U43

#### **Release Version:**

2.18\_06-24-2020

#### **Last Recommended or Critical Revision:**

2.16\_05-25-2020

#### **Previous Revision:**

2.16\_05-25-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

#### **Known Issues:**

None

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

## **Fixes**

### **Important Notes:**

None

### **Firmware Dependencies:**

None

### **Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant DL325 Gen10 (A41) Servers

Version: 2.42\_07-17-2020 (**Recommended**)

Filename: RPMS/x86\_64/firmware-system-a41-2.42\_2020\_07\_17-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-a41-2.42\_2020\_07\_17-1.1.x86\_64.rpm

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPE ProLiant DL325 Gen10 System ROM - A41

### **Release Version:**

2.42\_07-17-2020

**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

---

Online ROM Flash Component for Linux - HPE ProLiant DL325 Gen10 Plus (A43) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: RPMS/x86\_64/firmware-system-a43-1.30\_2020\_07\_18-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-system-a43-1.30\_2020\_07\_18-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-system-a43-1.30\_2020\_07\_18-1.1.x86\_64\_part2.compsig

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL325 Gen10 Plus System ROM - A43

**Release Version:**



1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

---

Online ROM Flash Component for Linux - HPE ProLiant DL360 Gen10 (U32) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u32-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u32-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL360 Gen10 System ROM - U32

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

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Online ROM Flash Component for Linux - HPE ProLiant DL380 Gen10 (U30) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u30-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u30-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL380 Gen10 System ROM - U30

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

Filename: RPMS/x86\_64/firmware-system-a40-2.42\_2020\_07\_17-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-a40-2.42\_2020\_07\_17-1.1.x86\_64.rpm

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HP ProLiant DL385 Gen10 System ROM - A40

#### **Release Version:**

2.42\_07-17-2020

#### **Last Recommended or Critical Revision:**

2.42\_07-17-2020

#### **Previous Revision:**

2.40\_05-11-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Linux - HPE ProLiant DL385 Gen10 Plus (A42) Servers

Version: 1.30\_07-18-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-a42-1.30\_2020\_07\_18-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-system-a42-1.30\_2020\_07\_18-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-system-a42-1.30\_2020\_07\_18-1.1.x86\_64\_part2.compsig

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL385 Gen10 Plus System ROM - A42

#### **Release Version:**

1.30\_07-18-2020

#### **Last Recommended or Critical Revision:**

1.30\_07-18-2020

#### **Previous Revision:**

1.26\_05-11-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).



Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Filename: RPMS/x86\_64/firmware-system-u34-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u34-2.36\_2020\_07\_16-1.1.x86\_64.rpm

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.34\_04-08-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

#### **Known Issues:**

None

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

## **Fixes**

### **Important Notes:**

None

### **Firmware Dependencies:**

None

### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant MicroServer Gen10 Plus (U48) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u48-2.18\_2020\_06\_24-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u48-2.18\_2020\_06\_24-1.1.x86\_64.rpm

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPE ProLiant MicroServer Gen10 Plus System ROM - U48

### **Release Version:**

2.18\_06-24-2020

### **Last Recommended or Critical Revision:**

2.16\_05-25-2020

### **Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant ML110 Gen10 (U33) Servers

Version: 2.36\_07-16-2020 (**Optional**)

Filename: RPMS/x86\_64/firmware-system-u33-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u33-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML110 Gen10 System ROM - U33

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant ML30 Gen10 (U44) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u44-2.18\_2020\_06\_24-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u44-2.18\_2020\_06\_24-1.1.x86\_64.rpm

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML30 Gen10 System ROM - U44

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

See the release document U44\_2.18\_06\_24\_2020 in Download Product Binaries page from Product Summary of the firmware product.

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Online ROM Flash Component for Linux - HPE ProLiant ML350 Gen10 (U41) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u41-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u41-2.36\_2020\_07\_16-1.1.x86\_64.rpm

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML350 Gen10 System ROM - U41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**



2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Linux - HPE ProLiant XL225n Gen10 Plus (A46) Servers

Version: 1.30\_07-18-2020 (**Recommended**)

Filename: RPMS/x86\_64/firmware-system-a46-1.30\_2020\_07\_18-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-system-a46-1.30\_2020\_07\_18-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-system-a46-1.30\_2020\_07\_18-1.1.x86\_64\_part2.compsig

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant XL225n Gen10 Plus System ROM - A46

#### **Release Version:**

1.30\_07-18-2020

#### **Last Recommended or Critical Revision:**

1.30\_07-18-2020

#### **Previous Revision:**

1.26\_05-14-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

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Online ROM Flash Component for Linux - HPE ProLiant XL230k Gen10 (U37) Server

Version: 2.36\_07-16-2020 **(Optional)**

Filename: RPMS/x86\_64/firmware-system-u37-2.36\_2020\_07\_16-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-system-u37-2.36\_2020\_07\_16-1.1.x86\_64.rpm

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant XL230k Gen10 System ROM - U37

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.34\_04-08-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044574.compsig; cp044574.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 System ROM - U38

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044674.compsig; cp044674.exe

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE Apollo 4200 Gen10/ProLiant XL420 Gen10 System ROM - U39

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044676.compsig; cp044676.exe

**Important Note!****Important Notes:**



None

**Deliverable Name:**

HPE Apollo 4510 Gen10/ProLiant XL450 Gen10 System ROM - U40

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044577.compsig; cp044577.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant BL460c Gen10 (I41) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044580.compsig; cp044580.exe

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HP ProLiant BL460c Gen10 System ROM - I41

### **Release Version:**

2.36\_07-16-2020

### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

### **Previous Revision:**

2.34\_04-08-2020

### **Firmware Dependencies:**

None

### **Enhancements/New Features:**

None

### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

## **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

## **Fixes**

### **Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044662.compsig; cp044662.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

Filename: cp044713.compsig; cp044713.exe

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL20 Gen10 System ROM - U43

#### **Release Version:**

2.18\_06-24-2020

#### **Last Recommended or Critical Revision:**

2.16\_05-25-2020

#### **Previous Revision:**

2.16\_05-25-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

#### **Known Issues:**

None

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

## **Fixes**

### **Important Notes:**

None

### **Firmware Dependencies:**

None

### **Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL325 Gen10 (A41) Servers

Version: 2.42\_07-17-2020 **(Recommended)**

Filename: cp044639.compsig; cp044639.exe

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPE ProLiant DL325 Gen10 System ROM - A41

### **Release Version:**

2.42\_07-17-2020



**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL325 Gen10 Plus (A43) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: cp041360.exe; cp041360\_part1.compsig; cp041360\_part2.compsig

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL325 Gen10 Plus System ROM - A43

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL360 Gen10 (U32) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044667.compsig; cp044667.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL360 Gen10 System ROM - U32

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

---

Online ROM Flash Component for Windows x64 - HPE ProLiant DL380 Gen10 (U30) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044661.compsig; cp044661.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL380 Gen10 System ROM - U30

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

Filename: cp044653.compsig; cp044653.exe

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant DL385 Gen10 System ROM - A40

#### **Release Version:**

2.42\_07-17-2020

#### **Last Recommended or Critical Revision:**

2.42\_07-17-2020

#### **Previous Revision:**

2.40\_05-11-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.



**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL385 Gen10 Plus (A42) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: cp041357.exe; cp041357\_part1.compsig; cp041357\_part2.compsig

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HP ProLiant DL385 Gen10 Plus System ROM - A42

#### **Release Version:**

1.30\_07-18-2020

#### **Last Recommended or Critical Revision:**

1.30\_07-18-2020

#### **Previous Revision:**

1.26\_05-11-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

#### **Known Issues:**

None

## **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

## **Fixes**

### **Important Notes:**

None

### **Firmware Dependencies:**

None

### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

### **Known Issues:**

None

## **Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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Online ROM Flash Component for Windows x64 - HPE ProLiant DL560 Gen10/DL580 Gen10 (U34) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044683.compsig; cp044683.exe

## **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant MicroServer Gen10 Plus (U48) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: cp044719.compsig; cp044719.exe

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant MicroServer Gen10 Plus System ROM - U48

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant ML110 Gen10 (U33) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044689.compsig; cp044689.exe

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML110 Gen10 System ROM - U33

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

## **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

## **Fixes**

### **Important Notes:**

None

### **Firmware Dependencies:**

None

### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant ML30 Gen10 (U44) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: cp044716.compsig; cp044716.exe

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPE ProLiant ML30 Gen10 System ROM - U44

### **Release Version:**

2.18\_06-24-2020

### **Last Recommended or Critical Revision:**



2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security

Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

See the release document U44\_2.18\_06\_24\_2020 in Download Product Binaries page from Product Summary of the firmware product.

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Online ROM Flash Component for Windows x64 - HPE ProLiant ML350 Gen10 (U41) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044686.compsig; cp044686.exe

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML350 Gen10 System ROM - U41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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Online ROM Flash Component for Windows x64 - HPE ProLiant XL225n Gen10 Plus (A46) Server

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: cp041721.exe; cp041721\_part1.compsig; cp041721\_part2.compsig

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPe ProLiant XL225n Gen10 Plus System ROM - A46

### **Release Version:**

1.30\_07-18-2020

### **Last Recommended or Critical Revision:**

1.30\_07-18-2020

### **Previous Revision:**

1.26\_05-14-2020

### **Firmware Dependencies:**

None

### **Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

### **Known Issues:**

None

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

### **Fixes**

#### **Important Notes:**

None

#### **Firmware Dependencies:**

None

#### **Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

#### **Known Issues:**

None

### **Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

---

Online ROM Flash Component for Windows x64 - HPE ProLiant XL230k Gen10 (U37) Server

Version: 2.36\_07-16-2020 **(Optional)**

Filename: cp044284.compsig; cp044284.exe

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant XL230k Gen10 System ROM - U37

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.34\_04-08-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

#### **Known Issues:**

None

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

## **Fixes**

### **Important Notes:**

None

### **Firmware Dependencies:**

None

### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

### **Known Issues:**

None

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ROM Flash Firmware Package - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U38\_2.36\_07\_16\_2020.fwpkg

## **Important Note!**

### **Important Notes:**

None

### **Deliverable Name:**

HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 System ROM - U38

### **Release Version:**

2.36\_07-16-2020

### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

### **Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None



Filename: U39\_2.36\_07\_16\_2020.fwpkg

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE Apollo 4200 Gen10/ProLiant XL420 Gen10 System ROM - U39

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.36\_06-23-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

#### **Known Issues:**

None

### **Fixes**

#### **Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U40\_2.36\_07\_16\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE Apollo 4510 Gen10/ProLiant XL450 Gen10 System ROM - U40

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U45\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant BL460c Gen10 (I41) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: I41\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant BL460c Gen10 System ROM - I41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U31\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant DL20 Gen10 (U43) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: U43\_2.18\_06\_24\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL20 Gen10 System ROM - U43

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.



Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant DL325 Gen10 (A41) Servers

Version: 2.42\_07-17-2020 **(Recommended)**

Filename: A41\_2.42\_07\_17\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HP ProLiant DL325 Gen10 System ROM - A41

**Release Version:**

2.42\_07-17-2020

**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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ROM Flash Firmware Package - HPE ProLiant DL360 Gen10 (U32) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U32\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL360 Gen10 System ROM - U32

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

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ROM Flash Firmware Package - HPE ProLiant DL380 Gen10 (U30) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U30\_2.36\_07\_16\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL380 Gen10 System ROM - U30

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Updated thermal support for the server to include the HPE NS204i-p Controller.

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

Updated thermal support for the server to include the HPE NS204i-p Controller.

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ROM Flash Firmware Package - HPE ProLiant DL385 Gen10 (A40) Servers

Version: 2.42\_07-17-2020 **(Recommended)**

Filename: A40\_2.42\_07\_17\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL385 Gen10 System ROM - A40

**Release Version:**

2.42\_07-17-2020

**Last Recommended or Critical Revision:**

2.42\_07-17-2020

**Previous Revision:**

2.40\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Address an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an extremely intermittent issue with AMD Epyc 1st Gen processors that would cause a critical error and system reset.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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ROM Flash Firmware Package - HPE ProLiant DL560 Gen10/DL580 Gen10 (U34) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U34\_2.36\_07\_16\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

**Release Version:**

2.36\_07-16-2020



**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant MicroServer Gen10 Plus (U48) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: U48\_2.18\_06\_24\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant MicroServer Gen10 Plus System ROM - U48

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant ML110 Gen10 (U33) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U33\_2.36\_07\_16\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML110 Gen10 System ROM - U33

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.34\_04-08-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant ML30 Gen10 (U44) Servers

Version: 2.18\_06-24-2020 **(Optional)**

Filename: U44\_2.18\_06\_24\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML30 Gen10 System ROM - U44

**Release Version:**

2.18\_06-24-2020

**Last Recommended or Critical Revision:**

2.16\_05-25-2020

**Previous Revision:**

2.16\_05-25-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

This revision of the System ROM includes the latest revision of the Intel microcode for Intel Pentium processors which provides mitigations for security vulnerabilities documented as CVE-2020-0543 as well as CVE-2020-0548 and CVE-2020-0549. These security vulnerabilities are documented in Intel Security Advisories INTEL-SA-00320 and INTEL-SA-00329. These issues are not unique to HPE servers. This update does not impact systems using Intel Xeon based processors.

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Enhancements**

See the release document U44\_2.18\_06\_24\_2020 in Download Product Binaries page from Product Summary of the firmware product.

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ROM Flash Firmware Package - HPE ProLiant ML350 Gen10 (U41) Servers

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U41\_2.36\_07\_16\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant ML350 Gen10 System ROM - U41

**Release Version:**

2.36\_07-16-2020

**Last Recommended or Critical Revision:**

2.32\_03-09-2020

**Previous Revision:**

2.36\_06-23-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Firmware Package - HPE ProLiant XL225n Gen10 Plus (A46) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: A46\_1.30\_07\_18\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant XL225n Gen10 Plus System ROM - A46

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-14-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.



**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

Added driver and option to enable SmartRAID SW RAID support for direct attached SATA drives.

---

ROM Flash Firmware Package - HPE ProLiant XL230k Gen10 (U37) Server

Version: 2.36\_07-16-2020 **(Optional)**

Filename: U37\_2.36\_07\_16\_2020.fwpkg

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE ProLiant XL230k Gen10 System ROM - U37

#### **Release Version:**

2.36\_07-16-2020

#### **Last Recommended or Critical Revision:**

2.32\_03-09-2020

#### **Previous Revision:**

2.34\_04-08-2020

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

None

#### **Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where the system would become unresponsive with a Red Screen or hang when booting to FreeBSD R12.1 from a USB device when in Legacy Boot Mode. This issue did not impact systems configured for UEFI Boot Mode or when booting from other types of media.

Addressed an issue where a dual port networking device may show up in the System Configuration Utilities with two Port 1 names instead of properly being represented as Port 1 and Port 2. This did not impact any functionality to the device.

**Known Issues:**

None

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ROM Flash Universal Firmware Package - HPE ProLiant DL325 Gen10 Plus (A43) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: A43\_1.30\_07\_18\_2020.fwpkg

**Important Note!****Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL325 Gen10 Plus System ROM - A43

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

Addressed an issue where the server may experience slower than expected performance when the inlet ambient temperature is greater than 30 degrees Celsius.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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ROM Flash Universal Firmware Package - HPE ProLiant DL385 Gen10 Plus (A42) Servers

Version: 1.30\_07-18-2020 **(Recommended)**

Filename: A42\_1.30\_07\_18\_2020.fwpkg

**Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE ProLiant DL385 Gen10 Plus System ROM - A42

**Release Version:**

1.30\_07-18-2020

**Last Recommended or Critical Revision:**

1.30\_07-18-2020

**Previous Revision:**

1.26\_05-11-2020

**Firmware Dependencies:**

None

**Enhancements/New Features:**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an issue where uncorrectable memory errors are seen when running memory intensive workloads with LRDIMMs.

Addressed an issue that could cause a slight degradation of performance.

Resolved an issue with NVMe hot add or removal which may result in an unrecoverable I/O error reported in the Integrated Management Log (IML).

Addressed an issue where the UEFI Shell command GetPciRom may not display information for PCI expansion device drivers.

**Known Issues:**

None

**Enhancements**

Added a new BIOS/Platform Configuration (RBSU) option for DRAM Burst Refresh Mode to provide mitigation for TRRespass and Targeted Row Refresh exploits. This option should be configured to Disabled to mitigate the TRRespass vulnerability. Setting this option to Disabled may have a minimal impact to system performance. The default setting is Enabled.

Added a new BIOS/Platform Configuration (RBSU) option in the Minimum Processor Idle Power Core C-State setting for C1 State. This option allows for power savings during certain workloads without the performance impacts of C6 State.

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**Driver - Chipset**

[Top](#)

Identifiers for AMD EPYC Processors for Windows

Version: 3.0.0.0 (B) **(Optional)**

Filename: cp040146.compsig; cp040146.exe

**Enhancements**

Add support for HPE ProLiant Gen10 Plus servers.

---

Identifiers for Intel Xeon E-2xxx Processor for Windows

Version: 10.1.18015.8142 **(Optional)**

Filename: cp039323.compsig; cp039323.exe

**Enhancements**

Add support for the HPE ProLiant MicroServer Gen10 Plus Server.

---

Identifiers for Intel Xeon Scalable Processors (First and Second Generation) for Windows

Version: 10.1.18015.8142 **(Optional)**

Filename: cp040561.compsig; cp040561.exe

## **Enhancements**

Add support for Intel devices 203A, 203D, 2078, and 207A.

---

### **Driver - Lights-Out Management**

[Top](#)

HPE iLO Native Driver for ESXi 7.0

Version: 10.6.0 (**Recommended**)

Filename: ilo-driver\_700.10.6.0.10-1OEM.700.1.0.15843807\_16345029.zip

## **Enhancements**

Support for VMware ESXi 7.0 and ESXi 7.0 U1

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### **Driver - Network**

[Top](#)

Broadcom NetXtreme-E Driver for Windows Server 2016

Version: 216.0.143.3 (**Optional**)

Filename: cp043516.compsig; cp043516.exe

## **Important Note!**

HPE recommends the firmware provided in *Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
  - HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
  - HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
  - HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
  - HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
  - HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter
-



Broadcom NetXtreme-E Driver for Windows Server 2019

Version: 216.0.143.3 **(Optional)**

Filename: cp043517.compsig; cp043517.exe

### **Important Note!**

HPE recommends the firmware provided in *Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

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HPE Blade Emulex 10/20GbE Driver for VMware vSphere 6.5

Version: 2020.03.09 **(Optional)**

Filename: cp042919.compsig; cp042919.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5*, version 2019.12.01 or later, for use with this driver.

### **Fixes**

This product corrects a vmnic flapping issue which impacts network connectivity.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter

- HPE FlexFabric 20Gb 2-port 650M Adapter
- 

HPE Blade Emulex 10/20GbE Driver for VMware vSphere 6.7

Version: 2020.03.09 **(Optional)**

Filename: cp042920.compsig; cp042920.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7*, version 2019.12.01 or later, for use with this driver.

### **Fixes**

This product corrects a vmnic flapping issue which impacts network connectivity.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

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HPE Blade Emulex 10/20GbE Driver for Windows Server 2012 R2

Version: 12.0.1195.0 **(Optional)**

Filename: cp039927.compsig; cp039927.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter

- HPE FlexFabric 20Gb 2-port 650M Adapter
- 

HPE Blade Emulex 10/20GbE Driver for Windows Server 2016

Version: 12.0.1195.0 (**Optional**)

Filename: cp039928.compsig; cp039928.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
  - HPE FlexFabric 20Gb 2-port 650M Adapter
- 

HPE Blade Emulex 10/20GbE Driver for Windows Server 2019

Version: 12.0.1195.0 (**Optional**)

Filename: cp039929.compsig; cp039929.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

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HPE Blade Emulex 10/20GbE Drivers for Red Hat Enterprise Linux 7

Version: 12.0.1261.0-1 (**Optional**)

Filename: kmod-be2net\_bl-12.0.1261.0-1.rhel7u6.x86\_64.compsig; kmod-be2net\_bl-12.0.1261.0-1.rhel7u6.x86\_64.rpm; kmod-be2net\_bl-12.0.1261.0-1.rhel7u7.x86\_64.compsig; kmod-be2net\_bl-12.0.1261.0-1.rhel7u7.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

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HPE Blade Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 12

Version: 12.0.1261.0-1 (**Optional**)

Filename: be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; be2net\_bl-kmp-default-12.0.1261.0\_k4.4.103\_6.38-1.sles12sp3MU5.x86\_64.compsig; be2net\_bl-kmp-default-12.0.1261.0\_k4.4.103\_6.38-1.sles12sp3MU5.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 15

Version: 12.0.1261.0-1 **(Optional)**

Filename: be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; be2net\_bl-kmp-default-12.0.1261.0\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

## **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

## **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.5

Version: 2019.12.20 **(Optional)**

Filename: cp039936.compsig; cp039936.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp039935.compsig; cp039935.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2012 R2

Version: 12.0.1171.0 **(Optional)**

Filename: cp039930.compsig; cp039930.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2016

Version: 12.0.1171.0 **(Optional)**

Filename: cp039931.compsig; cp039931.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2019

Version: 12.0.1171.0 **(Optional)**

Filename: cp039932.compsig; cp039932.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HP FlexFabric 20Gb 2-port 650FLB Adapter
- HP FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE iSCSI Drivers for Red Hat Enterprise Linux 7

Version: 12.0.1259.0-1 **(Optional)**

Filename: kmod-be2iscsi\_bl-12.0.1259.0-1.rhel7u6.x86\_64.compsig; kmod-be2iscsi\_bl-12.0.1259.0-1.rhel7u6.x86\_64.rpm; kmod-be2iscsi\_bl-12.0.1259.0-1.rhel7u7.x86\_64.compsig; kmod-be2iscsi\_bl-12.0.1259.0-1.rhel7u7.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 12

Version: 12.0.1259.0-1 **(Optional)**



Filename: be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.4.103\_6.38-1.sles12sp3MU5.x86\_64.compsig; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.4.103\_6.38-1.sles12sp3MU5.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 15

Version: 12.0.1259.0-1 **(Optional)**

Filename: be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; be2iscsi\_bl-kmp-default-12.0.1259.0\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Enhancements**

These drivers have been updated to maintain compatibility with the latest firmware.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter

---

HPE Blade Intel ixgbe Drivers for Red Hat Enterprise Linux 7

Version: 5.6.4-1 (B) **(Optional)**

Filename: kmod-hp-ixgbe\_bl-5.6.4-1.rhel7u6.x86\_64.compsig; kmod-hp-ixgbe\_bl-5.6.4-1.rhel7u6.x86\_64.rpm;  
kmod-hp-ixgbe\_bl-5.6.4-1.rhel7u7.x86\_64.compsig; kmod-hp-ixgbe\_bl-5.6.4-1.rhel7u7.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560M Adapter

---

HPE Blade Intel ixgbe Drivers for Red Hat Enterprise Linux 8

Version: 5.6.4-1 (B) **(Optional)**

Filename: kmod-hp-ixgbe\_bl-5.6.4-1.rhel8u0.x86\_64.compsig; kmod-hp-ixgbe\_bl-5.6.4-1.rhel8u0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

---

HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 12

Version: 5.6.4-1 (B) **(Optional)**

Filename: hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.4.73\_5-1.sles12sp3.x86\_64.compsig; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.4.73\_5-1.sles12sp3.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

---

HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 15

Version: 5.6.4-1 (B) **(Optional)**

Filename: hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-ixgbe\_bl-kmp-default-5.6.4\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

---

HPE Blade Intel ixgben Driver for VMware vSphere 6.5

Version: 2019.12.20 **(Optional)**

Filename: cp039952.compsig; cp039952.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for VMware*, version 1.0.7 or later, for use with this driver.

## **Fixes**

This product corrects a recursion termination condition so that recursion correctly ends in the case of PCIe link down.

This product addresses an issue where the ixgben driver has high CPU overhead when an SFP+ module is absent.

## **Enhancements**

Initial release.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

---

HPE Blade Intel ixgben Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp039953.compsig; cp039953.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for VMware*, version 1.0.7 or later, for use with this driver.

### **Fixes**

This product corrects a recursion termination condition so that recursion correctly ends in the case of PCIe link down.

This product addresses an issue where the ixgben driver has high CPU overhead when an SFP+ module is absent.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

---

HPE Blade Intel ixgben Driver for VMware vSphere 7.0

Version: 2020.06.01 **(Optional)**

Filename: cp041435.compsig; cp041435.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for VMware*, version 1.1.2 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
  - HPE Ethernet 10Gb 2-port 560M Adapter
- 

HPE Blade Intel ixgbevf Drivers for Red Hat Enterprise Linux 7

Version: 4.6.2-1 (B) **(Optional)**

Filename: kmod-hp-ixgbevf\_bl-4.6.2-1.rhel7u6.x86\_64.compsig; kmod-hp-ixgbevf\_bl-4.6.2-1.rhel7u6.x86\_64.rpm; kmod-hp-ixgbevf\_bl-4.6.2-1.rhel7u7.x86\_64.compsig; kmod-hp-ixgbevf\_bl-4.6.2-1.rhel7u7.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
  - HPE Ethernet 10Gb 2-port 560M Adapter
- 

HPE Blade Intel ixgbevf Drivers for Red Hat Enterprise Linux 8

Version: 4.6.2-1 (B) **(Optional)**

Filename: kmod-hp-ixgbevf\_bl-4.6.2-1.rhel8u0.x86\_64.compsig; kmod-hp-ixgbevf\_bl-4.6.2-1.rhel8u0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel ixgbevf Drivers for SUSE Linux Enterprise Server 12

Version: 4.6.2-1 (B) **(Optional)**

Filename: hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.4.73\_5-1.sles12sp3.x86\_64.compsig; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.4.73\_5-1.sles12sp3.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel ixgbevf Drivers for SUSE Linux Enterprise Server 15

Version: 4.6.2-1 (B) **(Optional)**

Filename: hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-ixgbevf\_bl-kmp-default-4.6.2\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.0.14 or later, for use with these drivers.

### **Fixes**

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

---

HPE Blade Intel ixn Driver for Windows Server 2012 R2

Version: 3.14.132.0 (**Optional**)

Filename: cp039939.compsig; cp039939.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.5 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel ixn Driver for Windows Server 2016

Version: 4.1.131.0 (**Optional**)

Filename: cp039940.compsig; cp039940.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.5 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter



- HPE Ethernet 10Gb 2-port 560M Adapter
- 

HPE Blade Intel ixn Driver for Windows Server 2019

Version: 4.1.143.0 (**Optional**)

Filename: cp039941.compsig; cp039941.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.5 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
  - HPE Ethernet 10Gb 2-port 560M Adapter
- 

HPE Blade Intel vxn Driver for Windows Server 2012 R2

Version: 1.0.16.1 (**Optional**)

Filename: cp039943.compsig; cp039943.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.5 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel vxn Driver for Windows Server 2016

Version: 2.0.210.0 **(Optional)**

Filename: cp039944.compsig; cp039944.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.5 or later, for use with this driver.

**Enhancements**

Initial release.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel vxn Driver for Windows Server 2019

Version: 2.1.138.0 **(Optional)**

Filename: cp039945.compsig; cp039945.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.5 or later, for use with this driver.

**Prerequisites**

This driver requires host driver version 4.1.143.0 or later.

**Enhancements**

Initial release.

**Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.5

Version: 2019.12.20 **(Optional)**

Filename: cp039954.compsig; cp039954.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.0.8 or later, for use with this driver.

### **Fixes**

This product addresses a VMkernel critical error (PSOD) seen during N-Port ID Virtualization (NPiV) VM power off.

This product addresses a PSOD seen with FCoE.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

---

HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp039955.compsig; cp039955.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.0.8 or later, for use with this driver.

## **Fixes**

This product addresses a VMkernel critical error (PSOD) seen during N-Port ID Virtualization (NPIV) VM power off.

This product addresses a PSOD seen with FCoE.

## **Enhancements**

Initial release.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 7.0

Version: 2020.06.01 **(Optional)**

Filename: cp041436.compsig; cp041436.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CPOxxxx.xml file.

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.1.1 or later, for use with this driver.

## **Enhancements**

Initial release.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 7

Version: 7.14.63.1-1 (B) **(Optional)**

Filename: kmod-netxtreme2\_bl-7.14.63.1-1.rhel7u6.x86\_64.compsig; kmod-netxtreme2\_bl-7.14.63.1-1.rhel7u6.x86\_64.rpm; kmod-netxtreme2\_bl-7.14.63.1-1.rhel7u7.x86\_64.compsig; kmod-netxtreme2\_bl-7.14.63.1-1.rhel7u7.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux*, version 1.0.9 or later, for use with these drivers.

### **Fixes**

These drivers correct an issue where iSCSI target discovery fails to complete when booting from SAN or a local HD.

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 8

Version: 7.14.63.1-1 (B) **(Optional)**

Filename: kmod-netxtreme2\_bl-7.14.63.1-1.rhel8u0.x86\_64.compsig; kmod-netxtreme2\_bl-7.14.63.1-1.rhel8u0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux*, version 1.0.9 or later, for use with these drivers.

### **Fixes**

These drivers correct an issue where iSCSI target discovery fails to complete when booting from SAN or a local HD.

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 12

Version: 7.14.63.1-1 (B) **(Optional)**

Filename: netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.4.73\_5-1.sles12sp3.x86\_64.compsig; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.4.73\_5-1.sles12sp3.x86\_64.rpm

## **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux*, version 1.0.9 or later, for use with these drivers.

## **Fixes**

These drivers correct an issue where iSCSI target discovery fails to complete when booting from SAN or a local HD.

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 15

Version: 7.14.63.1-1 (B) **(Optional)**

Filename: netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; netxtreme2\_bl-kmp-default-7.14.63.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux*, version 1.0.9 or later, for use with these drivers.

### **Fixes**

These drivers correct an issue where iSCSI target discovery fails to complete when booting from SAN or a local HD.

These drivers have been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for Windows Server x64 Editions

Version: 7.13.171.0 (D) **(Optional)**

Filename: cp045325.compsig; cp045325.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.0.8 or later, for use with these drivers.

### **Enhancements**

This product now privately supports Windows 10.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for Red Hat Enterprise Linux 7 Update 7

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiobl-2.11.5.13-3.rhel7u7.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.rhel7u7.x86\_64.rpm

### **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for Red Hat Enterprise Linux 8 Update 0

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiobl-2.11.5.13-3.rhel8u0.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.rhel8u0.x86\_64.rpm

### **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP4

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiobl-2.11.5.13-3.sles12sp4.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.sles12sp4.x86\_64.rpm

### **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.



## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP0

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiobl-2.11.5.13-3.sles15sp0.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.sles15sp0.x86\_64.rpm

## **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP1

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiobl-2.11.5.13-3.sles15sp1.x86\_64.compsig; iscsiuiobl-2.11.5.13-3.sles15sp1.x86\_64.rpm

## **Fixes**

This product has been recompiled with a build setting that allows SUM to identify them correctly for installation on systems they support.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Broadcom NetXtreme-E Driver for Windows Server 2012 R2

Version: 214.0.247.1 **(Optional)**

Filename: cp041785.compsig; cp041785.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.5 or later, for use with this driver.

### **Fixes**

This product correct an issue which .max SRIOV VFs are not loading when Windows hypervisor and Windows VMs are used.

This product correct an issue which VF driver won't install on some devices.

This product correct an issue which FW hangs while allocating more PF-Vports

This product correct an issue which fail bono commands right away if HW is surprise removed

This product correct an issue which few VPORTS available in SF mode when SR-IOV is used.

### **Enhancements**

This product now supports the following network adapters.

- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Driver for Windows Server 2016

Version: 216.0.143.3 **(Optional)**

Filename: cp043303.compsig; cp043303.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Fixes**

- This product correct an issue which live firmware upgrade fails when run on both interfaces of the adapter simultaneously.
- This product corrects a timeout issue which configures network connection.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Driver for Windows Server 2019

Version: 216.0.143.3 **(Optional)**

Filename: cp043304.compsig; cp043304.exe

## **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Fixes**

- This product correct an issue which live firmware upgrade fails when run on both interfaces of the adapter simultaneously.
- This product corrects a timeout issue which configures network connection.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7

Version: 1.10.1-216.0.169.4 **(Optional)**

Filename: kmod-bnxt\_en-1.10.1-216.0.169.4.rhel7u7.x86\_64.compsig; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel7u7.x86\_64.rpm; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel7u8.x86\_64.compsig; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64*, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which offload is not happening on bond(vf and virtio) interface after the fail over with VF as the active slave
- This product corrects an issue which driver loading failed on kdump kernel.
- This product corrects an issue which RoCE driver causes input-output memory management unit(IOMMU) warnings
- This product corrects an issue which RoCE Link Aggregation (RoCE LAG) when Maximum Transmission Unit(MTU) was changed.
- This product corrects an issue which Link up failed after resuming from hibernation
- This product corrects an issue which Virtual Function RoCE driver causes Virtual Machine to be rebooted

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 7 Update 8
- This product now sets Maximum Transmission Unit(MTU) default value from firmware returned value
- This product now not support user establishing connections using RDMA communication manager(CM) when Priority-based Flow Control (PFC) configured VLAN ID is 0

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8

Version: 1.10.1-216.0.169.4 (**Optional**)

Filename: kmod-bnxt\_en-1.10.1-216.0.169.4.rhel8u0.x86\_64.compsig; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel8u0.x86\_64.rpm; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel8u1.x86\_64.compsig; kmod-bnxt\_en-1.10.1-216.0.169.4.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64*, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which offload is not happening on bond(vf and virtio) interface after the fail over with VF as the active slave
- This product corrects an issue which driver loading failed on kdump kernel.
- This product corrects an issue which RoCE driver causes input-output memory management unit(IOMMU) warnings
- This product corrects an issue which RoCE Link Aggregation (RoCE LAG) when Maximum Transmission Unit(MTU) was changed.
- This product corrects an issue which Link up failed after resuming from hibernation
- This product corrects an issue which Virtual Function RoCE driver causes Virtual Machine to be rebooted
- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 8 Update 1
- This product now sets Maximum Transmission Unit(MTU) default value from firmware returned value
- This product now not support user establishing connections using RDMA communication manager(CM) when Priority-based Flow Control (PFC) configured VLAN ID is 0

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 1.10.1-216.0.169.4 **(Optional)**

Filename: bnxt\_en-kmp-default-1.10.1\_k4.12.14\_120-216.0.169.4.sles12sp5.x86\_64.compsig; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_120-216.0.169.4.sles12sp5.x86\_64.rpm; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_94.41-216.0.169.4.sles12sp4.x86\_64.compsig; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_94.41-216.0.169.4.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64*, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which offload is not happening on bond(vf and virtio) interface after the fail over with VF as the active slave
- This product corrects an issue which driver loading failed on kdump kernel.
- This product corrects an issue which RoCE driver causes input-output memory management unit(IOMMU) warnings
- This product corrects an issue which RoCE Link Aggregation (RoCE LAG) when Maximum Transmission Unit(MTU) was changed.
- This product corrects an issue which Link up failed after resuming from hibernation
- This product corrects an issue which Virtual Function RoCE driver causes Virtual Machine to be rebooted

### **Enhancements**

- This product now supports SUSE Linux Enterprise Server 12 Service Pack 5.
- This product now sets Maximum Transmission Unit(MTU) default value from firmware returned value.
- This product now not support user establishing connections using RDMA communication manager(CM) when Priority-based Flow Control (PFC) configured VLAN ID is 0

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter

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HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15

Version: 1.10.1-216.0.169.4 **(Optional)**

Filename: bnxt\_en-kmp-default-1.10.1\_k4.12.14\_195-216.0.169.4.sles15sp1.x86\_64.compsig; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_195-216.0.169.4.sles15sp1.x86\_64.rpm; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_23-216.0.169.4.sles15sp0.x86\_64.compsig; bnxt\_en-kmp-default-1.10.1\_k4.12.14\_23-216.0.169.4.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64*, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which offload is not happening on bond(vf and virtio) interface after the fail over with VF as the active slave
- This product corrects an issue which driver loading failed on kdump kernel.
- This product corrects an issue which RoCE driver causes input-output memory management unit(IOMMU) warnings
- This product corrects an issue which RoCE Link Aggregation (RoCE LAG) when Maximum Transmission Unit(MTU) was changed.
- This product corrects an issue which Link up failed after resuming from hibernation

- This product corrects an issue which Virtual Function RoCE driver causes Virtual Machine to be rebooted.
- This product corrects an issue which HPSUM selects driver for SUSE Linux Enterprise Server 15 while SPP deployment running with SUSE Linux Enterprise Server 15 Service Pack 1 platform.

### **Enhancements**

- This product now not support user establishing connections using RDMA communication manager(CM) when Priority-based Flow Control (PFC) configured VLAN ID is 0
- This product now sets Maximum Transmission Unit(MTU) default value from firmware returned value

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Drivers for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp043310.compsig; cp043310.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware*, version 5.11.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue where RDMA Ethernet Controller error description on ESXi Host.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter

- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
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HPE Broadcom NetXtreme-E Drivers for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp043311.compsig; cp043311.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware*, version 5.11.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue where RDMA Ethernet Controller error description on ESXi Host.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
  - HPE Ethernet 10Gb 2-port 535T Adapter
  - HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
  - HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
  - HPE Ethernet 10Gb 2-port 537SFP+ Adapter
  - HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
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HPE Broadcom NetXtreme-E Drivers for VMware vSphere 7.0

Version: 2020.09.14 **(Optional)**

Filename: cp043308.compsig; cp043308.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware*, version 5.11.0 or later, for use with this driver.

### **Enhancements**



Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 7 Update 7

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-rhel7u7.x86\_64.compsig; libbnxt\_re-216.0.88.3-rhel7u7.x86\_64.rpm; README

## **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.*

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

## **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot.
- This product corrects an issue which errors/performance may degrade after hot plug operation is performed.

## **Enhancements**

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled.
- This product now supports rdma-core v22.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter

- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
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HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 7 Update 8

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-rhel7u8.x86\_64.compsig; libbnxt\_re-216.0.88.3-rhel7u8.x86\_64.rpm; README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.*

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrades after hot plug operation is performed

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
  - HPE Ethernet 10Gb 2-port 535T Adapter
  - HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
  - HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
  - HPE Ethernet 10Gb 2-port 537SFP+ Adapter
  - HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
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HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 8

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-rhel8u0.x86\_64.compsig; libbnxt\_re-216.0.88.3-rhel8u0.x86\_64.rpm; README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.*

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrade after hot plug operation is performed

### **Enhancements**

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled
- This product now supports rdma-core v22

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 8 Update 1.

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-rhel8u1.x86\_64.compsig; libbnxt\_re-216.0.88.3-rhel8u1.x86\_64.rpm; README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.*

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot

- This product corrects an issue which errors/performance may degrades after hot plug operation is performed

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 12 SP4

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-sles12sp4.x86\_64.compsig; libbnxt\_re-216.0.88.3-sles12sp4.x86\_64.rpm;  
README

## **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12*, version 1.10.0-214.0.259.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

## **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrades after hot plug operation is performed

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter

- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
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HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 12 SP5

Version: 216.0.88.3 **(Optional)**

Filename: libbnext\_re-216.0.88.3-sles12sp5.x86\_64.compsig; libbnext\_re-216.0.88.3-sles12sp5.x86\_64.rpm;  
README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12*, version 1.10.1-216.0.153.0 or later, must be installed before installing this product.

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot
- This product corrects an issue which errors/performance may degrade after hot plug operation is performed

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
  - HPE Ethernet 10Gb 2-port 535T Adapter
  - HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
  - HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
  - HPE Ethernet 10Gb 2-port 537SFP+ Adapter
  - HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
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HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 15

Version: 216.0.88.3 **(Optional)**

Filename: libbnext\_re-216.0.88.3-sles15sp0.x86\_64.compsig; libbnext\_re-216.0.88.3-sles15sp0.x86\_64.rpm;  
README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15*, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot.
- This product corrects an issue which errors/performance may degrade after hot plug operation is performed.

### **Enhancements**

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled.
- This product now supports rdma-core v22.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 15 SP1

Version: 216.0.88.3 **(Optional)**

Filename: libbnxt\_re-216.0.88.3-sles15sp1.x86\_64.compsig; libbnxt\_re-216.0.88.3-sles15sp1.x86\_64.rpm;  
README

### **Prerequisites**

*HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15*, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverbs and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media..

### **Fixes**

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot

- This product corrects an issue which errors/performance may degrade after hot plug operation is performed
- This product corrects an issue which HPSUM selects driver for SUSE Linux Enterprise Server 15 while SPP deployment running with SUSE Linux Enterprise Server 15 Service Pack 1 platform.

### **Enhancements**

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled
- This product now supports rdma-core v22

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NX1 1Gb Driver for Windows Server x64 Editions

Version: 214.0.0.4 (**Optional**)

Filename: cp043306.compsig; cp043306.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Broadcom NX1 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product corrects an issue which system crashed while enable/disable cycle when running along with certain video driver.
- This product corrects an issue which the Gets statistics from a network adapter command (Get-NetAdapterStatistics) does not work with WS2019.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HP Ethernet 1Gb 2-port 330i Adapter (22BD)
- HP Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HP Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom tg3 Ethernet Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 3.138b-1 **(Optional)**

Filename: kmod-tg3-3.138b-1.rhel7u7.x86\_64.compsig; kmod-tg3-3.138b-1.rhel7u7.x86\_64.rpm; kmod-tg3-3.138b-1.rhel7u8.x86\_64.compsig; kmod-tg3-3.138b-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86\_64*, version 2.25.1 or later, for use with these drivers.

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 330i Adapter (22BD)
- HP Ethernet 1Gb 4-port 331i Adapter (22BE)
- HP Ethernet 1Gb 4-port 331FLR Adapter
- HP Ethernet 1Gb 4-port 331T Adapter
- HP Ethernet 1Gb 2-port 332i Adapter (22E8)
- HP Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom tg3 Ethernet Drivers for Red Hat Enterprise Linux 8

Version: 3.138b-1 **(Optional)**

Filename: kmod-tg3-3.138b-1.rhel8u0.x86\_64.compsig; kmod-tg3-3.138b-1.rhel8u0.x86\_64.rpm; kmod-tg3-3.138b-1.rhel8u1.x86\_64.compsig; kmod-tg3-3.138b-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86\_64*, version 2.25.1 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product now supports Red Hat Enterprise Linux 8 Update 1.



## **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom tg3 Ethernet Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 3.138b-2 (**Optional**)

Filename: README; tg3-kmp-default-3.138b\_k4.12.14\_120-2.sles12sp5.x86\_64.compsig; tg3-kmp-default-3.138b\_k4.12.14\_120-2.sles12sp5.x86\_64.rpm; tg3-kmp-default-3.138b\_k4.12.14\_94.41-2.sles12sp4.x86\_64.compsig; tg3-kmp-default-3.138b\_k4.12.14\_94.41-2.sles12sp4.x86\_64.rpm

## **Important Note!**

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86\_64*, version 2.25.1 or later, for use with these drivers.

## **Enhancements**

This product now supports SUSE Linux Enterprise Server 12 SP5.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 330i Adapter (22BD)
- HP Ethernet 1Gb 4-port 331i Adapter (22BE)
- HP Ethernet 1Gb 4-port 331FLR Adapter
- HP Ethernet 1Gb 4-port 331T Adapter
- HP Ethernet 1Gb 2-port 332i Adapter (22E8)
- HP Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom tg3 Ethernet Drivers for SUSE Linux Enterprise Server 15

Version: 3.138a-2 (**Optional**)

Filename: README; tg3-kmp-default-3.138a\_k4.12.14\_195-2.sles15sp1.x86\_64.compsig; tg3-kmp-default-3.138a\_k4.12.14\_195-2.sles15sp1.x86\_64.rpm; tg3-kmp-default-3.138a\_k4.12.14\_23-2.sles15sp0.x86\_64.compsig; tg3-kmp-default-3.138a\_k4.12.14\_23-2.sles15sp0.x86\_64.rpm

## **Important Note!**

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86\_64*, version 2.25.1 or later, for use with these drivers.

### **Fixes**

This product fixes an issue where the SLES15 driver be selected by HPSUM deployment for SLES15sp1 OS  
This product now exports vendor and packager tag in RPM metadata  
This product addresses the issue where the SLES15 component always be selected by HPSUM deployment

### **Enhancements**

This product now supports sles15 sp1

### **Supported Devices and Features**

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

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HPE Emulex 10/20 GbE Driver for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp044545.compsig; cp044545.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp044546.compsig; cp044546.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE Driver for Windows Server 2012 R2

Version: 12.0.1195.0 (C) **(Optional)**

Filename: cp044540.compsig; cp044540.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE Driver for Windows Server 2016

Version: 12.0.1195.0 (C) **(Optional)**

Filename: cp044541.compsig; cp044541.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE Driver for Windows Server 2019

Version: 12.0.1195.0 (C) **(Optional)**

Filename: cp044542.compsig; cp044542.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2012 R2

Version: 12.0.1171.0 (C) **(Optional)**

Filename: cp044560.compsig; cp044560.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2016

Version: 12.0.1171.0 (C) **(Optional)**

Filename: cp044561.compsig; cp044561.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2019

Version: 12.0.1171.0 (C) **(Optional)**

Filename: cp044562.compsig; cp044562.exe

**Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Windows (x64)*, version 2019.03.01 or later, for use with this driver.

**Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 12.0.1280.17-1 (B) **(Optional)**

Filename: kmod-be2net-12.0.1280.17-1.rhel7u7.x86\_64.compsig; kmod-be2net-12.0.1280.17-1.rhel7u7.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE Drivers for Red Hat Enterprise Linux 8

Version: 12.0.1280.17-1 (B) **(Optional)**

Filename: kmod-be2net-12.0.1280.17-1.rhel8u0.x86\_64.compsig; kmod-be2net-12.0.1280.17-1.rhel8u0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.03.01 for use with these drivers.

## **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 12.0.1280.17-1 (B) **(Optional)**

Filename: be2net-kmp-default-12.0.1280.17\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; be2net-kmp-default-12.0.1280.17\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

## **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

## **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 15

Version: 12.0.1280.17-1 (B) **(Optional)**



Filename: be2net-kmp-default-12.0.1280.17\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; be2net-kmp-default-12.0.1280.17\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; be2net-kmp-default-12.0.1280.17\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; be2net-kmp-default-12.0.1280.17\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.5

Version: 2020.09.14 (**Optional**)

Filename: cp044543.compsig; cp044543.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.7

Version: 2020.09.14 (**Optional**)

Filename: cp044544.compsig; cp044544.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7*, version 2019.03.01 or later, for use with this driver.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 12.0.1259.0-1 (B) (**Optional**)

Filename: kmod-be2iscsi-12.0.1259.0-1.rhel7u7.x86\_64.compsig; kmod-be2iscsi-12.0.1259.0-1.rhel7u7.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

## **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Drivers for Red Hat Enterprise Linux 8

Version: 12.0.1259.0-1 (B) **(Optional)**

Filename: kmod-be2iscsi-12.0.1259.0-1.rhel8u0.x86\_64.compsig; kmod-be2iscsi-12.0.1259.0-1.rhel8u0.x86\_64.rpm; README

## **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.03.01 for use with these drivers.

## **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 12.0.1259.0-1 (B) **(Optional)**

Filename: be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 15

Version: 12.0.1259.0-1 (B) **(Optional)**

Filename: be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; be2iscsi-kmp-default-12.0.1259.0\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2019.12.01 for use with these drivers.

### **Enhancements**

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

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HPE Intel E1R Driver for Windows Server 2012 R2

Version: 12.14.8.1 **(Optional)**

Filename: cp040854.compsig; cp040854.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This driver supports the following HPE Intel E1R network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366T Adapter
- HP Ethernet 1Gb 2-port 367i Adapter

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HPE Intel E1R Driver for Windows Server 2016

Version: 12.15.184.7 **(Optional)**

Filename: cp040879.compsig; cp040879.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Fixes**

This product correct an issue which override and copy constructor to MSIX\_AFFINITY\_MANAGEMENT class to eliminate KW issues with double freeing memory.  
This product correct an issue which fixed e1r compile to exclude Nahum Icelake defines.  
This product correct an issue which fixed conversion of timestamp into 64bit value.  
This product correct an issue which fix for NDIS Miniport Kernel Pointer Leakage

### **Enhancements**

This product now remove supports Synergy and Blade Server.

This product add Wrapping and fix Support To Cometlake,and added thermal sensor support for fiber NIC.

### **Supported Devices and Features**

This driver supports the following HPE Intel E1R network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366T Adapter

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HPE Intel E1R Driver for Windows Server 2019

Version: 12.18.9.1 **(Optional)**

Filename: cp040874.compsig; cp040874.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Fixes**

This product correct an issue which override and copy constructor to MSIX\_AFFINITY\_MANAGEMENT class to eliminate KW issues with double freeing memory.  
This product correct an issue which fixed e1r compile to exclude Nahum Icelake defines.  
This product correct an issue which fixed conversion of timestamp into 64bit value.  
This product correct an issue which fix for NDIS Miniport Kernel Pointer Leakage

### **Enhancements**

This product now remove supports Synergy and Blade Server.

This product add Wrapping and fix Support To Cometlake,and added thermal sensor support for fiber NIC.

### **Supported Devices and Features**

This driver supports the following HPE Intel E1R network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366T Adapter

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HPE Intel i40e Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 2.11.27-1 (**Optional**)

Filename: kmod-hp-i40e-2.11.27-1.rhel7u7.x86\_64.compsig; kmod-hp-i40e-2.11.27-1.rhel7u7.x86\_64.rpm;  
kmod-hp-i40e-2.11.27-1.rhel7u8.x86\_64.compsig; kmod-hp-i40e-2.11.27-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS
- This product corrects an issue which querying DCB configuration data failed on Intel Carlsville controller if driver probe or set at 2.5/5G speed.

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40e Drivers for Red Hat Enterprise Linux 8

Version: 2.11.27-1 (**Optional**)

Filename: kmod-hp-i40e-2.11.27-1.rhel8u0.x86\_64.compsig; kmod-hp-i40e-2.11.27-1.rhel8u0.x86\_64.rpm;  
kmod-hp-i40e-2.11.27-1.rhel8u1.x86\_64.compsig; kmod-hp-i40e-2.11.27-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS.
- This product corrects an issue which querying DCB configuration data failed on Intel Carlsville controller if driver probe or set at 2.5/5G speed.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40e Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 2.11.27-1 (**Optional**)

Filename: hp-i40e-kmp-default-2.11.27\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-i40e-kmp-default-2.11.27\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-i40e-kmp-default-2.11.27\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS
- This product corrects an issue which querying DCB configuration data failed on Intel Carlsville controller if driver probe or set at 2.5/5G speed.

### **Supported Devices and Features**



This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40e Drivers for SUSE Linux Enterprise Server 15

Version: 2.11.27-1 (**Optional**)

Filename: hp-i40e-kmp-default-2.11.27\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-i40e-kmp-default-2.11.27\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-i40e-kmp-default-2.11.27\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS
- This product corrects an issue which querying DCB configuration data failed on Intel Carlsville controller if driver probe or set at 2.5/5G speed.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40ea Driver for Windows Server 2012 R2

Version: 1.12.171.0 (**Optional**)

Filename: cp043119.compsig; cp043119.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

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HPE Intel i40ea Driver for Windows Server 2016

Version: 1.12.171.0 **(Optional)**

Filename: cp043120.compsig; cp043120.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

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HPE Intel i40ea Driver for Windows Server 2019

Version: 1.12.171.0 **(Optional)**

Filename: cp043121.compsig; cp043121.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

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HPE Intel i40eb Driver for Windows Server 2012 R2

Version: 1.12.171.0 **(Optional)**

Filename: cp043237.compsig; cp043237.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40eb Driver for Windows Server 2016

Version: 1.12.171.0 (**Optional**)

Filename: cp043236.compsig; cp043236.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40eb Driver for Windows Server 2019

Version: 1.12.171.0 **(Optional)**

Filename: cp043238.compsig; cp043238.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) (0x133) occurred with Remote Access Role service during shutdown.
- This product correct an issue which system crashed after few modifying Intel® Advanced Network Services (Intel® ans) Team type with tagged Virtual Local Area Network (VLAN).

### **Enhancements**

This product added implementation of Advanced Link Speed functionality in Physical Function (PF) driver that are supports dynamic link speed changes.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel i40en Driver for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp042675.compsig; cp042675.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue which PCI device information passing to intnetcli Command-Line Interface (Intel® ESXCLI Plug-In Managing tool ).

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel i40en Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp042676.compsig; cp042676.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue which PCI device information passing to intnetcli Command-Line Interface (Intel® ESXCLI Plug-In Managing tool ).

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel i40en Driver for VMware vSphere 7.0

Version: 2020.05.29 **(Optional)**

Filename: cp041295.compsig; cp041295.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.50 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Driver for Windows Server 2012 R2

Version: 1.7.119.0 **(Optional)**

Filename: cp040867.compsig; cp040867.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 1.11.101.0 or later.

### **Enhancements**

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy Intel iavf Driver for Windows Server 2012 R2](#).

### **Supported Devices and Features**

This product supports the following HPE Intel i40ea network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

This product supports the following HPE Intel i40eb network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Driver for Windows Server 2016

Version: 1.7.119.0 (**Optional**)

Filename: cp040868.compsig; cp040868.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 1.11.101.0 or later.

### **Enhancements**

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy Intel iavf Driver for Windows Server 2016](#).

### **Supported Devices and Features**

This product supports the following HPE Intel i40ea network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter



This product supports the following HPE Intel i40eb network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Driver for Windows Server 2019

Version: 1.7.119.0 (**Optional**)

Filename: cp040869.compsig; cp040869.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 1.11.101.0 or later.

### **Enhancements**

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy Intel iavf Driver for Windows Server 2019](#).

### **Supported Devices and Features**

This product supports the following HPE Intel i40ea network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

This product supports the following HPE Intel i40eb network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 3.9.5-1 (**Optional**)

Filename: kmod-hp-iavf-3.9.5-1.rhel7u7.x86\_64.compsig; kmod-hp-iavf-3.9.5-1.rhel7u7.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel7u8.x86\_64.compsig; kmod-hp-iavf-3.9.5-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel iavf Drivers for Red Hat Enterprise Linux 8

Version: 3.9.5-1 (**Optional**)

Filename: kmod-hp-iavf-3.9.5-1.rhel8u0.x86\_64.compsig; kmod-hp-iavf-3.9.5-1.rhel8u0.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel8u1.x86\_64.compsig; kmod-hp-iavf-3.9.5-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter

- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel iavf Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 3.9.5-1 **(Optional)**

Filename: hp-iavf-kmp-default-3.9.5\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-iavf-kmp-default-3.9.5\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-iavf-kmp-default-3.9.5\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel iavf Drivers for SUSE Linux Enterprise Server 15

Version: 3.9.5-1 **(Optional)**

Filename: hp-iavf-kmp-default-3.9.5\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-iavf-kmp-default-3.9.5\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-iavf-kmp-default-3.9.5\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 563i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

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HPE Intel igb Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 6.2.3-1 (**Optional**)

Filename: kmod-hp-igb-6.2.3-1.rhel7u7.x86\_64.compsig; kmod-hp-igb-6.2.3-1.rhel7u7.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel7u8.x86\_64.compsig; kmod-hp-igb-6.2.3-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8

### **Supported Devices and Features**

These drivers support the following Intel network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igb Drivers for Red Hat Enterprise Linux 8

Version: 6.2.3-1 (**Optional**)

Filename: kmod-hp-igb-6.2.3-1.rhel8u0.x86\_64.compsig; kmod-hp-igb-6.2.3-1.rhel8u0.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel8u1.x86\_64.compsig; kmod-hp-igb-6.2.3-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

These drivers support the following Intel network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igb Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 6.2.3-1 (**Optional**)

Filename: hp-igb-kmp-default-6.2.3\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-igb-kmp-default-6.2.3\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-igb-kmp-default-6.2.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

These drivers support the following Intel network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter

- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igb Drivers for SUSE Linux Enterprise Server 15

Version: 6.2.3-1 **(Optional)**

Filename: hp-igb-kmp-default-6.2.3\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-igb-kmp-default-6.2.3\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-igb-kmp-default-6.2.3\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Supported Devices and Features**

These drivers support the following Intel network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igbn Driver for VMware vSphere 6.5

Version: 2019.12.20 **(Optional)**

Filename: cp040825.compsig; cp040825.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.0 or later, for use with this driver.

### **Fixes**

This product addresses an issue where race condition during NIC adapter reset.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter

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HPE Intel igbn Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp040829.compsig; cp040829.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.0 or later, for use with this driver.

### **Fixes**

This product addresses an issue where race condition during NIC adapter reset.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board

- HP Ethernet 1Gb 4-port 366T Adapter
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HPE Intel igbn Driver for VMware vSphere 7.0

Version: 2020.05.29 **(Optional)**

Filename: cp041296.compsig; cp041296.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.50 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 1Gb 2-port 361i Adapter
  - HP Ethernet 1Gb 2-port 361T Adapter
  - HP Ethernet 1Gb 2-port 363i Adapter
  - HP Ethernet 1Gb 4-port 366FLR Adapter
  - HP Ethernet 1Gb 4-port 366i Adapter
  - HPE Ethernet 1Gb 4-port 366i Communication Board
  - HP Ethernet 1Gb 4-port 366T Adapter
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HPE Intel ixgbe Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 5.7.1-1 **(Optional)**

Filename: kmod-hp-ixgbe-5.7.1-1.rhel7u7.x86\_64.compsig; kmod-hp-ixgbe-5.7.1-1.rhel7u7.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel7u8.x86\_64.compsig; kmod-hp-ixgbe-5.7.1-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**



This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 7 Update 8
- This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbe Drivers for Red Hat Enterprise Linux 8

Version: 5.7.1-1 (**Optional**)

Filename: kmod-hp-ixgbe-5.7.1-1.rhel8u0.x86\_64.compsig; kmod-hp-ixgbe-5.7.1-1.rhel8u0.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel8u1.x86\_64.compsig; kmod-hp-ixgbe-5.7.1-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbe Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 5.7.1-1 **(Optional)**

Filename: hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbe Drivers for SUSE Linux Enterprise Server 15

Version: 5.7.1-1 **(Optional)**

Filename: hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

## **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

## **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

## **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgben Driver for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp042679.compsig; cp042679.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

## **Fixes**

This product corrects an issue which notification from Link Partner when executed Link Flow Control settings.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
  - HP Ethernet 10Gb 2-port 560SFP+ Adapter
  - HPE Ethernet 10Gb 2-port 562FLR-T Adapter
  - HPE Ethernet 10Gb 2-port 562T Adapter
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HPE Intel ixgben Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp042680.compsig; cp042680.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue which notification from Link Partner when executed Link Flow Control settings.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgben Driver for VMware vSphere 7.0

Version: 2020.05.29 **(Optional)**

Filename: cp041297.compsig; cp041297.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.50 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbevf Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 4.7.1-1 (**Optional**)

Filename: kmod-hp-ixgbevf-4.7.1-1.rhel7u7.x86\_64.compsig; kmod-hp-ixgbevf-4.7.1-1.rhel7u7.x86\_64.rpm; kmod-hp-ixgbevf-4.7.1-1.rhel7u8.x86\_64.compsig; kmod-hp-ixgbevf-4.7.1-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 7 Update 8
- This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbevf Drivers for Red Hat Enterprise Linux 8

Version: 4.7.1-1 (**Optional**)

Filename: kmod-hp-ixgbevf-4.7.1-1.rhel8u0.x86\_64.compsig; kmod-hp-ixgbevf-4.7.1-1.rhel8u0.x86\_64.rpm; kmod-hp-ixgbevf-4.7.1-1.rhel8u1.x86\_64.compsig; kmod-hp-ixgbevf-4.7.1-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbev Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 4.7.1-1 **(Optional)**

Filename: hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter

- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixgbevf Drivers for SUSE Linux Enterprise Server 15

Version: 4.7.1-1 **(Optional)**

Filename: hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.compsig; hp-ixgbevf-kmp-default-4.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86\_64*, version 1.20.0 or later, for use with these drivers.

### **Fixes**

This product corrects an issue which errata kernel loads inbox driver instead of this component after booting into OS

### **Enhancements**

This product update Linux kernel documentation and Configure IRQ affinity tools

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLB Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixn Driver for Windows Server 2012 R2

Version: 3.14.214.0 **(Optional)**

Filename: cp042027.compsig; cp042027.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Enhancements**

This product contains Windows system update supported improvements.

## **Supported Devices and Features**

This component supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

---

HPE Intel ixn Driver for Windows Server 2016

Version: 4.1.199.0 (**Optional**)

Filename: cp042028.compsig; cp042028.exe

## **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Enhancements**

This product contains Windows system update supported improvements.

## **Supported Devices and Features**

This component supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel ixn Driver for Windows Server 2019

Version: 4.1.197.0 (**Optional**)

Filename: cp042029.compsig; cp042029.exe

## **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Enhancements**



This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This component supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel ixs Driver for Windows Server 2012 R2

Version: 3.14.214.0 **(Optional)**

Filename: cp042030.compsig; cp042030.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixs Driver for Windows Server 2016

Version: 4.1.199.0 **(Optional)**

Filename: cp042031.compsig; cp042031.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Enhancements**

This product contains Windows system update supported improvements.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel ixS Driver for Windows Server 2019

Version: 4.1.197.0 (**Optional**)

Filename: cp042032.compsig; cp042032.exe

## **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Enhancements**

This product contains Windows system update supported improvements.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel vxn Driver for Windows Server 2012 R2

Version: 1.2.199.0 (**Optional**)

Filename: cp042033.compsig; cp042033.exe

## **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

## **Prerequisites**

This driver requires host driver version 3.14.214.0 or later.

## **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

This component supports the following HPE Intel ixt network adapters:

- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter

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HPE Intel vxn Driver for Windows Server 2016

Version: 2.1.192.0 **(Optional)**

Filename: cp042034.compsig; cp042034.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 4.1.199.0 or later.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel vxn Driver for Windows Server 2019

Version: 2.1.191.0 **(Optional)**

Filename: cp042035.compsig; cp042035.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 4.1.179.0 or later.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

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HPE Intel vxs Driver for Windows Server 2012 R2

Version: 1.2.199.0 (**Optional**)

Filename: cp042036.compsig; cp042036.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 3.14.214.0 or later.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel vxs Driver for Windows Server 2016

Version: 2.1.192.0 **(Optional)**

Filename: cp042037.compsig; cp042037.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 4.1.199.0 or later.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Intel vxs Driver for Windows Server 2019

Version: 2.1.191.0 **(Optional)**

Filename: cp042038.compsig; cp042038.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with this driver.

### **Prerequisites**

This driver requires host driver version 4.1.179.0 or later.

### **Enhancements**

This product contains Windows system update supported improvements.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter

- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2012 R2

Version: 2.40.22511.0 **(Optional)**

Filename: cp042797.compsig; cp042797.exe

### **Fixes**

1. This product correct an issue which caused memory corruption in case the OS provided continues memory across multiple pages that did not start with offset zero on aligned memory address.
2. This product correct an issue that prevented the device from being updated with the new driver because the driver was already in the driver store.
3. This product correct an issue which occasionally prevented the VF counters from being displayed correctly in perfmon.
4. This product correct an issue which caused the driver to report zero link speeds supported when working with firmware older than 1x.18.0240.
5. This product correct an issue which fixed a memory leak issue in error flow during driver initialization.

### **Enhancements**

1. The number of VMs is limited to 124 VMs with VMQ(Virtual Machine Queue) mode.
2. The driver supports up to 200 vPorts in ConnectX-4 Lx and 254 vPorts in ConnectX-5 with SRIOV(Single Root I/O Virtualization).

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2016

Version: 2.40.22511.0 **(Optional)**

Filename: cp042798.compsig; cp042798.exe

### **Fixes**

1. This product correct an issue which caused memory corruption in case the OS provided continues memory across multiple pages that did not start with offset zero on aligned memory address.

2. This product correct an issue that prevented the device from being updated with the new driver because the driver was already in the driver store.
3. This product correct an issue which occasionally prevented the VF counters from being displayed correctly in perfmon.
4. This product correct an issue which caused the driver to report zero link speeds supported when working with firmware older than 1x.18.0240.
5. This product correct an issue which fixed a memory leak issue in error flow during driver initialization.

### **Enhancements**

1. The number of VMs is limited to 124 VMs with VMQ(Virtual Machine Queue) mode.
2. The driver supports up to 200 vPorts in ConnectX-4 Lx and 254 vPorts in ConnectX-5 with SRIOV(Single Root I/O Virtualization).

### **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2019

Version: 2.40.22511.0 **(Optional)**

Filename: cp042799.compsig; cp042799.exe

### **Fixes**

1. This product correct an issue which caused memory corruption in case the OS provided continues memory across multiple pages that did not start with offset zero on aligned memory address.
2. This product correct an issue that prevented the device from being updated with the new driver because the driver was already in the driver store.
3. This product correct an issue which occasionally prevented the VF counters from being displayed correctly in perfmon.
4. This product correct an issue which caused the driver to report zero link speeds supported when working with firmware older than 1x.18.0240.
5. This product correct an issue which fixed a memory leak issue in error flow during driver initialization.

### **Enhancements**

1. The number of VMs is limited to 124 VMs with VMQ(Virtual Machine Queue) mode.
2. The driver supports up to 200 vPorts in ConnectX-4 Lx and 254 vPorts in ConnectX-5 with SRIOV(Single Root I/O Virtualization).

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 7 Update 7 (x86\_64)

Version: 4.14 **(Optional)**

Filename: kmod-kernel-mft-mlnx-4.14.0-1.rhel7u7.x86\_64.compsig; kmod-kernel-mft-mlnx-4.14.0-1.rhel7u7.x86\_64.rpm; mft-4.14.0-105.rhel7u7.x86\_64.compsig; mft-4.14.0-105.rhel7u7.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 7 (x86\_64) supported by this binary rpm are: 3.10.0-1062.el7 - (x86\_64) and future update kernels.

---

HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 7 Update 8 (x86\_64)

Version: 4.14 **(Optional)**

Filename: kmod-kernel-mft-mlnx-4.14.0-1.rhel7u8.x86\_64.compsig; kmod-kernel-mft-mlnx-4.14.0-1.rhel7u8.x86\_64.rpm; mft-4.14.0-105.rhel7u8.x86\_64.compsig; mft-4.14.0-105.rhel7u8.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.



## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86\_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86\_64) and future update kernels.

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HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 8 Update 1 (x86\_64)

Version: 4.14 **(Optional)**

Filename: kmod-kernel-mft-mlnx-4.14.0-1.rhel8u1.x86\_64.compsig; kmod-kernel-mft-mlnx-4.14.0-1.rhel8u1.x86\_64.rpm; mft-4.14.0-105.rhel8u1.x86\_64.compsig; mft-4.14.0-105.rhel8u1.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1 (x86\_64) supported by this binary rpm are: 4.18.0-147.el8 - (x86\_64) and future update kernels.

---

HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 8 Update 2 (x86\_64)

Version: 4.14 **(Optional)**

Filename: kmod-kernel-mft-mlnx-4.14.0-1.rhel8u2.x86\_64.compsig; kmod-kernel-mft-mlnx-4.14.0-1.rhel8u2.x86\_64.rpm; mft-4.14.0-105.2.rhel8u2.x86\_64.compsig; mft-4.14.0-105.2.rhel8u2.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

## **Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1 (x86\_64) supported by this binary rpm are:  
4.18.0-147.el8 - (x86\_64) and future update kernels.

---

HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 12 SP4 (AMD64/EM64T)

Version: 4.14 **(Optional)**

Filename: kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; mft-4.14.0-105.sles12sp4.x86\_64.compsig; mft-4.14.0-105.sles12sp4.x86\_64.rpm

**Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

**Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

**Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are:  
4.12.14-94.41-default and future update kernels.

---

HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 12 SP5 (AMD64/EM64T)

Version: 4.14 **(Optional)**

Filename: kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; mft-4.14.0-105.1.sles12sp5.x86\_64.compsig; mft-4.14.0-105.1.sles12sp5.x86\_64.rpm

**Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

**Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

**Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are:  
4.12.14-120-default and future update kernels.

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HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 15 SP1 (AMD64/EM64T)

Version: 4.14 **(Optional)**

Filename: kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; kernel-mft-mlnx-kmp-default-4.14.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; mft-4.14.0-105.sles15sp1.x86\_64.compsig; mft-4.14.0-105.sles15sp1.x86\_64.rpm

### **Fixes**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Enhancements**

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

### **Supported Devices and Features**

#### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-195-default and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 7 Update 7 (x86\_64)

Version: 5.0 **(Recommended)**

Filename: kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u7.x86\_64.compsig; kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u7.x86\_64.rpm; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u7.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u7.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

### **The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perfest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

## **Enhancements**

### **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

#### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 7 (x86\_64) supported by this binary rpm are: 3.10.0-1062.el7 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 7 Update 8 (x86\_64)

Version: 5.0 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u8.x86\_64.compsig; kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u8.x86\_64.rpm; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u8.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel7u8.x86\_64.rpm

## **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

**The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

## **Enhancements**

**Changes and new features in HPE Mellanox RoCE driver version 5.0:**

**For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86\_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 8 Update 1 (x86\_64)

Version: 5.0 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u1.x86\_64.compsig; kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u1.x86\_64.rpm; mlnx-ofa\_kernel-5.0-

OFED.5.0.2.1.8.1.g5f67178.rhel8u1.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u1.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) mads intensively ,the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

### **Enhancements**

**Changes and new features in HPE Mellanox RoCE driver version 5.0:**

**For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

### **Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1(x86\_64) supported by this binary rpm are:  
4.18.0-147.el8 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 8 Update 2 (x86\_64)

Version: 5.0 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u2.x86\_64.compsig; kmod-mlnx-  
ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.rhel8u2.x86\_64.rpm; mlnx-ofa\_kernel-5.0-  
OFED.5.0.2.1.8.1.g5f67178.2.rhel8u2.x86\_64.compsig; mlnx-ofa\_kernel-5.0-  
OFED.5.0.2.1.8.1.g5f67178.2.rhel8u2.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-`ofa_kernel` RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- `ibsim` was missing after OFED installation.
- `ucx-kmem` was missing after OFED installation.
- A dependency issue between `systemd` and `RDMA-Core` was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- `perftest` applications (`ib_read_*`, `ib_write_*` and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under `sysfs` for Physical Functions (PFs) in `SwitchDev` mode.

### **Enhancements**

**Changes and new features in HPE Mellanox RoCE driver version 5.0:**

## For ConnectX-5 Adapters and above

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## Supported Devices and Features

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 2(x86\_64) supported by this binary rpm are: 4.18.0-193.el8 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T)

Version: 5.0 (**Recommended**)

Filename: mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles12sp4.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles12sp4.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_94.41-OFED.5.0.2.1.8.1.g5f67178.sles12sp4.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_94.41-OFED.5.0.2.1.8.1.g5f67178.sles12sp4.x86\_64.rpm

## Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

## Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## Fixes

### **The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server



- communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
  - Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

## **Enhancements**

### **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

#### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-94.41-default - (AMD64/EM64T) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T)

Version: 5.0 (**Recommended**)

Filename: mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.1.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.1.sles12sp5.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_120-OFED.5.0.2.1.8.1.g5f67178.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_120-OFED.5.0.2.1.8.1.g5f67178.sles12sp5.x86\_64.rpm

## **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

**The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) made intensively, the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

## **Enhancements**

### **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

#### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-120-default - (AMD64/EM64T) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T)

Version: 5.0 (**Recommended**)

Filename: mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-5.0-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_195-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-5.0\_k4.12.14\_195-OFED.5.0.2.1.8.1.g5f67178.sles15sp1.x86\_64.rpm

## **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([http://downloads.linux.hpe.com/SDR/repo/mlnx\\_ofed/](http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/)).

## **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Please refer the following advisory for more details about the python dependency on SLES15SP1.  
<https://si.houston.hpecorp.net/si/DocumentationRequests/details.aspx?DRID=SID5293&slim=yes&offset=0>

## **Fixes**

### **The following issues have been fixed in version 5.0:**

- After a packet drop, the Rx page was not replenished. In certain rare scenarios, the same page fragment was mistakenly assigned to two different Rx descriptors for Write.
- ibsim was missing after OFED installation.
- ucx-kmem was missing after OFED installation.
- A dependency issue between systemd and RDMA-Core was fixed.
- Adding hairpin flows using Traffic Class (TC) tool was not allowed.
- Work Queue (WQ) flushing was not handled properly in the event of Enhanced Error Handling (EEH).
- When exiting an application that uses Reliable Message Passing Protocol (RMPP) mads intensively ,the kernel crashed.
- perftest applications (ib\_read\_\*, ib\_write\_\* and others) supplied with MLNX\_OFED v5.0 and above did not work correctly if corresponding applications on another side of client-server communication were supplied with previous versions of MLNX\_OFED due to an interoperability issue.
- When AER/slot reset is in done in parallel to user space commands execution, the kernel crashed.
- Missing Explicit Congestion Notification (ECN) configuration under sysfs for Physical Functions (PFs) in SwitchDev mode.

## **Enhancements**

### **Changes and new features in HPE Mellanox RoCE driver version 5.0:**

#### **For ConnectX-5 Adapters and above**

- Improved the performance of Kernel software managed flow steering by reducing its memory consumption.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-195-default - (AMD64/EM64T) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 7 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.rpm; mlnx-ofa\_kernel-4.9-

OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u7.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.

- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open vSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

#### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

#### **Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.

- roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets
  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- **For All HCA's**

**Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

**Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 7 (x86\_64) supported by this binary rpm are: 3.10.0-1062.el7 - (x86\_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 8 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.rpm; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel7u8.x86\_64.rpm

**Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

**Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

## **Fixes**

### **The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using `--add-kernel-support`) were resulting in improper installation of the drivers.
- A typo in perfest package where help messages wrongly displayed the conversion result between Gb/s and MB/s ( $20^2$  instead of  $2^{20}$ ).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in `/sys/kernel/debug/`. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when `esp6_offload` module did not load successfully.
- Added dependency of package `mpi-selectors` on `perl-Getopt-Long` system package. On minimal installs of RPM-based OSs, installing `mpi-selectors` will also install the required system package `perl-Getopt-Long`.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under `sysfs` for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: `.ndo_xdp_flush` and `.ndo_xdp_xmit`.
- Usage of `--excludedocs` Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (`refcount`) for RDMA connection ID (`cm_id`) was not incremented in `rdma_resolve_addr()` function, resulting in a `cm_id` use-after-free access. A fix was applied to increment the `cm_id` `refcount`.
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing `sysfs` hardware counters in SwitchDev mode
- Function `smp_processor_id()` is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open vSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running `fwreset` would result in unequal traffic on both PFs, and PFs would not reach line rate.

- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

#### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

#### **Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets
  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

#### **Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.



- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86\_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 8 update 1 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.rpm; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u1.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.

- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
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- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open VSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

**The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.
- **For ConnectX-4 Adapters and above**

### **Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
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- roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- **For All HCA's**

### **Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
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- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 1 (x86\_64) supported by this binary rpm are: 4.18.0-147.el8 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 8 update 2 (x86\_64)

Version: 4.9 (**Recommended**)

Filename: kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.compsig; kmod-mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.rpm; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.rhel8u2.x86\_64.rpm

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Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

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- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
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- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
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  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
  
- **For All HCA's**

### **Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
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- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of Red Hat Enterprise Linux 8 update 2 (x86\_64) supported by this binary rpm are: 4.18.0-193.el8 - (x86\_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T)

Version: 4.9 (**Recommended**)

Filename: mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_94.41-

OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_94.41-OFED.4.9.0.1.7.1.gd3d963b.sles12sp4.x86\_64.rpm

### **Important Note!**

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa\_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository ([https://downloads.linux.hpe.com/SDR/project/mlnx\\_ofed/](https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/)).

### **Prerequisites**

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

### **Fixes**

**The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using -add-kernel-support) were resulting in improper installation of the drivers.
- A typo in perftest package where help messages wrongly displayed the conversion result between Gb/s and MB/s (20^2 instead of 2^20).
- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
- The mlx5 driver maintains a subdirectory for every open eth port in /sys/kernel/debug/. For the default network namespace, the sub-directory name is the name of the interface, like "eth8". The new convention for the network interfaces moved to the non-default network namespaces is the interfaces name followed by "@" and the port's PCI ID. For example: "eth8@0000:af:00.3".
- "openibd" script load used to fail when esp6\_offload module did not load successfully.
- Added dependency of package mpi-selectors on perl-Getopt-Long system package. On minimal installs of RPM-based OSs, installing mpi-selectors will also install the required system package perl-Getopt-Long.
- During certain rare scenarios, due to Rx page not being replenished, the same page fragment mistakenly became assigned to two different Rx descriptors.
- Driver load issue existed with Errata-kernel on SLES15 SP1.
- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
- WQ (Work Queue) queue flushing was not handled properly in the event of EEH.
- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under sysfs for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: .ndo\_xdp\_flush and .ndo\_xdp\_xmit.
- Usage of --excludedocs Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.

- Reference count (refcount) for RDMA connection ID (cm\_id) was not incremented in rdma\_resolve\_addr() function, resulting in a cm\_id use-after-free access. A fix was applied to increment the cm\_id refcount
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
- Allowed accessing sysfs hardware counters in SwitchDev mode
- Function smp\_processor\_id() is called in the RX page recycle flow to determine the core to run on. This is intended to run in NAPI context. However, due to a bug in backporting, the RX page recycle was mistakenly called also in the RQ close flow when not needed.
- Port link state was automatically changed (without admin state involvement) to "UP" after reboot.
- ConnectX-3 adapter cards froze when running over SLES 11 OS.
- RDMA CM (Remote Direct Memory Access Commutation Manager) connection failed when port space was small.
- Traffic mirroring with OVS (Open vSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running fwreset would result in unequal traffic on both PFs, and PFs would not reach line rate.
- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
- An issue where following a bad affinity occurrence in VF LAG mode, traffic was sent after the port went up/down in the switch.
- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

#### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

#### **Added support for the following features:**

- Exposed rx\_prio[p]\_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce\_adp\_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce\_adp\_retrans\_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.



- roce\_slow\_restart - counts the number of times RoCE slow restart was used.
  - roce\_slow\_restart\_cnps - counts the number of times RoCE slow restart generated CNP packets
  - roce\_slow\_restart\_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.
- **For All HCA's**

**Added support for the following features:**

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
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- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

**Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-94.41-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T)

Version: 4.9 (**Recommended**)

Filename: mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles12sp5.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_120-OFED.4.9.0.1.7.1.gd3d963b.sles12sp5.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_120-OFED.4.9.0.1.7.1.gd3d963b.sles12sp5.x86\_64.rpm

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Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

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### **The following issues have been fixed in version 4.9:**

- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.
- RPM-based OSs with non-default kernels, using repositories after re-creating the installer (using `--add-kernel-support`) were resulting in improper installation of the drivers.
- A typo in perfest package where help messages wrongly displayed the conversion result between Gb/s and MB/s ( $20^2$  instead of  $2^{20}$ ).
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- Added dependency of package `mpi-selectors` on `perl-Getopt-Long` system package. On minimal installs of RPM-based OSs, installing `mpi-selectors` will also install the required system package `perl-Getopt-Long`.
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- An issue in the Hairpin feature which prevented adding hairpin flows using TC tool was fixed.
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- A rare kernel crash scenario when exiting an application that uses RMPP mads intensively.
- A possible kernel crash scenario when AER/slot reset is done in parallel to user space commands execution.
- Added missing ECN (Explicit Congestion Notification) configuration under `sysfs` for PFs in SwitchDev mode.
- When firmware response time to commands became very long, some commands failed upon timeout. The driver may have then triggered a timeout completion on the wrong entry, leading to a NULL pointer call trace.
- Added driver support for kernels with the old XDP\_REDIRECT infrastructure that uses the following NetDev operations: `.ndo_xdp_flush` and `.ndo_xdp_xmit`.
- Usage of `--excludedocs` Open MPI RPM option resulted in the removal of non-documentation related files.
- Disabled automated loading of some modules through udev triggers to preserve the startup process of previous MLNX\_OFED versions.
- Reference count (`refcount`) for RDMA connection ID (`cm_id`) was not incremented in `rdma_resolve_addr()` function, resulting in a `cm_id` use-after-free access. A fix was applied to increment the `cm_id` `refcount`.
- A race condition which caused kernel panic when moving two ports to SwitchDev mode at the same time.
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- ConnectX-3 adapter cards froze when running over SLES 11 OS.
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- Traffic mirroring with OVS (Open vSwitch) offload and non-offload over VxLAN interface is now supported. Note: For kernel 4.9, make sure to use a dedicated OVS version.
- When working with VF LAG while the bond device is in active-active mode, running `fwreset` would result in unequal traffic on both PFs, and PFs would not reach line rate.

- When bond was created over VF (Virtual Function) netdevices in SwitchDev mode, the VF netdevice would be treated as representor netdevice. This caused the mlx5\_core driver to crash in case it received netdevice events related to bond device.
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- Added support for VLAN (Virtual Local Area Network) header rewrite on CentOS 7.2 OS.

## **Enhancements**

### **The following changes and new features are added in version 4.9:**

- **For ConnectX-5 Adapters and above**

#### **Added support for the following features:**

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
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- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
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#### **Added support for the following features:**

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- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.

- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
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- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-120-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T)

Version: 4.9 (**Recommended**)

Filename: mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-4.9-OFED.4.9.0.1.7.1.gd3d963b.sles15sp1.x86\_64.rpm; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_195-OFED.4.9.0.1.7.1.gd3d963b.sles15sp1.x86\_64.compsig; mlnx-ofa\_kernel-kmp-default-4.9\_k4.12.14\_195-OFED.4.9.0.1.7.1.gd3d963b.sles15sp1.x86\_64.rpm

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- An issue where injecting EEH (Extended Error Handling) may cause extra Kernel prints, such as: "EEH: Might be infinite loop in mlx5\_core driver" was fixed.

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- When one of the LAG slaves went down, LAG deactivation failed, ultimately causing bandwidth degradation.
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- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.

- TCP segmentation and checksum offload support for MPLS-tagged traffic.

## **Supported Devices and Features**

### **SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 15 SP1 (AMD64/EM64T) supported by this binary rpm are: 4.12.14-195-default - (AMD64/EM64T) and future update kernels.

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HPE QLogic FastLinQ 10/25/50 GbE Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 8.50.25.0-1 **(Optional)**

Filename: kmod-qlgc-fastlinq-8.50.25.0-1.rhel7u7.x86\_64.compsig; kmod-qlgc-fastlinq-8.50.25.0-1.rhel7u7.x86\_64.rpm; kmod-qlgc-fastlinq-8.50.25.0-1.rhel7u8.x86\_64.compsig; kmod-qlgc-fastlinq-8.50.25.0-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which system crash after unloading and reloading only roce driver
- This product corrects an issue which VF RDMA system crash in overnight reboot test on multiple VMs
- This product corrects an issue which VMs crash randomly upon advanced property disable/enable with Max VFs enumerated on all PFs
- This product corrects an issue which iSCSI BFS system fails to reboot if one port is down and reboot is attempted

### **Enhancements**

- This product now supports Red Hat Enterprise Linux 7 Update 8
- This product now adds PCIe Advanced Error Recovery (AER) support
- This product now supports RoCE bonding mode

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
  - HPE Ethernet 10Gb 2-port 521T Adapter
  - HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Adapter
  - HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
  - HPE StoreFabric CN1300R Converged Network Adapter
  - HPE StoreFabric CN1200R-T Converged Network Adapter
-

HPE QLogic FastLinQ 10/25/50 GbE Drivers for Red Hat Enterprise Linux 8

Version: 8.50.25.0-1 **(Optional)**

Filename: kmod-qlgc-fastlinq-8.50.25.0-1.rhel8u0.x86\_64.compsig; kmod-qlgc-fastlinq-8.50.25.0-1.rhel8u0.x86\_64.rpm; kmod-qlgc-fastlinq-8.50.25.0-1.rhel8u1.x86\_64.compsig; kmod-qlgc-fastlinq-8.50.25.0-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which system crash after unloading and reloading only roce driver
- This product corrects an issue which VF RDMA system crash in overnight reboot test on multiple VMs
- This product corrects an issue which VMs crash randomly upon advanced property disable/enable with Max VFs enumerated on all PFs
- This product corrects an issue which iSCSI BFS system fails to reboot if one port is down and reboot is attempted

### **Enhancements**

- This product now supports Red Hat Enterprise Linux Server 8 update 1.
- This product now adds PCIe Advanced Error Recovery (AER) support
- This product now supports RoCE bonding mode

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 8.50.25.0-1 **(Optional)**

Filename: qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; README

### **Important Note!**



HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which system crash after unloading and reloading only roce driver
- This product corrects an issue which VF RDMA system crash in overnight reboot test on multiple VMs
- This product corrects an issue which VMs crash randomly upon advanced property disable/enable with Max VFs enumerated on all PFs
- This product corrects an issue which iSCSI BFS system fails to reboot if one port is down and reboot is attempted

### **Enhancements**

- This product now supports SUSE Linux Enterprise Server 12 Service Pack 5
- This product now adds PCIe Advanced Error Recovery (AER) support
- This product now supports RoCE bonding mode

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Drivers for SUSE Linux Enterprise Server 15

Version: 8.50.25.0-1 (**Optional**)

Filename: qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; qlgc-fastlinq-kmp-default-8.50.25.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; qlgc-fastlinq-kmp-default-8.50.25.1\_k5.3.18\_22-1.sles15sp2.x86\_64.compsig; qlgc-fastlinq-kmp-default-8.50.25.1\_k5.3.18\_22-1.sles15sp2.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64, version 1.9.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which system crash after unloading and reloading only roce driver
- This product corrects an issue which VF RDMA system crash in overnight reboot test on multiple VMs
- This product corrects an issue which VMs crash randomly upon advanced property disable/enable with Max VFs enumerated on all PFs

- This product corrects an issue which iSCSI BFS system fails to reboot if one port is down and reboot is attempted

### **Enhancements**

- This product now supports SUSE Linux Enterprise Server 15 SP2.
- This product now adds PCIe Advanced Error Recovery (AER) support.
- This product now supports RoCE bonding mode.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Drivers for Windows Server x64 Editions

Version: 8.50.10.0 (**Optional**)

Filename: cp043122.compsig; cp043122.exe

### **Important Note!**

HPE recommends the firmware provided in *HPE QLogic FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with these drivers.

### **Fixes**

- This product correct an issue which fixes the Virtual Function (VF) sleep duration on the channel while it waits for Physical Function(PF) response.
- This product correct an issue which System crashed when Single Root I/O Virtualization(SR-IOV) enabled on few partitions and disabled on few partitions using OneView.
- This product correct an issue which operating system boot failure after update Firmware to 08.50.27.
- This product correct an issue which System crashed is seen while upgrading drivers on enabled Network Partitioning (NPAR) and Single Root I/O Virtualization(SR-IOV) with enterprise data Center mode.
- This product correct an issue which Virtual Machines (VMs) crash randomly upon advanced property disable/enable with Max virtual functions (VFs) enumerated on all Physical Functions(PFs).
- This product correct an issue which System crashed seen while disabling Network Driver Interface Specification (NDIS) driver while running RoCEv2 IPv6 traffic on Management OS.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ OCP3 Adapter
- HPE Ethernet 10Gb 2-port 523T OCP3 Adapter
- HPE Ethernet 10Gb 2-port 523T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Multifunction Driver for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp044296.compsig; cp044296.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CPOxxxxx.xml file.

HPE recommends the firmware provided in *HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware*, version 4.12.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue where Fibre Channel over Ethernet (FCoE) frame with CRC size and End Of Frame(EOF) size.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Multifunction Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp044297.compsig; cp044297.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware*, version 4.12.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue where Fibre Channel over Ethernet (FCoE) frame with CRC size and End Of Frame(EoF) size.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Multifunction Driver for VMware vSphere 7.0

Version: 2020.05.29 **(Optional)**

Filename: cp041271.compsig; cp041271.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware*, version 4.11.50 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

- HPE StoreFabric CN1300R Converged Network Adapter
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HPE QLogic FastLinQ Open-iSCSI Driver for Red Hat Enterprise Linux 7 Update 7

Version: 2.0-873.113-1 **(Optional)**

Filename: qlgc-open-iscsi-2.0\_873.113.rhel7u7-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.rhel7u7-1.x86\_64.rpm; README

### **Enhancements**

This product now supports Red Hat Linux 7 Update 7.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
  - HPE Ethernet 10Gb 2-port 524SFP+ Adapter
  - HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
  - HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
  - HPE StoreFabric CN1200R-T Converged Network Adapter
  - HPE StoreFabric CN1300R Converged Network Adapter
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HPE QLogic FastLinQ Open-iSCSI Driver for Red Hat Enterprise Linux 8 Update 0

Version: 2.0-873.113-1 **(Optional)**

Filename: qlgc-open-iscsi-2.0\_873.113.rhel8u0-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.rhel8u0-1.x86\_64.rpm; README

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
  - HPE Ethernet 10Gb 2-port 524SFP+ Adapter
  - HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
  - HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
  - HPE StoreFabric CN1200R-T Converged Network Adapter
  - HPE StoreFabric CN1300R Converged Network Adapter
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HPE QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 12 SP4

Version: 2.0-873.113-1 (D) **(Optional)**

Filename: qlgc-open-iscsi-2.0\_873.113.sles12sp4-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.sles12sp4-1.x86\_64.rpm; README

### **Enhancements**

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 12 SP4](#).

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 15 SP0

Version: 2.0-873.113-1 (D) **(Optional)**

Filename: qlgc-open-iscsi-2.0\_873.113.sles15sp0-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.sles15sp0-1.x86\_64.rpm; README

### **Enhancements**

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 15 SP0](#).

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 15 SP1

Version: 2.0-873.113-1 **(Optional)**

Filename: qlgc-open-iscsi-2.0\_873.113.sles15sp1-1.x86\_64.compsig; qlgc-open-iscsi-2.0\_873.113.sles15sp1-1.x86\_64.rpm; README

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for Red Hat Enterprise Linux 7 Update 7

Version: 2.11.5.13-3 **(Optional)**

Filename: iscsiuiio-2.11.5.13-3.rhel7u7.x86\_64.compsig; iscsiuiio-2.11.5.13-3.rhel7u7.x86\_64.rpm

### **Enhancements**

This product now supports Red Hat Linux 7 Update 7.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for Red Hat Enterprise Linux 8 Update 0

Version: 2.11.5.13-3 **(Optional)**

Filename: iscsiuiio-2.11.5.13-3.rhel8u0.x86\_64.compsig; iscsiuiio-2.11.5.13-3.rhel8u0.x86\_64.rpm

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for Red Hat Enterprise Linux 8 Update 1

Version: 2.11.5.13-3 **(Optional)**

Filename: iscsiuiio-2.11.5.13-3.rhel8u1.x86\_64.compsig; iscsiuiio-2.11.5.13-3.rhel8u1.x86\_64.rpm; README

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP4



Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiio-2.11.5.13-3.sles12sp4.x86\_64.compsig; iscsiuiio-2.11.5.13-3.sles12sp4.x86\_64.rpm; README

### **Fixes**

This product addresses an iSCSI discovery failure with VLAN.

### **Enhancements**

This product no longer supports ProLiant Blade servers and devices. Blade servers and devices are now supported by the [HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP4](#).

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP4](#).

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP0

Version: 2.11.5.13-3 (B) **(Optional)**

Filename: iscsiuiio-2.11.5.13-3.sles15sp0.x86\_64.compsig; iscsiuiio-2.11.5.13-3.sles15sp0.x86\_64.rpm; README

### **Fixes**

This product addresses an iSCSI discovery failure with VLAN.

### **Enhancements**

This product no longer supports ProLiant Blade servers and devices. Blade servers and devices are now supported by the [HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP0](#).

This product no longer supports Synergy servers and devices. Synergy servers and devices are now supported by the [HPE Synergy QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP0](#).

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 15 SP1

Version: 2.11.5.13-3 **(Optional)**

Filename: iscsiuiio-2.11.5.13-3.sles15sp1.x86\_64.compsig; iscsiuiio-2.11.5.13-3.sles15sp1.x86\_64.rpm

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP FlexFabric 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.5

Version: 2020.09.14 **(Optional)**

Filename: cp042872.compsig; cp042872.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.27.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue where Purple Screen Of Death(PSOD) when ethernet link connected to 533FLR-T/536FLR-T Adapters.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.7

Version: 2020.09.14 **(Optional)**

Filename: cp042873.compsig; cp042873.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.27.0 or later, for use with this driver.

### **Fixes**

This product corrects an issue where Purple Screen Of Death(PSOD) when ethernet link connected to 533FLR-T/536FLR-T Adapters.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter

- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 7.0

Version: 2020.05.29 **(Optional)**

Filename: cp041163.compsig; cp041163.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CP0xxxxx.xml file.

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.26.50 or later, for use with this driver.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 7 x86\_64

Version: 7.14.70-1 **(Optional)**

Filename: kmod-netxtreme2-7.14.70-1.rhel7u7.x86\_64.compsig; kmod-netxtreme2-7.14.70-1.rhel7u7.x86\_64.rpm; kmod-netxtreme2-7.14.70-1.rhel7u8.x86\_64.compsig; kmod-netxtreme2-7.14.70-1.rhel7u8.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64*, version 2.27.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which system crash after unloading bnx2i driver
- This product corrects an issue which driver asserts due to stats update timeout
- This product corrects an issue which activity LED behavior is not consistent on 10GbT cards on the windows environment

### **Enhancements**

This product now supports Red Hat Enterprise Linux 7 Update 8

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 8

Version: 7.14.70-1 (**Optional**)

Filename: kmod-netxtreme2-7.14.70-1.rhel8u0.x86\_64.compsig; kmod-netxtreme2-7.14.70-1.rhel8u0.x86\_64.rpm; kmod-netxtreme2-7.14.70-1.rhel8u1.x86\_64.compsig; kmod-netxtreme2-7.14.70-1.rhel8u1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64*, version 2.27.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which system crash after unloading bnx2i driver
- This product corrects an issue which driver asserts due to stats update timeout
- This product corrects an issue which activity LED behavior is not consistent on 10GbT cards on the windows environment

### **Enhancements**

This product now supports Red Hat Enterprise Linux 8 Update 1

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter

- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 12 x86\_64

Version: 7.14.70-1 (**Optional**)

Filename: netxtreme2-kmp-default-7.14.70\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; netxtreme2-kmp-default-7.14.70\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; netxtreme2-kmp-default-7.14.70\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; netxtreme2-kmp-default-7.14.70\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm;  
README

### **Important Note!**

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64*, version 2.27.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which system crash after unloading bnx2i driver
- This product corrects an issue which driver asserts due to stats update timeout
- This product corrects an issue which activity LED behavior is not consistent on 10GbT cards on the windows environment

### **Enhancements**

This product now supports SUSE Linux Enterprise Server 12 Service Pack 5

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 15

Version: 7.14.70-1 (**Optional**)

Filename: netxtreme2-kmp-default-7.14.70.1\_k5.3.18\_22-1.sles15sp2.x86\_64.compsig; netxtreme2-kmp-default-7.14.70.1\_k5.3.18\_22-1.sles15sp2.x86\_64.rpm; netxtreme2-kmp-default-7.14.70\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; netxtreme2-kmp-default-7.14.70\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; README

### **Important Note!**

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64*, version 2.27.0 or later, for use with these drivers.

### **Fixes**

- This product corrects an issue which system crash after unloading bnx2i driver
- This product corrects an issue which driver asserts due to stats update timeout
- This product corrects an issue which activity LED behavior is not consistent on 10GbT cards on the windows environment

### **Enhancements**

This product now supports SUSE Linux Enterprise Server 15 SP2.

### **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Drivers for Windows Server x64 Editions

Version: 7.13.187.0 **(Optional)**

Filename: cp043244.compsig; cp043244.exe

### **Important Note!**

HP recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with these drivers.

### **Fixes**

- This product correct an issue which Blue Screen of Death (BSOD) that thread's saved floating-point state is invalid when executed Network stress.
- This product correct an issue which failed to generate Internet Small Computer System Interface(iSCSI) Crash dump in Secure Boot enabled.

## **Supported Devices and Features**

This driver supports the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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Intel i350 Driver for Windows Server 2016

Version: 12.15.184.7 **(Optional)**

Filename: cp041189.compsig; cp041189.exe

## **Important Note!**

HPE recommends the firmware provided in *Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This driver supports the following HPE Intel Powerville network adapters:

- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- Intel(R) I350 Gigabit Network Connection

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Intel i350 Driver for Windows Server 2019

Version: 12.18.9.1 **(Optional)**

Filename: cp041190.compsig; cp041190.exe

## **Important Note!**

HPE recommends the firmware provided in *Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.0.0 or later, for use with this driver.

## **Enhancements**



Initial release.

## **Supported Devices and Features**

This driver supports the following HPE Intel E1R network adapters:

- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- Intel(R) I350 Gigabit Network Connection

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Linux Intel Drivers build bundle for Red Hat Enterprise Linux

Version: 1.0.3.0 **(Optional)**

Filename: hp-i40e-2.11.27-1.all.src.rpm; hp-iavf-3.9.5-1.all.src.rpm; hp-igb-6.2.3-1.all.src.rpm; hp-ixgbe-5.7.1-1.all.src.rpm; hp-ixgbev-4.7.1-1.all.src.rpm; i40e-README; iavf-README; ice-README; igb-README; irdma-README; ixgbe-README; ixgbev-README; kmod-hp-i40e-2.11.27-1.rhel7u7.x86\_64.rpm; kmod-hp-i40e-2.11.27-1.rhel7u8.x86\_64.rpm; kmod-hp-i40e-2.11.27-1.rhel8u0.x86\_64.rpm; kmod-hp-i40e-2.11.27-1.rhel8u1.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel7u7.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel7u8.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel8u0.x86\_64.rpm; kmod-hp-iavf-3.9.5-1.rhel8u1.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel7u7.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel7u8.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel8u0.x86\_64.rpm; kmod-hp-igb-6.2.3-1.rhel8u1.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel7u7.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel7u8.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel8u0.x86\_64.rpm; kmod-hp-ixgbe-5.7.1-1.rhel8u1.x86\_64.rpm; kmod-hp-ixgbev-4.7.1-1.rhel7u7.x86\_64.rpm; kmod-hp-ixgbev-4.7.1-1.rhel7u8.x86\_64.rpm; kmod-hp-ixgbev-4.7.1-1.rhel8u0.x86\_64.rpm; kmod-hp-ixgbev-4.7.1-1.rhel8u1.x86\_64.rpm

## **Enhancements**

Gen10PlusSnap3

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Linux Intel Drivers build bundle for SUSE Linux Enterprise Server

Version: 1.0.3.0 **(Optional)**

Filename: hp-i40e-2.11.27-1.all.src.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-i40e-kmp-default-2.11.27\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-iavf-3.9.5-1.all.src.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-iavf-kmp-default-3.9.5\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-igb-6.2.3-1.all.src.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-igb-kmp-default-6.2.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-ixgbe-5.7.1-1.all.src.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-ixgbe-kmp-default-5.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; hp-ixgbev-4.7.1-1.all.src.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_23-1.sles15sp0.x86\_64.rpm; hp-ixgbev-kmp-default-4.7.1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm; i40e-README; iavf-README; ice-README; igb-README; irdma-README; ixgbe-README; ixgbev-README

## **Enhancements**

Gen10PlusSnap3

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Marvell FastLinQ 10/25/50 GbE Drivers for Windows Server x64 Editions

Version: 8.50.10.0 **(Optional)**

Filename: cp043118.compsig; cp043118.exe

## **Important Note!**

HPE recommends the firmware provided in *Marvell FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.3.0 or later, for use with these drivers.

## **Fixes**

- This product correct an issue which fixes the Virtual Function (VF) sleep duration on the channel while it waits for Physical Function(PF) response.
- This product correct an issue which System crashed when Single Root I/O Virtualization(SR-IOV) enabled on few partitions and disabled on few partitions using OneView.
- This product correct an issue which operating system boot failure after update Firmware to 08.50.27.
- This product correct an issue which System crashed is seen while upgrading drivers on enabled Network Partitioning (NPAR) and Single Root I/O Virtualization(SR-IOV) with enterprise data Center mode.
- This product correct an issue which Virtual Machines (VMs) crash randomly upon advanced property disable/enable with Max virtual functions (VFs) enumerated on all Physical Functions(PFs).
- This product correct an issue which System crashed seen while disabling Network Driver Interface Specification (NDIS) driver while running RoCEv2 IPv6 traffic on Management OS.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCU OCP3 Adapter
  - HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
  - HPE Ethernet 10Gb 4-port SFP+ QL41134HLCU Adapter
  - HPE Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter
  - HPE Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter
  - HPE Ethernet 10Gb 2-port SFP+ QL41132HQCU OCP3 Adapter
  - HPE Ethernet 10Gb 2-port SFP+ QL41132HLCU Adapter
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Mellanox CX5 and CX6DX Driver for Windows Server 2016

Version: 2.40.22511.0 **(Optional)**

Filename: cp043353.compsig; cp043353.exe

## **Enhancements**

This product now supports the following network adapters:

- HPE Ethernet 100Gb 2-port QSFP56 MCX623106AS-CDAT Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter

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Mellanox CX5 and CX6DX Driver for Windows Server 2019

Version: 2.40.22511.0 (**Optional**)

Filename: cp043354.compsig; cp043354.exe

## **Enhancements**

This product now supports the following network adapters:

- HPE Ethernet 100Gb 2-port QSFP56 MCX623106AS-CDAT Adapter

## **Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter

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net-mst kernel module driver component for VMware ESXi 6.5 and 6.7

Version: 2019.09.11 (**Recommended**)

Filename: cp041339.compsig; cp041339.zip

## **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the HPE vibsdepot.hpe.com webpage, plus an HPE specific CPXXXX.xml file.

**Prerequisites**

NA

**Fixes**

NMST version 4.12.0.105

**Enhancements**

NMST version 4.12.0.105:

This version adds support for the following adapters:

- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter (Part Number: P21930-B21)
- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter (Part Number: P11341-B21)
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter (Part Number: P13188-B21)
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter (Part Number: P10112-B21)
- HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter (Part Number: P21927-B21)
- HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter (Part Number: P06154-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter (Part Number: P06250-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter (Part Number: P06251-B21)
- HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter (Part Number: P23664-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter (Part Number: P23665-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter (Part Number: P23666-B21)
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter (Part Number: P25960-B21)
- HPE Ethernet 200Gb 1-port QSFP56 MCX623105AS-VDAT Adapter (Part Number: P10180-B21)

**Supported Devices and Features**

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017

764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P10180-B21	HPE Ethernet 200Gb 1-port QSFP56 MCX623105AS-VDAT Adapter	MT_0000000435
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

Version: 2020.05.20 **(Recommended)**

Filename: cp044401.compsig; cp044401.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the HPE vibsdepot.hpe.com webpage, plus an HPE specific CPXXXX.xml file.

### **Prerequisites**

NA

### **Fixes**

NMST version 4.14.3.3

### **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034

P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P10180-B21	HPE Ethernet 200Gb 1-port QSFP56 MCX623105AS-VDAT Adapter	MT_0000000435
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

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nmlx4\_en Driver Component for VMware 6.5

Version: 2019.06.14 **(Recommended)**

Filename: cp040179.compsig; cp040179.zip

**Important Note!**

**Known Issues:**

- ConnectX-3 Pro 10G adapter cards incorrectly report support for 40G speed when running the "esxcli network nic get" command.
- When the port is DOWN, the management interface "port type" field indicates one of the port types supported by the device, in the following order: TP, FIBER, DA, NONE. If the port supports several cable types, the first type in the list mentioned above will be printed.
- When the port is UP, the management interface port type field (nmlx\_en\_MgmtIFPortType) indicates which one of all possible supported types is currently connected.
- Management interface port type field reports SFP-to-RJ45 cable as FIBER.
- Management interface auto negotiation field is equivalent to "esxcli network nic get -n vmnicX" field "Pause Autonegotiate".

For further information on the release notes for ESXi 6.5 Driver Version 3.16.11.10 follow the below link:  
[https://www.mellanox.com/page/products\\_dyn?product\\_family=29&mtag=vmware\\_driver](https://www.mellanox.com/page/products_dyn?product_family=29&mtag=vmware_driver)

## **Fixes**

**No Fixes were included in version 3.16.11.10.**

## **Enhancements**

**Changes and New Features in version 3.16.11.10:**

- Resolved an issue that caused the network adapter traffic to stop.
- Fixed an internal multicast loopback issue that broke LACP(Link Aggregation Control Protocol) bonding protocol.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004

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nmlx4\_en driver component for VMware ESXi 6.7

Version: 2020.05.26 (**Recommended**)

Filename: cp035114.compsig; cp035114.zip

## **Important Note!**

**Known issues in version 3.17.70.1:**

- ConnectX-3 Pro 10G adapter cards wrongly report support for 40G speed when running the "esxcli network nic get" command.
- When the port is DOWN, the management interface port type field (nmlx\_en\_MgmtIFPortType) indicates one of the port types supported by the device, in the following order: TP, FIBER, DA, NONE. If the cable supports several types, the first type in the list mentioned above will be printed.
- When the port is UP, the management interface port type field (nmlx\_en\_MgmtIFPortType) indicates which one of all possible supported types is currently connected.



- Management interface port type field (nmlx\_en\_MgmtIFPortType) reports SFP-to-RJ45 cable as FIBER.
- Management interface auto negotiation field (nmlx\_en\_MgmtIFAutoNegMode) is equivalent to "esxcli network nic get -n vmnicX" field "Pause Autonegotiate"

## **Fixes**

### **No Fixes are included in version 3.17.70.1:**

## **Enhancements**

### **Changes and New features in version 3.17.70.1:**

- Adapter card's PSID is now displayed in the Privstats (Private statistics).

nmlx5\_en Driver Component for VMware 6.5

Version: 2020.03.09 (**Recommended**)

Filename: cp043371.compsig; cp043371.zip

## **Important Note!**

### **Known Issues in version 4.16.70.1:**

- The maximum number of established active RDMA connections (QPs) is currently 5000.
- Setting ETS value to 0 may cause WQE timeout.
- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- ECN statistic counters accumulatorsPeriod and ecnMarkedRoce-Packets display wrong values and cannot be cleared.
- The hardware can offload only up to 256 Bytes of headers.
- The "esxcli network sriovnic vf stats" command is not supported.
- Traffic cannot be sent between PV and SR-IOV VF connected to different ports on the same HCA.
- Setting the "Allow Guest MTU Change" option in vSphere Client is currently not functional. Although guest MTU changes in SR-IOV are allowed, they do not affect the port's MTU and the guest's MTU remains the same as the PF MTU.
- Geneve options length support is limited to 56 Bytes. Received packets with options length bigger than 56 Bytes are dropped.
- Interaction with ConnectX-4/ConnectX-4 Lx older firmware versions might result in the following internal firmware errors:
  - Device health compromised
  - synd 0x1: firmware internal error
  - extSync 0x94ee
- The 'esxcli mellanox uplink link info -u <vmnic\_name>' command reports the 'Auto negotiation' capability always as 'true'.
- Wake-on-LAN does not notify when invalid parameters are provided.
- Nested ESXi might not function properly.
- Device RSS fails to hash traffic to sufficient RX rings with Broadcast traffic.
- In stress condition 'Watchdog' may appear leading to link going up and down.
- VGT traffic over VXLAN interfaces is currently not supported.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Although the max\_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port:

- ConnectX-4: up to 127
- ConnectX-5: up to 63

## **Fixes**

### **The following issues have been fixed in version in 4.16.70.1:**

- The "esxcli network sriovnic vf stats" command was not supported. When running this command on a vmknic, a failure message was displayed.

## **Enhancements**

### **Changes and New Features in smart component version 2020.03.09:**

- Added support for the following adapters:
  - HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter (HPE Part Number: P24837-B21)
  - HPE Ethernet 10Gb 2-port 548SFP+ (HPE Part Number: P11338-B21)

### **New features and changes in version 4.16.70.1:**

- An event will be sent to notify the administrator if the power required by the network adapter is higher than that available on the PCIe slot.
- Support for trusting Differentiated Services Code Point (DSCP) and setting default value for RoCE traffic.
- A new counter that enables the user to query per Virtual Function counters.
- RX out-of-buffer counter to indicate any lack of software receive buffers.
- Module parameter to enforce specific RoCE version.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P10109-B21	HPE Eth 10 / 25Gb 2P 641SFP28 Adapter	HPE0000000039
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054

874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE000000014
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE000000036

nmlx5\_en Driver Component for VMware 6.7

Version: 2020.03.09 (**Recommended**)

Filename: cp043197.compsig; cp043197.zip

### **Important Note!**

#### **Known Issues in version 4.17.70.1:**

- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- SRI-OV is not supported while ENS is enabled.
- The maximum number of established active RDMA connections (QPs) is currently 5000.
- Enhanced Network Stack(ENS) is currently not supported in ConnectX-6 Dx adapter cards.
- Setting ETS value to 0 may cause WQE timeout.
- A PSOD may occur during vMotion over ENS VMK.
- During ENS uplink detachment from the ENS DVS, the below error message regarding the queue still being allocated or that the requested queue is not in use may appear.
- Live unload of the driver is not supported. Doing so may cause a PSOD if the max\_vfs parameter is set.
- ECN statistic counters accumulatorsPeriod and ecnMarkedRoce-Packets display wrong values and cannot be cleared.
- The maximum value of RSS must be lower than the number of CPU cores.
- The hardware can offload only up to 256B of headers.
- The "esxcli network sriovnic vf stats" command is not supported. When running this command on a vmknics, a failure message is displayed.
- There is no traffic between PV and SR-IOV VF connected to different ports on the same HCA.
- Setting the "Allow Guest MTU Change" option in vSphere Client is currently not functional. Although guest MTU changes in SR-IOV are allowed, they do not affect the port's MTU and the guest's MTU remains the same as the PF MTU.
- When a guest is assigned an IB PCI passthru device or an IB VF, VMware Tools networking information for the guest may be incorrect. This affects how the guest networking information, such as interfaces and their IPs, is displayed in vCenter.
- Operations on vmnics which are in passthru mode are not supported.
- The 'esxcli mellanox uplink link info -u <vmnic\_name>' command reports the 'Auto negotiation' capability always as 'true'.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Wake-on-LAN does not notify when invalid parameters are provided.
- Nested ESXi might not function properly.
- Device RSS fails to hash traffic to sufficient RX rings with Broadcast traffic.
- In stress condition 'Watchdog' may appear, leading to uplink going up and down.
- During ENS uplink detachment from the ENS DVS, the below error message regarding the queue still being allocated or that the requested queue is not in use may appear. *"Driver covers for OS issue and the messages are for information only."*
- Although the max\_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port devices:
  - ConnectX-4: up to 127

- ConnectX-5: up to 127

For further information on the release notes for ESXi 6.7 Driver Version 4.17.70.1 follow the below link:  
[https://www.mellanox.com/page/products\\_dyn?product\\_family=29&mtag=vmware\\_driver](https://www.mellanox.com/page/products_dyn?product_family=29&mtag=vmware_driver)

## **Fixes**

### **The following issues have been fixed in version in 4.17.70.1:**

- The "esxcli network sriovnic vf stats" command was not supported. When running this command on a "vmknic", a failure message was displayed.
- IPv6 as inner packet was not supported.

## **Enhancements**

### **Changes and New Features in smart component version 2020.03.09:**

- Added support for the following adapters:
  - HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter (HPE Part Number: P24837-B21)
  - HPE Ethernet 10Gb 2-port 548SFP+ Adapter (HPE Part Number: P11338-B21)

### **New features and changes in version 4.17.70.1:**

- Disabled the option of shutting down the link due to power limitation.
- Support for trusting Differentiated Services Code Point (DSCP) and setting default value for RoCE traffic.
- New counter that enables the user to query per Virtual Function counters.
- RX out-of-buffer counter to indicate any lack of software receive buffers.
- Module parameter to enforce specific RoCE version.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054

874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

nmlx5\_en Driver Component for VMware 7.0

Version: 2020.05.26 (**Recommended**)

Filename: cp043205.compsig; cp043205.zip

### **Important Note!**

#### **Known Issues in version 4.19.70.1:**

- SR-IOV is not supported while ENS is enabled.
- Live unload of the driver is not supported. Doing so may cause a PSOD if the max\_vfs parameter is set.
- The maximum number of established active RDMA connections (QPs) is currently 5000.
- ENS is currently not supported in ConnectX-6 Dx adapter cards.  
**Workaround:** Use non ENS DVS for ConnectX-6 Dx cards.
- Setting ETS value to 0 may cause WQE timeout.  
**Workaround:** Set ETS value of 1 instead of 0.
- The 'esxcli mellanox uplink link info -u <vmnic\_name>' command reports the 'Auto negotiation' capability always as 'true'.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Although the max\_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port devices:
  - ConnectX-4 / ConnectX-5: up to 127

### **Fixes**

**No fixes are included in version 4.19.70.1:**

### **Enhancements**

**No Changes and New Features are included in smart component version 2020.05.26:**

#### **New features and changes in version 4.19.70.1:**

- Disabled the option of shutting down the link due to power limitation.
- Support for trusting Differentiated Services Code Point (DSCP) and setting default value for RoCE traffic.

- New counter that enables the user to query per Virtual Function counters.
- RX out-of-buffer counter to indicate any lack of software receive buffers.
- support for Data Center Bridging Capability Exchange (DCBx) protocol. DCBx works with LLDP to allow switches to exchange information about their Data Center Bridging (DCB) capabilities and configuration and automatically

negotiate common Priority-Based Flow Control (PFC) parameters.

- Module parameter to enforce specific RoCE version.
- Support for setting the minimal bandwidth guarantee for traffic classes (TCs).

### **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

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VMware ESXi 6.5 and 6.7 MST Drivers Offline Bundle for Mellanox Adapters

Version: 4.12.0.105 **(Recommended)**

Filename: MLNX-NMST-ESX-6.5.0-4.12.0.105.zip

### **Prerequisites**

NA

## **Enhancements**

VM65/67 nmst 4.12.0.105

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VMware ESXi 7.0 MST Drivers Offline Bundle for Mellanox Adapters

Version: 4.14.3.3 **(Recommended)**

Filename: Mellanox-NATIVE-NMST\_4.14.3.3-1OEM.700.1.0.15525992\_16211416.zip

## **Prerequisites**

NA

## **Enhancements**

VM70 nmst 4.14.3.3

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## **Driver - Storage**

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HPE Smart Array S100i SR Gen10 Plus SW RAID Driver for Windows Server 2016, and Windows Server 2019

Version: 106.64.4.1384 **(Recommended)**

Filename: cp039949.compsig; cp039949.exe

## **Enhancements**

Initial Release

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HPE Smart Array S100i SR Gen10 SW RAID Driver for Windows Server 2012 R2, Windows Server 2016, and Windows Server 2019

Version: 106.12.6.0 **(Recommended)**

Filename: cp043250.compsig; cp043250.exe

## **Fixes**

Addressed an issue where the HPE Smart Array s100i Software RAID may experience potential data inconsistency during initial configuration or operation of a RAID volume configured in RAID 0/1/5/10 Fault Tolerant Modes.

This issue does not impact systems that have not enabled Smart Array s100i support.

- For additional information, reference [Customer Bulletin a00097789en\\_us](#).

**IMPORTANT INFORMATION:**

- An array configured with a single RAID 0 logical drive is NOT affected.
- An array configured with a single RAID 1 logical drive is NOT affected.

**Enhancements**

Added support for AMD.

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**Driver - Storage Controller**

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HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for Red Hat Enterprise Linux 7 (64-bit)

Version: 1.2.14-016 (**Recommended**)

Filename: kmod-smartpqi-1.2.14-016.rhel7u7.x86\_64.compsig; kmod-smartpqi-1.2.14-016.rhel7u7.x86\_64.rpm;  
kmod-smartpqi-1.2.14-016.rhel7u8.x86\_64.compsig; kmod-smartpqi-1.2.14-016.rhel7u8.x86\_64.rpm

**Enhancements**

Smartpqi driver 1.2.14-016 now supports Red Hat Enterprise Linux 7.7 and 8.2 and it is recommended for used with HPE Gen10 Smart Array controllers FW 3.0

**Supported Devices and Features**

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux7 (64-bit) supported by this binary rpm are:  
3.10.0-957.el7- Red Hat Enterprise Linux 7 Update 6 (64-bit) and future errata kernels for update 6.

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HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for Red Hat Enterprise Linux 8 (64-bit)

Version: 1.2.14-016 (**Recommended**)

Filename: kmod-smartpqi-1.2.14-016.rhel8u1.x86\_64.compsig; kmod-smartpqi-1.2.14-016.rhel8u1.x86\_64.rpm;  
kmod-smartpqi-1.2.14-016.rhel8u2.x86\_64.compsig; kmod-smartpqi-1.2.14-016.rhel8u2.x86\_64.rpm

**Enhancements**

Smartpqi driver 1.2.14-016 now supports Red Hat Enterprise Linux 7.7 and 8.2 and it is recommended for used with HPE Gen10 Smart Array controllers FW 3.0

**Supported Devices and Features**



SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux8 (64-bit) supported by this binary rpm are:  
-default- Red Hat Enterprise Linux 8 Update 0 (64-bit).

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HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for SUSE LINUX Enterprise Server 12 (64-bit)

Version: 1.2.14-016 (**Recommended**)

Filename: smartpqi-kmp-default-1.2.14-016.sles12sp4.x86\_64.compsig; smartpqi-kmp-default-1.2.14-016.sles12sp4.x86\_64.rpm; smartpqi-kmp-default-1.2.14-016.sles12sp5.x86\_64.compsig; smartpqi-kmp-default-1.2.14-016.sles12sp5.x86\_64.rpm

**Enhancements**

Smartpqi driver 1.2.14-016 now supports SUSE Linux Enterprise Service 12.5 and 15.1 and it is recommended for used with HPE Gen10 Smart Array controllers FW 3.0

**Supported Devices and Features**

SUPPORTED KERNELS:

4.12.14-94.41.1 - SUSE LINUX Enterprise Server 12 (64-bit) SP4 plus future errata.

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HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for SUSE LINUX Enterprise Server 15 (64-bit)

Version: 1.2.14-017 (**Recommended**)

Filename: smartpqi-kmp-default-1.2.14-017.sles15sp1.x86\_64.compsig; smartpqi-kmp-default-1.2.14-017.sles15sp1.x86\_64.rpm; smartpqi-kmp-default-1.2.14-017.sles15sp2.x86\_64.compsig; smartpqi-kmp-default-1.2.14-017.sles15sp2.x86\_64.rpm

**Enhancements**

Add support for SUSE Linux Enterprise Services 15 SP2

---

HPE ProLiant Gen10 Smart Array Controller Driver for VMware ESXi 6.5 (Bundle file)

Version: 1.0.4.3008 (**Recommended**)

Filename: VMW-ESX-6.5.0-smartpqi-1.0.4.3008-offline\_bundle-14862448.zip

**Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

---

HPE ProLiant Gen10 Smart Array Controller Driver for VMware ESXi 6.7 (Bundle file)

Version: 1.0.4.3008 **(Recommended)**

Filename: VMW-ESX-6.7.0-smartpqi-1.0.4.3008-offline\_bundle-14862538.zip

**Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

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HPE ProLiant Gen10 Smart Array Controller Driver for VMware vSphere 6.5 (Driver Component).

Version: 2019.12.01 **(Recommended)**

Filename: cp040982.compsig; cp040982.zip

**Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CPXXXX.xml file.

**Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

---

HPE ProLiant Gen10 Smart Array Controller Driver for VMware vSphere 6.7 (Driver Component).

Version: 2019.12.01 **(Recommended)**

Filename: cp040981.compsig; cp040981.zip

**Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hp.com webpages, plus an HPE specific CPXXXX.xml file.

**Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

---

HPE Smart Array Gen10 Controller Driver for Windows Server 2012 R2, Windows Server 2016, and Windows Server 2019

Version: 106.178.0.1009 **(Recommended)**

Filename: cp043158.compsig; cp043158.exe

### **Enhancements**

Smartpqi driver 106.178.0.1009 supports the latest versions of Microsoft Windows OS environments and it is recommended for used with HPE Gen10 Smart Array controllers FW 3.0

---

HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2012 R2 edition.

Version: 6.714.18.0 **(Recommended)**

Filename: cp034410.compsig; cp034410.exe

### **Enhancements**

- Added support for the Apollo 4510 system
- 

HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2016 edition.

Version: 6.714.18.0 **(Recommended)**

Filename: cp034411.compsig; cp034411.exe

### **Enhancements**

- Added support for the Apollo 4510 system
- 

HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2019 edition.

Version: 6.714.18.0 **(Recommended)**

Filename: cp038009.compsig; cp038009.exe

### **Enhancements**

Initial Microsoft Windows Server 2019 release

---

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.5

Version: 7.706.09.00 (**Recommended**)

Filename: Release\_Notes\_Isi-mr3-7.706.09.00-1OEM\_6.5.txt; VMW-ESX-6.5.0-Isi\_mr3-7.706.09.00-12102431.zip

### **Fixes**

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

---

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.5 (Driver Component)

Version: 2019.12.13 (**Recommended**)

Filename: cp042803.compsig; cp042803.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

### **Fixes**

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

---

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.7

Version: 7.706.09.00 (**Recommended**)

Filename: Release\_Notes\_Isi-mr3-7.706.09.00-1OEM.txt; VMW-ESX-6.7.0-Isi\_mr3-7.706.09.00-offline\_bundle-12095481.zip

### **Fixes**

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

---

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.7 (Driver Component)

Version: 2019.12.13 (**Recommended**)

Filename: cp042807.compsig; cp042807.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

## **Fixes**

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

---

HPE Smart Array P824i-p MR controller Driver for 64-bit Red Hat Enterprise Linux 7

Version: 07.706.05.00-14 **(Recommended)**

Filename: kmod-megaraid\_sas-07.706.05.00-14.rhel7u5.x86\_64.compsig; kmod-megaraid\_sas-07.706.05.00-14.rhel7u5.x86\_64.rpm; kmod-megaraid\_sas-07.706.05.00-14.rhel7u6.x86\_64.compsig; kmod-megaraid\_sas-07.706.05.00-14.rhel7u6.x86\_64.rpm

## **Enhancements**

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize & Expander)

## **Supported Devices and Features**

### SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 7 (64-bit) supported by this binary rpm are:

- 3.10.0-693.el7 - Red Hat Enterprise Linux 7 Update 4 (64-bit) and future errata kernels for update 4.
- 3.10.0-862.el7- Red Hat Enterprise Linux 7 Update 5 (64-bit) and future errata kernels for update 5.

---

HPE Smart Array P824i-p MR controller Driver for 64-bit SUSE LINUX Enterprise Server 12

Version: 07.706.05.00-14 **(Recommended)**

Filename: lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles12sp3.x86\_64.compsig; lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles12sp3.x86\_64.rpm; lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles12sp4.x86\_64.compsig; lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles12sp4.x86\_64.rpm

## **Enhancements**

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize and Expander)

## **Supported Devices and Features**

### SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 12 (64-bit) supported by this binary rpm are:

- 4.4.21-69-default - SUSE LINUX Enterprise Server 12 (64-bit) SP2 plus future errata.
- 4.4.73-5.1 - SUSE LINUX Enterprise Server 12 (64-bit) SP3 plus future errata.

---

HPE Smart Array P824i-p MR controller Driver for 64-bit SUSE LINUX Enterprise Server 15

Version: 07.706.05.00-14 **(Recommended)**

Filename: lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles15sp0.x86\_64.compsig; lsi-megaraid\_sas-kmp-default-07.706.05.00-14.sles15sp0.x86\_64.rpm

### **Enhancements**

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize & Expander)

### **Supported Devices and Features**

**SUPPORTED KERNELS:**

The kernels of SUSE LINUX Enterprise Server 15 (64-bit) supported by this binary rpm are:  
4.12.14-23 - SUSE LINUX Enterprise Server 15 (64-bit) SP0 plus future errata.

---

### **Driver - Storage Fibre Channel and Fibre Channel Over Ethernet**

[Top](#)

HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2012R2/2016

Version: 12.6.165.0 (b) **(Recommended)**

Filename: cp041717.compsig; cp041717.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Hyper-V Virtual Machines (VMs) could not access storage arrays if those Virtual Machine (VM) had been shut down and restarted over 512 times.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hyper-V Virtual Machines (VMs) could not access storage arrays if those Virtual Machine (VM) had been shut down and restarted over 512 times.

### **Enhancements**

Updated to driver version 12.6.165.0

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
elxdrv-rfc-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version\x64\win2019
```

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

---

HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2019

Version: 12.6.165.0 (b) **(Recommended)**

Filename: cp041729.compsig; cp041729.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Hyper-V Virtual Machines (VMs) could not access storage arrays if those Virtual Machine (VM) had been shut down and restarted over 512 times.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**



Fixed the following:

- Hyper-V Virtual Machines (VMs) could not access storage arrays if those Virtual Machine (VM) had been shut down and restarted over 512 times.

## **Enhancements**

Updated to driver version 12.6.165.0

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
elxdrv-fc-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version\x64\win2019
```

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

---

HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2012 R2

Version: 9.4.1.20 (**Recommended**)

Filename: cp042970.compsig; cp042970.exe

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Fixed the following:

- Memory dumps were not generated during a crash dump in a boot from SAN environment

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Memory dumps were not generated during a crash dump in a boot from SAN environment

### **Enhancements**

Updated to version 9.4.1.20

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN100Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN100Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN110Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN110Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

---

HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2016

Version: 9.4.1.20 (**Recommended**)

Filename: cp042519.compsig; cp042519.exe

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Fixed the following:

- Memory dumps were not generated during a crash dump in a boot from SAN environment

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Memory dumps were not generated during a crash dump in a boot from SAN environment

### **Enhancements**

Updated to version 9.4.1.20

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

---

HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2019

Version: 9.4.1.20 (**Recommended**)

Filename: cp042520.compsig; cp042520.exe

#### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Fixed the following:

- Memory dumps were not generated during a crash dump in a boot from SAN environment

#### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

#### **Fixes**

Fixed the following:

- Memory dumps were not generated during a crash dump in a boot from SAN environment

#### **Enhancements**

Updated to version 9.4.1.20

#### **Supported Devices and Features**

This driver supports the following HPE adapters:

##### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

**16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

**32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

---

HPE Storage Fibre Channel Over Ethernet Adapter Kit for the x64 Emulex Storport Driver for Windows 2012R2 and Windows 2016

Version: 12.0.1192.0 (c) **(Recommended)**

Filename: cp044554.compsig; cp044554.exe

**Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Enhancements**

Updated to driver version 12.0.1192.0

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
brcmdrvr-fcoe-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Broadcom\Drivers\FCoE-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Broadcom\Drivers\FCoE-version\x64\win2012
```

### **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

#### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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HPE Storage Fibre Channel Over Ethernet Adapter Kit for the x64 Emulex Storport Driver for Windows 2019

Version: 12.0.1192.0 (d) **(Recommended)**

Filename: cp044553.compsig; cp044553.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0,

12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Added support for following:

Updated to driver version 12.0.1192.0

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
brcmdrvr-fcoe-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Broadcom\Drivers\FCoE-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Broadcom\Drivers\FCoE-version\x64\win2012
```

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

---

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2012R2/2016

Version: 12.4.243.4 **(Recommended)**

Filename: cp042265.compsig; cp042265.exe

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)



Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Updated to driver version 12.4.243.4

Added the following support :

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
elxdrv-fc-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version\x64\win2019
```

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

## **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

---

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2019

Version: 12.4.243.4 (**Recommended**)

Filename: cp042264.compsig; cp042264.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Updated to driver version 12.4.243.4

Added the following support :

Removed the raw driver file folder. The raw driver files can be obtained by extracting the Smart Component and then extracting the Emulex installer. Use this command:

```
elxdrv-rfc-version.exe /q2 extract=2
```

The extracted files are located:

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version
```

Each kit folder has subsequent architecture folders with subsequent OS folders. For example,

```
C:\Users\Administrator\Documents\Emulex\Drivers\FC-version\x64\win2019
```

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

---

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2012 R2

Version: 9.3.3.20 (**Recommended**)

Filename: cp042971.compsig; cp042971.exe

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Updated to version 9.3.3.20

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

**16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

---

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2016

Version: 9.3.3.20 (**Recommended**)

Filename: cp042212.compsig; cp042212.exe

**Important Note!**

Release Notes:

[HPE StoreFabric QLogic Adapters Release Notes](#)

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

**Enhancements**

Updated to version 9.3.3.20

**Supported Devices and Features**

This driver supports the following HPE adapters:

**8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

**16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

---

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2019

Version: 9.3.3.20 (**Recommended**)

Filename: cp042213.compsig; cp042213.exe

## **Important Note!**

Release Notes:  
[HPE QLogic Adapters Release Notes](#)

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Updated to version 9.3.3.20

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

---

Red Hat Enterprise Linux 7 Update 7 Server FCoE Driver Kit for HPE Emulex(BRCM) Converged Network Adapters(CNAs) and mezzanine Converged Network Adapters(CNAs)

Version: 12.0.1259.0 (c) **(Recommended)**

Filename: kmod-brcmfcoe-12.0.1259.0-1.rhel7u7.x86\_64.compsig; kmod-brcmfcoe-12.0.1259.0-1.rhel7u7.x86\_64.rpm

## **Important Note!**

Release Notes:  
[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>

2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Updated to Driver version 12.0.1259.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

---

Red Hat Enterprise Linux 7 Update 7 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: kmod-elx-lpfc-12.6.275.14-1.rhel7u7.x86\_64.compsig; kmod-elx-lpfc-12.6.275.14-1.rhel7u7.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for Fibre Channel Host bus adapters and Converge Network Adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Enhancements**

Updated to driver version 12.6.275.14

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC Adapter:**



- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

#### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 7 Server Fibre Channel Driver Kit for HPE Emulex Mezzanine Host Bus Adapters

Version: 12.4.270.3 (**Recommended**)

Filename: kmod-elx-lpfc-12.4.270.3-1.rhel7u7.x86\_64.compsig; kmod-elx-lpfc-12.4.270.3-1.rhel7u7.x86\_64.rpm

#### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

#### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to driver version 12.4.270.3

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

---

Red Hat Enterprise Linux 7 Update 7 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.07.6-k1a (**Recommended**)

Filename: kmod-qlgc-qla2xxx-10.01.00.64.07.6\_k1a-1.rhel7u7.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.64.07.6\_k1a-1.rhel7u7.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

### **Enhancements**

Initial driver for RedHat Enterprise Linux Server 7 update 7 version 10.01.00.64.07.6-k1a

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 7 Server Fibre Channel Driver Kit for HPE QLogic Mezzanine Host Bus Adapters

Version: 10.01.00.57.07.6-k1 **(Recommended)**

Filename: kmod-qlgc-qla2xxx-10.01.00.57.07.6\_k1-1.rhel7u7.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.57.07.6\_k1-1.rhel7u7.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Updated driver version to 10.01.00.57.07.6-k1

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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Red Hat Enterprise Linux 7 Update 8 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: kmod-elx-lpfc-12.6.275.14-1.rhel7u8.x86\_64.compsig; kmod-elx-lpfc-12.6.275.14-1.rhel7u8.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 8 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.07.6-k1a (**Recommended**)

Filename: kmod-qlgc-qla2xxx-10.01.00.64.07.6\_k1a-1.rhel7u8.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.64.07.6\_k1a-1.rhel7u8.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

## **Enhancements**

Initial driver for RedHat Enterprise Linux Server 7 update 8 version 10.01.00.64.07.6-k1a

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 8 Update 1 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.08.0-k1 **(Recommended)**

Filename: kmod-qlgc-qla2xxx-10.01.00.64.08.0\_k1-1.rhel8u1.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.64.08.0\_k1-1.rhel8u1.x86\_64.rpm



## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

## **Enhancements**

Initial driver for RedHat Enterprise Linux Server 8 update 1 version 10.01.00.64.08.0-k1

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 8 Update 1 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: kmod-elx-lpfc-12.6.275.14-1.rhel8u1.x86\_64.compsig; kmod-elx-lpfc-12.6.275.14-1.rhel8u1.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 8 update 1 Server Fibre Channel Driver Kit for HPE QLogic Mezzanine Host Bus Adapters

Version: 10.01.00.57.08.0-k1 (**Recommended**)

Filename: kmod-qlgc-qla2xxx-10.01.00.57.08.0\_k1-1.rhel8u1.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.57.08.0\_k1-1.rhel8u1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpgsql" driver are supported.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Updated Driver for RedHat Enterprise Linux Server 8 update 1 version 10.01.00.57.08.0-k1

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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Red Hat Enterprise Linux 8 Update 2 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.08.0-k1 (**Recommended**)

Filename: kmod-qlgc-qla2xxx-10.01.00.64.08.0\_k1-1.rhel8u2.x86\_64.compsig; kmod-qlgc-qla2xxx-10.01.00.64.08.0\_k1-1.rhel8u2.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.

- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

### **Enhancements**

Initial driver for RedHat Enterprise Linux Server 8 update 2 version 10.01.00.64.08.0-k1

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN100Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN100Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN110Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN110Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN160Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN160Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN161Q 32Gb Dual Port Fibre Channel Host Bus Adapter

- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter
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Red Hat Enterprise Linux 8 Update 2 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: kmod-elx-lpfc-12.6.275.14-1.rhel8u2.x86\_64.compsig; kmod-elx-lpfc-12.6.275.14-1.rhel8u2.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
  - HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
  - HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
  - HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter
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SUSE Linux Enterprise Server 12 Service Pack 4 FCoE Driver Kit for HPE Emulex(BRCM) Converged Network Adapters(CNAs) and mezzanine Converged Network Adapters(CNAs)

Version: 12.0.1259.0 (c) **(Recommended)**

Filename: brcmfcoe-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; brcmfcoe-kmp-default-12.0.1259.0\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due Toa Firmware Issue" at the following link:

[https://support.hpe.com/hpsc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpsc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Updated to Driver version 12.0.1259.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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SUSE Linux Enterprise Server 12 Service Pack 4 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

For Emulex Fibre Channel Driver installation on SuSE Linux Enterprise Server 12 service pack 3 requires user to install latest Errata Kernel available, otherwise the driver may not complete the installation and throw dependency messages

### **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Enhancements**

Updated to driver version 12.6.275.14

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

#### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 12 Service Pack 4 Fibre Channel Driver Kit for HPE Emulex Mezzanine Host Bus Adapters

Version: 12.4.270.3 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.4.270.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; elx-lpfc-kmp-default-12.4.270.3\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

### **Important Note!**

Release Notes:  
[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

For Emulex Fibre Channel Driver installation on SuSE Linux Enterprise Server 12 service pack 3 requires user to install latest Errata Kernel available, otherwise the driver may not complete the installation and throw dependency messages

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

For Emulex Fibre Channel Driver installation on SuSE Linux Enterprise Server 12 service pack 3 requires user to install latest Errata Kernel available, otherwise the driver may not complete the installation and throw dependency messages

## **Enhancements**

Updated to driver version 12.4.270.3

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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SUSE Linux Enterprise Server 12 Service Pack 4 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.12.4-k1b (**Recommended**)

Filename: qlgc-qla2xxx-kmp-default-10.01.00.64.12.4\_k1b\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.64.12.4\_k1b\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2extended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

## **Enhancements**

Initial Driver of SuSE Linux Enterprise Server 12 Service Pack 4 version 10.01.00.64.12.4-k1b

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN100Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN100Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN110Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN110Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN160Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN160Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN161Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN161Q 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 12 Service Pack 4 Fibre Channel Driver Kit for HPE QLogic Mezzanine Host Bus Adapters

Version: 10.01.00.57.12.4-k1 (**Recommended**)

Filename: qlgc-qla2xxx-kmp-default-10.01.00.57.12.4\_k1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.57.12.4\_k1\_k4.12.14\_94.41-1.sles12sp4.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Updated Driver for:

SuSE Linux Enterprise Server 12 service pack 4 (SLES12 sp4) version 10.01.00.57.12.4-k1

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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SUSE Linux Enterprise Server 12 Service Pack 5 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm



## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 12 Service Pack 5 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.12.5-k1 **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.64.12.5\_k1\_k4.12.14\_120-1.sles12sp5.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.64.12.5\_k1\_k4.12.14\_120-1.sles12sp5.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpaqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

### **Enhancements**

Initial Driver of SuSE Linux Enterprise Server 12 Service Pack 5 version 10.01.00.64.12.5-k1

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 15 Service Pack 1 FCoE Driver Kit for HPE Emulex(BRCM) Converged Network Adapters(CNAs) and mezzanine Converged Network Adapters(CNAs)

Version: 12.0.1259.0 (c) **(Recommended)**

Filename: brcmfcoe-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; brcmfcoe-kmp-default-12.0.1259.0\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Enhancements**

Updated to Driver version 12.0.1259.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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SUSE Linux Enterprise Server 15 Service Pack 1 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.14 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; elx-lpfc-kmp-default-12.6.275.14\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.14

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 15 Service Pack 1 Fibre Channel Driver Kit for HPE Emulex Mezzanine Host Bus Adapters

Version: 12.4.270.3 **(Recommended)**

Filename: elx-lpfc-kmp-default-12.4.270.3\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; elx-lpfc-kmp-default-12.4.270.3\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:



1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Enhancements**

Updated to driver version 12.4.270.3

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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SUSE Linux Enterprise Server 15 Service Pack 1 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters

Version: 10.01.00.64.15.1-k1 **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.64.15.1\_k1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.64.15.1\_k1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA)

- Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

### **Enhancements**

Initial Driver of SuSE Linux Enterprise Server 15 Service Pack 1 version 10.01.00.64.15.1-k1

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN100Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter

- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 15 Service Pack 1 Fibre Channel Driver Kit Host Bus Adapters for HPE QLogic Mezzanine Host Bus Adapters

Version: 10.01.00.57.15.1-k1 **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.57.15.1\_k1\_k4.12.14\_195-1.sles15sp1.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.57.15.1\_k1\_k4.12.14\_195-1.sles15sp1.x86\_64.rpm

#### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpglqc" driver are supported.

#### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

#### **Enhancements**

Updated Driver for:

SuSE Linux Enterprise Server 15 Service Pack 1 version 10.01.00.57.15.1-k1

#### **Supported Devices and Features**

This driver supports the following HPE adapters:

##### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

##### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
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SUSE Linux Enterprise Server 15 Service Pack 2 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters

Version: 12.6.275.20 (**Recommended**)

Filename: elx-lpfc-kmp-default-12.6.275.20\_k5.3.18\_22-1.sles15sp2.x86\_64.compsig; elx-lpfc-kmp-default-12.6.275.20\_k5.3.18\_22-1.sles15sp2.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

- Input / Output (I/O) non- working messages would be observed if 3PAR Persistent checksum is disabled on an array while the host is still running.

## **Enhancements**

Updated to driver version 12.6.275.20

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

Version: 10.01.00.64.15.2-k1b **(Recommended)**

Filename: qlgc-qla2xxx-kmp-default-10.01.00.64.15.2\_k1b\_k5.3.18\_22-1.sles15sp2.x86\_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.64.15.2\_k1b\_k5.3.18\_22-1.sles15sp2.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

Note: The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpglqc" driver are supported.

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

- Hosts booting from 3PAR arrays could unexpectedly reboot during 3PAR array node controller reboots with driver 10.01.00.57.xx.xx
- Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

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## **Enhancements**

Initial Driver of SuSE Linux Enterprise Server 15 Service Pack 2 version 10.01.00.64.15.2-k1b

Added support for the following:

- Allow ql2xextended\_error\_logging special value 1 to be set anytime.
- Port statistics collection improved to increase driver performance

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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## **Driver - System**

[Top](#)

HPE Non-Volatile Memory Drivers for Microsoft Windows Server 2012 R2 and 2016

Version: 3.0.1.2 **(Recommended)**

Filename: cp038534.compsig; cp038534.exe

## **Important Note!**

This Smart Component version 3.0.1.2 contains the HPE NVM Bus Driver HpeNvmBus.sys version 3.0.1.2 and the HPE NVM Disk Driver HpeNvmDisk0101 version 3.0.1.0.

## **Enhancements**

These Non-Volatile Memory drivers enable support for Persistent Memory technology on select HPE Servers running Microsoft Windows Server 2012 R2 and 2016.

- Added support for HPE Persistent Memory devices (featuring Intel Optane DC Persistent Memory), on WS2012R2 and WS2016.
- Added support for HPE 16GB NVDIMM devices, on WS2012R2.
- Changed block sector size from 512B to 4096B. Old data won't be accessible and must be backed up first if it needs to be preserved.

For more information about Persistent Memory technology offered on HPE Servers, please consult the following links:

- <https://www.hpe.com/us/en/servers/persistent-memory.html>
- <https://persistentmemory.hpe.com/windows/nvdimm>

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## Driver - System Management

[Top](#)

HPE CRU Native Driver for ESXi 7.0

Version: 7.0.10 **(Recommended)**

Filename: cru\_driver\_700.10.16\_10EM.700.0.0.14828939\_signed\_component\_15675715.zip

### **Enhancements**

Support for VMware ESXi 7.0

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iLO 5 Automatic Server Recovery Driver for Windows Server 2012 R2

Version: 4.7.0.0 **(Optional)**

Filename: cp041378.compsig; cp041378.exe

### **Important Note!**

Installing the iLO 5 Channel Interface Driver, version 4.1.0.0 or earlier, will overwrite this driver. To avoid the overwrite, use version 4.1.0.0(B) or later of the iLO 5 Channel Interface Driver.

### **Fixes**

Corrected an issue with driver versions 4.4.0.0 and 4.6.0.0, in which an operating system hang and reboot followed by another operating system hang could improperly result in an ASR Reset instead of the expected Windows bugcheck and memory dump.

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iLO 5 Automatic Server Recovery Driver for Windows Server 2016 and Server 2019

Version: 4.7.0.0 **(Optional)**



Filename: cp041379.compsig; cp041379.exe

### **Important Note!**

Installing the iLO 5 Channel Interface Driver, version 4.1.0.0 or earlier, will overwrite this driver. To avoid the overwrite, use version 4.1.0.0(B) or later of the iLO 5 Channel Interface Driver.

### **Fixes**

Corrected an issue with driver versions 4.4.0.0 and 4.6.0.0, in which an operating system hang and reboot followed by another operating system hang could improperly result in an ASR Reset instead of the expected Windows bugcheck and memory dump.

---

iLO 5 Channel Interface Driver for Windows Server 2012 R2

Version: 4.6.0.0 **(Optional)**

Filename: cp040013.compsig; cp040013.exe

### **Enhancements**

Add support for iLO 5 version 2.x firmware.

---

iLO 5 Channel Interface Driver for Windows Server 2016 and Server 2019

Version: 4.6.0.0 (C) **(Optional)**

Filename: cp041932.compsig; cp041932.exe

### **Enhancements**

TBD

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### **Driver - Video**

[Top](#)

Matrox G200eH3 Video Controller Driver for Windows Server 2012 R2

Version: 9.15.1.224 (B) **(Optional)**

Filename: cp040214.compsig; cp040214.exe

### **Enhancements**

Add support for iLO 5 version 2.x firmware.

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Matrox G200eH3 Video Controller Driver for Windows Server 2016 and Server 2019

Version: 9.15.1.224 (B) **(Optional)**

Filename: cp040215.compsig; cp040215.exe

### **Enhancements**

- Add support for iLO 5 version 2.x firmware.
- Add support for HPE ProLiant Gen10 Plus servers.

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### **Firmware - Blade Infrastructure**

[Top](#)

HPE BladeSystem c-Class Virtual Connect Firmware, Ethernet plus 8Gb 20-port and 8/16Gb 24-port FC Edition Component for Windows

Version: 4.85 **(Recommended)**

Filename: cp043332.exe

### **Prerequisites**

The 4.85 version of HPE Virtual Connect Release Notes contains the prerequisites and can also be found in the following URL: <http://www.hpe.com/info/vc/manuals>

### **Fixes**

The list of issues resolved in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL: <http://www.hpe.com/info/vc/manuals>

### **Enhancements**

The list of enhancements in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL: <http://www.hpe.com/info/vc/manuals>

### **Supported Devices and Features**

HPE Virtual Connect FlexFabric 10Gb/24-port Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 24-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 20-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect Flex-10/10D Module for c-Class BladeSystem

HPE Virtual Connect FlexFabric-20/40 F8 Module for HPE BladeSystem c-Class

HPE Virtual Connect 16Gb 24-port Fibre Channel Module for c-Class BladeSystem

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HPE BladeSystem c-Class Virtual Connect Firmware, Ethernet plus 8Gb 20-port and 8/16Gb 24-port FC Edition  
Component for Linux

Version: 4.85 (**Recommended**)

Filename: RPMS/x86\_64/firmware-vceth-4.85-1.1.x86\_64.rpm

### **Prerequisites**

The 4.85 version of HPE Virtual Connect Release Notes contains the prerequisites and can be found in the following URL: <http://www.hpe.com/info/vc/manuals>

### **Fixes**

The list of issues resolved in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL: <http://www.hpe.com/info/vc/manuals>

### **Enhancements**

The list of enhancements in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL: <http://www.hpe.com/info/vc/manuals>

### **Supported Devices and Features**

HPE Virtual Connect FlexFabric 10Gb/24-port Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 24-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 20-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect Flex-10/10D Module for c-Class BladeSystem

HPE Virtual Connect FlexFabric-20/40 F8 Module for HPE BladeSystem c-Class

HPE Virtual Connect 16Gb 24-port Fibre Channel Module for c-Class BladeSystem

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Online HP 6Gb SAS BL Switch Firmware Smart Component for Linux (x86/x64)

Version: 4.3.6.0 (B) (**Optional**)

Filename: RPMS/i586/firmware-solex6gb-solex-4.3.6.0-2.1.i586.rpm

### **Important Note!**

**Note:** If version 4.3.6.0 was previously installed, then it is not necessary to upgrade to version 4.3.6.0 (B).

## **Enhancements**

- Added support for SUSE Linux Enterprise Server 15 OS

---

Online HPE 6Gb SAS BL Switch Firmware Smart Component for Windows (x86/x64)

Version: 4.3.6.0 (C) **(Optional)**

Filename: cp038273.exe

## **Enhancements**

- Improved integration with Smart Update Manager

---

Online HPE BladeSystem c-Class Onboard Administrator Firmware Component for Linux

Version: 4.96 **(Recommended)**

Filename: RPMS/x86\_64/firmware-oa-4.96-1.1.x86\_64.rpm

## **Important Note!**

### **Important Notes**

- **Firmware Upgrade**
  - Starting OA 4.50 release, a standardized code signing and validation mechanism has been introduced to enhance the firmware image authenticity.
  - For customers using Firmware ROM image to upgrade OA:
    - For OAs with firmware version less than 3.50, first update to OA 3.50 and then continue updating to OA 4.50 or above.
  - For customers using Smart Components to upgrade OA:
    - OA firmware update mechanisms which rely on HPE Smart Components (example: EFM), will not be affected by this change. The Smart Component will automatically perform the intermediate upgrade to OA 3.50 before performing the OA 4.50 or above upgrade.
- **EFM**
  - The OA only supports SPP ISO images that are less than 4 GB in size, whether hosted directly via the Enclosure DVD feature or an attached USB key, or mounted remotely via a specified URL. If an ISO image exceeds 4 GB, the CLI SHOW FIRMWARE MANAGEMENT command displays ISO URL Status as "Invalid URL."
  - If an SPP ISO image exceeds 4 GB, it is necessary to create a custom ISO image that excludes components unnecessary to the OA EFM blade firmware update process. At a minimum, the custom ISO must contain the firmware components for HPE ProLiant BL servers. (When using HPE SUM to create the custom ISO image, select Firmware as the Component Type, and select HPE ProLiant BL Series as the Server Type.) For information about creating a custom ISO image compatible for OA EFM functionality, see the *HPE BladeSystem Onboard Administrator User Guide*. More HPE SUM information can be found via HPE Smart Update Manager online help or at <https://www.hpe.com/servers/hpsum/documentation>.
- **FIPS**
  - Onboard Administrator 4.71 is FIPS certified as referenced in the 140-2 In Process list located at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140InProcess.pdf>.

- **IPv6**
  - When the Enable DHCPv6 or Enable SLAAC enclosure IPv6 settings are disabled on the Onboard Administrator, the respective DHCPv6 or SLAAC addresses of the iLOs in the enclosure are retained until these addresses expire automatically based on their respective configurations. A manual reset of the iLO releases these addresses immediately

## **Prerequisites**

To access the OA web interface, you must have the OA IP address and a compatible web browser. You must access the

application through HTTPS (HTTP packets exchanged over an SSL/TLS-encrypted session).

The OA web interface requires an XSLT-enabled browser with support for JavaScript 1.3 or the equivalent.

Supported browsers include:

- Microsoft Internet Explorer 11
- Mozilla Firefox 67.0.4(64-bit)
- Google Chrome 77.0.3865.90 (Official Build) (64-bit)

## **Fixes**

### **General**

- Addressed an issue where SNMP queries to Onboard Administrator OIDs were not successfully completed when VLAN is configured for Blades and Interconnects.
- Addressed an issue in the Device and Rack Summary GUI page to eliminate the duplicate display of FLB and Mezz adapters information.
- Addressed an issue where Interconnects were not receiving IP address from EBIPA (or) external DHCP server.
- Addressed an issue where Blade Location information was not displayed correctly in SHOW SERVER STATUS ALL CLI command.
- Addressed an issue where DNS record update was getting delayed in DNS server when a user configured a domain name in Onboard Administrator.

### **Security**

- None

### **Issues and workarounds**

#### **Browsers**

- OA GUI is not accessible in Chrome versions 43.0.2357.10 to 44.0.2383. The issue was caused by a "regression" in Chrome (or WebKit). Customers should use an alternative browser like Firefox or Internet Explorer or try a different version of Chrome.
- SSO-to-iLO connection from the OA using an iLO host name fails with Microsoft Internet Explorer11 on Windows 8. On a Windows 8 system with Internet Explorer 10 or Internet Explorer 11, if the OA web GUI session is loaded using a host name instead of an IP address, an attempt to open an iLO window using SSO from the OA web GUI might result in the iLO page loading in the OA web GUI window instead of the intended new window. This issue was determined to be a

bug in Internet Explorer and is expected to be fixed in a future release or update for Internet Explorer. To work around this issue, either use an IP address to load the OA Web GUI, or turn off Protected Mode for the appropriate zone in Internet Explorer's settings. This issue occurs only on Internet Explorer browsers.

## **FIPS**

Certificates smaller than 2048 bits in size are not compliant with FIPS requirements as enforced by the OA firmware starting with OA 4.20. When the OA running OA firmware version 4.40 or greater is operating in FIPS Mode ON/DEBUG and is configured with a 1024-bit LDAP certificate that was installed when running a previous version of OA firmware, FIPS Mode ON/DEBUG is considered to be operating in a degraded state due to the presence of the non-compliant certificate. While operating in this FIPS-Degraded Mode operational state, attempts to set FIPS Mode OFF from the OA GUI Network Access>FIPS tab will fail and show the error message The selected FIPS mode is already enabled. When the non-compliant certificate is removed, the FIPS-Degraded operational status is cleared, FIPS Mode can then be successfully set to OFF from the GUI interface. Note that the OA CLI command SET FIPS MODE OFF can be successfully used to set FIPS Mode OFF even with non-compliant 1024-bit LDAP certificates installed in the OA.

## **IRC**

Unable to open .net IRC console for Gen10 Blades, Gen9 Blades also have the same issue. The Java applet and Webstart however, loads but the virtual media mounting fails. The work around is to launch the IRC through IRC Application (HPE Lights-Out Stand Alone Remote Console) which is installed on terminal client.

## **EFM**

To use EFM on Gen 10 Blades, please select options/filters "*Make Bootable ISO file*" and "*Enclosure Firmware Management*" while creating custom SPP ISO on HPE SUM 8.0.0. Please refer to HPE SUM 8.0.0 User guide for further details.

## **CAC**

- In the CAC mode SSH, Telnet and XML Reply protocols will be disabled.
- Linked enclosure login will not work if the linked enclosure in CAC mode.
- If accurate Service account details are not provided, LDAP user login with certificate will fail.
- It is highly recommended to establish a recovery plan before getting started with CAC. If something goes wrong with the OA configuration, the OA may be recovered through the serial port or Insight Display panel and USB KEY. Both methods require physical access to the OA. However, if an LCD PIN has been configured (and forgotten) and local accounts have been disabled or CAC has been incorrectly configured then, the only way to recover is through a serial port. The two most common situations where OA recovery is needed are when LDAP has been configured incorrectly with local accounts disabled or when CAC has been configured without certificate access.

## **Configurable SSH Port Number**

If a Standby OA is running firmware version less than 4.85 and it is updated to firmware version greater than or equal to 4.85 using synchronize firmware feature from Active OA, after the firmware update and reboot of the Standby OA, SSH port will not open in the configured port number. The work around is to reboot the Standby OA and SSH port will open in the configured port in next boot. This issue will not occur in the case where SSH port is configured to default port 22 in the Active OA.

## **Enhancements**

Onboard Administrator 4.96 provides support for the following enhancements:

## Hardware additions

- None

Features: **additions and changes**

## General

- AlertMail feature now supports two priorities that a user can select for the AlertMail messages..
- Enclosure Firmware Management (EFM) feature is optimized to speed up the EFM update operation.
- The SSL certificate of Onboard Administrator now supports Fully Qualified Domain Name (FQDN) in **Common Name (CN) field and IP address in SAN field.**
- Common Access Card (CAC) Authentication feature is enhanced to support a configurable timeout for the SSL session.

## Security

- Onboard Administrator supports two new TLS\_DHE\_RSA ciphers
- FIPS TOP-SECRET mode ciphers are now supported in FIPS **ON** and **OFF** modes.
- CLI commands SHOW SSH CIPHER, ENABLE SSH CIPHER and DISABLE SSH CIPHER are added to Show, Enable and Disable SSH ciphers in FIPS ON and OFF modes.

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Online HPE BladeSystem c-Class Onboard Administrator Firmware Component for Windows

Version: 4.96 (**Recommended**)

Filename: cp042537.exe

## **Important Note!**

### Important Notes

- **Firmware Upgrade**
  - Starting OA 4.50 release, a standardized code signing and validation mechanism has been introduced to enhance the firmware image authenticity.
  - For customers using Firmware ROM image to upgrade OA:
    - For OAs with firmware version less than 3.50, first update to OA 3.50 and then continue updating to OA 4.50 or above.
  - For customers using Smart Components to upgrade OA:
    - OA firmware update mechanisms which rely on HPE Smart Components (example: EFM), will not be affected by this change. The Smart Component will automatically perform the intermediate upgrade to OA 3.50 before performing the OA 4.50 or above upgrade.
- **EFM**
  - The OA only supports SPP ISO images that are less than 4 GB in size, whether hosted directly via the Enclosure DVD feature or an attached USB key, or mounted remotely via a specified URL. If an ISO image exceeds 4 GB, the CLI SHOW FIRMWARE MANAGEMENT command displays ISO URL Status as "Invalid URL."
  - If an SPP ISO image exceeds 4 GB, it is necessary to create a custom ISO image that excludes components unnecessary to the OA EFM blade firmware update process. At a minimum, the custom ISO must contain the firmware components for HPE ProLiant BL servers. (When using HPE SUM to create the custom ISO image, select Firmware as the Component Type, and select HPE ProLiant BL Series as the Server Type.) For information about creating a custom ISO image compatible for OA EFM functionality, see the *HPE BladeSystem Onboard Administrator User Guide*. More HPE SUM information can

be found via HPE Smart Update Manager online help or at <https://www.hpe.com/servers/hpsum/documentation>.

- **FIPS**
  - Onboard Administrator 4.71 is FIPS certified as referenced in the 140-2 In Process list located at <http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140InProcess.pdf>.
- **IPv6**
  - When the Enable DHCPv6 or Enable SLAAC enclosure IPv6 settings are disabled on the Onboard Administrator, the respective DHCPv6 or SLAAC addresses of the iLOs in the enclosure are retained until these addresses expire automatically based on their respective configurations. A manual reset of the iLO releases these addresses immediately.

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- Addressed an issue where DNS record update was getting delayed in DNS server when a user configured a domain name in Onboard Administrator

### **Security**

- None

### **Issues and workarounds**

### **Browsers**

- OA GUI is not accessible in Chrome versions 43.0.2357.10 to 44.0.2383. The issue was caused by a "regression" in Chrome (or WebKit). Customers should use an alternative browser like Firefox or Internet Explorer or try a different version of Chrome.
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## **IRC**

Unable to open .net IRC console for Gen10 Blades, Gen9 Blades also have the same issue. The Java applet and Webstart however, loads but the virtual media mounting fails. The work around is to launch the IRC through IRC Application (HPE Lights-Out Stand Alone Remote Console) which is installed on terminal client.

## **EFM**

To use EFM on Gen 10 Blades, please select options/filters "Make Bootable ISO file" and "Enclosure Firmware Management" while creating custom SPP ISO on HPE SUM 8.0.0. Please refer to HPE SUM 8.0.0 User guide for further details.

## **CAC**

- In the CAC mode SSH, Telnet and XML Reply protocols will be disabled.
- Linked enclosure login will not work if the linked enclosure in CAC mode.
- If accurate Service account details are not provided, LDAP user login with certificate will fail.
- It is highly recommended to establish a recovery plan before getting started with CAC. If something goes wrong with the OA configuration, the OA may be recovered through the serial port or Insight Display panel and USB KEY. Both methods require physical access to the OA. However, if an LCD PIN has been configured (and forgotten) and local accounts have been disabled or CAC has been incorrectly configured then, the only way to recover is through a serial port. The two most common situations where OA recovery is needed are when LDAP has been configured incorrectly with local accounts disabled or when CAC has been configured without certificate access.

## **Configurable SSH Port Number**

If a Standby OA is running firmware version less than 4.85 and it is updated to firmware version greater than or equal to 4.85 using synchronize firmware feature from Active OA, after the firmware update and reboot of the Standby OA, SSH port will not open in the configured port number. The work around is to reboot the Standby OA and SSH port will open in the configured port in next boot. This issue will not occur in the case where SSH port is configured to default port 22 in the Active OA.

## **Enhancements**

Onboard Administrator 4.96 provides support for the following enhancements:

### Hardware additions

- None

Features: **additions and changes**

### General

- AlertMail feature now supports two priorities that a user can select for the AlertMail messages.
- Enclosure Firmware Management (EFM) feature is optimized to speed up the EFM update operation.
- The SSL certificate of Onboard Administrator now supports Fully Qualified Domain Name (FQDN) in **Common Name** (CN) field and IP address in **SAN** field.
- Common Access Card (CAC) Authentication feature is enhanced to support a configurable timeout for the SSL session.

### Security

- Onboard Administrator supports two new TLS\_DHE\_RSA ciphers.
- FIPS TOP-SECRET mode ciphers are now supported in FIPS **ON** and **OFF** modes.
- CLI commands SHOW SSH CIPHER, ENABLE SSH CIPHER and DISABLE SSH CIPHER are added to Show, Enable and Disable SSH ciphers in FIPS ON and OFF modes.

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## Firmware - Lights-Out Management

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\*REMOVED\* Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5

Version: 1.40 (**Recommended**)

Filename: RPMS/x86\_64/firmware-ilo5-1.40-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-ilo5-1.40-1.1.x86\_64.rpm

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog

WinDBG Support  
HPONCFG/HPLOMIG over an IPv6 connection  
Scriptable Virtual Media  
CLI/RIBCL Key Import over IPv6  
Authentication using LDAP and Kerberos over IPv6  
iLO Federation  
Networking Features not supported by IPv6 in this release  
IPv6 Over Shared Network Port Connections  
IPMI  
NETBIOS-WINS  
Enterprise Secure Key Manager (ESKM) Support  
Embedded Remote Support (ERS)

## **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.4.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

## **Fixes**

**REMOVED** - HPE Integrated Lights-Out 5 (iLO 5) v1.40 is NO LONGER AVAILABLE for download and has been replaced with version 1.40(a). Click the "Obtain software" link to download version 1.40(a). More information is also available in the [Customer Advisory](#).

The following issues are resolved in this version:

- User interface fixes and improvements.
- Fixed an issue where power supply status changes may be delayed.
- Device Inventory could display a parse error under Internet Explorer 11 when certain PCI Cards are installed.
- Improved shared network port out-of-band LOM resuscitation to reduce the scope and the frequency of system power-on/power-off during systems shutdown/reboot.
- iLO communication issues in certain configurations where a server is set to Auto-Power-On after an AC power cycle.

SECURITY FIXES:

- HPESBHF03907

For the latest security bulletins and vulnerabilities, please visit:  
<https://support.hpe.com/hpesc/public/home> Security best practices:

Please refer to the HPE Integrated Lights-Out 5 Security Technology Brief for the latest on security best practices at:  
<http://www.hpe.com/support/ilo5-security-en>

## **Enhancements**

**REMOVED** - HPE Integrated Lights-Out 5 (iLO 5) v1.40 is NO LONGER AVAILABLE for download and has been replaced with version 1.40(a). Click the "Obtain software" link to download version 1.40(a). More information is also available in the [Customer Advisory](#).

- Ability to edit Maintenance Windows in Firmware & OS Software section
- Added Password Complexity feature to Security > Access Settings
- Enable/disable for overlay video showing Server Health Summary
- Downgrade Policy - Specifies how iLO handles requests to downgrade any of the firmware types that you can update through iLO.
- Virtual NIC functionality (disabled by default)
- Enabled One-button Secure Erase via Intelligent Provisioning
- LDAP/Directory settings configurable via Redfish
- Security Dashboard - displays the status of important security features, the Overall Security Status for the system, and the current configuration for the Security State and Server Configuration Lock features.
- Support for Gemalto SafeNet and SafeNet AT key managers
- InfoSight Optimized AHS Download
- Show NVMe wear level
- Workload performance advisor: provides server tuning recommendations to improve server performance

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\*REMOVED\* Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5

Version: 1.40 (**Recommended**)

Filename: cp035625.compsig; cp035625.exe

## **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

IPv6 Over Shared Network Port Connections  
IPMI  
NETBIOS-WINS  
Enterprise Secure Key Manager (ESKM) Support  
Embedded Remote Support (ERS)

### **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.4.0
- LOCFG v5.10.0
- HPLMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

### **Fixes**

**REMOVED** - HPE Integrated Lights-Out 5 (iLO 5) v1.40 is NO LONGER AVAILABLE for download and has been replaced with version 1.40(a). Click the "Obtain software" link to download version 1.40(a). More information is also available in the [Customer Advisory](#).

The following issues are resolved in this version:

- User interface fixes and improvements.
- Fixed an issue where power supply status changes may be delayed.
- Device Inventory could display a parse error under Internet Explorer 11 when certain PCI Cards are installed.
- Improved shared network port out-of-band LOM resuscitation to reduce the scope and the frequency of system power-on/power-off during systems shutdown/reboot.
- iLO communication issues in certain configurations where a server is set to Auto-Power-On after an AC power cycle.

SECURITY FIXES:

- HPESBHF03907

For the latest security bulletins and vulnerabilities, please visit:  
<https://support.hpe.com/hpesc/public/home> Security best practices:

Please refer to the HPE Integrated Lights-Out 5 Security Technology Brief for the latest on security best practices at:  
<http://www.hpe.com/support/ilo5-security-en>

### **Enhancements**

**REMOVED** - HPE Integrated Lights-Out 5 (iLO 5) v1.40 is NO LONGER AVAILABLE for download and has been replaced with version 1.40(a). Click the "Obtain software" link to download version 1.40(a). More information is also available in the [Customer Advisory](#).

- Ability to edit Maintenance Windows in Firmware & OS Software section
- Added Password Complexity feature to Security > Access Settings
- Enable/disable for overlay video showing Server Health Summary
- Downgrade Policy - Specifies how iLO handles requests to downgrade any of the firmware types that you can update through iLO.
- Virtual NIC functionality (disabled by default)
- Enabled One-button Secure Erase via Intelligent Provisioning
- LDAP/Directory settings configurable via Redfish
- Security Dashboard - displays the status of important security features, the Overall Security Status for the system, and the current configuration for the Security State and Server Configuration Lock features.
- Support for Gemalto SafeNet and SafeNet AT key managers
- InfoSight Optimized AHS Download
- Show NVMe wear level
- Workload performance advisor: provides server tuning recommendations to improve server performance

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\*REMOVED\* Online ROM Flash Firmware Package - HPE Integrated Lights-Out 5

Version: 1.40 (**Recommended**)

Filename: ilo5\_140.fwpkg

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS

Enterprise Secure Key Manager (ESKM) Support  
Embedded Remote Support (ERS)

### **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.4.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

### **Fixes**

**REMOVED** - HPE Integrated Lights-Out 5 (iLO 5) v1.40 is NO LONGER AVAILABLE for download and has been replaced with version 1.40(a). Click the "Obtain software" link to download version 1.40(a). More information is also available in the [Customer Advisory](#).

The following issues are resolved in this version:

- User interface fixes and improvements.
- Fixed an issue where power supply status changes may be delayed.
- Device Inventory could display a parse error under Internet Explorer 11 when certain PCI Cards are installed.
- Improved shared network port out-of-band LOM resuscitation to reduce the scope and the frequency of system power-on/power-off during systems shutdown/reboot.
- iLO communication issues in certain configurations where a server is set to Auto-Power-On after an AC power cycle.

SECURITY FIXES:

- HPESBHF03907

For the latest security bulletins and vulnerabilities, please visit:  
<https://support.hpe.com/hpesc/public/home> Security best practices:

Please refer to the HPE Integrated Lights-Out 5 Security Technology Brief for the latest on security best practices at:  
<http://www.hpe.com/support/ilo5-security-en>

### **Enhancements**

**REMOVED** - HPE Integrated Lights-Out 5 (iLO 5) v1.40 is NO LONGER AVAILABLE for download and has been replaced with version 1.40(a). Click the "Obtain software" link to download version 1.40(a). More information is also available in the [Customer Advisory](#).

- Ability to edit Maintenance Windows in Firmware & OS Software section
- Added Password Complexity feature to Security > Access Settings

- Enable/disable for overlay video showing Server Health Summary
- Downgrade Policy - Specifies how iLO handles requests to downgrade any of the firmware types that you can update through iLO.
- Virtual NIC functionality (disabled by default)
- Enabled One-button Secure Erase via Intelligent Provisioning
- LDAP/Directory settings configurable via Redfish
- Security Dashboard - displays the status of important security features, the Overall Security Status for the system, and the current configuration for the Security State and Server Configuration Lock features.
- Support for Gemalto SafeNet and SafeNet AT key managers
- InfoSight Optimized AHS Download
- Show NVMe wear level
- Workload performance advisor: provides server tuning recommendations to improve server performance

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Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5

Version: 2.30 **(Recommended)**

Filename: RPMS/x86\_64/firmware-ilo5-sha512-2.30-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-ilo5-sha512-2.30-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-ilo5-sha512-2.30-1.1.x86\_64\_part2.compsig

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support

### **Prerequisites**



Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 3.0
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.20.0 or later
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.3.0 or later
- LOCFG v5.20.0 or later
- HPLMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

### **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

### **Enhancements**

- MCTP now addresses the iLO false alarm "device/adaptor not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webservice to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

Filename: RPMS/x86\_64/firmware-ilo5-2.30-1.1.x86\_64.rpm; RPMS/x86\_64/firmware-ilo5-2.30-1.1.x86\_64\_part1.compsig; RPMS/x86\_64/firmware-ilo5-2.30-1.1.x86\_64\_part2.compsig

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support
- Embedded Remote Support (ERS)

### **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.2.0
- HPONCFG Linux 5.3.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

### **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.

- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adapter not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webserver to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

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Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5

Version: 2.30 **(Recommended)**

Filename: cp043711.exe; cp043711\_part1.compsig; cp043711\_part2.compsig

## **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- Sntp Client
- DDNS Client
- RIBCL over IPv6
- SNMP

- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation
- Networking Features not supported by IPv6 in this release
  - IPv6 Over Shared Network Port Connections
  - IPMI
  - NETBIOS-WINS
  - Enterprise Secure Key Manager (ESKM) Support

## **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 3.0
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.20.0 or later
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.3.0 or later
- LOCFG v5.20.0 or later
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

## **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adaptor not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.

- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webservice to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5

Version: 2.30 **(Recommended)**

Filename: cp040154.exe; cp040154\_part1.compsig; cp040154\_part2.compsig

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support
- Embedded Remote Support (ERS)

### **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0

- HPONCFG Windows 5.2.0
- HPONCFG Linux 5.3.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

### **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

### **Enhancements**

- MCTP now addresses the iLO false alarm "device/adapter not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webservice to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

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Online ROM Flash Firmware Package - HPE Integrated Lights-Out 5

Version: 2.30 **(Recommended)**

Filename: ilo5\_230\_SHA512.fwpkg

### **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6
- iLO Federation

Networking Features not supported by IPv6 in this release

- IPv6 Over Shared Network Port Connections
- IPMI
- NETBIOS-WINS
- Enterprise Secure Key Manager (ESKM) Support

## **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 3.0
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.20.0 or later
- HPONCFG Windows 5.3.0
- HPONCFG Linux 5.3.0 or later
- LOCFG v5.20.0 or later
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states.

## **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.

- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adapter not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webservice to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.
- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

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Online ROM Flash Firmware Package - HPE Integrated Lights-Out 5

Version: 2.30 **(Recommended)**

Filename: ilo5\_230.fwpkg

## **Important Note!**

IPv6 network communications - Dedicated network connection only

Supported Networking Features

- IPv6 Static Address Assignment
- IPv6 SLAAC Address Assignment
- IPv6 Static Route Assignment
- IPv6 Static Default Gateway Entry
- DHCPv6 Stateful Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- Web Server
- SSH Server
- SNTP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support
- HPONCFG/HPLOMIG over an IPv6 connection
- Scriptable Virtual Media
- CLI/RIBCL Key Import over IPv6
- Authentication using LDAP and Kerberos over IPv6



iLO Federation  
Networking Features not supported by IPv6 in this release  
IPv6 Over Shared Network Port Connections  
IPMI  
NETBIOS-WINS  
Enterprise Secure Key Manager (ESKM) Support  
Embedded Remote Support (ERS)

## **Prerequisites**

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.2.0
- HPONCFG Linux 5.3.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

## **Fixes**

- Ripple20 vulnerabilities might affect the TCP/IP stack.
- Synergy compute modules do not power up after One-button secure erase completes.
- SPS firmware updates initiated through the iLO Firmware & OS Software pages might fail.
- C-Class blades do not complete FRU discovery.
- During central connect Remote Support registration, an error message is not displayed when a required field is blank.
- The Virtual NIC feature intermittently fails to provide an IP address to a host with SUSE Linux Enterprise Server 15.
- Zero Sign In login fails when Kerberos authentication is configured for a large number of groups.
- When iLO is set to the factory default settings on a fully populated NVDIMM configuration, iLO may lose CHIF communication.
- DCi compliant Network Adapters under un-managed network configuration, reset to defaults on cold boot.

## **Enhancements**

- MCTP now addresses the iLO false alarm "device/adapter not responsive" issue.
- Shutdown by virtual button press is included in the iLO enhanced reset cause.
- Support for initiating the One-button secure erase process from the iLO web interface Lifecycle Management - Decommission page.
- User account roles provide predefined privilege sets or allow you to define a custom set.
- New HTML5 remote console modes: Standalone mode and New Window mode.
- Virtual power button to power NVMe drives on and off. You can access this feature from the Physical Drive Details pane on the Storage Information page.
- Configuration of Minimum Fan speed using iLO interfaces.
- Users can view and modify the System thermal configuration settings using iLO interfaces..
- PLDM firmware update support for NIC and storage option cards.
- New REST alerts for Auto Heal and Safe Mode.
- Enabled the iLO webserver to identify the source of request as Host over Virtual NIC.
- Read support for RDE-enabled devices.
- Support for flashing Universal FWPKG 2.0 images.
- Power reading support for Edgeline 8000 systems.

- Drive Indicator LED - 'Lit' and 'Off' state support for U.2/UBM1/UBM3 with NVMe direct attached storage.
- When iLO is set to the factory default settings, Virtual NIC is disabled by default.
- User can now configure iLO to avoid access over an HTTP connection

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## Firmware - Network

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Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64

Version: 1.9.4 **(Optional)**

Filename: firmware-nic-is-bcm-nxe-1.9.4-1.1.x86\_64.compsig; firmware-nic-is-bcm-nxe-1.9.4-1.1.x86\_64.rpm

### **Important Note!**

HPE recommends the *Broadcom NetXtreme-E Drivers for Linux*, versions 1.10.1-216.0.169.4 or later, for use with this firmware.

### **Prerequisites**

This package requires the appropriate driver for your network adapter be installed on all Ethernet ports brought up (*ifup ethX or ifconfig ethX up or wicked ifup ethX*) before firmware can be updated.

If local system doesn't configure any network interface for the adapter that are necessary to create the network config file to bring up interface.

- For example in sles15sp1, To create ifcfg-ethX files under `/etc/sysconfig/network/`.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

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Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware

Version: 5.11.6 **(Optional)**

Filename: CP043168.compsig; CP043168.zip

**Important Note!**

HPE recommends *Broadcom NetXtreme-E Drivers for VMware*, versions 216.0.54.0 or later, for use with this firmware.

This software package contains NVM Image version 216.0.333.11 with the following firmware versions:

<b>NIC</b>	<b>Bootcode Version</b>	<b>NCSI Version</b>	<b>MBA Version</b>	<b>UEFI Version</b>	<b>CCM Version</b>	<b>RoCE Version</b>
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter	214.4.91.1	214.4.42.1	2214.0.241.0	214.0.305.0	216.0.52.1	214.0.194.0
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter						
HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter						
HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter						
HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter						
HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter						

**Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

**Enhancements**

Initial release.

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter

- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

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Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 5.2.3.0 **(Optional)**

Filename: cp043169.compsig; cp043169.exe

**Important Note!**

HPE recommends *Broadcom NetXtreme-E Driver for Windows*, versions 216.0.143.3 or later, for use with this firmware.

This software package contains NVM Image version 216.0.333.11 with the following firmware versions:

NIC	Bootcode Version	NCSI Version	MBA Version	UEFI Version	CCM Version	RoCE Version
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter	214.4.91.1	214.4.42.1	2214.0.241.0	214.0.305.0	216.0.52.1	214.0.194.0
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter						
HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter						
HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter						
HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter						
HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter						

**Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

**Enhancements**

Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter

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HPE Blade Intel Online Firmware Upgrade Utility for Linux

Version: 1.0.14 **(Optional)**

Filename: firmware-nic-intel-bl-1.0.14-1.1.x86\_64.compsig; firmware-nic-intel-bl-1.0.14-1.1.x86\_64.rpm

## **Important Note!**

HPE recommends the *HPE Blade Intel ixgbe Drivers for Linux*, versions 5.6.4 or later, for use with this firmware.

## **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

## **Fixes**

This product addresses an issue where the "Firmware Image Properties," "Device Level Configuration," and "Link Speed Status" options in NIC HII menu disappear when F7 is pressed.

## **Enhancements**

Initial release.

This product now supports the following operating systems:

- Red Hat Enterprise Linux 7 Update 7
- Red Hat Enterprise Linux 8 Update 0
- SUSE Linux Enterprise Server 15 SP1

## **Supported Devices and Features**

This package supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade Intel Online Firmware Upgrade Utility for VMware

Version: 1.1.2 **(Optional)**

Filename: CP042573.compsig; CP042573.zip

### **Important Note!**

HPE recommends the *HPE Blade Intel ixgben Driver for VMware vSphere 7.0*, version 2020.06.01 or later, for use with this firmware.

HPE recommends the *HPE Blade Intel ixgben Driver for VMware vSphere 6.7*, version 2019.12.20 or later, for use with this firmware.

HPE recommends the *HPE Blade Intel ixgben Driver for VMware vSphere 6.5*, version 2019.12.20 or later, for use with this firmware.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Enhancements**

This product now supports VMware ESXi 7.0.

### **Supported Devices and Features**

This package supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 1.0.0.5 **(Optional)**

Filename: cp040422.compsig; cp040422.exe

### **Important Note!**

HPE recommends one of the following drivers, as appropriate for your system, for use with this firmware:

- *HPE Blade Intel ixn Driver for Windows Server 2012 R2*, version 3.14.132.0 or later
- *HPE Blade Intel ixn Driver for Windows Server 2016*, version 4.1.131.0 or later
- *HPE Blade Intel ixn Driver for Windows Server 2019*, version 4.1.143.0 or later

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

## **Fixes**

This product addresses an issue where the "Firmware Image Properties," "Device Level Configuration," and "Link Speed Status" options in NIC HII menu disappear when F7 is pressed.

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This package supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

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HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux

Version: 1.0.9 **(Optional)**

Filename: firmware-nic-qlogic-nx2-bl-1.0.9-1.1.x86\_64.compsig; firmware-nic-qlogic-nx2-bl-1.0.9-1.1.x86\_64.rpm

## **Important Note!**

HPE recommends *HPE Blade QLogic NX2 10/20GbE Multifunction Drivers for Linux*, versions 7.14.63-1 or later, for use with the firmware in this package.

## **Prerequisites**

This package requires the appropriate driver for your network adapter be installed and all Ethernet ports brought up (*ifup ethX* or *ifconfig ethX up*) before firmware can be updated.

## **Fixes**

This product addresses an incorrect local sequence number in the Link Layer Discovery Protocol (LLDP).

This product addresses an issue where boot mode is not restored to the default value after a factory reset.

This product addresses an issue where the F1 help messages "Number of VFs per PF" and "Legacy Boot Protocol" option display incorrectly in Japanese and Simplified Chinese languages.

## **Enhancements**

Initial release.

This product now supports the following operating systems:

- Red Hat Enterprise Linux 7 Update 7
- Red Hat Enterprise Linux 8 Update 0
- SUSE Linux Enterprise Server 15 SP1

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware  
Version: 1.1.1 **(Optional)**  
Filename: CP042923.compsig; CP042923.zip

### **Important Note!**

HPE recommends the *HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 7.0*, version 2020.06.01 or later, for use with this firmware.

HPE recommends the *HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.7*, version 2019.12.20 or later, for use with this firmware.

HPE recommends the *HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.5*, version 2019.12.20 or later, for use with this firmware.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Enhancements**

This product now supports VMware vSphere 7.0.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions  
Version: 1.0.0.9 (C) **(Recommended)**  
Filename: cp044984.compsig; cp044984.exe

### **Important Note!**

HPE recommends *HPE Blade QLogic NX2 10/20GbE Multifunction Drivers for Windows Server x64 Editions*, version 7.13.171.0 or later, for use with this firmware.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Fixes**

This product has been rebuilt with the correct digital signature. It does not require dual signatures.

### **Supported Devices and Features**



This product supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 534M Adapter
- HPE FlexFabric 10Gb 2-port 536FLB Adapter
- HPE FlexFabric 20Gb 2-port 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

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HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86\_64

Version: 1.9.3 **(Optional)**

Filename: firmware-nic-bcm-nxe-1.9.3-1.1.x86\_64.compsig; firmware-nic-bcm-nxe-1.9.3-1.1.x86\_64.rpm

### **Important Note!**

HPE recommends the *HPE Broadcom NetXtreme-E Drivers for Linux*, versions 1.10.1-216.0.169.4 or later, for use with this firmware.

### **Prerequisites**

This package requires the appropriate driver for your network adapter be installed on all Ethernet ports brought up (*ifup ethX* or *ifconfig ethX up* or *wicked ifup ethX*) before firmware can be updated.

If local system doesn't configure any network interface for the adapter that are necessary to create the network config file to bring up interface.

- For example in sles15sp1, To create ifcfg-ethX files under /etc/sysconfig/network/.

### **Fixes**

- This product corrects wrong names of adapters which show up while doing firmware update.
- This product corrects an issue about 2 ports in a port bond both being disconnected if we were just disconnecting 1 port.
- This product corrects an issue about LLDP nearest bridge packet not being disabled while that option under NIC HII was disabled.
- This product corrects the wrong LED behavior while attaching SFP-RJ45 transceiver.
- This product corrects an issue about firmware not being actually updated even seeing it was reported as successfully by update utility.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware

Version: 5.11.6 **(Optional)**

Filename: CP043300.compsig; CP043300.zip

### **Important Note!**

HPE recommends *HPE Broadcom NetXtreme-E Drivers for VMware*, versions 2020.09.14 or later, for use with this firmware.

This software package contains NVM Image version 216.0.333011 with the following firmware versions:

NIC	Bootcode Version	NCSI Version	MBA Version	UEFI Version	CCM Version	RoCE Version
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	214.4.91.1	214.4.42.1	214.0.241.0	214.0.305.0	216.0.52.1	214.0.194.0
HPE Ethernet 10Gb 2-port 535T Adapter						
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter						
HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter						
HPE Ethernet 10Gb 2-port 537SFP+ Adapter						
HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter						

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Fixes**

- This product corrects wrong names of adapters which show up while doing firmware update.
- This product corrects an issue about 2 ports in a port bond both being disconnected if we were just disconnecting 1 port.
- This product corrects an issue about LLDP nearest bridge packet not being disabled while that option under NIC HII was disabled.
- This product corrects the wrong LED behavior while attaching SFP-RJ45 transceiver.
- This product corrects an issue about firmware not being actually updated even seeing it was reported as successfully by update utility.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
  - HPE Ethernet 10Gb 2-port 535T Adapter
  - HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
  - HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
  - HPE Ethernet 10Gb 2-port 537SFP+ Adapter
  - HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
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HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions  
 Version: 5.2.3.0 (**Optional**)  
 Filename: cp043301.compsig; cp043301.exe

**Important Note!**

HPE recommends *HPE Broadcom NetXtreme-E Driver for Windows*, versions 216.0.143.3 or later, for use with this firmware.

This software package contains NVM Image version 216.0.333011 with the following firmware versions:

NIC	Bootcode Version	NCSI Version	MBA Version	UEFI Version	CCM Version	RoCE Version
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	214.4.91.1	214.4.42.1	214.0.241.0	214.0.305.0	216.0.52.1	214.0.194.0
HPE Ethernet 10Gb 2-port 535T Adapter						
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter						
HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter						
HPE Ethernet 10Gb 2-port 537SFP+ Adapter						
HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter						

**Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

**Fixes**

- This product corrects wrong names of adapters which show up while doing firmware update.
- This product corrects an issue about 2 ports in a port bond both being disconnected if we were just disconnecting 1 port.
- This product corrects an issue about LLDP nearest bridge packet not being disabled while that option under NIC HII was disabled.
- This product corrects the wrong LED behavior while attaching SFP-RJ45 transceiver.
- This product corrects an issue about firmware not being actually updated even seeing it was reported as successfully by update utility.

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter

- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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HPE Broadcom NX1 Online Firmware Upgrade Utility for Linux x86\_64

Version: 2.26.1 (**Optional**)

Filename: firmware-nic-broadcom-2.26.1-1.1.x86\_64.compsig; firmware-nic-broadcom-2.26.1-1.1.x86\_64.rpm

**Important Note!**

HPE recommends *HPE Broadcom tg3 Ethernet Drivers*, versions 3.138b or later, for use with this firmware.

**Prerequisites**

This package requires the appropriate driver for your network adapter be installed on all Ethernet ports brought up (*ifup ethX or ifconfig ethX up or wicked ifup ethX*) before firmware can be updated.

If local system doesn't configure any network interface for the adapter that are necessary to create the network config file to bring up interface.

- For example in sles15sp1, To create ifcfg-ethX files under */etc/sysconfig/network/*.

**Fixes**

This product corrects the wrong spare number while it was originally not the same as what was written on the label of package.

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

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HPE Broadcom NX1 Online Firmware Upgrade Utility for VMware

Version: 1.27.5 (**Optional**)

Filename: CP043297.compsig; CP043297.zip

**Important Note!**

This software package contains combo image v20.16.31 with the following firmware versions:

<b>NIC</b>	<b>Boot Code Version</b>	<b>PXE Version</b>	<b>NCSI Version</b>	<b>UEFI Version</b>	<b>CCM Version</b>
HPE Ethernet 1Gb 2-port 330i Adapter (22BD)	2.10	21.6.0	1.5.18	21.6.5	216.0.49.0
HPE Ethernet 1Gb 4-port 331i Adapter (22BE) HPE Ethernet 1Gb 4-port 331FLR Adapter HPE Ethernet 1Gb 4-port 331T Adapter	1.46	21.6.0	1.5.18	21.6.5	216.0.49.0
HPE Ethernet 1Gb 2-port 332i Adapter (22E8)	1.40	21.6.0	1.5.18	21.6.5	216.0.49.0

HPE Ethernet 1Gb 2-port 332T Adapter					
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**Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

**Fixes**

This product corrects the wrong spare number while it was originally not the same as what was written on the label of package.

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

HPE Broadcom NX1 Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 5.2.3.0 **(Optional)**

Filename: cp043298.compsig; cp043298.exe

**Important Note!**

HPE recommends *HPE Broadcom NX1 1Gb Driver for Windows Server x64 Editions*, version 214.0.0.3 or later, for use with this firmware.

This software package contains combo image v20.16.31 with the following firmware versions:

<b>NIC</b>	<b>Boot Code Version</b>	<b>PXE Version</b>	<b>NCSI Version</b>	<b>UEFI Version</b>	<b>CCM Version</b>
HPE Ethernet 1Gb 2-port 330i Adapter (22BD)	2.10	21.6.0	1.5.18	21.6.5	216.0.49.0
HPE Ethernet 1Gb 4-port 331i Adapter (22BE) HPE Ethernet 1Gb 4-port 331FLR Adapter HPE Ethernet 1Gb 4-port 331T Adapter	1.46	21.6.0	1.5.18	21.6.5	216.0.49.0
HPE Ethernet 1Gb 2-port 332i Adapter (22E8) HPE Ethernet 1Gb 2-port 332T Adapter	1.40	21.6.0	1.5.18	21.6.5	216.0.49.0

**Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

## **Fixes**

This product corrects the wrong spare number while it was originally not the same as what was written on the label of package.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

PE Firmware Flash for Emulex Converged Network Adapters for Linux (x64)

Version: 2020.09.01 (**Recommended**)

Filename: RPMS/x86\_64/firmware-cna-emulex-2020.09.01-1.17.x86\_64.compsig; RPMS/x86\_64/firmware-cna-emulex-2020.09.01-1.17.x86\_64.rpm

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

**Firmware:**

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

This Firmware package contains following firmware versions:

Adapter	Speed	Firmware
HPE FlexFabric 10Gb 2-port 556FLR-T Adapter	10Gb	12.0.1280.5
HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	10Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1280.5
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1280.5
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1280.5

**Prerequisites**

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The OOB NIC driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

Additional requirements:

The target environment must have the libsysfs or sysfsutils package installed prior to the installation of the firmware update kit. If not already present, the libsysfs or sysfsutils package can be obtained from the operating system installation media.

Environment must have 32-bit netlink library (libnl.so) installed for component to be able to discover Emulex HBAs/CNAs  
 Environment must be running the syslog daemon for the flash engine to run

Note: To enable the FCoE/iSCSI protocol on devices that support it, please install the appropriate Emulex FCoE/iSCSI driver. The FCoE protocol also requires the HPE Emulex FCoE Enablement Kit be installed. The

drivers and enablement kit are also available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

The Enablement Kit requires that the target environment have the libHBAAPI package installed from your OS installation media.

Install the FCoE Driver Kit, reboot, and then install the Enablement Kit.

## **Fixes**

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a converged network adapter update component.

Updated CNA (XE100 series) firmware

### **Firmware**

Contains:

CNA (XE100 series) firmware 12.0.1280.5

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter



- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5

Version: 2020.09.01 (b) **(Recommended)**

Filename: CP044549.compsig; CP044549.zip

### **Important Note!**

Release Notes:

[HPE Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware

Issue" at the following link:[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

This Firmware package contains following firmware version:

Adapter	Speed	Firmware
HPE FlexFabric 10Gb 2-port 556FLR-T Adapter	10Gb	12.0.1280.5
HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	10Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1280.5
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1280.5
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1280.5

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Enhancements**

Updated CNA (XE100 series) firmware

**Firmware**

**Contains:**

CNA (XE100 series) firmware 12.0.1280.5

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7

Version: 2020.09.01 (b) **(Recommended)**

Filename: CP044550.compsig; CP044550.zip

### **Important Note!**

Release Notes:

[HPE Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

This Firmware package contains following firmware version:

Adapter	Speed	Firmware
HPE FlexFabric 10Gb 2-port 556FLR-T Adapter	10Gb	12.0.1280.5
HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	10Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1280.5
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1280.5
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1280.

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

**Fixes**

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0,

12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Updated CNA (XE100 series) firmware

### **Firmware**

#### **Contains:**

CNA (XE100 series) firmware 12.0.1280.5

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 7.0

Version: 2020.09.01 (b) (**Recommended**)

Filename: CP044565.compsig; CP044565.zip

## **Important Note!**

Release Notes:

[HPE Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>

- Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

This Firmware package contains following firmware version:

Adapter	Speed	Firmware
HPE FlexFabric 10Gb 2-port 556FLR-T Adapter	10Gb	12.0.1280.5
HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	10Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1280.5
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1280.5
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1280.5

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Fixes**

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Updated CNA (XE100 series) firmware

**Firmware**

**Contains:**

CNA (XE100 series) firmware 12.0.1280.5

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

**XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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HPE Firmware Flash for Emulex Converged Network Adapters for Windows (x64)

Version: 2020.09.01 **(Recommended)**

Filename: cp044552.compsig; cp044552.exe

## **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

This Firmware package contains following firmware version:

Adapter	Speed	Firmware
HPE FlexFabric 10Gb 2-port 556FLR-T Adapter	10Gb	12.0.1280.5



HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	10Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1280.5
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1280.5
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1280.5
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1280.5

## **Prerequisites**

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Emulex NIC driver must be installed prior to this firmware component being identified by SUM for deployment. The latest driver is available on the HPE.com website at <http://www.hpe.com/>.

The FCoE/iSCSI OOB driver and FCoE enablement kit are available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

## **Fixes**

Fixed the following:

UEFI:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter and HPE FlexFabric 20Gb 2-port 650M Adapter does not complete to create boot source on 2nd port

Firmware:

- Light Emitting Diode(LED) is in invalid state when disable the port under Unified Extensible Firmware Interface (UEFI)
- Duplicate Entries found in firmware report under NIC details for few adaptors.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).
- On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a converged network adapter update component.

Updated CNA (XE100 series) firmware

Contains:  
CNA (XE100 series) firmware 12.0.1280.5

### **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

#### **XE100 Series:**

- HPE CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE CN1200E-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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HPE Intel Online Firmware Upgrade Utility for Linux x86\_64

Version: 1.20.10 (**Optional**)

Filename: firmware-nic-intel-1.20.10-1.1.x86\_64.compsig; firmware-nic-intel-1.20.10-1.1.x86\_64.rpm

### **Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- HPE Intel igb Drivers for Linux, versions 6.3.1 or later
- HPE Intel ixgbe Drivers for Linux , versions 5.7.1 or later
- HPE Intel i40e Drivers for Linux, versions 2.11.27 or later

### **Prerequisites**

This package requires the appropriate driver for your network adapter be installed on all Ethernet ports brought up (*ifup ethX* or *ifconfig ethX up* or *wicked ifup ethX*) before firmware can be updated.

If local system doesn't configure any network interface for the adapter that are necessary to create the network config file to bring up interface.

- For example in sles15sp1, To create ifcfg-ethX files under /etc/sysconfig/network/.

### **Fixes**

This product addresses an issue where ECC error occurs when running failed recovery with HPE Ethernet 10Gb 2-port 562T Adapter and HPE Ethernet 10Gb 2-port 562FLR-T Adapter.

### **Supported Devices and Features**

This package supports the following network adapters:

- HP Ethernet 1Gb 4-port 366T Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 2-port 368i Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel Online Firmware Upgrade Utility for VMware

Version: 3.13.15 (**Optional**)

Filename: CP041856.compsig; CP041856.zip

**Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- *HPE Intel igbn Drivers for VMware, versions 2020.09.14*
- *HPE Intel ixgben Drivers for VMware, versions 2020.09.14*
- *HPE Intel i40en Drivers for VMware, versions 2020.09.14*

This software package contains the following firmware versions for the below listed supported network adapters:

<b>NIC</b>	<b>EEPROM/NVM Version</b>	<b>OROM Version</b>	<b>Single NVM Version</b>
HP Ethernet 1Gb 2-port 361i Adapter	8000106F	1.2688.0	N/A
HP Ethernet 1Gb 2-port 361T Adapter	80000F91	1.2688.0	N/A
HP Ethernet 1Gb 2-port 363i Adapter	80000D00	1.2688.0	N/A
HPE Ethernet 1Gb 4-port 366i Communication Board	80000EBF	1.2688.0	N/A
HP Ethernet 1Gb 4-port 366i Adapter	8000105E	1.2688.0	N/A

HP Ethernet 1Gb 4-port 366FLR Adapter	80001060	1.2688.0	N/A
HP Ethernet 1Gb 4-port 366T Adapter	8000105F	1.2688.0	N/A
HPE Ethernet 1Gb 2-port 368i Adapter	80002192	1.2688.0	N/A
HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter	8000218B	1.2688.0	N/A
HPE Ethernet 1Gb 4-port 369i Adapter	8000218F	1.2688.0	N/A
HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	80000838	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 560SFP+ Adapter	80000835	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 568i Adapter	80002190	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter	8000218B	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter	8000218B	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 563i Adapter	800035C0	1.1375.0	N/A
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	800083C2	1.2688.0	10.53.7
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	800011BD	1.2688.0	10.53.4
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	800083C1	1.2688.0	10.53.7
HPE Ethernet 10Gb 2-port 562T Adapter	8000115A	1.2688.0	10.53.3

The combo image v1.2688.0 includes: Boot Agent: 1GbE - v1.5.88, 10GbE - v2.4.44, 40GbE - v1.1.16 & UEFI Drivers: 1GbE - v9.2.06, 10GbE - v7.6.13, 40GbE - v4.1.20

The combo image v1.1375.0 includes: Boot Agent: 1GbE - v1.5.72, 10GbE - v2.3.46, 40GbE - v1.0.21 & UEFI Drivers: 1GbE - v6.9.13, 10GbE - v5.0.20, 40GbE - v1.5.14

Single NVM Version is new firmware format which represent an unified version in place of the previously used EEPROM/NVM Version or OROM version.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Fixes**

This product addresses an issue where ECC error occurs when running failed recovery with HPE Ethernet 10Gb 2-port 562T Adapter and HPE Ethernet 10Gb 2-port 562FLR-T Adapter.

## **Enhancements**

This product now supports VMware vSphere 7.0.

## **Supported Devices and Features**

This package supports the following network adapters:

- HP Ethernet 1Gb 4-port 366T Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 2-port 368i Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HP Intel Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 5.2.3.0 (**Optional**)

Filename: cp041704.compsig; cp041704.exe

## **Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- *HPE Intel ixn Drivers for Windows, versions 3.14.214.0*
- *HPE Intel ixs Drivers for Windows, versions 3.14.214.0*
- *HPE Intel i40ea Drivers for Windows, versions 1.12.171.0*
- *HPE Intel i40eb Drivers for Windows, versions 1.12.171.0*
- *HPE Intel vxn Drivers for Windows, versions 1.2.199.0*
- *HPE Intel vxs Drivers for Windows, versions 1.2.199.0*

This software package contains the following firmware versions for the below listed supported network adapters:

<b>NIC</b>	<b>EEPROM/NVM Version</b>	<b>OROM Version</b>	<b>Single NVM Version</b>
HP Ethernet 1Gb 2-port 361i Adapter	8000106F	1.2688.0	N/A

HP Ethernet 1Gb 2-port 361T Adapter	80000F91	1.2688.0	N/A
HP Ethernet 1Gb 2-port 363i Adapter	80000D00	1.2688.0	N/A
HPE Ethernet 1Gb 4-port 366i Communication Board	80000EBF	1.2688.0	N/A
HP Ethernet 1Gb 4-port 366i Adapter	8000105E	1.2688.0	N/A
HP Ethernet 1Gb 4-port 366FLR Adapter	80001060	1.2688.0	N/A
HP Ethernet 1Gb 4-port 366T Adapter	8000105F	1.2688.0	N/A
HPE Ethernet 1Gb 2-port 368i Adapter	80002192	1.2688.0	N/A
HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter	8000218B	1.2688.0	N/A
HPE Ethernet 1Gb 4-port 369i Adapter	8000218F	1.2688.0	N/A
HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	80000838	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 560SFP+ Adapter	80000835	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 568i Adapter	80002190	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter	8000218B	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter	8000218B	1.2688.0	N/A
HPE Ethernet 10Gb 2-port 563i Adapter	800035C0	1.1375.0	N/A
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	800083C2	1.2688.0	10.53.7
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	800011BD	1.2688.0	10.53.4
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	800083C1	1.2688.0	10.53.7
HPE Ethernet 10Gb 2-port 562T Adapter	8000115A	1.2688.0	10.53.3

The combo image v1.2688.0 includes: Boot Agent: 1GbE - v1.5.88, 10GbE - v2.4.44, 40GbE - v1.1.16 & UEFI Drivers: 1GbE - v9.2.06, 10GbE - v7.6.13, 40GbE - v4.1.20

The combo image v1.1375.0 includes: Boot Agent: 1GbE - v1.5.72, 10GbE - v2.3.46, 40GbE - v1.0.21 & UEFI Drivers: 1GbE - v6.9.13, 10GbE - v5.0.20, 40GbE - v1.5.14

Single NVM Version is new firmware format which represent an unified version in place of the previously used EEPROM/NVM Version or OROM version.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Fixes**

- This product addresses an WOL issue that system wakes up automatically if any magic packet being sent before system was shut down. A corresponding driver setting to enable PME under Windows® should be adopted as well.
- This product addresses an issue where ECC error occurs when running failed recovery with HPE Ethernet 10Gb 2-port 562T Adapter and HPE Ethernet 10Gb 2-port 562FLR-T Adapter.

### **Supported Devices and Features**

This package supports the following network adapters:

- HP Ethernet 1Gb 4-port 366T Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 2-port 368i Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86\_64

Version: 1.9.8 **(Optional)**

Filename: firmware-nic-qlogic-flq-1.9.8-1.1.x86\_64.compsig; firmware-nic-qlogic-flq-1.9.8-1.1.x86\_64.rpm

### **Important Note!**

HPE recommends *HPE QLogic FastLinQ 10/25/50GbE Drivers for Linux*, versions 8.50.25.0-1 or later, for use with the firmware in this product.

### **Prerequisites**

This package requires the appropriate driver for your network adapter be installed on all Ethernet ports brought up (*ifup ethX* or *ifconfig ethX up* or *wicked ifup ethX*) before firmware can be updated.

If local system doesn't configure any network interface for the adapter that are necessary to create the network config file to bring up interface.

- For example in sles15sp1, To create ifcfg-ethX files under /etc/sysconfig/network/.

## **Fixes**

- This product corrects the abnormal disconnection of iLO web page while performing under Shared Networking on Flexible-LOM.
- This product addresses an issue where the HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 adapter and HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter UMCE (Uncorrectable Machine Check Exception) was followed by Unrecoverable I/O error, Uncorrectable PCI express error on Server and one of the ports suddenly no longer can send or receive traffic.
- This product addresses an issue where driver doesn't load upon booting up by correct memory relocation.
- This product addresses an issue where adapter may disappear during POST if the adapter is in heavy traffic during the system boot up.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware

Version: 4.12.12 **(Optional)**

Filename: CP041875.compsig; CP041875.zip

## **Important Note!**

HPE recommends *HPE QLogic FastLinQ 10/25/50GbE Multifunction Drivers for VMware*, versions 2020.09.14 or later, for use with this firmware.

This software package contains combo image version v8.52.12 includes:

- Boot Code (MFW): 8.52.9.0
- UEFI: 4.1.10.2
- PXE: 2.0.19

The users will only see the combo image versions in the interactive mode firmware update or while using HPSUM/SPP to update the firmware on the supported adapters.

## **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

## **Fixes**



- This product corrects the abnormal disconnection of iLO web page while performing under Shared Networking on Flexible-LOM.
- This product addresses an issue where the HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 adapter and HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter UMCE (Uncorrectable Machine Check Exception) was followed by Unrecoverable I/O error, Uncorrectable PCI express error on Server and one of the ports suddenly no longer can send or receive traffic.
- This product addresses an issue where driver doesn't load upon booting up by correct memory relocation.
- This product addresses an issue where adapter may disappear during POST if the adapter is in heavy traffic during the system boot up.

### **Enhancements**

This product improves the functionality for the MBI firmware update.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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HPE QLogic FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 5.2.3.0 **(Optional)**

Filename: cp041876.compsig; cp041876.exe

### **Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- *HPE QLogic FastLinQ 10/25/50GbE Driver for Windows Server x64 Editions*, versions 8.50.10.0

This combo image version v8.52.12 includes:

- Boot Code (MFW): 8.52.9.0
- UEFI: 4.1.10.2
- PXE: 2.0.19

The users will only see the combo image versions in the interactive mode firmware update or while using HPSUM/SPP to update the firmware on the supported adapters.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

## **Fixes**

- This product corrects the abnormal disconnection of iLO web page while performing under Shared Networking on Flexible-LOM.
- This product addresses an issue where the HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 adapter and HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter UMCE (Uncorrectable Machine Check Exception) was followed by Unrecoverable I/O error, Uncorrectable PCI express error on Server and one of the ports suddenly no longer can send or receive traffic.
- This product addresses an issue where driver doesn't load upon booting up by correct memory relocation.
- This product addresses an issue where adapter may disappear during POST if the adapter is in heavy traffic during the system boot up.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

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HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86\_64

Version: 2.27.8 **(Optional)**

Filename: firmware-nic-qlogic-nx2-2.27.8-1.1.x86\_64.compsig; firmware-nic-qlogic-nx2-2.27.8-1.1.x86\_64.rpm

## **Important Note!**

HPE recommends *HPE QLogic NX2 10/20GbE Multifunction Drivers for Linux*, versions 7.14.70-1 or later, for use with the firmware in this package.

## **Prerequisites**

This package requires the appropriate driver for your network adapter be installed on all Ethernet ports brought up (*ifup ethX* or *ifconfig ethX up* or *wicked ifup ethX*) before firmware can be updated.

If local system doesn't configure any network interface for the adapter that are necessary to create the network config file to bring up interface.

- For example in sles15sp1, To create ifcfg-ethX files under /etc/sysconfig/network/.

## **Fixes**

- This product corrects the display problem of the adapter name under RBSU.
- This product corrects some issues about the thermal reporting and temperature threshold control of the adapter.

- This product addresses an issue where unexpected UMCE(Uncorrectable Machine Check Exception) appeared when powering on the system with NPAR(Network Partitioning) enabled.

**Supported Devices and Features**

This product supports the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

HPE QLogic NX2 Online Firmware Upgrade Utility for VMware

Version: 1.27.11 **(Optional)**

Filename: CP041878.compsig; CP041878.zip

**Important Note!**

HPE recommends HPE QLogic NX2 10/20GbE Multifunction Drivers for VMware, versions 2020.09.14 or later, for use with this firmware.

This software package contains combo image v7.18.69 with the following firmware versions:

<b>NIC</b>	<b>Boot Code Version</b>	<b>PXE Version</b>	<b>UEFI Version</b>	<b>iSCSI Version</b>	<b>FCoE Version</b>	<b>CCM Version</b>	<b>L2 Version</b>
HP Ethernet 10Gb 2-port 530SFP+ Adapter HP Ethernet 10Gb 2-port 530T Adapter	7.15.77	7.14.13	8.7.2	n/a	n/a	7.14.4	7.12.25
HP Ethernet 10Gb 2-port 533FLR-T Adapter HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter HPE FlexFabric 10Gb 4-port 536FLR-T Adapter HP StoreFabric CN1100R Dual Port Converged Network Adapter HPE StoreFabric CN1100R-T Converged Network Adapter	7.15.77	7.14.13	8.7.2	7.14.0	7.14.3	7.14.4	7.12.25

**Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Fixes**

- This product corrects the display problem of the adapter name under RBSU.
- This products corrects some issues about the thermal reporting and temperature threadshold control of the adapter.
- This product addresses an error when the MBI firmware update is executed in the secure boot mode.
- This product addresses an issue where unexpected UMCE(Uncorrectable Machine Check Exception) appeared when powering on the system with NPAR(Network Partitioning) enabled.

### **Enhancements**

This product improves the functionality for the MBI firmware update.

### **Supported Devices and Features**

This product supports the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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HP E QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 5.2.3.0 **(Optional)**

Filename: cp041879.compsig; cp041879.exe

### **Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- *HPE QLogic NX2 10/20GbE Multifunction Drivers for Windows Server x64 Editions*, version 7.13.187.0 or later

This software package contains combo image v7.18.69 with the following firmware versions:

<b>NIC</b>	<b>Boot Code Version</b>	<b>PXE Version</b>	<b>UEFI Version</b>	<b>iSCSI Version</b>	<b>FCoE Version</b>	<b>CCM Version</b>	<b>L2 Version</b>
HP Ethernet 10Gb 2-port 530SFP+ Adapter	7.15.77	7.14.13	8.7.2	n/a	n/a	7.14.4	7.12.25

HP Ethernet 10Gb 2-port 530T Adapter							
HP Ethernet 10Gb 2-port 533FLR-T Adapter HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter HPE FlexFabric 10Gb 4-port 536FLR-T Adapter HP StoreFabric CN1100R Dual Port Converged Network Adapter HPE StoreFabric CN1100R-T Converged Network Adapter	7.15.77	7.14.13	8.7.2	7.14.0	7.14.3	7.14.4	7.12.25

The users will only see the combo image versions in the interactive mode firmware update or while using HPSUM/SPP to update the firmware on the supported adapters.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Fixes**

- This product corrects the display problem of the adapter name under RBSU.
- This products corrects some issues about the thermal reporting and temperature threshold control of the adapter.
- This product addresses an issue where unexpected UMCE(Uncorrectable Machine Check Exception) appeared when powering on the system with NPAR(Network Partitioning) enabled.

### **Supported Devices and Features**

This product supports the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

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Intel Online Firmware Upgrade Utility for Linux x86\_64

Version: 1.20.11 **(Optional)**

Filename: firmware-nic-is-intel-1.20.11-1.1.x86\_64.compsig; firmware-nic-is-intel-1.20.11-1.1.x86\_64.rpm

### **Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- Intel igb Drivers for Linux , versions 6.3.0 or later

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Enhancements**

- This product now supports SUSE Linux Enterprise Server 12 SP5.
- This product now supports HPE ProLiant MicroServer Gen10 Plus and HPE ProLiant XL225n Gen10 Plus.

### **Supported Devices and Features**

This package supports the following network adapters:

- Intel(R) I350 Gigabit Network Connection (2-port)
- Intel(R) I350 Gigabit Network Connection (4-port)
- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter

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Intel Online Firmware Upgrade Utility for VMware

Version: 3.13.12 **(Optional)**

Filename: CP041853.compsig; CP041853.zip

### **Important Note!**

This software package contains the following firmware versions for the below listed supported network adapters:

<b>NIC</b>	<b>EEPROM/NVM Version</b>	<b>OROM Version</b>
HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter	80001099	1.2684.0
HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Ada...	80001097	1.2684.0
Intel(R) I350 Gigabit Network Connection (2-port)	8000108E	1.2684.0
Intel(R) I350 Gigabit Network Connection (4-port)	8000108F	1.2684.0

The combo image v1.2658.0 includes: Boot Agent: 1GbE - v1.5.88 & UEFI Drivers: 1GbE - v9.2.05.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Enhancements**

This product now supports HPE ProLiant MicroServer Gen10 Plus and HPE ProLiant XL225n Gen10 Plus.

### **Supported Devices and Features**

This package supports the following network adapters:

- Intel(R) I350 Gigabit Backplane Connection
- Intel(R) I350 Gigabit Network Connection
- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter

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Intel Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 5.2.3.0 **(Optional)**

Filename: cp041854.compsig; cp041854.exe

### **Important Note!**

This software package contains the following firmware versions for the below listed supported network adapters:

<b>NIC</b>	<b>EEPROM/NVM Version</b>	<b>OROM Version</b>
HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter	80001099	1.2684.0
HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Ada...	80001097	1.2684.0
Intel(R) I350 Gigabit Network Connection (2-port)	8000108E	1.2684.0
Intel(R) I350 Gigabit Network Connection (4-port)	8000108F	1.2684.0

The combo image v1.2658.0 includes: Boot Agent: 1GbE - v1.5.88 & UEFI Drivers: 1GbE - v9.2.05.

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Enhancements**

This product now supports HPE ProLiant MicroServer Gen10 Plus and HPE ProLiant XL225n Gen10 Plus.

## **Supported Devices and Features**

This package supports the following network adapters:

- Intel(R) I350 Gigabit Backplane Connection
- Intel(R) I350 Gigabit Network Connection
- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter

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Marvell FastLinQ Online Firmware Upgrade Utility for Linux x86\_64

Version: 1.9.10 **(Optional)**

Filename: firmware-nic-is-marvell-flq-1.9.10-1.1.x86\_64.compsig; firmware-nic-is-marvell-flq-1.9.10-1.1.x86\_64.rpm

## **Important Note!**

HPE recommends *Marvell FastLinQ 10/25/50GbE Drivers for Linux*, versions 8.50.25.0-1 or later, for use with the firmware in this product.

## **Prerequisites**

This package requires the appropriate driver for your network adapter be installed and all Ethernet ports brought up (*ifup ethX* or *ifconfig ethX up*) before firmware can be updated.

## **Fixes**

- This product corrects an issue of inconsistent LED behavior while linking up with different speed.
- This product corrects an issue about failing to restore the factory default value by pressing F7.
- This product addresses an issue where driver doesn't load upon booting up by correct memory relocation.
- This product addresses an issue where adapter may disappear during POST if the adapter is in heavy traffic during the system boot up.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HVCU OCP3 Adapter
  - HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
  - HPE Ethernet 10Gb 4-port SFP+ QL41134HLCU Adapter
  - HPE Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter
  - HPE Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter
  - HPE Ethernet 10Gb 2-port SFP+ QL41132HVCU OCP3 Adapter
  - HPE Ethernet 10Gb 2-port SFP+ QL41132HLCU Adapter
-



Marvell FastLinQ Online Firmware Upgrade Utility for VMware

Version: 4.12.14 (**Optional**)

Filename: CP042279.compsig; CP042279.zip

### **Important Note!**

This software package contains combo image v8.52.21. This combo image includes:

- Boot Code (MFW): 8.52.9.0
- UEFI: 6.1.7.3

### **Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

### **Fixes**

- This product corrects an issue of inconsistent LED behavior while linking up with different speed.
- This product corrects an issue about failing to restore the factory default value by pressing F7.
- This product addresses an issue where driver doesn't load upon booting up by correct memory relocation.
- This product addresses an issue where adapter may disappear during POST if the adapter is in heavy traffic during the system boot up.

### **Enhancements**

This product now supports firmware upgrade in the ESXi 7.0.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCU OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HLCU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HQCU OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HLCU Adapter

Marvell FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions

Version: 5.2.3.0 (Optional)

Filename: cp042280.compsig; cp042280.exe

Important Note!

HPE recommends Marvell FastLinQ 10/25/50 GbE Drivers for Windows Server x64 Editions 8.50.10.0 or later, for use with the firmware in this product.

This software package contains combo image v8.52.21. This combo image includes:

- Boot Code (MFW): 8.52.9.0
- UEFI: 6.1.7.3

#### Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

#### Fixes

- This product corrects an issue of inconsistent LED behavior while linking up with different speed.
- This product corrects an issue about failing to restore the factory default value by pressing F7.
- This product addresses an issue where driver doesn't load upon booting up by correct memory relocation.
- This product addresses an issue where adapter may disappear during POST if the adapter is in heavy traffic during the system boot up.

#### Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCU OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HLCU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HQCU OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HLCU Adapter

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Online Firmware Upgrade Utility (ESXi 6.5) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter

Version: 1.0.3 (Recommended)

Filename: CP044321.compsig; CP044321.zip

#### Important Note!

No known issues were included in firmware version 14.27.4000:

#### Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4 firmware version 14.27.4000. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

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#### Fixes

Following issues have been fixed in version 14.27.4000:

- An issue that caused the sent packet to hang while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- A rare case where the the device froze while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance while using the VSC to trigger the send\_ring\_doorbells.
- An error that prevented the completions (CQ) from being completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- An issue that caused the fragmented IP packets to drop was fixed.

#### Enhancements

Firmware for the following device is updated to 14.27.4000:

P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

Following New features and Changes are included in version 14.27.4000:

- Added mlxconfig support for power reduction: PCI CAP AUTO\_POWER\_SAVE\_LINK\_DOWN
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN
- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

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#### **Supported Devices and Features**

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

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Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox Ethernet only adapters

Version: 1.0.8 (Recommended)

Filename: CP044339.compsig; CP044339.zip

#### Important Note!

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adpaters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

Known Issues for FW version 2.42.5044 :

- When using the QSFP module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.

- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LES will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the PF is passed through to a VM requires a reboot of the Hypervisor.
- Downgrade to previous GA requires server reboot. Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot. Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX®-3 adapters
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed
- RH6.3 Inbox driver causes kernel panic when SR-IOV is enabled on VPI cards due to driver compatibility issue.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
- MFT tools might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only).
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV
- Bloom filter is currently not supported.
- Firmware downgrade message When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3
- RM#DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3
- RM#VPD read-only fields are writable.
- Increasing SymbolErrorCounter When working in VPI mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- ConnectX-3 Pro VF device ID is presented the same as ConnectX-3 VF device ID due to driver limitations.
- RSOD while running PXE (legacy) on G9 servers. This occurs only when PXE boot fails and BIOS boots from HDD. Currently it is pending BIOS fix.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
- RDP over IPv6 is currently not functional.
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule"
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx-4\_en\_get\_drvinfo() that is called from asynchronous event handler.
- 832298: When running ibdump, loopback traffic is mirroring into the kernel driver.
- AHS reports wrong MTU size
- RM#846523: MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer

#### Known Issues for FW version 14.27.24000 and 16.27.2008:

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
Workaround: Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
Workaround: To use Flow Metering, use older firmware versions.

- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
Workaround: Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mlxfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.
- quota\_exceeded\_command and invalid\_command c

#### Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

#### Fixes

Fixes submitted in version 2.42.5044 :

- An issue that prevented the firmware from detecting a link\_down event thus preventing the IB bond interface from going to a failover mode.

Following issues have been fixed in firmware version 14.27.4000:

- The sent packet hung while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- The device hung while running the sw reset flow under heavy stress and with many open resources.
- The completions (CQ) completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- The fragmented IP packets were dropped.

Following issues have been fixed in firmware version 16.27.2008:

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

#### Enhancements

Firmware for the following devices are updated to 2.42.5044 :

779799-B21 (HP Ethernet 10G 2-port 546FLR-SFP+ Adapter)  
779793-B21 (HP Ethernet 10G 2-port 546SFP+ Adapter)

Firmware for the following devices are updated to 14.27.4000:

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

Firmware for the following devices are updated to 14.27.4000:  
817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

Firmware for the following device is updated to 16.27.2008:

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

New features and changes in version 16.27.2008:

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

New features and changes in version 14.27.4000:

- Added mlxconfig support for power reduction:
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN

#### Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
779793-B21	HP Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

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Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on VMware ESXi 6.5

Version: 1.0.7 (Recommended)

Filename: CP044170.compsig; CP044170.zip

#### Important Note!

Known Issues with firmware version 16.27.2008:

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
Workaround: Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
Workaround: To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
Workaround: Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mlxfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.

- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

#### Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

#### Fixes

Following issues have been fixed in firmware version 16.27.2008:

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

Following issues have been fixed in firmware version 12.27.4000:

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- iPoIB and DC would not work together.
- DC functionality issues.

#### Enhancements

Firmware for the following devices are updated to 12.27.4000:

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)  
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

New Feature and Changes in Version 12.27.4000:

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

Firmware for the following devices are updated to 16.27.2008:

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)  
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

New Feature and Changes in Version 16.27.2008:

This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.

- Improved init\_hca performance in Parallel Function initialization.

#### Supported Devices and Features

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on VMware ESXi 6.5

Version: 1.0.0 (Recommended)

Filename: CP044414.compsig; CP044414.zip

#### Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 - Ethernet	HDR/HDR100	EDR	FDR	QDR
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	50GbE	100GbE/25GbE	40GbE/10GbE	1GbE
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

#### Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

#### Fixes



There are no new fixes in firmware version 20.27.6008.

#### Enhancements

Firmware for the following devices are updated to 20.27.6008:

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

#### New Features and Changes in Version 20.27.6008:

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038
  - ConnectX-6: 20.27.2008\*

\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
- Added support for the following features:
  - Enabled KP4RS FEC on Active Fiber cable up to 30m.
  - FDR protocol.
  - Enabled updating End-to-End (E2E) credit packets instantly.

#### Supported Devices and Features

HPE Part Number	Device Name	PSID
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox Ethernet only adapters  
Version: 1.0.4 (**Recommended**)  
Filename: CP044340.compsig; CP044340.zip

#### Important Note!

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adapters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

#### **Known Issues for FW version 2.42.5044 :**

- When using the QSFP module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LES will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the PF is passed through to a VM requires a reboot of the Hypervisor.
- Downgrade to previous GA requires server reboot. Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot. Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/driver utilities that read the GUID via

- device firmware (e.g., using `ibstat`). `Mlxburn/flint` return `0xffff` as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX®-3 adapters
  - On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed
  - RH6.3 Inbox driver causes kernel panic when SR-IOV is enabled on VPI cards due to driver compatibility issue.
  - In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
  - When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
  - MFT tools might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
  - Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module
  - Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only).
  - PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV
  - Bloom filter is currently not supported.
  - Firmware downgrade message When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3
  - `RM#DMFS` should not be enabled when working with InfiniBand on `MLNX_OFED-2.0.3`
  - `RM#VPD` read-only fields are writable.
  - Increasing `SymbolErrorCounter` When working in VPI mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly
  - Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
  - CQ and EQ cannot be configured to different stride sizes.
  - ConnectX-3 Pro VF device ID is presented the same as ConnectX-3 VF device ID due to driver limitations.
  - RSOD while running PXE (legacy) on G9 servers. This occurs only when PXE boot fails and BIOS boots from HDD. Currently it is pending BIOS fix.
  - Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
  - RDP over IPv6 is currently not functional.
  - Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule"
  - Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
  - The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
  - 56GbE link is not raised when using 100GbE optic cables.
  - When working with `MLNX_OFED v3.3-1.0.0.0`, server reboot could get stuck due to a kernel panic in `mlx-4_en_get_drvinfo()` that is called from asynchronous event handler.
  - 832298: When running `ibdump`, loopback traffic is mirroring into the kernel driver.
  - AHS reports wrong MTU size
  - `RM#846523`: MAC address that are set from the OS using `ifconfig` are not reflected in the OCBB buffer

#### **Known Issues for FW version 14.27.24000 and 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (`page_offset != 0`), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (`page_offset = 0`).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- `mlxconfig` query for the `BOOT_INTERRUPT_DIS` TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing `mlxfwreset`, the expansion ROM register might be writable on all hosts for less than 1 second.
- `quota_exceeded_command` and `invalid_command` c

## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

### **Fixes submitted in version 2.42.5044 :**

- An issue that prevented the firmware from detecting a link\_down event thus preventing the IB bond interface from going to a failover mode.

### **Following issues have been fixed in firmware version 14.27.4000:**

- The sent packet hung while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- The device hung while running the sw reset flow under heavy stress and with many open resources.
- The completions (CQ) completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- The fragmented IP packets were dropped.

### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

## **Enhancements**

### **Firmware for the following devices are updated to 2.42.5044 :**

779799-B21 (HP Ethernet 10G 2-port 546FLR-SFP+ Adapter)  
779793-B21 (HP Ethernet 10G 2-port 546SFP+ Adapter)

### **Firmware for the following devices are updated to 14.27.4000:**

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

### **Firmware for the following devices are updated to 14.27.4000:**

817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

### **Firmware for the following device is updated to 16.27.2008:**

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

### New features and changes in version 16.27.2008:

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

### New features and changes in version 14.27.4000:

- Added mlxconfig support for power reduction:
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN

### Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
779793-B21	HP Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

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Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on VMware ESXi 6.7

Version: 1.0.3 (**Recommended**)

Filename: CP044171.compsig; CP044171.zip

### Important Note!

#### Known Issues with firmware version 16.27.2008:

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mlxfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.
- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

### Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### Fixes

**Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

**Following issues have been fixed in firmware version 12.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

**Enhancements**

**Firmware for the following devices are updated to 12.27.4000:**

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)  
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

**New Feature and Changes in Version 12.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**Firmware for the following devices are updated to 16.27.2008:**

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)  
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

**New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032

872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE000000022

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on VMware ESXi 6.7

Version: 1.0.0 (**Recommended**)

Filename: CP044415.compsig; CP044415.zip

### **Important Note!**

**ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.**

<b>Port #2 - InfiniBand</b>				
<b>Port #1 - Ethernet</b>	<b>HDR/HDR100</b>	<b>EDR</b>	<b>FDR</b>	<b>QDR</b>
<b>50GbE</b>	supported	not supported	not supported	supported
<b>100GbE/25GbE</b>	supported	not supported	not supported	supported
<b>40GbE/10GbE</b>	supported	not supported	not supported	supported
<b>1GbE</b>	supported	not supported	not supported	supported

<b>Port #2 - Ethernet</b>				
<b>Port #1 - InfiniBand</b>	<b>50GbE</b>	<b>100GbE/25GbE</b>	<b>40GbE/10GbE</b>	<b>1GbE</b>
<b>HDR / HDR100</b>	supported	supported	not supported	supported
<b>EDR</b>	supported	supported	not supported	supported
<b>FDR</b>	not supported	not supported	not supported	not supported
<b>QDR/SDR</b>	supported	supported	not supported	supported

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

**There are no new fixes in firmware version 20.27.6008.**

### **Enhancements**

**Firmware for the following devices are updated to 20.27.6008:**

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

### **New Features and Changes in Version 20.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038

- ConnectX-6: 20.27.2008\*  
\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
  - Added support for the following features:
    - Enabled KP4RS FEC on Active Fiber cable up to 30m.
    - FDR protocol.
    - Enabled updating End-to-End (E2E) credit packets instantly.

### **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on VMware ESXi 6.7

Version: 1.0.4 (**Recommended**)

Filename: CP044335.compsig; CP044335.zip

### **Important Note!**

#### **Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:**

- When using the Quad Small Form-factor Pluggable (QSFP) module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.  
**Workaround:** Reboot the server.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.  
**Workaround:** Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.  
**Workaround:** Please use the GUID value returned by the fabric/driver utilities (not 0xffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.
- **Workaround:** Set the "do\_- sense=false" parameter in the [IB\_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.  
**Workaround:** Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.  
**Workaround:** Clear the semaphore using MFT command: 'flint -clear\_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.

- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.
- DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.  
**Workaround:** Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.  
**Workaround:** Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.  
**Workaround:** 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.  
**Workaround:** Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4\_en\_get\_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

## Fixes

### Fixes in version 2.42.5000:

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxftop -d mt4103\_pci\_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow\_steering, BMC could not receive a ping over IPV6 after running bmc\_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.



- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw\_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable\_static\_steering\_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

**Fixes in version 2.42.5056:**

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

**Enhancements**

**Firmware for the following devices are updated to 2.42.5000:**

764282-B21  
764286-B21

**Firmware for the following devices are updated to 2.42.5056:**

764283-B21  
764284-B21

**Firmware for the following device is updated to 2.42.5700:**

764285-B21

**New features in firmware version 2.42.5000:**

- Added support for the following features.
  - new TLV: CX3\_GLOBAL\_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting mstdump before driver reset.
  - A mechanism to detect DEAD\_IRISC (plastic) from TPT (iron) and raise an assert.
  - A new field is added to "set port" command which notifies the firmware what is the user\_mtu size.
- Improved the debug ability for command timeout cases.

**New features and changes in firmware version 2.42.5700.**

- Modified the mlx\_cmd\_get\_mlx\_link\_status command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

**Supported Devices and Features**

**Supported Devices:**

HP Part Number	Device Name
764282-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter
764283-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter
764284-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter
764285-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter
764286-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter

## **Important Note!**

This release contains important reliability improvements and security hardening enhancements. Upgrade the devices firmware to this release to improve the devices' firmware security and reliability.

### **Known Issues in firmware 22.27.6008:**

- The CRC is being removed despite using the keep\_crc flag, and the byte count of the packet are counted without the CRC.
- The port link might be unstable after phyless reset when the keep\_link\_up configuration is set to False, and phyless reset might be malfunction.
- When the SLTP configuration is wrongly set, the "Bad status" explanation will not be presented (only error indication) to the user.
- Modifying the Flow Control attributes during traffic might cause all packets to drop.  
**Workaround:** If such scenario took place, perform the following:
  1. Restart the driver.
  2. Stop the traffic.
  3. Change the Flow Control attributes again.
- On Dual-Port devices, and only after Rx buffer modification, resetting all Physical Functions over one port (through reboot / driver restart / FLR), while there are active Physical Functions over the second port (which caused the Rx buffer changes), will cause the Rx buffer default values to be restored, although not expected by the active Physical Function on the second port.  
**Workaround:**
  - Re-apply the changes
  - Reset the functions from both ports together (driver restart / FLRs / reboot)
  - Power cycle or reset the firmware
- After Shared Buffer modifications such as SBPR, SBPM, SBCM, the PFCC flow control modifications will override the previous Shared Buffer modifications.  
**Workaround:** Apply Shared Buffer modifications after PFCC (flow control) modifications.
- Phyless Reset is not supported when using Non-DME cables.
- Phyless Reset is not supported when using a PAM4 mode.
- When running several Phyless Reset iteration in sequence, the device may get stuck.  
**Workaround:** Run a full reset (mlxfwreset) to release it.
- Running several Phyless resets in a row might result in a race between the previous Phyless reset handling the action and the current one.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- PRBS is not functional when using Wedge switch.
- 200GbE Optical cables in Auto-Negotiation mode work only in 200GbE
- Linkup time to Wedge 100 Switch in Force mode with RS-FEC/No-FEC is 24 seconds.
- When running MH TCP, few packets are dropped every second due to no Receive WQEs.  
**Workaround:** Use 4K RX queue size: ethtool -G rx 4096
- After programing firmware in LF, power-cycle must be recovered.
- Under certain congestion conditions, where traffic packets are small, accuracy of the shared buffer configuration might not be achieved.
- Software Reset does not work on ConnectX-6 Dx adapter cards.

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX6-Dx firmware version 22.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

**Following issues have been resolved in firmware version 22.27.6008:**

- Encapsulated RoCE traffic to drop when IB padding was required.
- PortXmitWait HW counter to count when not expected due to an inaccuracy in the counter.
- On dual-port device after Rx buffer modification the Physical Function on the second port got restored although no expected. The Rx buffer changes when all Physical Functions resets over one port (through reboot /driver restart / FLR) while there were active Physical Functions over the second port.
- Previous Shared Buffer modifications being overrun after performing Shared Buffer modifications such as SBPR, SBPM, SBCM, the PFCC Flow Control).

**Enhancements**

**Firmware for the following device is updated to 22.27.6008:**

P25960-B21 (HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter)

**New features and changes in version 22.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Spectrum-3: 30.2007.1142
  - Mellanox Spectrum-2: 29.2007.1142
  - Switch SDK: 4.4.0920
  - Mellanox Onyx: 3.9.0830-038
  - SONiC/SAI: 201911
  - ConnectX-6 Dx: 22.27.2008

\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.

- Programmable Congestion Control (PCC) is at GA level.
- Enabled TLS offload v1.3 with key size 256.

**Supported Devices and Features**

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437

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Online Firmware Upgrade Utility (ESXi 6.7) for Mellanox Open Ethernet cards  
 Version: 1.0.3 **(Recommended)**  
 Filename: CP044346.zip; CP044346\_part1.compsig; CP044346\_part2.compsig

**Important Note!**

**Known Issues in firmware 14.27.4000:**

- "mlxconfig" query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.
- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- Since Packet Pacing enforce max\_tc value is "1", features that require multiple TCs will not be active when this mode is available.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables

### **Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mlxfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.
- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

#### **Following issues have been fixed in firmware version 14.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

### **Enhancements**

#### **Firmware for the following devices is updated to 14.27.4000:**

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)  
P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

**Firmware for the following devices is updated to 16.27.2008:**

P13188-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter)  
 P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)  
 P10112-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter)

**New Feature and Changes in Version 14.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Online Firmware Upgrade Utility (ESXi 6.7) for Mellanox Open VPI (Ethernet and Infiniband mode) ConnectX6 devices on VMware ESXi 6.7

Version: 1.0.0 (**Recommended**)

Filename: CP044419.compsig; CP044419.zip

**Important Note!**

**ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.**

Port #2 - InfiniBand				
Port #1 - Ethernet	HDR/HDR100	EDR	FDR	QDR
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	50GbE	100GbE/25GbE	40GbE/10GbE	1GbE
HDR / HDR100	supported	supported	not supported	supported

<b>EDR</b>	supported	supported	not supported	supported
<b>FDR</b>	not supported	not supported	not supported	not supported
<b>QDR/SDR</b>	supported	supported	not supported	supported

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment if the server iLO5 firmware version is older than 2.30.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX5/ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

**The following issues have been fixed in version 20.27.6008:**

- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- Low PXE performance while using the VSC to trigger the send\_ring\_doorbells.
- Fragmented IP packets were getting dropped.
- Firmware burning after PHY-less reset is expected to be significantly slow.
- PortCounters.PortRcvErr / PPCNT.infiniband\_counters.PortRcvErr were not reporting port icrc errors.
- PortXmitWait HW counter was incrementing when not expected due to an inaccuracy in the counter.

### **Enhancements**

**Firmware for the following devices are updated to 20.27.6008:**

- HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter - P23664-B21
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter - P23665-B21
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter - P23666-B21

**New Features and Changes in Version 20.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038
  - ConnectX-6: 20.27.2008\*

\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
- Added support for the following features:
  - Enabled KP4RS FEC on Active Fiber cable up to 30m.
  - FDR protocol.
  - Enabled updating End-to-End (E2E) credit packets instantly.

### **Supported Devices and Features**

HPE Part Number	Device Name	PSID
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

Online Firmware Upgrade Utility (ESXi 7.0) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter  
Version: 1.0.0 (**Recommended**)  
Filename: CP044411.compsig; CP044411.zip

**Important Note!**

**No known issues were included in firmware version 14.27.4000:**

**Fixes**

**Following issues have been fixed in version 14.27.4000:**

- An issue that caused the sent packet to hang while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- A rare case where the the device froze while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance while using the VSC to trigger the send\_ring\_doorbells.
- An error that prevented the completions (CQ) from being completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- An issue that caused the fragmented IP packets to drop was fixed.

**Enhancements**

**Firmware for the following device is updated to 14.27.4000:**

P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

**Following New features and Changes are included in version 14.27.4000:**

- Added mlxconfig support for power reduction: PCI CAP AUTO\_POWER\_SAVE\_LINK\_DOWN
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN
- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**Supported Devices and Features**

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

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Online Firmware Upgrade Utility (ESXi 7.0) for HPE Mellanox Ethernet only adapters  
Version: 1.0.0 (**Recommended**)  
Filename: CP044390.compsig; CP044390.zip

### **Important Note!**

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adapters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

### **Known Issues for FW version 2.42.5044 :**

- When using the QSFP module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LES will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the PF is passed through to a VM requires a reboot of the Hypervisor.
- Downgrade to previous GA requires server reboot. Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot. Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX®-3 adapters
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed
- RH6.3 Inbox driver causes kernel panic when SR-IOV is enabled on VPI cards due to driver compatibility issue.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
- MFT tools might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only).
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV
- Bloom filter is currently not supported.
- Firmware downgrade message When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3
- RM#DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3
- RM#VPD read-only fields are writable.
- Increasing SymbolErrorCounter When working in VPI mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- ConnectX-3 Pro VF device ID is presented the same as ConnectX-3 VF device ID due to driver limitations.
- RSOD while running PXE (legacy) on G9 servers. This occurs only when PXE boot fails and BIOS boots from HDD. Currently it is pending BIOS fix.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
- RDP over IPv6 is currently not functional.
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule"
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.



- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in `mlx-4_en_get_drvinfo()` that is called from asynchronous event handler.
- 832298:When running `ibdump`, loopback traffic is mirroring into the kernel driver.
- AHS reports wrong MTU size
- RM#846523: MAC address that are set from the OS using `ifconfig` are not reflected in the OCBB buffer

#### **Known Issues for FW version 14.27.24000 and 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (`page_offset != 0`), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (`page_offset = 0`).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- `mlxconfig` query for the `BOOT_INTERRUPT_DIS` TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing `mlxfwreset`, the expansion ROM register might be writable on all hosts for less than 1 second.
- `quota_exceeded_command` and `invalid_command c`

#### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

#### **Fixes**

##### **Fixes submitted in version 2.42.5044 :**

- An issue that prevented the firmware from detecting a `link_down` event thus preventing the IB bond interface from going to a failover mode.

##### **Following issues have been fixed in firmware version 14.27.4000:**

- The sent packet hung while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the `write_en` bitmask.
- The device hung while running the sw reset flow under heavy stress and with many open resources.
- The completions (CQ) completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- The fragmented IP packets were dropped.

##### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The `desched_threshold` field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.

- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

## **Enhancements**

### **Firmware for the following devices are updated to 2.42.5044 :**

779799-B21 (HP Ethernet 10G 2-port 546FLR-SFP+ Adapter)  
779793-B21 (HP Ethernet 10G 2-port 546SFP+ Adapter)

### **Firmware for the following devices are updated to 14.27.4000:**

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

### **Firmware for the following devices are updated to 14.27.4000:**

817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

### **Firmware for the following device is updated to 16.27.2008:**

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

### **New features and changes in version 16.27.2008:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

### **New features and changes in version 14.27.4000:**

- Added mlxconfig support for power reduction:
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Mellanox Ethernet Only Adapters</b>	<b>PSID</b>
779793-B21	HP Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

Online Firmware Upgrade Utility (ESXi 7.0) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on VMware ESXi 7.0

Version: 1.0.0 (**Recommended**)

Filename: CP044083.compsig; CP044083.zip

## **Important Note!**

### **Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mlxfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.
- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

#### **Following issues have been fixed in firmware version 12.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

### **Enhancements**

#### **Firmware for the following devices are updated to 12.27.4000:**

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)  
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

#### **New Feature and Changes in Version 12.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY

- QUERY\_VNIC\_ENV

**Firmware for the following devices are updated to 16.27.2008:**

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)  
 872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

**New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE000000022

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Online Firmware Upgrade Utility (ESXi 7.0) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on VMware ESXi 7.0

Version: 1.0.0 (**Recommended**)

Filename: CP044416.compsig; CP044416.zip

**Important Note!**

**ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.**

<b>Port #2 - InfiniBand</b>				
<b>Port #1 - Ethernet</b>	<b>HDR/HDR100</b>	<b>EDR</b>	<b>FDR</b>	<b>QDR</b>
<b>50GbE</b>	supported	not supported	not supported	supported
<b>100GbE/25GbE</b>	supported	not supported	not supported	supported
<b>40GbE/10GbE</b>	supported	not supported	not supported	supported
<b>1GbE</b>	supported	not supported	not supported	supported

<b>Port #2 - Ethernet</b>				
<b>Port #1 - InfiniBand</b>	<b>50GbE</b>	<b>100GbE/25GbE</b>	<b>40GbE/10GbE</b>	<b>1GbE</b>
<b>HDR / HDR100</b>	supported	supported	not supported	supported
<b>EDR</b>	supported	supported	not supported	supported
<b>FDR</b>	not supported	not supported	not supported	not supported
<b>QDR/SDR</b>	supported	supported	not supported	supported

**Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

**There are no new fixes in firmware version 20.27.6008.**

## **Enhancements**

**Firmware for the following devices are updated to 20.27.6008:**

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

## **New Features and Changes in Version 20.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038
  - ConnectX-6: 20.27.2008\*

\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
- Added support for the following features:
  - Enabled KP4RS FEC on Active Fiber cable up to 30m.
  - FDR protocol.
  - Enabled updating End-to-End (E2E) credit packets instantly.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

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Online Firmware Upgrade Utility (ESXi 7.0) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on VMware ESXi 7.0

Version: 1.0.0 (**Recommended**)

Filename: CP044389.compsig; CP044389.zip

## **Important Note!**

### **Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:**

- When using the Quad Small Form-factor Pluggable (QSFP) module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.  
**Workaround:** Reboot the server.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.

- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.  
**Workaround:** Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.  
**Workaround:** Please use the GUID value returned by the fabric/driver utilities (not 0xffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.  
**Workaround:** Set the "do\_ sense=false" parameter in the [IB\_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.  
**Workaround:** Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.  
**Workaround:** Clear the semaphore using MFT command: 'flint -clear\_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.
- DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.  
**Workaround:** Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.  
**Workaround:** Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.  
**Workaround:** 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.  
**Workaround:** Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4\_en\_get\_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.

- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

## **Fixes**

### **Fixes in version 2.42.5000:**

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxftop -d mt4103\_pci\_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow\_steering, BMC could not receive a ping over IPV6 after running bmc\_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw\_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable\_static\_steering\_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

### **Fixes in version 2.42.5056:**

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

## **Enhancements**

### **Firmware for the following devices are updated to 2.42.5000:**

764282-B21  
764286-B21

### **Firmware for the following devices are updated to 2.42.5056:**

764283-B21  
764284-B21

### **Firmware for the following device is updated to 2.42.5700:**

764285-B21

### **New features in firmware version 2.42.5000:**

- Added support for the following features.
  - new TLV: CX3\_GLOBAL\_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting mstdump before driver reset.
  - A mechanism to detect DEAD\_IRISC (plastic) from TPT (iron) and raise an assert.
  - A new field is added to "set port" command which notifies the firmware what is the user\_mtu size.
- Improved the debug ability for command timeout cases.

## New features and changes in firmware version 2.42.5700.

- Modified the `mlx_cmd_get_mlx_link_status` command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

## Supported Devices and Features

### Supported Devices:

HP Part Number	Device Name	PSID
764282-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
764285-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023

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Online Firmware Upgrade Utility (ESXi 7.0) for Mellanox ConnectX6Dx Open Ethernet cards

Version: 1.0.0 (**Recommended**)

Filename: CP044406.compsig; CP044406.zip

### Important Note!

This release contains important reliability improvements and security hardening enhancements. Upgrade the devices firmware to this release to improve the devices' firmware security and reliability.

### Known Issues in firmware 22.27.6008:

- The CRC is being removed despite using the `keep_crc` flag, and the byte count of the packet are counted without the CRC.
- The port link might be unstable after phyless reset when the `keep_link_up` configuration is set to False, and phyless reset might be malfunction.
- When the SLTP configuration is wrongly set, the "Bad status" explanation will not be presented (only error indication) to the user.
- Modifying the Flow Control attributes during traffic might cause all packets to drop.  
**Workaround:** If such scenario took place, perform the following:
  1. Restart the driver.
  2. Stop the traffic.
  3. Change the Flow Control attributes again.
- On Dual-Port devices, and only after Rx buffer modification, resetting all Physical Functions over one port (through reboot / driver restart / FLR), while there are active Physical Functions over the second port (which caused the Rx buffer changes), will cause the Rx buffer default values to be restored, although not expected by the active Physical Function on the second port.  
**Workaround:**
  - Re-apply the changes
  - Reset the functions from both ports together (driver restart / FLRs / reboot)
  - Power cycle or reset the firmware
- After Shared Buffer modifications such as SBPR, SBPM, SBCM, the PFCC flow control modifications will override the previous Shared Buffer modifications.  
**Workaround:** Apply Shared Buffer modifications after PFCC (flow control) modifications.
- Phyless Reset is not supported when using Non-DME cables.
- Phyless Reset is not supported when using a PAM4 mode.
- When running several Phyless Reset iteration in sequence, the device may get stuck.  
**Workaround:** Run a full reset (`mlxfwreset`) to release it.
- Running several Phyless resets in a row might result in a race between the previous Phyless reset handling the action and the current one.



- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- PRBS is not functional when using Wedge switch.
- 200GbE Optical cables in Auto-Negotiation mode work only in 200GbE
- Linkup time to Wedge 100 Switch in Force mode with RS-FEC/No-FEC is 24 seconds.
- When running MH TCP, few packets are dropped every second due to no Receive WQEs.  
**Workaround:** Use 4K RX queue size: ethtool -G rx 4096
- After programing firmware in LF, power-cycle must be recovered.
- Under certain congestion conditions, where traffic packets are small, accuracy of the shared buffer configuration might not be achieved.
- Software Reset does not work on ConnectX-6 Dx adapter cards.

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX6-Dx firmware version 22.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been resolved in firmware version 22.27.6008:**

- Encapsulated RoCE traffic to drop when IB padding was required.
- PortXmitWait HW counter to count when not expected due to an inaccuracy in the counter.
- On dual-port device after Rx buffer modification the Physical Function on the second port got restored although no expected. The Rx buffer changes when all Physical Functions resets over one port (through reboot /driver restart / FLR) while there were active Physical Functions over the second port.
- Previous Shared Buffer modifications being overrun after performing Shared Buffer modifications such as SBPR, SBPM, SBCM, the PFCC Flow Control).

### **Enhancements**

#### **Firmware for the following device is updated to 22.27.6008:**

P25960-B21 (HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter)

#### **New features and changes in version 22.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Spectrum-3: 30.2007.1142
  - Mellanox Spectrum-2: 29.2007.1142
  - Switch SDK: 4.4.0920
  - Mellanox Onyx: 3.9.0830-038
  - SONiC/SAI: 201911
  - ConnectX-6 Dx: 22.27.2008

\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.

- Programmable Congestion Control (PCC) is at GA level.
- Enabled TLS offload v1.3 with key size 256.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Mellanox Ethernet Only Adapters</b>	<b>PSID</b>
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437

Online Firmware Upgrade Utility (ESXi 7.0) for Mellanox Open Ethernet cards

Version: 1.0.0 (**Recommended**)

Filename: CP044391.zip; CP044391\_part1.compsig; CP044391\_part2.compsig

## **Important Note!**

### **Known Issues in firmware 14.27.4000:**

- "mlxconfig" query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.
- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- Since Packet Pacing enforce max\_tc value is "1", features that require multiple TCs will not be active when this mode is available.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables

### **Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mixfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.
- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.

- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

**Following issues have been fixed in firmware version 14.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

**Enhancements**

**Firmware for the following devices is updated to 14.27.4000:**

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)  
P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

**Firmware for the following devices is updated to 16.27.2008:**

P13188-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter)  
P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)  
P10112-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter)

**New Feature and Changes in Version 14.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Online Firmware Upgrade Utility (ESXi 7.0) for Mellanox Open VPI (Ethernet and Infiniband mode) ConnectX6 devices on VMware ESXi 7.0

Version: 1.0.0 (**Recommended**)

Filename: CP044420.compsig; CP044420.zip

### **Important Note!**

**ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.**

<b>Port #2 - InfiniBand</b>				
<b>Port #1 - Ethernet</b>	<b>HDR/HDR100</b>	<b>EDR</b>	<b>FDR</b>	<b>QDR</b>
<b>50GbE</b>	supported	not supported	not supported	supported
<b>100GbE/25GbE</b>	supported	not supported	not supported	supported
<b>40GbE/10GbE</b>	supported	not supported	not supported	supported
<b>1GbE</b>	supported	not supported	not supported	supported

<b>Port #2 - Ethernet</b>				
<b>Port #1 - InfiniBand</b>	<b>50GbE</b>	<b>100GbE/25GbE</b>	<b>40GbE/10GbE</b>	<b>1GbE</b>
<b>HDR / HDR100</b>	supported	supported	not supported	supported
<b>EDR</b>	supported	supported	not supported	supported
<b>FDR</b>	not supported	not supported	not supported	not supported
<b>QDR/SDR</b>	supported	supported	not supported	supported

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment if the server iLO5 firmware version is older than 2.30.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX5/ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

**The following issues have been fixed in version 20.27.6008:**

- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- Low PXE performance while using the VSC to trigger the send\_ring\_doorbells.
- Fragmented IP packets were getting dropped.

- Firmware burning after PHY-less reset is expected to be significantly slow.
- PortCounters.PortRcvErr / PPCNT.infiniband\_counters.PortRcvErr were not reporting port icrc errors.
- PortXmitWait HW counter was incrementing when not expected due to an inaccuracy in the counter.

## **Enhancements**

### **Firmware for the following devices are updated to 20.27.6008:**

- HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter - P23664-B21
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter - P23665-B21
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter - P23666-B21

### **New Features and Changes in Version 20.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038
  - ConnectX-6: 20.27.2008\*
 \*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
- Added support for the following features:
  - Enabled KP4RS FEC on Active Fiber cable up to 30m.
  - FDR protocol.
  - Enabled updating End-to-End (E2E) credit packets instantly.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

Online Firmware Upgrade Utility (Linux x86\_64) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter

Version: 1.0.3 **(Recommended)**

Filename: firmware-nic-mellanox-eth-only-mft-1.0.3-1.1.x86\_64.compsig; firmware-nic-mellanox-eth-only-mft-1.0.3-1.1.x86\_64.rpm

## **Important Note!**

**No known issues were included in firmware version 14.27.4000:**

## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4 firmware version 14.27.4000. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

**Following issues have been fixed in version 14.27.4000:**

- An issue that caused the sent packet to hang while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- A rare case where the the device froze while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance while using the VSC to trigger the send\_ring\_doorbells.
- An error that prevented the completions (CQ) from being completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- An issue that caused the fragmented IP packets to drop was fixed.

**Enhancements**

**Firmware for the following device is updated to 14.27.4000:**

P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

**Following New features and Changes are included in version 14.27.4000:**

- Added mlxconfig support for power reduction: PCI CAP AUTO\_POWER\_SAVE\_LINK\_DOWN
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN
- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**Supported Devices and Features**

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

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Online Firmware Upgrade Utility (Linux x86\_64) for HPE Intel OPA adapters

Version: 1.9.2 (**Recommended**)

Filename: firmware-nic-intel-opa-hfi-1.9.2-1.1.x86\_64.compsig; firmware-nic-intel-opa-hfi-1.9.2-1.1.x86\_64.rpm

**Prerequisites**

The smart component requires Intel IFS or Basic software v10.9.2.0.9 to be installed as a prerequisite.

**Fixes**

**Following issues have been resolved in version 1.9.2:**

- Due to a SLES 15 kernel setting, hfi1\_eprom cannot work while the HFI driver is loaded. The tool and driver are mutually exclusive.

## **Enhancements**

### **Changes and New Features in version 1.9.2:**

- Added hfi1\_eprom **v10\_9\_2\_0\_0**.
- Loader ROM **HfiPcieGen3Loader\_1.9.2.0.0.rom** and driver EFI **HfiPcieGen3\_1.9.2.0.0.efi** were added.

## **Supported Devices and Features**

<b>HP Part Number</b>	<b>OPA HFI Adapter Type</b>	<b>SSID</b>
829334-B21	HPE 100Gb 1-Port OP101 QSFP28 x8 OPA Adapter	E7
829335-B21	HPE 100Gb 1-Port OP101 QSFP28 x16 OPA Adapter	E8
851226-B21	HPE Apollo 100Gb 1-port Intel Omni-Path Architecture 860z Mezzanine FIO Adapter	21C

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Online Firmware Upgrade Utility (Linux x86\_64) for HPE Mellanox Ethernet only adapters

Version: 1.0.13 (**Recommended**)

Filename: firmware-nic-mellanox-ethernet-only-1.0.13-1.1.x86\_64.compsig; firmware-nic-mellanox-ethernet-only-1.0.13-1.1.x86\_64.rpm

## **Important Note!**

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adapters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

### **Known Issues for FW version 2.42.5044 :**

- When using the QSFP module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LES will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the PF is passed through to a VM requires a reboot of the Hypervisor.
- Downgrade to previous GA requires server reboot. Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot. Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX®-3 adapters
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed
- RH6.3 Inbox driver causes kernel panic when SR-IOV is enabled on VPI cards due to driver compatibility issue.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
- MFT tools might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only).
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV
- Bloom filter is currently not supported.

- Firmware downgrade message When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3
- RM#DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3
- RM#VPD read-only fields are writable.
- Increasing SymbolErrorCounter When working in VPI mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- ConnectX-3 Pro VF device ID is presented the same as ConnectX-3 VF device ID due to driver limitations.
- RSOD while running PXE (legacy) on G9 servers. This occurs only when PXE boot fails and BIOS boots from HDD. Currently it is pending BIOS fix.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
- RDP over IPv6 is currently not functional.
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule"
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in `mlx-4_en_get_drvinfo()` that is called from asynchronous event handler.
- 832298:When running `ibdump`, loopback traffic is mirroring into the kernel driver.
- AHS reports wrong MTU size
- RM#846523: MAC address that are set from the OS using `ifconfig` are not reflected in the OCBB buffer

#### **Known Issues for FW version 14.27.24000 and 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (`page_offset != 0`), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (`page_offset = 0`).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- `mlxconfig` query for the `BOOT_INTERRUPT_DIS` TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the `"setpci"` command, it will not be functional even after re-enabling it by running the `"setpci"` command again.
- In Socket Direct supported cards, after performing `mixfwreset`, the expansion ROM register might be writable on all hosts for less than 1 second.
- `quota_exceeded_command` and `invalid_command c`

#### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

#### **Fixes**

##### **Fixes submitted in version 2.42.5044 :**

- An issue that prevented the firmware from detecting a `link_down` event thus preventing the IB bond interface from going to a failover mode.

##### **Following issues have been fixed in firmware version 14.27.4000:**



- The sent packet hung while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- The device hung while running the sw reset flow under heavy stress and with many open resources.
- The completions (CQ) completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- The fragmented IP packets were dropped.

**Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

**Enhancements**

**Firmware for the following devices are updated to 2.42.5044 :**

779799-B21 (HP Ethernet 10G 2-port 546FLR-SFP+ Adapter)  
779793-B21 (HP Ethernet 10G 2-port 546SFP+ Adapter)

**Firmware for the following devices are updated to 14.27.4000:**

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

**Firmware for the following devices are updated to 14.27.4000:**

817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

**Firmware for the following device is updated to 16.27.2008:**

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

**New features and changes in version 16.27.2008:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**New features and changes in version 14.27.4000:**

- Added mlxconfig support for power reduction:
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN

**Supported Devices and Features**

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
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779793-B21	HP Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

Online Firmware Upgrade Utility (Linux x86\_64) for HPE Mellanox IB only ConnectX4 and ConnectX5 devices on Linux x86\_64 platform

Version: 1.0.6 (**Recommended**)

Filename: firmware-nic-mellanox-ib-cx4-cx5-1.0.6-1.1.x86\_64.compsig; firmware-nic-mellanox-ib-cx4-cx5-1.0.6-1.1.x86\_64.rpm

### **Important Note!**

#### **Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

#### **Following issues have been fixed in firmware version 12.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

### **Enhancements**

**Firmware for the following devices are updated to 12.27.4000:**

843400-B21 (HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter)

**New Feature and Changes in Version 12.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**Firmware for the following devices are updated to 16.27.2008:**

872723-B21 (HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter)

872725-B21 (HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter)

**New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

**Supported Devices:**

HPE Part Number	Device Name	PSID
843400-B21	HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter	HPE2920111032
872723-B21	HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter	HPE0000000017
872725-B21	HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	HPE0000000008

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Online Firmware Upgrade Utility (Linux x86\_64) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on Linux x86\_64 platform

Version: 1.0.9 (**Recommended**)

Filename: firmware-hca-mellanox-vpi-connectx4-1.0.9-1.1.x86\_64.compsig; firmware-hca-mellanox-vpi-connectx4-1.0.9-1.1.x86\_64.rpm

**Important Note!**

**Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mlxfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.

- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

#### **Following issues have been fixed in firmware version 12.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

### **Enhancements**

#### **Firmware for the following devices are updated to 12.27.4000:**

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)  
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

#### **New Feature and Changes in Version 12.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

#### **Firmware for the following devices are updated to 16.27.2008:**

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)  
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

#### **New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (Linux x86\_64) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on Linux x86\_64 platform

Version: 1.0.5 (**Recommended**)

Filename: firmware-hca-mellanox-vpi-connectx6-mft-1.0.5-1.1.x86\_64.compsig; firmware-hca-mellanox-vpi-connectx6-mft-1.0.5-1.1.x86\_64.rpm

**Important Note!**

**ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.**

Port #2 - InfiniBand				
Port #1 - Ethernet	HDR/HDR100	EDR	FDR	QDR
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	50GbE	100GbE/25GbE	40GbE/10GbE	1GbE
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

**Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

**Fixes**

**There are no new fixes in firmware version 20.27.6008.**

**Enhancements**

**Firmware for the following devices are updated to 20.27.6008:**

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

**New Features and Changes in Version 20.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038
  - ConnectX-6: 20.27.2008\*

\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
- Added support for the following features:
  - Enabled KP4RS FEC on Active Fiber cable up to 30m.
  - FDR protocol.
  - Enabled updating End-to-End (E2E) credit packets instantly.

**Supported Devices and Features**

HPE Part Number	Device Name	PSID
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (Linux x86\_64) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on Linux x86\_64 platform

Version: 1.0.11 (**Recommended**)

Filename: firmware-hca-mellanox-vpi-eth-ib-1.0.11-1.1.x86\_64.compsig; firmware-hca-mellanox-vpi-eth-ib-1.0.11-1.1.x86\_64.rpm

**Important Note!**

**Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:**

- When using the Quad Small Form-factor Pluggable (QSFP) module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.  
**Workaround:** Reboot the server.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.  
**Workaround:** Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.  
**Workaround:** Please use the GUID value returned by the fabric/driver utilities (not 0xffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.

- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.
- **Workaround:** Set the "do\_ - sense=false" parameter in the [IB\_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.  
**Workaround:** Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.  
**Workaround:** Clear the semaphore using MFT command: 'flint -clear\_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.
- DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.  
**Workaround:** Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.  
**Workaround:** Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.  
**Workaround:** 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.  
**Workaround:** Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4\_en\_get\_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

## Fixes

### Fixes in version 2.42.5000:

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxftop -d mt4103\_pci\_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow\_steering, BMC could not receive a ping over IPV6 after running bmc\_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw\_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable\_static\_steering\_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

#### **Fixes in version 2.42.5056:**

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

#### **Enhancements**

##### **Firmware for the following devices are updated to 2.42.5000:**

764282-B21  
764286-B21

##### **Firmware for the following devices are updated to 2.42.5056:**

764283-B21  
764284-B21

##### **Firmware for the following device is updated to 2.42.5700:**

764285-B21

#### **New features in firmware version 2.42.5000:**

- Added support for the following features.
  - new TLV: CX3\_GLOBAL\_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting mstdump before driver reset.
  - A mechanism to detect DEAD\_IRISC (plastic) from TPT (iron) and raise an assert.
  - A new field is added to "set port" command which notifies the firmware what is the user\_mtu size.
- Improved the debug ability for command timeout cases.

#### **New features and changes in firmware version 2.42.5700.**

- Modified the mlx\_cmd\_get\_mlx\_link\_status command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

#### **Supported Devices and Features**



## Supported Devices:

HP Part Number	Device Name
764282-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter
764283-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter
764284-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter
764285-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter
764286-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter

Online Firmware Upgrade Utility (Linux x86\_64) for Mellanox ConnectX6Dx Open Ethernet cards

Version: 1.0.2 (**Recommended**)

Filename: firmware-nic-open-cx6dx-mellanox-eth-mft-1.0.2-1.1.x86\_64.compsig; firmware-nic-open-cx6dx-mellanox-eth-mft-1.0.2-1.1.x86\_64.rpm

## **Important Note!**

This release contains important reliability improvements and security hardening enhancements. Upgrade the devices firmware to this release to improve the devices' firmware security and reliability.

## **Known Issues in firmware 22.27.6008:**

- The CRC is being removed despite using the keep\_crc flag, and the byte count of the packet are counted without the CRC.
- The port link might be unstable after phyless reset when the keep\_link\_up configuration is set to False, and phyless reset might be malfunction.
- When the SLTP configuration is wrongly set, the "Bad status" explanation will not be presented (only error indication) to the user.
- Modifying the Flow Control attributes during traffic might cause all packets to drop.  
**Workaround:** If such scenario took place, perform the following:
  1. Restart the driver.
  2. Stop the traffic.
  3. Change the Flow Control attributes again.
- On Dual-Port devices, and only after Rx buffer modification, resetting all Physical Functions over one port (through reboot / driver restart / FLR), while there are active Physical Functions over the second port (which caused the Rx buffer changes), will cause the Rx buffer default values to be restored, although not expected by the active Physical Function on the second port.  
**Workaround:**
  - Re-apply the changes
  - Reset the functions from both ports together (driver restart / FLRs / reboot)
  - Power cycle or reset the firmware
- After Shared Buffer modifications such as SBPR, SBPM, SBCM, the PFCC flow control modifications will override the previous Shared Buffer modifications.  
**Workaround:** Apply Shared Buffer modifications after PFCC (flow control) modifications.
- Phyless Reset is not supported when using Non-DME cables.
- Phyless Reset is not supported when using a PAM4 mode.
- When running several Phyless Reset iteration in sequence, the device may get stuck.  
**Workaround:** Run a full reset (mlxfwreset) to release it.
- Running several Phyless resets in a row might result in a race between the previous Phyless reset handling the action and the current one.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- PRBS is not functional when using Wedge switch.
- 200GbE Optical cables in Auto-Negotiation mode work only in 200GbE
- Linkup time to Wedge 100 Switch in Force mode with RS-FEC/No-FEC is 24 seconds.
- When running MH TCP, few packets are dropped every second due to no Receive WQEs.  
**Workaround:** Use 4K RX queue size: ethtool -G rx 4096
- After programming firmware in LF, power-cycle must be recovered.

- Under certain congestion conditions, where traffic packets are small, accuracy of the shared buffer configuration might not be achieved.
- Software Reset does not work on ConnectX-6 Dx adapter cards.

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX6-Dx firmware version 22.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been resolved in firmware version 22.27.6008:**

- Encapsulated RoCE traffic to drop when IB padding was required.
- PortXmitWait HW counter to count when not expected due to an inaccuracy in the counter.
- On dual-port device after Rx buffer modification the Physical Function on the second port got restored although no expected. The Rx buffer changes when all Physical Functions resets over one port (through reboot /driver restart / FLR) while there were active Physical Functions over the second port.
- Previous Shared Buffer modifications being overrun after performing Shared Buffer modifications such as SBPR, SBPM, SBCM, the PFCC Flow Control).

### **Enhancements**

#### **Firmware for the following device is updated to 22.27.6008:**

P25960-B21 (HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter)

#### **New features and changes in version 22.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Spectrum-3: 30.2007.1142
  - Mellanox Spectrum-2: 29.2007.1142
  - Switch SDK: 4.4.0920
  - Mellanox Onyx: 3.9.0830-038
  - SONiC/SAI: 201911
  - ConnectX-6 Dx: 22.27.2008

\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.

- Programmable Congestion Control (PCC) is at GA level.
- Enabled TLS offload v1.3 with key size 256.

### **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Mellanox Ethernet Only Adapters</b>	<b>PSID</b>
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437

Filename: firmware-nic-open-mellanox-eth-mft-1.0.3-1.1.x86\_64.compsig; firmware-nic-open-mellanox-eth-mft-1.0.3-1.1.x86\_64.rpm

### **Important Note!**

#### **Known Issues in firmware 14.27.4000:**

- "mlxconfig" query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.
- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- Since Packet Pacing enforce max\_tc value is "1", features that require multiple TCs will not be active when this mode is available.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables

#### **Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mlxfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.
- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

**Following issues have been fixed in firmware version 14.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

**Enhancements**

**Firmware for the following devices is updated to 14.27.4000:**

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)  
P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

**Firmware for the following devices is updated to 16.27.2008:**

P13188-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter)  
P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)  
P10112-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter)

**New Feature and Changes in Version 12.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

<b>HPE Part Number</b>	<b>Mellanox Ethernet Only Adapters</b>	<b>PSID</b>
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter	MT_0000000416
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Online Firmware Upgrade Utility (Linux x86\_64) for Mellanox Open VPI (Ethernet and Infiniband mode) ConnectX6 devices on Linux x86\_64 platform

Version: 1.0.2 **(Recommended)**

Filename: firmware-hca-open-mellanox-vpi-connectx6-mft-1.0.2-1.1.x86\_64.compsig; firmware-hca-open-mellanox-vpi-connectx6-mft-1.0.2-1.1.x86\_64.rpm

**Important Note!**

**ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.**

<b>Port #2 - InfiniBand</b>				
<b>Port #1 - Ethernet</b>	<b>HDR/HDR100</b>	<b>EDR</b>	<b>FDR</b>	<b>QDR</b>
<b>50GbE</b>	supported	not supported	not supported	supported
<b>100GbE/25GbE</b>	supported	not supported	not supported	supported
<b>40GbE/10GbE</b>	supported	not supported	not supported	supported
<b>1GbE</b>	supported	not supported	not supported	supported

<b>Port #2 - Ethernet</b>				
<b>Port #1 - InfiniBand</b>	<b>50GbE</b>	<b>100GbE/25GbE</b>	<b>40GbE/10GbE</b>	<b>1GbE</b>
<b>HDR / HDR100</b>	supported	supported	not supported	supported
<b>EDR</b>	supported	supported	not supported	supported
<b>FDR</b>	not supported	not supported	not supported	not supported
<b>QDR/SDR</b>	supported	supported	not supported	supported

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment if the server iLO5 firmware version is older than 2.30.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX5/ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

**The following issues have been fixed in version 20.27.6008:**

- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- Low PXE performance while using the VSC to trigger the send\_ring\_doorbells.
- Fragmented IP packets were getting dropped.
- Firmware burning after PHY-less reset is expected to be significantly slow.
- PortCounters.PortRcvErr / PPCNT.infiniband\_counters.PortRcvErr were not reporting port icrc errors.

- PortXmitWait HW counter was incrementing when not expected due to an inaccuracy in the counter.

## **Enhancements**

### **Firmware for the following devices are updated to 20.27.6008:**

- HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter - P23664-B21
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter - P23665-B21
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter - P23666-B21

### **New Features and Changes in Version 20.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038
  - ConnectX-6: 20.27.2008\*  
\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
- Added support for the following features:
  - Enabled KP4RS FEC on Active Fiber cable up to 30m.
  - FDR protocol.
  - Enabled updating End-to-End (E2E) credit packets instantly.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

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Online Firmware Upgrade Utility (Windows x64) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter  
Version: 1.0.0.3 **(Recommended)**  
Filename: cp044323.compsig; cp044323.exe

## **Important Note!**

**No known issues were included in firmware version 14.27.4000:**

## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4 firmware version 14.27.4000. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

**Following issues have been fixed in version 14.27.4000:**

- An issue that caused the sent packet to hang while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the write\_en bitmask.

- A rare case where the the device froze while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance while using the VSC to trigger the send\_ring\_doorbells.
- An error that prevented the completions (CQ) from being completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- An issue that caused the fragmented IP packets to drop was fixed.

## **Enhancements**

**Firmware for the following device is updated to 14.27.4000:**

P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

**Following New features and Changes are included in version 14.27.4000:**

- Added mlxconfig support for power reduction: PCI CAP AUTO\_POWER\_SAVE\_LINK\_DOWN
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN
- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Mellanox Ethernet Only Adapters</b>	<b>PSID</b>
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

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Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox Ethernet only adapters  
 Version: 1.0.0.13 (**Recommended**)  
 Filename: cp044409.compsig; cp044409.exe

## **Important Note!**

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adpaters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

**Known Issues for FW version 2.42.5044 :**

- When using the QSFP module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LES will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the PF is passed through to a VM requires a reboot of the Hypervisor.
- Downgrade to previous GA requires server reboot. Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot. Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/driver utilities that read the GUID via

- device firmware (e.g., using `ibstat`). `Mlxburn/flint` return `0xffff` as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX®-3 adapters
  - On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed
  - RH6.3 Inbox driver causes kernel panic when SR-IOV is enabled on VPI cards due to driver compatibility issue.
  - In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
  - When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
  - MFT tools might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
  - Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module
  - Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only).
  - PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV
  - Bloom filter is currently not supported.
  - Firmware downgrade message When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3
  - `RM#DMFS` should not be enabled when working with InfiniBand on `MLNX_OFED-2.0.3`
  - `RM#VPD` read-only fields are writable.
  - Increasing `SymbolErrorCounter` When working in VPI mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly
  - Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
  - CQ and EQ cannot be configured to different stride sizes.
  - ConnectX-3 Pro VF device ID is presented the same as ConnectX-3 VF device ID due to driver limitations.
  - RSOD while running PXE (legacy) on G9 servers. This occurs only when PXE boot fails and BIOS boots from HDD. Currently it is pending BIOS fix.
  - Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
  - RDP over IPv6 is currently not functional.
  - Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule"
  - Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
  - The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
  - 56GbE link is not raised when using 100GbE optic cables.
  - When working with `MLNX_OFED v3.3-1.0.0.0`, server reboot could get stuck due to a kernel panic in `mlx-4_en_get_drvinfo()` that is called from asynchronous event handler.
  - 832298: When running `ibdump`, loopback traffic is mirroring into the kernel driver.
  - AHS reports wrong MTU size
  - `RM#846523`: MAC address that are set from the OS using `ifconfig` are not reflected in the OCBB buffer

#### **Known Issues for FW version 14.27.24000 and 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (`page_offset != 0`), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (`page_offset = 0`).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- `mlxconfig` query for the `BOOT_INTERRUPT_DIS` TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing `mlxfwreset`, the expansion ROM register might be writable on all hosts for less than 1 second.
- `quota_exceeded_command` and `invalid_command` c



## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

### **Fixes submitted in version 2.42.5044 :**

- An issue that prevented the firmware from detecting a link\_down event thus preventing the IB bond interface from going to a failover mode.

### **Following issues have been fixed in firmware version 14.27.4000:**

- The sent packet hung while the device entered FLR mode.
- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- The device hung while running the sw reset flow under heavy stress and with many open resources.
- The completions (CQ) completed due to a race condition in the firmware transport error handlers, and the error stressors, where the error stressors would hang the firmware transport error handler flow.
- The fragmented IP packets were dropped.

### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

## **Enhancements**

### **Firmware for the following devices are updated to 2.42.5044 :**

779799-B21 (HP Ethernet 10G 2-port 546FLR-SFP+ Adapter)  
779793-B21 (HP Ethernet 10G 2-port 546SFP+ Adapter)

### **Firmware for the following devices are updated to 14.27.4000:**

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

### **Firmware for the following devices are updated to 14.27.4000:**

817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

### **Firmware for the following device is updated to 16.27.2008:**

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

### **New features and changes in version 16.27.2008:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

### **New features and changes in version 14.27.4000:**

- Added mlxconfig support for power reduction:
  - PCI CAP
  - AUTO\_POWER\_SAVE\_LINK\_DOWN

### **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Mellanox Ethernet Only Adapters</b>	<b>PSID</b>
779793-B21	HP Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

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Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox IB only ConnectX4 and ConnectX5 devices on Windows x86\_64 platform

Version: 1.0.0.6 (**Recommended**)

Filename: cp044357.compsig; cp044357.exe

### **Important Note!**

#### **Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.

- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

**Following issues have been fixed in firmware version 12.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

**Enhancements**

**Firmware for the following devices are updated to 12.27.4000:**

843400-B21 (HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter)

**New Feature and Changes in Version 12.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**Firmware for the following devices are updated to 16.27.2008:**

872723-B21 (HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter)  
 872725-B21 (HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter)

**New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

**Supported Devices:**

HPE Part Number	Device Name	PSID
843400-B21	HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter	HPE2920111032
872723-B21	HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter	HPE0000000017
872725-B21	HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	HPE0000000008

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Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on Windows x86\_64 platform

Version: 1.0.0.8 **(Recommended)**

Filename: cp044172.compsig; cp044172.exe

**Important Note!**

### **Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mixfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.
- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

#### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

#### **Following issues have been fixed in firmware version 12.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

### **Enhancements**

#### **Firmware for the following devices are updated to 12.27.4000:**

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)  
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

#### **New Feature and Changes in Version 12.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

**Firmware for the following devices are updated to 16.27.2008:**

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)  
 872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

**New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on Windows x86\_64 platform  
 Version: 1.0.0.2 **(Recommended)**  
 Filename: cp044485.compsig; cp044485.exe

**Important Note!**

**ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.**

Port #2 - InfiniBand				
Port #1 - Ethernet	HDR/HDR100	EDR	FDR	QDR
<b>50GbE</b>	supported	not supported	not supported	supported
<b>100GbE/25GbE</b>	supported	not supported	not supported	supported
<b>40GbE/10GbE</b>	supported	not supported	not supported	supported
<b>1GbE</b>	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	50GbE	100GbE/25GbE	40GbE/10GbE	1GbE
<b>HDR / HDR100</b>	supported	supported	not supported	supported
<b>EDR</b>	supported	supported	not supported	supported
<b>FDR</b>	not supported	not supported	not supported	not supported

<b>QDR/SDR</b>	supported	supported	not supported	supported
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### **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

### **Fixes**

**There are no new fixes in firmware version 20.27.6008.**

### **Enhancements**

**Firmware for the following devices are updated to 20.27.6008:**

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21  
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

### **New Features and Changes in Version 20.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038
  - ConnectX-6: 20.27.2008\*  
\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
- Added support for the following features:
  - Enabled KP4RS FEC on Active Fiber cable up to 30m.
  - FDR protocol.
  - Enabled updating End-to-End (E2E) credit packets instantly.

### **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on Windows x86\_64 platform

Version: 1.0.0.11 (**Recommended**)

Filename: cp044336.compsig; cp044336.exe

### **Important Note!**

**Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:**

- When using the Quad Small Form-factor Pluggable (QSFP) module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.  
**Workaround:** Reboot the server.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.

- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.  
**Workaround:** Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mixburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.  
**Workaround:** Please use the GUID value returned by the fabric/driver utilities (not 0xffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.
- **Workaround:** Set the "do\_- sense=false" parameter in the [IB\_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.  
**Workaround:** Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.  
**Workaround:** Clear the semaphore using MFT command: 'flint -clear\_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.
- DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.  
**Workaround:** Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.  
**Workaround:** Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.  
**Workaround:** 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.  
**Workaround:** Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.

- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in `mlx4_en_get_drvinfo()` that is called from asynchronous event handler.
- When running `ibdump`, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using `ifconfig` are not reflected in the OCBB buffer.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

## **Fixes**

### **Fixes in version 2.42.5000:**

- `PortRcvPkts` counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running `"mlxftop -d mt4103_pci_cr0"` while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In `flow_steering`, BMC could not receive a ping over IPV6 after running `bmc_reboot`.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the `irisc` to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- `ibdump` could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of `sw_reset` to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the `disable_static_steering_ini` field in the ini file, due to memory allocation issue for this field in the scratchpad.

### **Fixes in version 2.42.5056:**

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

## **Enhancements**

### **Firmware for the following devices are updated to 2.42.5000:**

764282-B21  
764286-B21

### **Firmware for the following devices are updated to 2.42.5056:**

764283-B21  
764284-B21

### **Firmware for the following device is updated to 2.42.5700:**

764285-B21

### **New features in firmware version 2.42.5000:**

- Added support for the following features.
  - new TLV: `CX3_GLOBAL_CONF` to enable/disable timestamp on incoming packets through `mlxconfig` configuration.
  - User MAC configuration.
  - Automatically collecting `mstdump` before driver reset.
  - A mechanism to detect `DEAD_IRISC` (plastic) from TPT (iron) and raise an assert.



- A new field is added to "set port" command which notifies the firmware what is the user\_mtu size.
- Improved the debug ability for command timeout cases.

**New features and changes in firmware version 2.42.5700.**

- Modified the mlx\_cmd\_get\_mlx\_link\_status command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

**Supported Devices and Features**

**Supported Devices:**

HP Part Number	Device Name	PSID
764282-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
764285-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023

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Online Firmware Upgrade Utility (Windows x64) for Mellanox ConnectX6Dx Open Ethernet cards  
 Version: 1.0.0.2 (**Recommended**)  
 Filename: cp044267.compsig; cp044267.exe

**Important Note!**

This release contains important reliability improvements and security hardening enhancements. Upgrade the devices firmware to this release to improve the devices' firmware security and reliability.

**Known Issues in firmware 22.27.6008:**

- The CRC is being removed despite using the keep\_crc flag, and the byte count of the packet are counted without the CRC.
- The port link might be unstable after phyless reset when the keep\_link\_up configuration is set to False, and phyless reset might be malfunction.
- When the SLTP configuration is wrongly set, the "Bad status" explanation will not be presented (only error indication) to the user.
- Modifying the Flow Control attributes during traffic might cause all packets to drop.  
**Workaround:** If such scenario took place, perform the following:
  1. Restart the driver.
  2. Stop the traffic.
  3. Change the Flow Control attributes again.
- On Dual-Port devices, and only after Rx buffer modification, resetting all Physical Functions over one port (through reboot / driver restart / FLR), while there are active Physical Functions over

the second port (which caused the Rx buffer changes), will cause the Rx buffer default values to be restored, although not expected by the active Physical Function on the second port.

**Workaround:**

- Re-apply the changes
- Reset the functions from both ports together (driver restart / FLRs / reboot)
- Power cycle or reset the firmware
- After Shared Buffer modifications such as SBPR, SBPM, SBCM, the PFCC flow control modifications will override the previous Shared Buffer modifications.  
**Workaround:** Apply Shared Buffer modifications after PFCC (flow control) modifications.
- Phyless Reset is not supported when using Non-DME cables.
- Phyless Reset is not supported when using a PAM4 mode.
- When running several Phyless Reset iteration in sequence, the device may get stuck.  
**Workaround:** Run a full reset (mlxfwreset) to release it.
- Running several Phyless resets in a row might result in a race between the previous Phyless reset handling the action and the current one.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- PRBS is not functional when using Wedge switch.
- 200GbE Optical cables in Auto-Negotiation mode work only in 200GbE
- Linkup time to Wedge 100 Switch in Force mode with RS-FEC/No-FEC is 24 seconds.
- When running MH TCP, few packets are dropped every second due to no Receive WQEs.  
**Workaround:** Use 4K RX queue size: ethtool -G rx 4096
- After programming firmware in LF, power-cycle must be recovered.
- Under certain congestion conditions, where traffic packets are small, accuracy of the shared buffer configuration might not be achieved.
- Software Reset does not work on ConnectX-6 Dx adapter cards.

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX6-Dx firmware version 22.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

### **Following issues have been resolved in firmware version 22.27.6008:**

- Encapsulated RoCE traffic to drop when IB padding was required.
- PortXmitWait HW counter to count when not expected due to an inaccuracy in the counter.
- On dual-port device after Rx buffer modification the Physical Function on the second port got restored although no expected. The Rx buffer changes when all Physical Functions resets over one port (through reboot /driver restart / FLR) while there were active Physical Functions over the second port.
- Previous Shared Buffer modifications being overrun after performing Shared Buffer modifications such as SBPR, SBPM, SBCM, the PFCC Flow Control).

## **Enhancements**

### **Firmware for the following device is updated to 22.27.6008:**

P25960-B21 (HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter)

### **New features and changes in version 22.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Spectrum-3: 30.2007.1142
  - Mellanox Spectrum-2: 29.2007.1142
  - Switch SDK: 4.4.0920
  - Mellanox Onyx: 3.9.0830-038
  - SONiC/SAI: 201911
  - ConnectX-6 Dx: 22.27.2008

\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.

- Programmable Congestion Control (PCC) is at GA level.
- Enabled TLS offload v1.3 with key size 256.

### **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Mellanox Ethernet Only Adapters</b>	<b>PSID</b>
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437

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Online Firmware Upgrade Utility (Windows x64) for Mellanox Open Ethernet cards  
 Version: 1.0.0.3 (**Recommended**)  
 Filename: cp044408.compsig; cp044408.exe

### **Important Note!**

#### **Known Issues in firmware 14.27.4000:**

- "mlxconfig" query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.
- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- Since Packet Pacing enforce max\_tc value is "1", features that require multiple TCs will not be active when this mode is available.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables

#### **Known Issues with firmware version 16.27.2008:**

- When working with an NVME offload QP that is created with a unaligned page size (page\_offset != 0), the QP moves to an error state on the first posted WQE.  
**Workaround:** Create an NVME offload QP with page an aligned size (page\_offset = 0).
- Flow Metering capability is not functional in firmware v16.27.1016.  
**Workaround:** To use Flow Metering, use older firmware versions.
- mlxconfig query for the BOOT\_INTERRUPT\_DIS TLV shows a wrong value in the "current value" field.  
**Workaround:** Use "next boot" indication to see the right value.
- If Relaxed Ordering is disabled by running the "setpci" command, it will not be functional even after re-enabling it by running the "setpci" command again.
- In Socket Direct supported cards, after performing mlxfwreset, the expansion ROM register might be writable on all hosts for less than 1 second.
- quota\_exceeded\_command and invalid\_command counters do not function properly. In this firmware version, the quota\_exceeded\_command counter's value always remains 0, whereas the invalid\_command counter increases only for some Ethernet commands failure events.

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

### **Following issues have been fixed in firmware version 16.27.2008:**

- Although the effective BER (after FEC) was expected to meet the design targets (e.g. 10e-14 or lower), occasionally it was higher.
- High BER occurred when connecting cables of type 0.5/1m DAC to an HDR speed.
- The PCIe Tx parameters did not load correctly when the speed was changed after the PCIe link was disabled.
- The desched\_threshold field did not work properly.
- The "roce\_adp\_retrans" counter was presenting the values of the "local\_ack\_timeout\_err" counter.
- If Relaxed Ordering was disabled by running the "setpci" command, it would not be functional even after re-enabling it by running the "setpci" command again.

### **Following issues have been fixed in firmware version 14.27.4000:**

- The device hung while running the sw reset flow under heavy stress and with many open resources.
- Low PXE performance observed while using the VSC to trigger the send\_ring\_doorbells.
- IPoIB and DC would not work together.
- DC functionality issues.

## **Enhancements**

### **Firmware for the following devices is updated to 14.27.4000:**

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)  
P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

### **Firmware for the following devices is updated to 16.27.2008:**

P13188-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter)  
P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)  
P10112-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter)

### **New Feature and Changes in Version 12.27.4000:**

- Added the following segments, as appeared in the PRM, to the Resource Dump:
  - PRM\_QUERY\_QP
  - PRM\_QUERY\_CQ
  - PRM\_QUERY\_MKEY
  - QUERY\_VNIC\_ENV

### **New Feature and Changes in Version 16.27.2008:**

**This release contains important reliability improvements and security hardening enhancements. Upgrade the firmware of the device to this release to improve the devices' firmware security and reliability.**

- Improved init\_hca performance in Parallel Function initialization.

**Supported Devices and Features**

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Online Firmware Upgrade Utility (Windows x64) for Mellanox Open VPI (Ethernet and Infiniband mode) ConnectX6 devices on Windows x86\_64 platform  
 Version: 1.0.0.2 (**Recommended**)  
 Filename: cp044422.compsig; cp044422.exe

**Important Note!**

**ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.**

Port #2 - InfiniBand				
Port #1 - Ethernet	HDR/HDR100	EDR	FDR	QDR
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	50GbE	100GbE/25GbE	40GbE/10GbE	1GbE
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Note: On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment if the server iLO5 firmware version is older than 2.30.

## **Prerequisites**

Use iLO5 firmware version 2.30 or higher with ConnectX5/ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

## **Fixes**

### **The following issues have been fixed in version 20.27.6008:**

- Enabled Bar configuration bitwise by applying the write\_en bitmask.
- Low PXE performance while using the VSC to trigger the send\_ring\_doorbells.
- Fragmented IP packets were getting dropped.
- Firmware burning after PHY-less reset is expected to be significantly slow.
- PortCounters.PortRcvErr / PPCNT.infiniband\_counters.PortRcvErr were not reporting port icrc errors.
- PortXmitWait HW counter was incrementing when not expected due to an inaccuracy in the counter.

## **Enhancements**

### **Firmware for the following devices are updated to 20.27.6008:**

- HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter - P23664-B21
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter - P23665-B21
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter - P23666-B21

### **New Features and Changes in Version 20.27.6008:**

- The following are the minimal software/firmware versions that support PAM4 link speeds when connected using Mellanox NIC to Mellanox Switch and Mellanox NIC to 3rd Party Switches:
  - Mellanox Onyx: 3.9.0830-038
  - ConnectX-6: 20.27.2008\*\*Note: NICs with this firmware version support Mellanox-to-Mellanox connectivity with PAM4 link speeds.
- Added support for the following features:
  - Enabled KP4RS FEC on Active Fiber cable up to 30m.
  - FDR protocol.
  - Enabled updating End-to-End (E2E) credit packets instantly.

## **Supported Devices and Features**

<b>HPE Part Number</b>	<b>Device Name</b>	<b>PSID</b>
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

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## **Firmware - NVDIMM**

Firmware Package - 16GB NVDIMM-N DDR4-2666  
Version: 1.04 (B) **(Recommended)**

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Filename: nvdimm-16gb\_1.04.fwpkg

### **Enhancements**

This product now supports Microsoft Windows Server 2019, Red Hat Enterprise Linux 8, SUSE Linux Enterprise Server 15 and VMware ESXi 7.0.

### **Supported Devices and Features**

This package supports the following Memory Device:

- HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit

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Firmware package for HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Servers  
Version: 01.02.00.5435 (B) **(Recommended)**  
Filename: dcpmm\_01.02.00.5435.fwpkg

### **Important Note!**

This software package contains Intel Optane DC Persistent Memory Firmware version 1.2.0.5435

### **Enhancements**

- This product contains mainly performance improvements.
- This product now supports Red Hat Enterprise Linux 8, SUSE Linux Enterprise Server 12 and VMware ESXi 7.0.

### **Supported Devices and Features**

This package supports the following Memory Devices:

- HPE 512GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 256GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 128GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

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Online Flash Component for Linux - 16GB NVDIMM-N DDR4-2666  
Version: 1.04 (A) **(Optional)**  
Filename: RPMS/x86\_64/firmware-nvdimm-16gb-1.04-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-nvdimm-16gb-1.04-1.1.x86\_64.rpm

### **Fixes**

Initial release.

### **Enhancements**

Initial release.

---

Online Flash Component for Linux - HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Servers  
Version: 1.2.0.5435 (B) **(Recommended)**  
Filename: RPMS/x86\_64/firmware-dcpmm-1.2.0.5435-2.1.x86\_64.compsig; RPMS/x86\_64/firmware-dcpmm-1.2.0.5435-2.1.x86\_64.rpm

### **Important Note!**

This software package contains Intel Optane DC Persistent Memory Firmware version 1.2.0.5435

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

### **Enhancements**

- Initial release of Firmware for HPE Persistent Memory for Gen10 Servers.
- This product contains mainly performance improvements.
- This product now supports Red Hat Enterprise Linux 8 and SUSE Linux Enterprise Server 12.

### **Supported Devices and Features**

This package supports the following Memory Devices:

- HPE 512GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 256GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 128GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

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Online Flash Component for Windows x64 - 16GB NVDIMM-N DDR4-2666

Version: 1.04 (A) **(Optional)**

Filename: cp037531.compsig; cp037531.exe

### **Fixes**

Initial release.

### **Enhancements**

Initial release.

---

Online Flash Component for Windows x64 - HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Servers

Version: 1.2.0.5375 **(Recommended)**

Filename: cp039525.compsig; cp039525.exe

### **Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

### **Enhancements**

Initial release of Firmware for HPE Persistent Memory for Gen10 Servers.

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### **Firmware - PCIe NVMe Storage Disk**

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Online NVMe SSD Flash Component for Linux (x64) - MK000400KWDUK, VK000480KWDUE, MK000800KWDUL, VK000960KWDUF, MK001600KWDUN and VK001920KWDUH Drives

Version: HPK4 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-b45e49679c-HPK4-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-b45e49679c-HPK4-4.1.x86\_64.rpm

### **Enhancements**



- Added support for RHEL8.2

---

Online NVMe SSD Flash Component for Linux (x64) - MO0400KEFHN, MO0800KEFHP, MO1600KEFHQ, MO2000KEFHR, MT0800KEXUU and MT1600KEXUV Drives

Version: HPK4 (E) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-2a5b65f157-HPK4-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-2a5b65f157-HPK4-5.1.x86\_64.rpm

#### **Enhancements**

- Added support for RHEL 8.2

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Online NVMe SSD Flash Component for Linux (x64) - VO001000KWJSE, VO002000KWJSF, VO004000KWJSH, VT004000KWJSU, MO001600KWJSN and MO003200KWJSQ Drives

Version: HPK1 (E) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-1656c1b14a-HPK1-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-1656c1b14a-HPK1-5.1.x86\_64.rpm

#### **Fixes**

- This firmware corrects the potential for a drive to become disabled and nonfunctional during certain conditions or workloads.
- After the drive is upgraded to firmware version HPK1, it cannot be downgraded to firmware version HPK0.

#### **Enhancements**

- Added support for RHEL 8.2

---

Online NVMe SSD Flash Component for Linux (x64) - VO002000KVVVC, VO004000KVVUR, MO001600KVVUU, MO003200KVVUV and MO006400KVVVA Drives

Version: HPK1 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-92d876cfea-HPK1-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-92d876cfea-HPK1-3.1.x86\_64.rpm

#### **Enhancements**

- Added support for RHEL 8.2

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Online NVMe SSD Flash Component for Linux (x64) - VS000480KWDUP, VS000960KWUDUQ, MS000400KWDUR and MS000800KWDUT Drives

Version: HPK4 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-95a2e5abcb-HPK4-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-95a2e5abcb-HPK4-4.1.x86\_64.rpm

#### **Enhancements**

- Added support for RHEL8.2
-

Online NVMe SSD Flash Component for Linux (x64) - ET000750KWJTF, EO000750KWTXC and EO000375KWJUC Drives

Version: HPK3 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-c4355d15c4-HPK3-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-c4355d15c4-HPK3-2.1.x86\_64.rpm

#### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for RHEL 8.2

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Online NVMe SSD Flash Component for Linux (x64) - LO0400KEFJQ, LO0800KEFJR, LO1600KEFJT, LO2000KEFJU, LT0800KEXVA, LT1600KEXVB and LT2000KEXVC Drives

Version: HPK4 (E) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-d64642c780-HPK4-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-d64642c780-HPK4-5.1.x86\_64.rpm

#### **Enhancements**

- Added support for RHEL 8.2

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Online NVMe SSD Flash Component for Linux (x64) - MO001600KWVNB, MO003200KWVNC and MO006400KWVND Drives

Version: HPK2 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-cea219e4b1-HPK2-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-cea219e4b1-HPK2-2.1.x86\_64.rpm

#### **Enhancements**

- Added support for RHEL8.2

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Online NVMe SSD Flash Component for Linux (x64) - MT001600KWHAC, MT003200KWHAD and MT006400KWHAE Drives

Version: HPS1 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-8e8ddc5265-HPS1-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-8e8ddc5265-HPS1-4.1.x86\_64.rpm

#### **Enhancements**

- Added support for RHEL 8.2

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Online NVMe SSD Flash Component for Linux (x64) - MT001600KWSTB, MT003200KWSTC and MT006400KWSTD Drives

Version: HPK2 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-9ccac59e76-HPK2-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-9ccac59e76-HPK2-2.1.x86\_64.rpm

#### **Enhancements**

- Added support for RHEL 8.2

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Online NVMe SSD Flash Component for Linux (x64) - VO0400KEFJB, VO1200KEFJC and VO2000KEFJD Drives

Version: HPK4 (E) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-9a826ccd8a-HPK4-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-9a826ccd8a-HPK4-5.1.x86\_64.rpm

#### **Enhancements**

- Added support for RHEL 8.2

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Online NVMe SSD Flash Component for Linux (x64) - VS000480KXALB Drive

Version: 85030G00 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-805abb7e9c-85030G00-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-805abb7e9c-85030G00-2.1.x86\_64.rpm

#### **Enhancements**

- Added Support for RHEL 8.2

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Online NVMe SSD Flash Component for VMware ESXi - ET000750KWJTF, EO000750KWTXC and EO000375KWJUC Drives

Version: HPK3 (B) **(Recommended)**

Filename: CP043846.compsig; CP043846.zip

#### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - MK000400KWDUK, VK000480KWDUE, MK000800KWDUL, VK000960KWDUF, MK001600KWDUN and VK001920KWDUH Drives

Version: HPK4 (E) **(Recommended)**

Filename: CP044491.compsig; CP044491.zip

#### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - MO0400KEFHN, MO0800KEFHP, MO1600KEFHQ, MO2000KEFHR, MT0800KEXUU and MT1600KEXUV Drives  
Version: HPK4 (C) (**Recommended**)  
Filename: CP043753.compsig; CP043753.zip

**Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - MT001600KWHAC, MT003200KWHAD and MT006400KWHAE Drives  
Version: HPS1 (D) (**Recommended**)  
Filename: CP044496.compsig; CP044496.zip

**Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - VO001000KWJSE, VO002000KWJSF, VO004000KWJSH, VT004000KWJSU, MO001600KWJSN and MO003200KWJSQ Drives  
Version: HPK1 (D) (**Critical**)  
Filename: CP044495.compsig; CP044495.zip

**Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**

- This firmware corrects the potential for a drive to become disabled and nonfunctional during certain conditions or workloads.
- After the drive is upgraded to firmware version HPK1, it cannot be downgraded to firmware version HPK0.

**Enhancements**

- Added support for VMware 7.0
-

Online NVMe SSD Flash Component for VMware ESXi - VS000480KWDUP, VS000960KWDUQ, MS000400KWDUR and MS000800KWDUT Drives  
Version: HPK4 (C) (**Recommended**)  
Filename: CP043757.compsig; CP043757.zip

**Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - LO0400KEFJQ, LO0800KEFJR, LO1600KEFJT, LO2000KEFJU, LT0800KEXVA, LT1600KEXVB, and LT2000KEXVC Drives  
Version: HPK4 (D) (**Recommended**)  
Filename: CP044498.compsig; CP044498.zip

**Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - MO001600KWVNB, MO003200KWVNC and MO006400KWVND Drives  
Version: HPK2 (**Recommended**)  
Filename: CP043321.compsig; CP043321.zip

**Fixes**

- Fixes an issue where the SSID was not programmed correctly to the drive. This may cause issues with the drive not being identified correctly in the Integrated Lights Out Utility.

**Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - MT001600KWSTB, MT003200KWSTC and MT006400KWSTD Drives  
Version: HPK2 (B) (**Recommended**)  
Filename: CP044246.compsig; CP044246.zip

**Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - VO002000KVVVC, VO004000KVVUR, MO001600KVVUU, MO003200KVVUV and MO006400KVVVA Drives

Version: HPK1 (B) (**Recommended**)

Filename: CP044243.compsig; CP044243.zip

### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - VO0400KEFJB, VO1200KEFJC and VO2000KEFJD Drives

Version: HPK4 (D) (**Recommended**)

Filename: CP044497.compsig; CP044497.zip

### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

### **Enhancements**

- Added support for VMware 7.0

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Online NVMe SSD Flash Component for VMware ESXi - VS000480KXALB Drive

Version: 85030G00 (C) (**Recommended**)

Filename: CP044993.compsig; CP044993.zip

### **Enhancements**

- Added support for VMware 7.0 U1.

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Online NVMe SSD Flash Component for Windows (x64) - ET000750KWJTF, EO000750KWTXC and EO000375KWJUC Drives

Version: HPK3 (B) (**Recommended**)

Filename: cp043969.compsig; cp043969.exe; cp043969.md5

### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows 2019

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Online NVMe SSD Flash Component for Windows (x64) - MK000400KWDUK, VK000480KWDUE, MK000800KWDUL, VK000960KWDUF, MK001600KWDUN and VK001920KWDUH Drives

Version: HPK4 (B) **(Recommended)**

Filename: cp043864.compsig; cp043864.exe; cp043864.md5

### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - MO0400KEFHN, MO0800KEFHP, MO1600KEFHQ, MO2000KEFHR, MT0800KEXUU and MT1600KEXUV Drives

Version: HPK4 (B) **(Recommended)**

Filename: cp043603.compsig; cp043603.exe; cp043603.md5

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - MT001600KWHAC, MT003200KWHAD and MT006400KWHAE Drives

Version: HPS1 (B) **(Recommended)**

Filename: cp043865.compsig; cp043865.exe; cp043865.md5

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - MT001600KWSTB, MT003200KWSTC and MT006400KWSTD Drives

Version: HPK2 (B) **(Recommended)**

Filename: cp044248.compsig; cp044248.exe; cp044248.md5

### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - VO001000KWJSE, VO002000KWJSF, VO004000KWJSH, VT004000KWJSU, MO001600KWJSN and MO003200KWJSQ Drives

Version: HPK1 (B) (**Recommended**)

Filename: cp043872.compsig; cp043872.exe; cp043872.md5

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - VS000480KWDUP, VS000960KWDUQ, MS000400KWDUR and MS000800KWDUT Drives

Version: HPK4 (B) (**Recommended**)

Filename: cp043871.compsig; cp043871.exe; cp043871.md5

### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - LO0400KEFJQ, LO0800KEFJR, LO1600KEFJT, LO2000KEFJU, LT0800KEXVA, LT1600KEXVB, and LT2000KEXVC Drives

Version: HPK4 (B) (**Recommended**)

Filename: cp043870.compsig; cp043870.exe; cp043870.md5

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - MO001600KVVNB, MO003200KVVNC and MO006400KVVND Drives

Version: HPK2 (**Recommended**)

Filename: cp044393.compsig; cp044393.exe; cp044393.md5

### **Fixes**

- Fixes an issue where the SSID was not programmed correctly to the drive. This may cause issues with the drive not being identified correctly in the Integrated Lights Out Utility.



### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - VO002000KVVVC, VO004000KVVUR, MO001600KVVUU, MO003200KVVUV and MO006400KVVVA Drives

Version: HPK1 (B) **(Recommended)**

Filename: cp044244.compsig; cp044244.exe; cp044244.md5

### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - VO0400KEFJB, VO1200KEFJC and VO2000KEFJD Drives

Version: HPK4 (B) **(Recommended)**

Filename: cp043863.compsig; cp043863.exe; cp043863.md5

### **Important Note!**

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows 2019.

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Online NVMe SSD Flash Component for Windows (x64) - VS000480KXALB drive

Version: 85030G00 (B) **(Recommended)**

Filename: cp044288.compsig; cp044288.exe; cp044288.md5

### **Enhancements**

- Added Support for Windows Server 2019.

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### **Firmware - SAS Storage Disk**

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Online HDD/SDD Flash Component for VMware ESXi - MB6000JVYZD and MB4000JVYZC Drives

Version: HPD4 (E) **(Recommended)**

Filename: CP044489.compsig; CP044489.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

---

Online HDD/SSD Flash Component for Linux (x64) - EG000300JWBHR Drive

Version: HPD4 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-2e4c61fc63-HPD4-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-2e4c61fc63-HPD4-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

---

Online HDD/SSD Flash Component for Linux (x64) - EG000300JWFVB Drive

Version: HPD2 (E) **(Optional)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-c5cd837c29-HPD2-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-c5cd837c29-HPD2-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

---

Online HDD/SSD Flash Component for Linux (x64) - EG000600JWFUV and EG001200JWFVA Drives

Version: HPD3 (E) **(Optional)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-f0c91d2fe3-HPD3-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-f0c91d2fe3-HPD3-5.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG000600JWJNP and EG001200JWJNQ Drives

Version: HPD3 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-bdfb8e99d9-HPD3-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-bdfb8e99d9-HPD3-2.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG001800JWJNR and EG002400JWJNT Drives

Version: HPD5 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-b1c9eaf74c-HPD5-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-b1c9eaf74c-HPD5-2.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG0600JETKA, EG0900JETKB and EG1200JETKC Drives

Version: HPD7 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-7505dfb5ae-HPD7-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-7505dfb5ae-HPD7-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EK0800JVYPN, EO1600JVYPP, MK0800JVYPQ and

MO1600JVYPR Drives

Version: HPD7 (B) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-481c8ea9a7-HPD7-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-481c8ea9a7-HPD7-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD7 that results in SSD failure at 40,000 hours of operation (i.e., 4 years, 205 days 16 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.

- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00097382en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00097382en_us).

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EO000400JWDKP, EO000800JWDKQ, EO001600JWDKR, MO000400JWDKU, MO000800JWDKV, MO001600JWDLA and MO003200JWDLB Drives

Version: HPD2 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-5dcf26fa42-HPD2-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-5dcf26fa42-HPD2-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB002000JWFVN and MB004000JWFVP Drives

Version: HPD3 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-d7af557f47-HPD3-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-d7af557f47-HPD3-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB004000JWFVK and MB006000JWFVL Drives

Version: HPD3 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-f6d00bd17e-HPD3-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-f6d00bd17e-HPD3-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB6000JVYZD and MB4000JVYZC Drives

Version: HPD4 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-e800e8d3b9-HPD4-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-e800e8d3b9-HPD4-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MM1000JEFRB and MM2000JEFRC Drives

Version: HPD8 (E) **(Optional)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-b04257b77b-HPD8-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-b04257b77b-HPD8-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MO000400JWUFT, MO000800JWUFU, MO001600JWUFV, MO003200JWUGA, MO006400JWUGB, EO000400JWUGC, EO000800JWUGD and EO001600JWUGE Drives  
Version: HPD1 (D) **(Optional)**  
Filename: rpm/RPMS/x86\_64/firmware-hdd-ef93133161-HPD1-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-ef93133161-HPD1-4.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VO000960JWTBK, VO001920JWTL, VO003840JWTLN, VO007680JWTLB, MO000400JWTLQ, MO000800JWTLR, MO001600JWTLT, MO003200JWTLU, MO006400JWTLCD, EO000400JWTLV, EO000800JWTLCA and EO001600JWTLCB Drives  
Version: HPD7 (E) **(Recommended)**  
Filename: rpm/RPMS/x86\_64/firmware-hdd-9ad359dac1-HPD7-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-9ad359dac1-HPD7-5.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG000300JWSJP, EG000600JWJNH and EG001200JWJNK Drive  
Version: HPD2 (C) **(Recommended)**  
Filename: rpm/RPMS/x86\_64/firmware-hdd-24fe569b72-HPD2-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-24fe569b72-HPD2-3.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

Online HDD/SSD Flash Component for Linux (x64) - EG001800JWFVC Drive

Version: HPD3 (E) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-693b9a2853-HPD3-5.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-hdd-693b9a2853-HPD3-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

Online HDD/SSD Flash Component for Linux (x64) - EG001800JWJNL and EG002400JWJNN Drives

Version: HPD2 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-852266afdf-HPD2-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-852266afdf-HPD2-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**



- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG0300FCSPH, EG0450FCSPK, EG0600FCSPH and EG0900FCSPN Drives

Version: HPD2 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-7c1a1734f9-HPD2-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-7c1a1734f9-HPD2-6.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG0300JEHLV, EG0600JEHMA, EG0900JEHMB and EG1200JEHMC Drives

Version: HPD5 (G) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-31f91b8622-HPD5-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-31f91b8622-HPD5-7.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG0300JFCKA, EG0600JEMCV, EG0900JFCKB and EG1200JEMDA Drives

Version: HPD6 (G) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-ac3fda26eb-HPD6-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-ac3fda26eb-HPD6-7.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG1800JEHMD Drive

Version: HPD6 (G) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-8a2c06af48-HPD6-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-8a2c06af48-HPD6-7.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG1800JEMDB Drive

Version: HPD5 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-0a38b25661-HPD5-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-0a38b25661-HPD5-6.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EG1800JFHHM Drive

Version: HPD7 (E) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-7fc5497116-HPD7-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-7fc5497116-HPD7-5.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EH000300JWCPC, EH000600JWCPL and EH000900JWCPN Drives

Version: HPD5 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-3d97759111-HPD5-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-3d97759111-HPD5-4.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EH000600JWCPCF and EH000900JWCPH Drives

Version: HPD7 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-a05f29cef3-HPD7-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-a05f29cef3-HPD7-4.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EH000900JWHPK and EH000600JWHPH Drives

Version: HPD4 (B) (**Recommended**)

Filename: rpm/RPMS/x86\_64/firmware-hdd-c7df7ceedb-HPD4-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-c7df7ceedb-HPD4-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EH000900JWHPH, EH000600JWHPN and EH000300JWHPL Drives

Version: HPD4 (B) (**Recommended**)

Filename: rpm/RPMS/x86\_64/firmware-hdd-8d68452816-HPD4-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-8d68452816-HPD4-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EH0300JDXBA, EH0450JDXBB and EH0600JDXBC Drives

Version: HPD5 (F) (**Recommended**)

Filename: rpm/RPMS/x86\_64/firmware-hdd-1cbab97ff0-HPD5-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-1cbab97ff0-HPD5-6.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK and EH0600JDYTL Drives  
Version: HPD6 (G) **(Recommended)**  
Filename: rpm/RPMS/x86\_64/firmware-hdd-b9340d29be-HPD6-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-b9340d29be-HPD6-7.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EH0300JEDHC, EH0450JEDHD and EH0600JEDHE Drives  
Version: HPD4 (G) **(Recommended)**  
Filename: rpm/RPMS/x86\_64/firmware-hdd-8c4a212ff9-HPD4-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-8c4a212ff9-HPD4-7.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - EH0600JDYTN Drive

Version: HPD7 (F) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-f3faa195ff-HPD7-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-f3faa195ff-HPD7-6.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**

- Fixes a data integrity risk where stale data is mistakenly used from cache.
- Fixes a data integrity risk where stale data is returned on an unaligned overlapped write-read operation.
- Fixes a data integrity risk during a sequential read and write workload when a recovered error is encountered, which could cause incomplete data to be read.

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB004000JWKGU Drive

Version: HPD1 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-2c27a7a9a4-HPD1-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-2c27a7a9a4-HPD1-3.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2
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Online HDD/SSD Flash Component for Linux (x64) - MB004000JWWQB, MB002000JWWQA and MB001000JWWPV Drives

Version: HPD2 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-adb3ab8147-HPD2-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-adb3ab8147-HPD2-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB006000JWKGN Drive

Version: HPD1 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-a886842a99-HPD1-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-a886842a99-HPD1-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB008000JWJRQ and MB006000JWJRP Drives

Version: HPD5 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-faf39e0ff7-HPD5-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-faf39e0ff7-HPD5-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB008000JWRTD Drive

Version: HPD1 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-8b26d1ef02-HPD1-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-8b26d1ef02-HPD1-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB008000JWWQP and MB006000JWWQN Drives

Version: HPD2 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-ae6b41e855-HPD2-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-ae6b41e855-HPD2-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2.

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Online HDD/SSD Flash Component for Linux (x64) - MB010000JWAYK and MB008000JWAYH Drives

Version: HPD5 (E) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-6ec35faf90-HPD5-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-6ec35faf90-HPD5-5.1.x86\_64.rpm



### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- This code corrects a potential data integrity issue related to unaligned write commands. This issue was only found in supplier ongoing lab testing.

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB012000JWDFD Drive

Version: HPD2 (E) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-aaf1014ede-HPD2-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-aaf1014ede-HPD2-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue during unaligned write commands, only found in supplier ongoing lab testing. Includes additional fixes to improve error handling and reliability.

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB014000JWRTH, MB012000JWRTF and MB010000JWRTE Drives

Version: HPD2 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-10385ef3e6-HPD2-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-10385ef3e6-HPD2-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB014000JWUDB Drive

Version: HPD2 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-cfd7436fcc-HPD2-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-cfd7436fcc-HPD2-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB1000JVYZL, MB2000JVYZN, MB3000JVYZP and MB4000JVYZQ Drives

Version: HPD3 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-b85516c7d2-HPD3-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-b85516c7d2-HPD3-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB2000JFDSL and MB4000JFDSN Drives

Version: HPD4 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-46fc43ab26-HPD4-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-46fc43ab26-HPD4-6.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB2000JFEML and MB4000JFEMN Drives

Version: HPD6 (F) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-624b75c7e2-HPD6-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-624b75c7e2-HPD6-6.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also includes emergency power off improvements.

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB2000JFEP A and MB4000JFEP B Drives

Version: HPD5 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-326de7c0f2-HPD5-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-326de7c0f2-HPD5-6.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB4000JEFNC and MB6000JEFND Drives

Version: HPD9 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-af802bb412-HPD9-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-af802bb412-HPD9-6.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB4000JEqNL and MB6000JEqNN Drives

Version: HPDB (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-2cfaac41db-HPDB-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-2cfaac41db-HPDB-6.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB4000JEXYA and MB6000JEXYB Drives

Version: HPD9 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-0f923833e9-HPD9-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-0f923833e9-HPD9-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB6000JEUUV and MB8000JEUVA Drives

Version: HPDB (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-df22f7effd-HPDB-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-df22f7effd-HPDB-6.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB6000JVYYV Drive

Version: HPD2 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-0595c2a887-HPD2-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-0595c2a887-HPD2-6.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB8000JFECQ Drive

Version: HPD7 (E) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-252770cdda-HPD7-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-252770cdda-HPD7-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MM1000JFJTH Drive

Version: HPD3 (E) **(Optional)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-fa46c607d6-HPD3-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-fa46c607d6-HPD3-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MO000400JWFVN, MO000800JWFVP, MO001600JWFVQ, MO003200JWFVR, MO000960JWFVT, MO001920JWFVU and MO003840JWFVW Drives

Version: HPD5 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-b8a60fbe9a-HPD5-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-b8a60fbe9a-HPD5-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MO0200JEFNV, MO0400JEFPA, MO0800JEFPB, MO1600JEFPC, EO0200JEFPD, EO0400JEFPE and EO0800JEFPF Drives

Version: HPD3 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-71af849f3b-HPD3-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-71af849f3b-HPD3-6.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MO0400JFFCF, MO0800JFFCH, MO1600JFFCK and MO3200JFFCL Drives

Version: HPD9 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-edf6dcd906-HPD9-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-edf6dcd906-HPD9-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000960JWSSQ, VK001920JWSSR, VK003840JWSST, VK007680JWSSU and VO015300JWSSV Drives

Version: HPD8 (C) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-1e51a57347-HPD8-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-1e51a57347-HPD8-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VO000480JWDAR, VO000960JWDAT, VO001920JWDAU and VO003840JWDVA Drives

Version: HPD8 (B) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-2eb810cdd7-HPD8-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-2eb810cdd7-HPD8-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.



## **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

## **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VO000960RWUEV, VO001920RWUFA, VO003840RWUFB, VO007680RWUFC, VO000960RWUFD, VO001920RWUFE and VO003840RWUFF Drives

Version: HPD3 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-8fafc9efb2-HPD3-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-8fafc9efb2-HPD3-2.1.x86\_64.rpm

## **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VO007680JWCNK and VO015300JWCNL Drives

Version: HPD8 (B) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-4c048aaeb0-HPD8-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-4c048aaeb0-HPD8-2.1.x86\_64.rpm

## **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VO0480JFDGT, VO0960JFDGU, VO1920JFDGV and VO3840JFDHA Drives

Version: HPD9 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-8ed8893abd-HPD9-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-8ed8893abd-HPD9-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VO1920JEUQQ Drive

Version: HPD3 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-5d9e841607-HPD3-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-5d9e841607-HPD3-6.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for VMware ESXi - EG000300JWBHR Drive  
Version: HPD4 (E) (**Recommended**)  
Filename: CP044494.compsig; CP044494.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG000300JWFVB Drive  
Version: HPD2 (F) (**Recommended**)  
Filename: CP043779.compsig; CP043779.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG000600JWFUV and EG001200JWFVA Drives  
Version: HPD3 (F) (**Optional**)  
Filename: CP043780.compsig; CP043780.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG000600JWJNP and EG001200JWJNQ Drives

Version: HPD3 (C) **(Recommended)**

Filename: CP043849.compsig; CP043849.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG001800JWJNR and EG002400JWJNT Drives

Version: HPD5 (C) **(Recommended)**

Filename: CP043848.compsig; CP043848.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG0600JETKA, EG0900JETKB and EG1200JETKC Drives

Version: HPD7 (D) **(Recommended)**

Filename: CP043758.compsig; CP043758.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EH000900JWHPK and EH000600JWHPH Drives

Version: HPD4 (C) (**Recommended**)

Filename: CP043743.compsig; CP043743.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EH000900JWHPH, EH000600JWHPN and EH000300JWHPH Drives

Version: HPD4 (C) (**Recommended**)

Filename: CP043829.compsig; CP043829.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EH0600JDYTN Drive  
Version: HPD7 (F) **(Critical)**  
Filename: CP043798.compsig; CP043798.zip

## **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Fixes**

- Fixes a data integrity risk where stale data is mistakenly used from cache.
- Fixes a data integrity risk where stale data is returned on an unaligned overlapped write-read operation.
- Fixes a data integrity risk during a sequential read and write workload when a recovered error is encountered, which could cause incomplete data to be read.

## **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EO000400JWDKP, EO000800JWDKQ, EO001600JWDKR, MO000400JWDKU, MO000800JWDKV, MO001600JWDLA and MO003200JWDLB Drives  
Version: HPD2 (D) **(Recommended)**  
Filename: CP043788.compsig; CP043788.zip

## **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB002000JWFFVN and MB004000JWFVP Drives  
Version: HPD3 (C) (**Recommended**)  
Filename: CP043832.compsig; CP043832.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB004000JWFFVK and MB006000JWFFVL Drives  
Version: HPD3 (C) (**Recommended**)  
Filename: CP043847.compsig; CP043847.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB012000JWDFD Drive  
Version: HPD2 (E) (**Critical**)  
Filename: CP043803.compsig; CP043803.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue during unaligned write commands, found in supplier ongoing lab testing. Includes additional fixes to improve error handling and reliability.

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB2000JFEML and MB4000JFEMN Drives

Version: HPD6 (G) **(Critical)**

Filename: CP043785.compsig; CP043785.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also includes emergency power off improvements.

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB4000JEQNL and MB6000JEQNN Drives

Version: HPD6 (G) **(Recommended)**

Filename: CP043765.compsig; CP043765.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.



- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB6000JEQUV and MB8000JEQVA Drives

Version: HPDB (G) **(Recommended)**

Filename: CP043774.compsig; CP043774.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MM1000JEFRB and MM2000JEFRC Drives

Version: HPD8 (F) **(Optional)**

Filename: CP043838.compsig; CP043838.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MM1000JFJTH Drive

Version: HPD3 (F) **(Optional)**

Filename: CP043775.compsig; CP043775.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MO000400JWUFT, MO000800JWUFU, MO001600JWUFV, MO003200JWUGA, MO006400JWUGB, EO000400JWUGC, EO000800JWUGD and EO001600JWUGE Drives  
Version: HPD1 (D) **(Optional)**  
Filename: CP043808.compsig; CP043808.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VO000960JWTBK, VO001920JWTL, VO003840JWBTN, VO007680JWBTB, MO000400JWBTQ, MO000800JWBTB, MO001600JWBTB, MO003200JWBTU, MO006400JWBTCD, EO000400JWBTB, EO000800JWBTCA, EO001600JWBTB Drives  
Version: HPD7 (D) **(Recommended)**  
Filename: CP043816.compsig; CP043816.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG000300JWSJP, EG000600JWJNH and EG001200JWJNK Drive

Version: HPD2 (D) **(Recommended)**

Filename: CP043828.compsig; CP043828.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG001800JWFVC Drive

Version: HPD3 (D) **(Recommended)**

Filename: CP043768.compsig; CP043768.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG001800JWJNL and EG002400JWJNN Drive

Version: HPD2 (E) **(Recommended)**

Filename: CP043821.compsig; CP043821.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG0300FCSPH, EG0450FCSPK, EG0600FCSPL and EG0900FCSPN Drives

Version: HPD2 (G) **(Recommended)**

Filename: CP043769.compsig; CP043769.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG0300JEHLV, EG0600JEHMA, EG0900JEHMB, and EG1200JEHMC Drives

Version: HPD5 (H) **(Recommended)**

Filename: CP043841.compsig; CP043841.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG0300JFCKA, EG0600JEMCV, EG0900JFCKB and EG1200JEMDA Drives  
Version: HPD6 (G) **(Recommended)**  
Filename: CP043839.compsig; CP043839.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG1800JEHMD Drive  
Version: HPD6 (H) **(Recommended)**  
Filename: CP043781.compsig; CP043781.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG1800JEMDB Drive  
Version: HPD5 (G) **(Recommended)**  
Filename: CP043759.compsig; CP043759.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EG1800JFHMH Drive  
Version: HPD7 (F) (**Recommended**)  
Filename: CP043782.compsig; CP043782.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EH000300JWCPK, EH000600JWCPL and EH000900JWCPN Drives  
Version: HPD5 (D) (**Recommended**)  
Filename: CP043771.compsig; CP043771.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EH000600JWCPF and EH000900JWCPH Drives  
Version: HPD7 (D) **(Recommended)**  
Filename: CP043770.compsig; CP043770.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EH0300JDXBA, EH0450JDXBB and EH0600JDXBC Drives  
Version: HPD5 (G) **(Recommended)**  
Filename: CP043760.compsig; CP043760.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EH0300JDYTH, EH0450JDYTK and EH0600JDYTL Drives  
Version: HPD6 (H) **(Recommended)**  
Filename: CP043783.compsig; CP043783.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EH0300JEDHC, EH0450JEDHD and EH0600JEDHE Drives  
Version: HPD4 (H) **(Recommended)**  
Filename: CP043761.compsig; CP043761.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - EK0800JVYPN, EO1600JVYPP, MK0800JVYPQ and MO1600JVYPR Drives  
Version: HPD7 (B) **(Critical)**  
Filename: CP044215.compsig; CP044215.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD7 that results in SSD failure at 40,000 hours of operation (i.e., 4 years, 205 days 16 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.



- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00097382en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00097382en_us).

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB004000JWKGU Drive  
Version: HPD1 (D) **(Recommended)**  
Filename: CP043818.compsig; CP043818.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB004000JWWQB, MB002000JWWQA and MB001000JWWPV Drives  
Version: HPD2 (B) **(Recommended)**  
Filename: CP044219.compsig; CP044219.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB006000JWKGN Drive  
Version: HPD1 (D) **(Recommended)**  
Filename: CP043819.compsig; CP043819.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB008000JWJRQ and MB006000JWJRP Drives  
Version: HPD5 (B) **(Recommended)**  
Filename: CP044156.compsig; CP044156.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB008000JWRTD Drive  
Version: HPD1 (D) **(Recommended)**  
Filename: CP043822.compsig; CP043822.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB008000JWWQP and MB006000JWWQN Drives  
Version: HPD2 (B) (**Recommended**)  
Filename: CP044203.compsig; CP044203.zip

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB010000JWAYK and MB008000JWAYH Drives  
Version: HPD5 (E) (**Critical**)  
Filename: CP043784.compsig; CP043784.zip

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Fixes**

- This code corrects a potential data integrity issue related to unaligned write commands. This issue was only found in supplier ongoing lab testing.

#### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB014000JWUDB Drive  
Version: HPD2 (D) (**Recommended**)  
Filename: CP043831.compsig; CP043831.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB1000JVYZL, MB2000JVYZN, MB3000JVYZP and MB4000JVYZQ Drives

Version: HPD3 (D) **(Recommended)**

Filename: CP043790.compsig; CP043790.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB2000JFDSL and MB4000JFDSN Drives

Version: HPD4 (G) **(Recommended)**

Filename: CP043858.compsig; CP043858.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB2000JFEPA and MB4000JFEPB Drives

Version: HPD5 (G) **(Recommended)**

Filename: CP043857.compsig; CP043857.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB4000JEFNC and MB6000JEFND Drives

Version: HPD9 (G) **(Recommended)**

Filename: CP043764.compsig; CP043764.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB4000JEXYA and MB6000JEXYB Drives

Version: HPD9 (D) **(Recommended)**

Filename: CP043805.compsig; CP043805.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB6000JVYV Drive  
Version: HPD2 (G) **(Recommended)**  
Filename: CP043854.compsig; CP043854.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB8000JFECQ Drive  
Version: HPD7 (F) **(Recommended)**  
Filename: CP043853.compsig; CP043853.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0
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Online HDD/SSD Flash Component for VMware ESXi - MO000400JWFVN, MO000800JWFVP, MO001600JWFVQ, MO003200JWFVR, MO000960JWFVT, MO001920JWFVU and MO003840JWFVW Drives  
Version: HPD5 (D) **(Recommended)**  
Filename: CP043826.compsig; CP043826.zip

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MO0200JEFNV, MO0400JEFPA, MO0800JEFPB, MO1600JEFPC, EO0200JEFPD, EO0400JEFPE and EO0800JEFPF Drives  
Version: HPD3 (G) **(Recommended)**  
Filename: CP043752.compsig; CP043752.zip

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MO0400JFFCF, MO0800JFFCH, MO1600JFFCK and MO3200JFFCL Drives  
Version: HPD9 (B) **(Recommended)**  
Filename: CP043791.compsig; CP043791.zip

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK000960JWSSQ, VK001920JWSSR, VK003840JWSST, VK007680JWSSU and VO015300JWSSV Drives  
Version: HPD8 (C) **(Critical)**  
Filename: CP043834.compsig; CP043834.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VO000480JWDAR, VO000960JWDAT, VO001920JWDAU and VO003840JWDAV Drives  
Version: HPD8 (D) **(Critical)**  
Filename: CP044493.compsig; CP044493.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.



- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VO000960RWUEV, VO001920RWUFA, VO003840RWUFB, VO007680RWUFC, VO000960RWUFD, VO001920RWUFE and VO003840RWUFF Drives  
Version: HPD3 (C) **(Recommended)**  
Filename: CP043850.compsig; CP043850.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VO007680JWCNK and VO015300JWCNL Drives  
Version: HPD8 (C) **(Critical)**  
Filename: CP043835.compsig; CP043835.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

## **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VO0480JFDGT, VO0960JFDGU, VO1920JFDGV and VO3840JFDHA Drives

Version: HPD9 (B) **(Recommended)**

Filename: CP043845.compsig; CP043845.zip

## **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VO1920JEUQQ Drive

Version: HPD3 (G) **(Recommended)**

Filename: CP043777.compsig; CP043777.zip

## **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi -MB014000JWRTH, MB012000JWRTF and MB010000JWRTE Drives

Version: HPD2 (D) (**Recommended**)

Filename: CP043825.compsig; CP043825.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for Windows (x64) - EG000300JWBHR Drive

Version: HPD4 (C) (**Recommended**)

Filename: cp043897.compsig; cp043897.exe; cp043897.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG000300JWFVB Drive

Version: HPD2 (D) (**Optional**)

Filename: cp043922.compsig; cp043922.exe; cp043922.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG000300JWSJP, EG000600JWJNH and EG001200JWJNK Drives

Version: HPD2 (C) **(Recommended)**

Filename: cp043960.compsig; cp043960.exe; cp043960.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG000600JWFUV and EG001200JWFVA Drives

Version: HPD3 (D) **(Optional)**

Filename: cp043921.compsig; cp043921.exe; cp043921.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG000600JWJNP and EG001200JWJNQ Drives

Version: HPD3 (B) **(Recommended)**

Filename: cp043966.compsig; cp043966.exe; cp043966.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG001800JWFVC Drive  
Version: HPD3 (C) **(Recommended)**  
Filename: cp043908.compsig; cp043908.exe; cp043908.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG001800JWJNL and EG002400JWJNN Drives  
Version: HPD2 (D) **(Recommended)**  
Filename: cp043973.compsig; cp043973.exe; cp043973.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG001800JWJNR and EG002400JWJNT Drives

Version: HPD5 (B) (**Recommended**)

Filename: cp043965.compsig; cp043965.exe; cp043965.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG0300FCSPH, EG0450FCSPK, EG0600FCSPL and EG0900FCSPN Drives

Version: HPD2 (E) (**Recommended**)

Filename: cp043898.compsig; cp043898.exe; cp043898.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG0300JEHLV, EG0600JEHMA, EG0900JEHMB and EG1200JEHMC Drives

Version: HPD5 (F) (**Recommended**)

Filename: cp043909.compsig; cp043909.exe; cp043909.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG0300JFCKA, EG0600JEMCV, EG0900JFCKB and EG1200JEMDA Drives

Version: HPD6 (E) **(Recommended)**

Filename: cp043879.compsig; cp043879.exe; cp043879.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG0600JETKA, EG0900JETKB and EG1200JETKC Drives

Version: HPD7 (C) **(Recommended)**

Filename: cp043884.compsig; cp043884.exe; cp043884.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG1800JEHMD Drive  
Version: HPD6 (F) (**Recommended**)  
Filename: cp043910.compsig; cp043910.exe; cp043910.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG1800JEMDB Drive  
Version: HPD5 (E) (**Recommended**)  
Filename: cp043940.compsig; cp043940.exe; cp043940.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EG1800JFHMH Drive  
Version: HPD7 (E) (**Recommended**)  
Filename: cp043912.compsig; cp043912.exe; cp043912.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..



### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EH000300JWCPK, EH000600JWCPL and EH000900JWCPN Drives

Version: HPD5 (C) **(Recommended)**

Filename: cp043903.compsig; cp043903.exe; cp043903.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EH000600JWCPF and EH000900JWCPH Drives

Version: HPD7 (C) **(Recommended)**

Filename: cp043902.compsig; cp043902.exe; cp043902.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EH000900JWHPK and EH000600JWHPH Drives

Version: HPD4 (B) **(Recommended)**

Filename: cp043964.compsig; cp043964.exe; cp043964.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EH000900JWHPP, EH000600JWHPN and EH000300JWHPL Drives

Version: HPD4 (B) **(Recommended)**

Filename: cp043963.compsig; cp043963.exe; cp043963.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EH0300JDXBA, EH0450JDXBB and EH0600JDXBC Drives

Version: HPD5 (E) **(Recommended)**

Filename: cp043882.compsig; cp043882.exe; cp043882.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EH0300JDYTH, EH0450JDYTK and EH0600JDYTL Drives

Version: HPD6 (F) **(Recommended)**

Filename: cp043911.compsig; cp043911.exe; cp043911.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EH0300JEDHC, EH0450JEDHD and EH0600JEDHE Drives  
Version: HPD4 (G) **(Recommended)**  
Filename: cp043875.compsig; cp043875.exe; cp043875.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EH0600JDYTN Drive  
Version: HPD7 (D) **(Critical)**  
Filename: cp043926.compsig; cp043926.exe; cp043926.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Fixes a data integrity risk where stale data is mistakenly used from cache.

- Fixes a data integrity risk where stale data is returned on an unaligned overlapped write-read operation.
- Fixes a data integrity risk during a sequential read and write workload when a recovered error is encountered, which could cause incomplete data to be read.

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EK0800JVYPN, EO1600JVYPP, MK0800JVYPQ and MO1600JVYPR Drives

Version: HPD7 (B) **(Critical)**

Filename: cp044216.compsig; cp044216.exe; cp044216.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD7 that results in SSD failure at 40,000 hours of operation (i.e., 4 years, 205 days 16 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00097382en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00097382en_us).

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - EO000400JWDKP, EO000800JWDKQ, EO001600JWDKR, MO000400JWDKU, MO000800JWDKV, MO001600JWDLA and MO003200JWDLB Drives

Version: HPD2 (C) **(Recommended)**

Filename: cp043918.compsig; cp043918.exe; cp043918.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB002000JWFVN and MB004000JWFVP Drives

Version: HPD3 (B) **(Recommended)**

Filename: cp043968.compsig; cp043968.exe; cp043968.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB004000JWFKV and MB006000JWFLV Drives

Version: HPD3 (B) **(Recommended)**

Filename: cp043967.compsig; cp043967.exe; cp043967.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB004000JWKGU Drive

Version: HPD1 (C) **(Recommended)**

Filename: cp043954.compsig; cp043954.exe; cp043954.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB004000JWWQB, MB002000JWWQA and MB001000JWWPV Drives

Version: HPD2 (B) (**Recommended**)

Filename: cp044220.compsig; cp044220.exe; cp044220.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB006000JWKGN Drive

Version: HPD1 (C) (**Recommended**)

Filename: cp043953.compsig; cp043953.exe; cp043953.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB008000JWJRQ and MB006000JWJRP Drives  
Version: HPD5 (B) (**Recommended**)  
Filename: cp044157.compsig; cp044157.exe; cp044157.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB008000JWRTD Drive  
Version: HPD1 (C) (**Recommended**)  
Filename: cp043951.compsig; cp043951.exe; cp043951.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB008000JWWQP and MB006000JWWQN Drives  
Version: HPD2 (B) (**Recommended**)  
Filename: cp044201.compsig; cp044201.exe; cp044201.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB01000JWAYK and MB008000JWAYH Drives  
Version: HPD5 (D) **(Critical)**  
Filename: cp043913.compsig; cp043913.exe; cp043913.md5

## **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Fixes**

- This code corrects a potential data integrity issue related to unaligned write commands. This issue was only found in supplier ongoing lab testing.

## **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB012000JWDFD Drive  
Version: HPD2 (D) **(Critical)**  
Filename: cp043923.compsig; cp043923.exe; cp043923.md5

## **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

## **Fixes**

- Corrects a potential data integrity issue during unaligned write commands, found in supplier ongoing lab testing. Includes additional fixes to improve error handling and reliability.

## **Enhancements**



- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB014000JWRTH, MB012000JWRTF and MB010000JWRTE Drives

Version: HPD2 (C) **(Recommended)**

Filename: cp043950.compsig; cp043950.exe; cp043950.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB014000JWUDB Drive

Version: HPD2 (C) **(Recommended)**

Filename: cp043958.compsig; cp043958.exe; cp043958.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

---

Online HDD/SSD Flash Component for Windows (x64) - MB1000JVYZL, MB2000JVYZN, MB3000JVYZP and MB4000JVYZQ Drives

Version: HPD3 (C) **(Recommended)**

Filename: cp043930.compsig; cp043930.exe; cp043930.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

---

Online HDD/SSD Flash Component for Windows (x64) - MB2000JFDSL and MB4000JFDSN Drives

Version: HPD4 (E) (**Recommended**)

Filename: cp043887.compsig; cp043887.exe; cp043887.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB2000JFEML and MB4000JFEMN Drives

Version: HPD6 (E) (**Critical**)

Filename: cp043914.compsig; cp043914.exe; cp043914.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also includes emergency power off improvements.

### **Enhancements**

- Added support for Windows Server 2019.

---

Online HDD/SSD Flash Component for Windows (x64) - MB2000JFEPA and MB4000JFEPB Drives

Version: HPD5 (E) (**Recommended**)

Filename: cp043888.compsig; cp043888.exe; cp043888.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB4000JEFNC and MB6000JEFND Drives

Version: HPD9 (E) (**Recommended**)

Filename: cp043881.compsig; cp043881.exe; cp043881.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB4000JEQNL and MB6000JEQNN Drives

Version: HPDB (E) (**Recommended**)

Filename: cp043876.compsig; cp043876.exe; cp043876.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

---

Online HDD/SSD Flash Component for Windows (x64) - MB4000JEXYA and MB6000JEXYB Drives

Version: HPD9 (C) **(Recommended)**

Filename: cp043900.compsig; cp043900.exe; cp043900.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB6000JEQUV and MB8000JEQVA Drives

Version: HPDB (E) **(Recommended)**

Filename: cp043893.compsig; cp043893.exe; cp043893.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB6000JVYYV Drive

Version: HPD2 (E) **(Recommended)**

Filename: cp043901.compsig; cp043901.exe; cp043901.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB6000JVYZD and MB4000JVYZC Drives  
Version: HPD4 (C) **(Recommended)**  
Filename: cp043917.compsig; cp043917.exe; cp043917.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB8000JFECQ Drive  
Version: HPD7 (D) **(Recommended)**  
Filename: cp043899.compsig; cp043899.exe; cp043899.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.
-

Online HDD/SSD Flash Component for Windows (x64) - MM1000JEFRB and MM2000JEFRC Drives  
Version: HPD8 (D) **(Optional)**  
Filename: cp043878.compsig; cp043878.exe; cp043878.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.,

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MM1000JFJTH Drive  
Version: HPD3 (D) **(Optional)**  
Filename: cp043891.compsig; cp043891.exe; cp043891.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MO000400JWFVN, MO000800JWFVP, MO001600JWFVQ, MO003200JWFVR, MO000960JWFVT, MO001920JWFVU and MO003840JWFVW Drives  
Version: HPD5 (C) **(Recommended)**  
Filename: cp043948.compsig; cp043948.exe; cp043948.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.,

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MO000400JWUFT, MO000800JWUFU, MO001600JWUFV, MO003200JWUGA, MO006400JWUGB, EO000400JWUGC, EO000800JWUGD and EO001600JWUGE Drives  
Version: HPD1 (C) **(Optional)**  
Filename: cp043935.compsig; cp043935.exe; cp043935.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MO0200JEFNV, MO0400JEFPA, MO0800JEFPB, MO1600JEFPC, EO0200JEFPD, EO0400JEFPE and EO0800JEFPF Drives  
Version: HPD3 (E) **(Recommended)**  
Filename: cp043873.compsig; cp043873.exe; cp043873.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MO0400JFFCF, MO0800JFFCH, MO1600JFFCK and MO3200JFFCL Drives  
Version: HPD9 (B) **(Recommended)**  
Filename: cp043975.compsig; cp043975.exe; cp043975.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000960JWSSQ, VK001920JWSSR, VK003840JWSST, VK007680JWSSU and VO015300JWSSV Drives  
 Version: HPD8 (B) **(Critical)**  
 Filename: cp043573.compsig; cp043573.exe; cp043573.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VO000480JWDAR, VO000960JWDAT, VO001920JWDAU and VO003840JWDAV Drives  
 Version: HPD8 (B) **(Critical)**  
 Filename: cp043572.compsig; cp043572.exe; cp043572.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.



- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VO000960JWTK, VO001920JWTK, VO003840JWTK, VO007680JWTK, MO000400JWTK, MO000800JWTK, MO001600JWTK, MO003200JWTK, MO006400JWTK, EO000400JWTK, EO000800JWTK and EO001600JWTK Drives  
Version: HPD7 (C) **(Recommended)**  
Filename: cp043941.compsig; cp043941.exe; cp043941.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VO000960RWUEV, VO001920RWUFA, VO003840RWUFB, VO007680RWUFC, VO000960RWUFD, VO001920RWUFE and VO003840RWUFF Drives  
Version: HPD3 (B) **(Recommended)**  
Filename: cp043977.compsig; cp043977.exe; cp043977.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019

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Online HDD/SSD Flash Component for Windows (x64) - VO007680JWCNK and VO015300JWCNL Drives  
Version: HPD8 (B) **(Critical)**  
Filename: cp043961.compsig; cp043961.exe; cp043961.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00092491en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us)

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Online HDD/SSD Flash Component for Windows (x64) - VO0480JFDGT, VO0960JFDGU, VO1920JFDGV and VO3840JFDHA Drives  
Version: HPD9 (B) **(Recommended)**  
Filename: cp043976.compsig; cp043976.exe; cp043976.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.
-

Online HDD/SSD Flash Component for Windows (x64) - VO1920JEUQQ Drive  
Version: HPD3 (E) (**Recommended**)  
Filename: cp043906.compsig; cp043906.exe; cp043906.md5

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for Windows Server 2019.

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#### **Firmware - SATA Storage Disk**

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Online HDD/SSD Flash Component for Linux (x64) - EK000200GWEPPD, EK000400GWEPE, EK000800GWEPPF and EK001600GWEPPH Drives

Version: HPG3 (E) (**Recommended**)

Filename: rpm/RPMS/x86\_64/firmware-hdd-5bf9355926-HPG3-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-5bf9355926-HPG3-5.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB001000GWCBC and MB002000GWCBD Drives

Version: HPG6 (D) (**Recommended**)

Filename: rpm/RPMS/x86\_64/firmware-hdd-68b12e54d2-HPG6-4.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-hdd-68b12e54d2-HPG6-4.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB001000GWFVK and MB002000GFWFL Drives

Version: HPG6 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-bfc4af697b-HPG6-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-bfc4af697b-HPG6-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB001000GWJAN, MB002000GFWFA and MB004000GFWFB Drives

Version: HPG1 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-d39e7a7e75-HPG1-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-d39e7a7e75-HPG1-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB002000GWFGH and MB001000GWFGF Drives

Version: HPG3 (F) **(Optional)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-0b575b5895-HPG3-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-0b575b5895-HPG3-6.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB004000GWKGV Drive

Version: HPG1 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-ca21e169e2-HPG1-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-ca21e169e2-HPG1-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB004000GWWQH, MB002000GWWQF and MB001000GWWQE Drives

Version: HPG2 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-12304c1aca-HPG2-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-12304c1aca-HPG2-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2.

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Online HDD/SSD Flash Component for Linux (x64) - MB006000GWBXQ and MB008000GWBYL Drives

Version: HPG8 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-a1fd19f9ca-HPG8-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-a1fd19f9ca-HPG8-4.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB006000GWJRR and MB008000GWJRT Drives

Version: HPG4 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-c993b31232-HPG4-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-c993b31232-HPG4-2.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB006000GWKGR Drive

Version: HPG1 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-7f2a26e6d0-HPG1-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-7f2a26e6d0-HPG1-3.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB008000GWRTC Drive

Version: HPG1 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-82894b9e0a-HPG1-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-82894b9e0a-HPG1-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB008000GWWQU and MB006000GWWQT Drives

Version: HPG2 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-18e328f036-HPG2-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-18e328f036-HPG2-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB010000GWAYN and MB008000GWAYL Drives

Version: HPG5 (E) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-cc819d4bff-HPG5-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-cc819d4bff-HPG5-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- This code corrects a potential data integrity issue related to unaligned write commands. This issue was only found in supplier ongoing lab testing.

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB012000GWDFE Drive

Version: HPG2 (E) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-059b8654a6-HPG2-5.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-hdd-059b8654a6-HPG2-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue during unaligned write commands, only found in supplier ongoing lab testing. Includes additional fixes to improve error handling and reliability.

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB012000GWTFE and MB014000GWTFE Drives

Version: HPG6 (B) **(Optional)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-b78255e146-HPG6-2.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-hdd-b78255e146-HPG6-2.1.x86\_64.rpm



### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB014000GWRTN, MB012000GWRTL and MB010000GWRTK Drives

Version: HPG2 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-6b7ce3da0e-HPG2-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-6b7ce3da0e-HPG2-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB014000GWUDA Drive

Version: HPG2 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-41cdb1c9da-HPG2-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-41cdb1c9da-HPG2-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB1000GDUNU, MB2000GDUNV, MB3000GDUPA and MB4000GDUPB Drives

Version: HPG4 (H) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-3ab4c70e64-HPG4-8.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-3ab4c70e64-HPG4-8.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB1000GVYZE, MB2000GVYZF, MB3000GVYZH and MB4000GVYZK Drives

Version: HPG4 (H) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-0a7010918e-HPG4-8.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-0a7010918e-HPG4-8.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB2000GCWLT, MB3000GCWLU and MB4000GCWLV Drives

Version: HPG4 (H) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-2e70ce7412-HPG4-8.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-2e70ce7412-HPG4-8.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB2000GFEMH and MB4000GFEMK Drives

Version: HPG6 (G) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-70e3962f98-HPG6-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-70e3962f98-HPG6-7.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB4000GEFNA and MB6000GEFNB Drives

Version: HPG6 (H) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-40277d55d3-HPG6-8.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-hdd-40277d55d3-HPG6-8.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB4000GEQNH and MB6000GEQNK Drives

Version: HPGB (G) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-bfc95f0628-HPGB-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-bfc95f0628-HPGB-7.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB6000GEBTP Drive

Version: HPG4 (G) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-3243fce9a0-HPG4-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-3243fce9a0-HPG4-7.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB6000GEQUT and MB8000GEQUU Drives

Version: HPGB (G) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-1d7f19120b-HPGB-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-1d7f19120b-HPGB-7.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was only found during supplier ongoing reliability testing.

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB6000GEXXV Drive

Version: HPG2 (H) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-a629fcea59-HPG2-8.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-a629fcea59-HPG2-8.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB6000GVYYU Drive

Version: HPG2 (G) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-bdc37cb37f-HPG2-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-bdc37cb37f-HPG2-7.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB6000GVYZB and MB4000GVYZA Drives

Version: HPG4 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-0a7d4aa47f-HPG4-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-0a7d4aa47f-HPG4-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MB8000GFECR Drive

Version: HPG6 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-6d922fc9a8-HPG6-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-6d922fc9a8-HPG6-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MK000240GWCEU, MK000480GWCEV, MK000960GWCFB and MK001920GWCFB Drives

Version: HPG3 (E) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-7677644a25-HPG3-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-7677644a25-HPG3-5.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MK000480GWSSC, MK000960GWSSD, MK001920GWSSE and MK003840GWSSF Drives

Version: HPG2 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-f693ccc138-HPG2-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-f693ccc138-HPG2-2.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MK000480GWXFF, MK000960GWXFH, MK001920GWXFK and MK003840GWXFL Drives

Version: HPG1 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-8e1e8083c5-HPG1-2.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-8e1e8083c5-HPG1-2.1.x86\_64.rpm

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MK003840GWTE Drive

Version: HPG6 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-ac20a1e1c6-HPG6-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-ac20a1e1c6-HPG6-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MK0960GECQK Drive

Version: HPG3 (I) **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-3e34285be7-HPG3-9.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-3e34285be7-HPG3-9.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**



- Firmware fixes intermittent data corruption issue associated with unaligned sequential write operations.

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MM1000GEFQV and MM2000GEFRA Drives

Version: HPG8 (F) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-ec908c3650-HPG8-6.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-ec908c3650-HPG8-6.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MM1000GFJTE Drive

Version: HPG5 (D) **(Optional)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-95af9a555e-HPG5-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-95af9a555e-HPG5-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - MR000240GWFLU, MR000480GWFLV, VR000480GWFMD,

MR000960GWFMA, VR000960GWFME, MR001920GWFMB and VR001920GWFMC Drives

Version: HPGE (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-9196d4f720-HPGE-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-9196d4f720-HPGE-3.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000150GWCNN, VK000240GWCNP, VK000480GWCNQ, VK000960GWCNR and VK001600GWCNT Drives

Version: HPG1 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-6e3845def5-HPG1-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-6e3845def5-HPG1-4.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000240GWCFD, VK000480GWCFE, VK000960GWCF, VK001920GWCFH and VK003840GWCFK Drives

Version: HPG3 (E) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-f42438de3d-HPG3-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-f42438de3d-HPG3-5.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000240GWEZB, VK000480GWEZC, VK000960GWEZD, VK001920GWEZE, MK000240GWEZF, MK000480GWEZH, MK000960GWEZK and MK001920GWHRU Drives  
Version: HPGE (C) **(Optional)**  
Filename: rpm/RPMS/x86\_64/firmware-hdd-3db7640485-HPGE-3.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-hdd-3db7640485-HPGE-3.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000240GWJPD, VK000480GWJPE, VK000960GWJPF, VK001920GWJPH, VK003840GWJPK, MK000240GWKVK, MK000480GWJPN, MK000960GWJPP and MK001920GWJPQ Drives  
Version: HPG5 (D) **(Critical)**  
Filename: rpm/RPMS/x86\_64/firmware-hdd-aef2a690c9-HPG5-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-aef2a690c9-HPG5-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Fixes a rare link loss issue and adds enhancements for drive reliability.
- After HPG5 firmware is downloaded to the drive, the new HPG5 firmware will be active on the drive.
- The new drive bootloader code will be activated after the next drive power cycle.

- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00072768en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00072768en_us)

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000240GWSRQ, VK000480GWSRR, VK000960GWSRT, VK001920GWSRU and VK003840GWSRV Drives

Version: HPG3 (B) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-db687966b4-HPG3-2.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-hdd-db687966b4-HPG3-2.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000240GWTSV, VK000480GWTTA, VK000960GWTTB, VK001920GWTTCC, VK003840GWTTD, MK000480GWTTT, MK000960GWTTK, MK001920GWTTL and MK003840GWTTN Drives

Version: HPG3 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-c566d63ca0-HPG3-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-c566d63ca0-HPG3-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000480GWSXF, VK000960GWSXH, VK001920GWSXK, MK000480GWUGF, MK000960GWUGH and MK001920GWUGK Drives

Version: HPG2 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-9e87eecb3f-HPG2-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-9e87eecb3f-HPG2-4.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK000480GWTHA, VK000960GWTHB, VK001920GWTHC and VK003840GWTHD Drives

Version: HPG1 (C) **(Optional)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-492a9952f6-HPG1-3.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-492a9952f6-HPG1-3.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK003840GWSXL Drive

Version: HPG2 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-d1cf327bc4-HPG2-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-d1cf327bc4-HPG2-4.1.x86\_64.rpm

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK007680GWSXN Drive

Version: HPG2 (D) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-b460823f70-HPG2-4.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-b460823f70-HPG2-4.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK0120GFDKE, VK0240GFDKF, VK0480GFDKH, VK0960GFDKK, VK1920GFDKL and VK3840GFDKN Drives

Version: HPG1 (H) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-a2d4b5c742-HPG1-8.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-a2d4b5c742-HPG1-8.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VK0240GEPQN, VK0480GEPQP and VK0960GEPQQ Drives

Version: HPG1 (G) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-hdd-1a516522d1-HPG1-7.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-1a516522d1-HPG1-7.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - VR000150GWEPP and VR000480GWEPR Drives

Version: HPG1 (E) (**Critical**)

Filename: rpm/RPMS/x86\_64/firmware-hdd-b7eb905efe-HPG1-5.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-b7eb905efe-HPG1-5.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Fixes an issue which caused the drive to become non-functional.
- Fixes VPD Log D0h reported drive Sanitize times.
- Adds support for Security Log Page BBh.

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for Linux (x64) - XP0120GFJSL and XP0240GFJSN Drives

Version: HPS4 (H) (**Recommended**)

Filename: rpm/RPMS/x86\_64/firmware-hdd-d355375539-HPS4-8.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-hdd-d355375539-HPS4-8.1.x86\_64.rpm

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for RHEL 8.2

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Online HDD/SSD Flash Component for VMware ESXi - EK000200GWEPD, EK000400GWEPE, EK000800GWEPE and EK001600GWEPE Drives

Version: HPG3 (E) (**Recommended**)

Filename: CP043799.compsig; CP043799.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB001000GWCBC and MB002000GWCBD Drives

Version: HPG6 (D) (**Recommended**)

Filename: CP043772.compsig; CP043772.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB001000GFWFK and MB002000GFWFL Drives



Version: HPG6 (D) **(Recommended)**  
Filename: CP043860.compsig; CP043860.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB001000GWJAN, MB002000GWFWA and MB004000GWFWB Drives

Version: HPG1 (D) **(Recommended)**  
Filename: CP043800.compsig; CP043800.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB002000GWFGH and MB001000GWFGF Drives

Version: HPG3 (F) **(Optional)**  
Filename: CP043789.compsig; CP043789.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB004000GWKGV Drive  
Version: HPG1 (D) **(Recommended)**  
Filename: CP043817.compsig; CP043817.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB004000GWWQH, MB002000GWWQF and MB001000GWWQE Drives  
Version: HPG2 (B) **(Recommended)**  
Filename: CP044227.compsig; CP044227.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB006000GWBXQ and MB008000GWBYL Drives  
Version: HPG8 (D) **(Recommended)**  
Filename: CP043809.compsig; CP043809.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB006000GWJRR and MB008000GWJRT Drives  
Version: HPG4 (B) **(Recommended)**  
Filename: CP044435.compsig; CP044435.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB006000GWKGR Drive  
Version: HPG1 (D) **(Recommended)**  
Filename: CP043830.compsig; CP043830.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB008000GWRTC Drive

Version: HPG1 (D) **(Recommended)**

Filename: CP043820.compsig; CP043820.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB008000GWWQU and MB006000GWWQT Drives

Version: HPG2 (B) **(Recommended)**

Filename: CP044208.compsig; CP044208.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB010000GWAYN and MB008000GWAYL Drives

Version: HPG5 (E) **(Critical)**

Filename: CP043207.compsig; CP043207.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- This code corrects a potential data integrity issue related to unaligned write commands. This issue was only found in supplier ongoing lab testing.

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB012000GWDFE Drive

Version: HPG2 (E) **(Critical)**

Filename: CP043801.compsig; CP043801.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue during unaligned write commands, found in supplier ongoing lab testing.
- Includes additional fixes to improve error handling and reliability.

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB012000GWTFE and MB014000GWTFE Drives

Version: HPG6 (C) **(Optional)**

Filename: CP043833.compsig; CP043833.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB014000GWRTN, MB012000GWRTL and MB010000GWRTK Drives

Version: HPG2 (D) **(Recommended)**

Filename: CP043823.compsig; CP043823.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB014000GWUDA Drive

Version: HPG2 (D) **(Recommended)**

Filename: CP043824.compsig; CP043824.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0
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Online HDD/SSD Flash Component for VMware ESXi - MB1000GDUNU, MB2000GDUNV, MB3000GDUPA and MB4000GDUPB Drives  
Version: HPG4 (I) **(Recommended)**  
Filename: CP043762.compsig; CP043762.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB1000GVYZE, MB2000GVYZF, MB3000GVYZH and MB4000GVYZK Drives  
Version: HPG4 (G) **(Recommended)**  
Filename: CP043859.compsig; CP043859.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB2000GCWLT, MB3000GCWLU and MB4000GCWLV Drives  
Version: HPG4 (I) **(Recommended)**  
Filename: CP043763.compsig; CP043763.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB2000GFEMH and MB4000GFEMK Drives

Version: HPG6 (G) **(Critical)**

Filename: CP043792.compsig; CP043792.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.
- Online firmware update fails when drives are connected behind AHCI controller.

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB4000GEFNA and MB6000GEFNB Drives

Version: HPG6 (G) **(Recommended)**

Filename: CP043750.compsig; CP043750.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**



- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB4000GEQNH and MB6000GEQNK Drives  
Version: HPGB (G) **(Critical)**  
Filename: CP043804.compsig; CP043804.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB6000GEBTP Drive  
Version: HPG4 (G) **(Recommended)**  
Filename: CP043856.compsig; CP043856.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB6000GEQUT and MB8000GEQUU Drives

Version: HPGB (G) **(Critical)**  
Filename: CP043786.compsig; CP043786.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was only found during supplier ongoing reliability testing.
- Online firmware update fails when drives are connected behind AHCI controller.

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB6000GEXXV Drive  
Version: HPG2 (I) **(Recommended)**  
Filename: CP043855.compsig; CP043855.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB6000GVYYU Drive  
Version: HPG2 (G) **(Recommended)**  
Filename: CP043806.compsig; CP043806.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB6000GVYZB and MB4000GVYZA Drives  
Version: HPG4 (D) **(Recommended)**  
Filename: CP043807.compsig; CP043807.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MB8000GFECR Drive  
Version: HPG6 (E) **(Recommended)**  
Filename: CP044490.compsig; CP044490.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0
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Online HDD/SSD Flash Component for VMware ESXi - MK000240GWCEU, MK000480GWCEV, MK000960GWCFA and MK001920GWCFCB Drives  
Version: HPG3 (E) (**Recommended**)  
Filename: CP043794.compsig; CP043794.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MK000480GWSSC, MK000960GWSSD, MK001920GWSSE and MK003840GWSSF Drives  
Version: HPG2 (C) (**Recommended**)  
Filename: CP044492.compsig; CP044492.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MK000480GWXFF, MK000960GWXFH, MK001920GWXFK and MK003840GWXFL Drives  
Version: HPG1 (B) (**Recommended**)  
Filename: CP044205.compsig; CP044205.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MK003840GWHT Drive  
Version: HPG6 (D) **(Recommended)**  
Filename: CP043810.compsig; CP043810.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MK0960GECQK Drive  
Version: HPG3 (J) **(Critical)**  
Filename: CP043837.compsig; CP043837.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Firmware fixes intermittent data corruption issue associated with unaligned sequential write operations.

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MM1000GEFQV and MM2000GEFRA Drives

Version: HPG8 (F) **(Recommended)**

Filename: CP043795.compsig; CP043795.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MM1000GFJTE Drive

Version: HPG5 (D) **(Optional)**

Filename: CP043842.compsig; CP043842.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - MR000240GWFLU, MR000480GWFLV, VR000480GWFMD,

MR000960GWFMA, VR000960GWFME, MR001920GWFMB and VR001920GWFMC Drives

Version: HPGE (D) **(Recommended)**

Filename: CP043811.compsig; CP043811.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK000150GWCNN, VK000240GWCNP, VK000480GWCNQ, VK000960GWCNR and VK001600GWCNT Drives  
Version: HPG1 (D) **(Recommended)**  
Filename: CP043843.compsig; CP043843.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK000240GWCFD, VK000480GWCFE, VK000960GWCFE, VK001920GWCFH and VK003840GWCFK Drives.  
Version: HPG3 (E) **(Recommended)**  
Filename: CP043796.compsig; CP043796.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK000240GWEZB, VK000480GWEZC, VK000960GWEZD, VK001920GWEZE, MK000240GWEZF, MK000480GWEZH, MK000960GWEZK and MK001920GWHRU Drives  
Version: HPG5 (E) **(Optional)**  
Filename: CP044252.compsig; CP044252.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK000240GWJPD, VK000480GWJPE, VK000960GWJPF, VK001920GWJPH, VK003840GWJPK, MK000240GWKVK, MK000480GWJPN, MK000960GWJPP and MK001920GWJPQ Drives  
Version: HPG5 (D) **(Critical)**  
Filename: CP043793.compsig; CP043793.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Fixes a rare link loss issue and adds enhancements for drive reliability.
- After HPG5 firmware is downloaded to the drive, the new HPG5 firmware will be active on the drive.
- The new drive bootloader code will be activated after the next drive power cycle.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00072768en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00072768en_us)

### **Enhancements**

- Added support for VMware 7.0
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Online HDD/SSD Flash Component for VMware ESXi - VK000240GWSRQ, VK000480GWSRR, VK000960GWSRT, VK001920GWSRU, VK003840GWSRV Drives  
Version: HPG3 (B) (**Recommended**)  
Filename: CP043836.compsig; CP043836.zip

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK000240GWTSV, VK000480GWTTA, VK000960GWTTB, VK001920GWTTCC, VK003840GWTTD, MK000480GWTTT, MK000960GWTTK, MK001920GWTTL and MK003840GWTTN Drives  
Version: HPG3 (D) (**Recommended**)  
Filename: CP043812.compsig; CP043812.zip

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK000480GWSXF, VK000960GWSXH, VK001920GWSXK, MK000480GWUGF, MK000960GWUGH and MK001920GWUGK Drives  
Version: HPG2 (D) (**Recommended**)  
Filename: CP043813.compsig; CP043813.zip

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK000480GWTHA, VK000960GWTHB, VK001920GWTHC and VK003840GWTHD Drives

Version: HPG1 (D) **(Optional)**

Filename: CP043827.compsig; CP043827.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK003840GWSXL Drive

Version: HPG2 (D) **(Recommended)**

Filename: CP043814.compsig; CP043814.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK007680GWSXN Drive

Version: HPG2 (D) **(Recommended)**  
Filename: CP043815.compsig; CP043815.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK0120GFDKE, VK0240GFDKF, VK0480GFDKH, VK0960GFDKK, VK1920GFDKL, and VK3840GFDKN Drives  
Version: HPG1 (H) **(Recommended)**  
Filename: CP043840.compsig; CP043840.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VK0240GEPQN, VK0480GEPQP and VK0960GEPQQ Drives  
Version: HPG1 (H) **(Recommended)**  
Filename: CP043776.compsig; CP043776.zip

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - VR000150GWEPP and VR000480GWEPR Drives  
Version: HPG1 (E) **(Critical)**  
Filename: CP043797.compsig; CP043797.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Fixes a timing issue which can cause the drive to become non-functional.
- Fixes VPD Log D0h reported drive Sanitize times.
- Adds support for Security Log Page BBh.

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for VMware ESXi - XP0120GFJSL and XP0240GFJSN Drives  
Version: HPS4 (H) **(Recommended)**  
Filename: CP043778.compsig; CP043778.zip

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for VMware 7.0

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Online HDD/SSD Flash Component for Windows (x64) - EK000200GWEPD, EK000400GWEPE, EK000800GWEPE and EK001600GWEPE Drives

Version: HPG3 (D) **(Recommended)**

Filename: cp043939.compsig; cp043939.exe; cp043939.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB001000GWCBC and MB002000GWCBD Drives

Version: HPG6 (C) **(Recommended)**

Filename: cp043896.compsig; cp043896.exe; cp043896.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB001000GFWFK and MB002000GFWFL Drives

Version: HPG6 (C) **(Recommended)**

Filename: cp043907.compsig; cp043907.exe; cp043907.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB001000GWJAN, MB002000GWFWA and MB004000GWFWB Drives

Version: HPG1 (C) **(Recommended)**

Filename: cp043936.compsig; cp043936.exe; cp043936.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB002000GWFGH and MB001000GWFGF Drives

Version: HPG3 (E) **(Optional)**

Filename: cp043920.compsig; cp043920.exe; cp043920.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB004000GWKGV Drive

Version: HPG1 (C) **(Recommended)**  
Filename: cp043955.compsig; cp043955.exe; cp043955.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB004000GWWQH, MB002000GWWQF and MB001000GWWQE Drives  
Version: HPG2 (B) **(Recommended)**  
Filename: cp044228.compsig; cp044228.exe; cp044228.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB006000GWBXQ and MB008000GWBXL Drives  
Version: HPG8 (C) **(Recommended)**  
Filename: cp043945.compsig; cp043945.exe; cp043945.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB006000GWJRR and MB008000GWJRT Drives  
Version: HPG4 (B) (**Recommended**)  
Filename: cp044437.compsig; cp044437.exe; cp044437.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB006000GWKGR Drive  
Version: HPG1 (C) (**Recommended**)  
Filename: cp043959.compsig; cp043959.exe; cp043959.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB008000GWRTC Drive  
Version: HPG1 (C) (**Recommended**)  
Filename: cp043952.compsig; cp043952.exe; cp043952.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.



- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB008000GWWQU and MB006000GWWQT Drives  
Version: HPG2 (B) (**Recommended**)  
Filename: cp044209.compsig; cp044209.exe; cp044209.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB010000GWAYN and MB008000GWAYL Drives  
Version: HPG5 (D) (**Critical**)  
Filename: cp043916.compsig; cp043916.exe; cp043916.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- This code corrects a potential data integrity issue related to unaligned write commands. This issue was only found in supplier ongoing lab testing.

### **Enhancements**

- Added support for Windows Server 2019.
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Online HDD/SSD Flash Component for Windows (x64) - MB012000GWDFE Drive  
Version: HPG2 (D) **(Critical)**  
Filename: cp043924.compsig; cp043924.exe; cp043924.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**

- Corrects a potential data integrity issue during unaligned write commands, found in supplier ongoing lab testing. Includes additional fixes to improve error handling and reliability.

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB012000GWTFE and MB014000GWTFE Drives  
Version: HPG6 (B) **(Optional)**  
Filename: cp043962.compsig; cp043962.exe; cp043962.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB014000GWRTN, MB012000GWRTL and MB010000GWRTK Drives  
Version: HPG2 (C) **(Recommended)**  
Filename: cp043949.compsig; cp043949.exe; cp043949.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB014000GWUDA Drive

Version: HPG2 (C) **(Recommended)**

Filename: cp043957.compsig; cp043957.exe; cp043957.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB1000GDUNU, MB2000GDUNV, MB3000GDUPA and MB4000GDUPB Drives

Version: HPG4 (G) **(Recommended)**

Filename: cp043885.compsig; cp043885.exe; cp043885.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB1000GVYZE, MB2000GVYZF, MB3000GVYZH and MB4000GVYZK Drives

Version: HPG4 (G) **(Recommended)**

Filename: cp043905.compsig; cp043905.exe; cp043905.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB2000GCWLT, MB3000GCWLU and MB4000GCWLV Drives  
Version: HPG4 (G) **(Recommended)**

Filename: cp043886.compsig; cp043886.exe; cp043886.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB2000GFEMH and MB4000GFEMK Drives  
Version: HPG6 (F) **(Critical)**

Filename: cp043915.compsig; cp043915.exe; cp043915.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB4000GEFNA and MB6000GEFNB Drives

Version: HPG6 (G) **(Recommended)**

Filename: cp043866.compsig; cp043866.exe; cp043866.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB4000GEQNH and MB6000GEQNK Drives

Version: HPG6 (F) **(Critical)**

Filename: cp043877.compsig; cp043877.exe; cp043877.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

### **Enhancements**

- Added support for Windows Server 2019.

---

Online HDD/SSD Flash Component for Windows (x64) - MB6000GEBTP Drive

Version: HPG4 (F) (**Recommended**)

Filename: cp043904.compsig; cp043904.exe; cp043904.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB6000GEQUT and MB8000GEQUU Drives

Version: HPG4 (F) (**Critical**)

Filename: cp043919.compsig; cp043919.exe; cp043919.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was only found during supplier ongoing reliability testing.
- Online firmware update fails when drives are connected behind AHCI controller.

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB6000GEXXV Drive

Version: HPG2 (G) (**Recommended**)

Filename: cp043889.compsig; cp043889.exe; cp043889.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB6000GVYYU Drive  
Version: HPG2 (F) **(Recommended)**  
Filename: cp043938.compsig; cp043938.exe; cp043938.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MB6000GVYZB and MB4000GVYZA Drives  
Version: HPG4 (C) **(Recommended)**  
Filename: cp043925.compsig; cp043925.exe; cp043925.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

### **Enhancements**

- Added support for Windows Server 2019.
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Online HDD/SSD Flash Component for Windows (x64) - MB8000GFECR Drive  
Version: HPG6 (C) **(Recommended)**  
Filename: cp043890.compsig; cp043890.exe; cp043890.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MK000240GWCEU, MK000480GWCEV, MK000960GWCFA and MK001920GWCFB Drives  
Version: HPG3 (D) **(Recommended)**  
Filename: cp043937.compsig; cp043937.exe; cp043937.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Error Recovery Optimization Enhancements

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Online HDD/SSD Flash Component for Windows (x64) - MK000480GWSSC, MK000960GWSSD, MK001920GWSSE and MK003840GWSSF Drives  
Version: HPG2 (B) **(Recommended)**  
Filename: cp043974.compsig; cp043974.exe; cp043974.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.



- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MK000480GWXFF, MK000960GWXFH, MK001920GWXFK and MK003840GWXFL Drives

Version: HPG1 (B) (**Recommended**)

Filename: cp044206.compsig; cp044206.exe; cp044206.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MK003840GWHITE Drive

Version: HPG6 (C) (**Recommended**)

Filename: cp043947.compsig; cp043947.exe; cp043947.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MK0960GECQK Drive

Version: HPG3 (I) (**Critical**)

Filename: cp043874.compsig; cp043874.exe; cp043874.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..,

### **Fixes**

- Firmware fixes intermittent data corruption issue associated with unaligned sequential write operations.

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MM100GEFQV and MM2000GEFRA Drives  
Version: HPG8 (E) (**Recommended**)  
Filename: cp043880.compsig; cp043880.exe; cp043880.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MM100GFJTE Drive  
Version: HPG5 (C) (**Optional**)  
Filename: cp043929.compsig; cp043929.exe; cp043929.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - MR000240GWFLU, MR000480GWFLV, VR000480GWFMF, MR000960GWFMF, VR000960GWFMF, MR001920GWFMF and VR001920GWFMF Drives  
Version: HPGE (C) **(Recommended)**  
Filename: cp043928.compsig; cp043928.exe; cp043928.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000150GWCNN, VK000240GWCNP, VK000480GWCNQ, VK000960GWCNR and VK001600GWCNT Drives  
Version: HPG1 (C) **(Recommended)**  
Filename: cp043931.compsig; cp043931.exe; cp043931.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000240GWCFD, VK000480GWCFE, VK000960GWCFE, VK001920GWCFH and VK003840GWCFK Drives  
Version: HPG3 (D) **(Recommended)**  
Filename: cp043932.compsig; cp043932.exe; cp043932.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000240GWEZB, VK000480GWEZC, VK000960GWEZD, VK001920GWEZE, MK000240GWEZF, MK000480GWEZH, MK000960GWEZK and MK001920GWHRU Drives  
Version: HPGE (C) **(Optional)**  
Filename: cp043970.compsig; cp043970.exe; cp043970.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Fix to issue in bootloader download during power loss.
- Change IDF Word 106 report 4K TU for 4/8TB drives to align with Microsoft SQL requirement.
- Improvements to error exception.
- Improvements to Secure lock fix during multi-thread read tests with high freq. power cycling.
- HPGE includes a fix to improve the ability of the drive firmware to find and repair errors on the drive.

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000240GWJPD, VK000480GWJPE, VK000960GWJPF, VK001920GWJPH, VK003840GWJPK, MK000240GWKVK, MK000480GWJPN, MK000960GWJPP and MK001920GWJPQ Drives  
Version: HPG5 (C) **(Critical)**  
Filename: cp043927.compsig; cp043927.exe; cp043927.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Fixes a rare link loss issue and adds enhancements for drive reliability.
- After HPG5 firmware is downloaded to the drive, the new HPG5 firmware will be active on the drive.
- The new drive bootloader code will be activated after the next drive power cycle.
- For more information, refer to HPE Customer Advisory at the following URL: [https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00072768en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00072768en_us)

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000240GWSRQ, VK000480GWSRR, VK000960GWSRT, VK001920GWSRU and VK003840GWSRV Drives

Version: HPG3 (B) (**Recommended**)

Filename: cp043972.compsig; cp043972.exe; cp043972.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000240GWTSV, VK000480GWTTA, VK000960GWTTB, VK001920GWTTT, VK003840GWTTD, MK000480GWTTT, MK000960GWTTK, MK001920GWTTL and MK003840GWTTN Drives

Version: HPG3 (C) (**Recommended**)

Filename: cp043946.compsig; cp043946.exe; cp043946.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Corrects a potential unresponsiveness during a Secure Erase operation, and fixes an incorrect error reporting issue during certain SATA protocol transfers.

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000480GWSXF, VK000960GWSXH, VK001920GWSXK, MK000480GWUGF, MK000960GWUGH and MK001920GWUGK Drives

Version: HPG2 (C) **(Recommended)**

Filename: cp043944.compsig; cp043944.exe; cp043944.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK000480GWTHA, VK000960GWTHB, VK001920GWTHC and VK003840GWTHD Drives

Version: HPG1 (C) **(Optional)**

Filename: cp043956.compsig; cp043956.exe; cp043956.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK003840GWSXL Drive  
Version: HPG2 (C) **(Recommended)**  
Filename: cp043942.compsig; cp043942.exe; cp043942.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK007680GWSXN Drive  
Version: HPG2 (C) **(Recommended)**  
Filename: cp043943.compsig; cp043943.exe; cp043943.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK0120GFDKE, VK0240GFDKF, VK0480GFDKH, VK0960GFDKK, VK1920GFDKL and VK3840GFDKN Drives  
Version: HPG1 (F) **(Recommended)**  
Filename: cp043892.compsig; cp043892.exe; cp043892.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VK0240GEPQN, VK0480GEPQP and VK0960GEPQQ Drives  
Version: HPG1 (F) (**Recommended**)  
Filename: cp043895.compsig; cp043895.exe; cp043895.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Enhancements**

- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - VR000150GWEPP and VR000480GWEPR Drives  
Version: HPG1 (D) (**Critical**)  
Filename: cp043933.compsig; cp043933.exe; cp043933.md5

### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

### **Fixes**

- Fixes a timing issue which can cause the drive to become non-functional.
- Fixes VPD Log D0h reported drive Sanitize times.
- Adds support for Security Log Page BBh.

### **Enhancements**



- Added support for Windows Server 2019.

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Online HDD/SSD Flash Component for Windows (x64) - XP0120GFJSL and XP0240GFJSN Drives

Version: HPS4 (F) (**Recommended**)

Filename: cp043894.compsig; cp043894.exe; cp043894.md5

#### **Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or a ProLiant host bus adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

#### **Enhancements**

- Added support for Windows Server 2019.

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#### **Firmware - Storage Controller**

[Top](#)

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)

Version: 5.04 (**Recommended**)

Filename: CP041859.md5; RPMS/x86\_64/firmware-d3000-5.04-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-d3000-5.04-1.1.x86\_64.rpm

#### **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D3000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

#### **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

#### **Fixes**

**The following fixes were incorporated in this version:**

- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure for a NonStop solution.
- The smart carrier, which is the drive case for SAS drives, now authenticates in the D3610/D3710 drive enclosure.
- Added new 7-segment error codes E0 and E1 to report issues with Fan modules A and B, respectively. These new codes only apply to the D3610/D3710 and only display when running firmware 5.04.
- If the storage enclosure processor within the I/O module fails, a hard reset (power down and then power up) is executed to ensure the processor comes back online.

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

### **Enhancements**

**The following enhancement has been added in this version:**

- Added support of RHEL 7.8
- Added support of RHEL 8.2
- Added support of SLES15 SP2

### **Supported Devices and Features**

The D3600 / D3700 / D3610 / D3710 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller
- Smart Array P741m Controller

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HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)

Version: 5.04 (**Recommended**)

Filename: CP041860.compsig; CP041860.md5; CP041860.zip

### **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D3000 (or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

### **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

## **Fixes**

### **The following fixes were incorporated in this version:**

- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure for a NonStop solution.
- The smart carrier, which is the drive case for SAS drives, now authenticates in the D3610/D3710 drive enclosure.
- Added new 7-segment error codes E0 and E1 to report issues with Fan modules A and B, respectively. These new codes only apply to the D3610/D3710 and only display when running firmware 5.04.
- If the storage enclosure processor within the I/O module fails, a hard reset (power down and then power up) is executed to ensure the processor comes back online.

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

## **Supported Devices and Features**

The D3600 / D3700 / D3610 / D3710 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P741m Controller
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller

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HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for Windows (x64)  
Version: 5.04 (**Recommended**)  
Filename: cp041861.compsig; cp041861.exe

## **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D3000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D3000.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

## **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of

capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D3000.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

## **Fixes**

### **The following fixes were incorporated in this version:**

- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure for a NonStop solution.
- The smart carrier, which is the drive case for SAS drives, now authenticates in the D3610/D3710 drive enclosure.
- Added new 7-segment error codes E0 and E1 to report issues with Fan modules A and B, respectively. These new codes only apply to the D3610/D3710 and only display when running firmware 5.04.
- If the storage enclosure processor within the I/O module fails, a hard reset (power down and then power up) is executed to ensure the processor comes back online.

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

## **Supported Devices and Features**

The D3600 / D3700 / D3610 / D3710 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller
- Smart Array P741m Controller

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HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)

Version: 2.74 (G) (**Recommended**)

Filename: CP043653.md5; RPMS/x86\_64/firmware-d6020-2.74-7.1.x86\_64.compsig; RPMS/x86\_64/firmware-d6020-2.74-7.1.x86\_64.rpm

## **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D6020(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

## **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

### **Fixes**

**The following fixes were incorporated in this version:**

- Temperature sensors logic inside gSEP model and SES database
- When an IOM is pulled the surviving IOM reports false critical temperatures

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

### **Enhancements**

**The following enhancement has been added in this version:**

- Added support of RHEL 7.8
- Added support of RHEL 8.2
- Added support of SLES15 SP2

### **Supported Devices and Features**

The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P741m Controller
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller

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HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)

Version: 2.74 (G) **(Recommended)**

Filename: CP043637.compsig; CP043637.md5; CP043637.zip

### **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D6020(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

### **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

## **Fixes**

**The following fixes were incorporated in this version:**

- Temperature sensors logic inside gSEP model and SES database
- When an IOM is pulled the surviving IOM reports false critical temperatures

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

## **Supported Devices and Features**

The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P741m Controller
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller

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HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for Windows (x64)

Version: 2.74 (G) **(Recommended)**

Filename: cp043654.compsig; cp043654.exe

## **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D6020(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D6020.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

## **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D6020.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

## **Fixes**

### **The following fixes were incorporated in this version:**

- Temperature sensors logic inside gSEP model and SES database
- When an IOM is pulled the surviving IOM reports false critical temperatures

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

## **Supported Devices and Features**

The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P741m Controller
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller

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HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)

Version: 0107 (**Recommended**)

Filename: CP043683.md5; RPMS/x86\_64/firmware-d8000-0107-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-d8000-0107-1.1.x86\_64.rpm

## **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D8000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

## **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

## **Fixes**

### **The following fixes were incorporated in this version:**

- In STD INQUIRY RESPONSE, the ErrM bit was always being set. The ErrM bit indicates that the enclosure firmware detects a mismatch in any of its package versions and the firmware version of

a FRU component. The issue was due to an incorrect version of PSU firmware being included and that has been fixed.

- After installing the latest firmware on the enclosure I/O modules, the SES targets could not be discovered on the host. The virtual phy bit in SMP DISCOVER RESPONSE, which is used by the Microchip smartpqi HBA, was det for the virtual phy of the I/O module.

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

## **Enhancements**

**The following enhancement has been added in this version:**

- Added support of Rhel 7.8
- Added support of Rhel 8.2
- Added support of SLES15 SP2

## **Supported Devices and Features**

The D8000 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller

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HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)

Version: 0107 (**Recommended**)

Filename: CP043703.md5; CP043703.zip; CP043703\_part1.compsig; CP043703\_part2.compsig

## **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D8000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

## **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

## **Fixes**

**The following fixes were incorporated in this version:**



- In STD INQUIRY RESPONSE, the ErrM bit was always being set. The ErrM bit indicates that the enclosure firmware detects a mismatch in any of its package versions and the firmware version of a FRU component. The issue was due to an incorrect version of PSU firmware being included and that has been fixed.
- After installing the latest firmware on the enclosure I/O modules, the SES targets could not be discovered on the host. The virtual phy bit in SMP DISCOVER RESPONSE, which is used by the Microchip smartpqi HBA, was det for the virtual phy of the I/O module.

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

### **Supported Devices and Features**

The D8000 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller

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HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for Windows (x64)

Version: 0107 (**Recommended**)

Filename: cp043713.compsig; cp043713.exe

### **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D8000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D8000.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

### **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D8000.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

### **Fixes**

**The following fixes were incorporated in this version:**

- In STD INQUIRY RESPONSE, the ErrM bit was always being set. The ErrM bit indicates that the enclosure firmware detects a mismatch in any of its package versions and the firmware version of a FRU component. The issue was due to an incorrect version of PSU firmware being included and that has been fixed.
- After installing the latest firmware on the enclosure I/O modules, the SES targets could not be discovered on the host. The virtual phy bit in SMP DISCOVER RESPONSE, which is used by the Microchip smartpqi HBA, was det for the virtual phy of the I/O module.

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

### **Supported Devices and Features**

The D8000 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller

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Online Firmware Flash for ESXi - HPE NS204i-p Gen10+ Boot Controller

Version: 1.0.14.1047 (**Recommended**)

Filename: CP041687.compsig; CP041687.zip

### **Important Note!**

VMware **7.0u1** **is** supported by HPE NS204i-p Gen10+ Boot Controller

**VMware 7.0 is NOT supported by HPE NS204i-p Gen10+ Boot Controller**

### **Prerequisites**

Requires iLO5 version 2.30 or later

For Intel Gen10 systems, requires system BIOS 2.36 or later.

For AMD Gen10 Plus systems, requires system BIOS 1.30 or later.

### **Enhancements**

- Initial Firmware Smart Component release for HPE Gen10+ Boot Controller

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Online Firmware Flash for Linux(x64) - HPE NS204i-p Gen10+ Boot Controller

Version: 1.0.14.1047 (**Recommended**)

Filename: CP041686.md5; CP041686.scexe; deb/firmware-9041739931\_1.0.14.1047-1.1\_amd64.deb; rpm/RPMS/x86\_64/firmware-9041739931-1.0.14.1047-1.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-9041739931-1.0.14.1047-1.1.x86\_64.rpm

### **Prerequisites**

Requires iLO5 version 2.30 or later

For Intel Gen10 systems, requires system BIOS 2.36 or later.

For AMD Gen10 Plus systems, requires system BIOS 1.30 or later.

### **Enhancements**

- Initial Firmware Smart Component release for HPE Gen10+ Boot Controller

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Online Firmware Flash for Windows - HPE NS204i-p Gen10+ Boot Controller

Version: 1.0.14.1047 (**Recommended**)

Filename: cp041688.compsig; cp041688.exe; cp041688.md5

### **Prerequisites**

Requires iLO5 version 2.30 or later

For Intel Gen10 systems, requires system BIOS 2.36 or later.  
For AMD Gen10 Plus systems, requires system BIOS 1.30 or later.

### **Enhancements**

- Initial Firmware Smart Component release for HPE Gen10+ Boot Controller

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Online ROM Flash Component for ESXi - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208e-p, E208i-c, E208i-a, P408i-sb, P408e-m, P204i-c, P204i-b, P816i-a and P416ie-m SR Gen10  
Version: 3.00 **(Critical)**  
Filename: CP044423.compsig; CP044423.zip

### **Prerequisites**

- \* Back up your data before initiating a firmware update.

### **Fixes**

The following issues have been fixed in Smart Array controller firmware v3.00:

- \* Background surface scan might not repair media errors on 12G SAS drives in RAID 1, 5, 10, and 50 logical drives.
- \* In some I/O workloads, the file system or application might read incorrect data from encrypted RAID 0 (with two or more physical drives) or RAID 10/10ADM (with four or more physical drives) logical drives.
- \* A controller might hang when a Test Unit Ready command fails during SSD logical drive Rapid Parity Initialization.
- \* During a rebuild and extreme simultaneous host I/O writes, the rebuild operation might use old data, resulting in subsequent host reads that might return old data.
- \* A host might read incorrect data after background parity initialization finishes on a logical drive on a single array with multiple logical drives.
- \* A controller lockup issue might occur during the repair of an unrecoverable read error (URE) on a RAID 5 volume.
- \* A controller lockup issue might occur during SmartCache error handling.
- \* A controller lockup issue might occur during controller boot when SmartCache is enabled.
- \* A file system or application might read incorrect data when a coalesced host request encounters a fatal error.

- \* A failed drive installed during controller boot is not identified as a failed drive.
- \* The failed drive status LED is not illuminated when a good drive is replaced with a failed drive in a backplane.
- \* In configurations with backplanes, a failed drive installed as a replacement for a previously configured RAID volume is not identified as a failed drive.
- \* A rebuild of a logical drive created from SSD drives fails to start within 1,200 seconds.
- \* A performance drop during 16k to 256k sequential reads with low queue depth occurs on a logical drive with cache enabled.
- \* A controller lockup issue might occur during a simultaneous host write and background cache flush operation.
- \* Incorrect connector information is displayed for SATA drives after certain physical events in a dual I/O module enclosure configuration.
- \* A failed drive that is physically present in a drive bay is not reported correctly.
- \* Devices might drop out of a configuration after multiple create or delete drive zone group commands are issued.
- \* The drive status LED does not flash during sanitize operations if drives are attached to an expander.
- \* Cache disable status is not updated correctly when backup power source charging times out.
- \* The clear configuration command might not clear the configuration if SmartCache is enabled and the system was previously shut down ungracefully.
- \* The clear configuration command fails if a SmartCache volume has multiple UREs within a SmartCache page block size.
- \* A controller lockup issue might occur when toggling a path to an enclosure in a dual domain configuration.
- \* The controller runs in survival mode if a temperature sensor is not detected.
- \* The clear configuration command might report failures when it encounters an installed drive with failed status.
- \* A performance drop occurs during sequential workloads.
- \* A controller failure might occur when running concurrent I/O to unassigned drives and drives in a RAID logical drive.
- \* After a reboot, a bad drive might prevent controller discovery or operating system startup.

- \* A host request is incorrectly returned as Failed when a failed drive in a degraded volume is replaced.
- \* Modifying the spare configuration under an active spare rebuild causes the rebuild process to stop.
- \* Incorrect device location reporting occurs when direct-attach drives are not attached to a backplane and an enclosure management schema is not defined.
- \* RAID volume configuration settings are not applied when a disk drive transitions from unassigned to RAID usage during runtime.
- \* A RAID volume with a failed drive reappears after a clear configuration operation completes and the system is rebooted.
- \* A controller might hang during a SmartCache flush task that encounters multiple unrecoverable media errors (UREs).
- \* A response of all zeros is sent for ATA PASSTHROUGH commands, such as SMART READ DATA, through Out of Band (OOB) host transport.

### **Enhancements**

The following enhancements are part of the Smart Array controller firmware v3.00:

- \* After a firmware upgrade and reboot, the background parity initialization process starts for logical drives with incomplete or failed background parity initialization status.
- \* Previously, background surface scans for data consistency could wait up to 14 days between runs. Surface scan now restarts immediately when a consistency check fails. When no surface scan issues are found, surface scan maintains the 14 day waiting period.

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Online ROM Flash Component for ESXi (x86) - HPE Smart Array P824i-p MR Gen10  
Version: 24.23.0-0043 (B) **(Recommended)**  
Filename: CP044443.compsig; CP044443.zip

### **Enhancements**

Added support for VMware ESXi 7.0

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Online ROM Flash Component for Linux (x64) – HPE Apollo 2000 Gen10 Backplane Expander Firmware  
Version: 1.00 (B) **(Optional)**  
Filename: rpm/RPMS/x86\_64/firmware-smartarray-9f082dff4-1.00-2.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-smartarray-9f082dff4-1.00-2.1.x86\_64.rpm

### **Important Note!**

**Note:** If version 1.00 was previously installed, then it is not necessary to upgrade to version 1.00 (B).

### **Enhancements**

- Added support for SUSE Linux Enterprise Server 15 OS

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Online ROM Flash Component for Linux (x64) - HPE SAS Expander Firmware for HPE D2500sb Storage Blade  
Version: 2.00 (B) **(Optional)**  
Filename: rpm/RPMS/x86\_64/firmware-smartarray-1d0696d939-2.00-2.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-smartarray-1d0696d939-2.00-2.1.x86\_64.rpm

**Important Note!**

Customers who already installed firmware version 2.00 do not need to update to 2.00 (B).

**Enhancements**

- Added support for SUSE Linux Enterprise Server 15 OS

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Online ROM Flash Component for Linux (x64) - HPE Smart Array P824i-p MR Gen10  
Version: 24.23.0-0043 (A) **(Recommended)**  
Filename: CP044918.md5; CP044918.scexe; deb/firmware-cafee9b6e4\_24.23.0.0043-1.1\_amd64.deb;  
rpm/RPMS/x86\_64/firmware-cafee9b6e4-24.23.0\_0043-1.1.x86\_64.compsig; rpm/RPMS/x86\_64/firmware-  
cafee9b6e4-24.23.0\_0043-1.1.x86\_64.rpm

**Fixes**

Over-temp issue was a false IML due to a  $\geq 60C$  threshold, modified the threshold to  $>65C$  in new version.

Please reference Customer Advisory [a00101958en\\_us](#)

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Online ROM Flash Component for VMware ESXi - HPE 12Gb/s SAS Expander Firmware for HPE Smart Array Controllers and HPE HBA Controllers  
Version: 4.22 (A) **(Recommended)**  
Filename: CP044309.compsig; CP044309.zip

**Important Note!**

- Power cycle / cold reboot is required if firmware is upgraded from version 1.31 or earlier.

**Enhancements**

Added ESXi 7.0 support.

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Online ROM Flash Component for VMware ESXi - HPE Apollo 2000 Gen10 Backplane Expander Firmware  
Version: 1.00 (E) **(Recommended)**  
Filename: CP044326.compsig; CP044326.zip

**Important Note!**

Customers who already installed firmware version 1.00 do not need to update to 1.00 (E).

**Enhancements**

Added VMware ESXi 7.0 support

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Online ROM Flash Component for VMware ESXi - HPE Apollo 45xx Gen10 Backplane Expander Firmware  
Version: 1.56 (F) **(Recommended)**  
Filename: CP044312.compsig; CP044312.zip

### **Enhancements**

- Added VMware ESXi 7.0 Support

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Online ROM Flash Component for VMware ESXi - HPE SAS Expander Firmware for HPE D2500sb Storage Blade  
Version: 2.02 (A) **(Recommended)**  
Filename: CP044325.compsig; CP044325.zip

### **Important Note!**

- When using ESXi6.0 you must be at upgrade 3 or newer. The required SmartPQI driver is not present in earlier versions of the OS

### **Prerequisites**

When using ESXi6.0 you must be at upgrade 3 or newer. The required SmartPQI driver is not present in earlier versions of the OS

### **Enhancements**

Added ESXi 7.0 support.

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Online ROM Flash Component for Windows (x64) - HPE 12Gb/s SAS Expander Firmware for HPE Smart Array Controllers and HPE HBA Controllers  
Version: 4.22 **(Recommended)**  
Filename: cp040619.compsig; cp040619.exe; cp040619.md5

### **Important Note!**

- Power cycle / cold reboot is required if firmware is upgraded from version 1.31 or earlier.

### **Fixes**

- Fixes an issue where false Smart Carrier authentication errors may happen.

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Online ROM Flash Component for Windows (x64) - HPE Apollo 2000 Gen10 Backplane Expander Firmware  
Version: 1.00 (B) **(Optional)**  
Filename: cp037609.compsig; cp037609.exe; cp037609.md5

### **Important Note!**

**Note:** If version 1.00 was previously installed, then it is not necessary to upgrade to version 1.00 (B).

### **Enhancements**

- Added support for Microsoft Windows Server 2019 OS

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Online ROM Flash Component for Windows (x64) - HPE Apollo 45xx Gen10 Backplane Expander Firmware  
Version: 1.56 (C) **(Recommended)**  
Filename: cp037765.compsig; cp037765.exe; cp037765.md5

## **Enhancements**

- Added HPE Smart Array p824i-p controller support

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Online ROM Flash Component for Windows (x64) - HPE SAS Expander Firmware for HPE D2500sb Storage Blade  
Version: 2.00 (B) **(Optional)**  
Filename: cp037679.compsig; cp037679.exe; cp037679.md5

## **Important Note!**

Customers who already installed firmware version 2.00 do not need to update to 2.00 (B).

## **Enhancements**

- Added support for Microsoft Windows Server 2019 OS

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Online ROM Flash Component for Windows (x64) - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208e-p, E208i-c, E208i-a, P408i-sb, P408e-m, P204i-c, P204i-b, P816i-a and P416ie-m SR Gen10  
Version: 3.00 **(Critical)**  
Filename: cp044558.compsig; cp044558.exe; cp044558.md5

## **Prerequisites**

- \* Back up your data before initiating a firmware update.

## **Fixes**

The following issues have been fixed in Smart Array controller firmware v3.00:

- \* Background surface scan might not repair media errors on 12G SAS drives in RAID 1, 5, 10, and 50 logical drives.
- \* In some I/O workloads, the file system or application might read incorrect data from encrypted RAID 0 (with two or more physical drives) or RAID 10/10ADM (with four or more physical drives) logical drives.
- \* A controller might hang when a Test Unit Ready command fails during SSD logical drive Rapid Parity Initialization.
- \* During a rebuild and extreme simultaneous host I/O writes, the rebuild operation might use old data, resulting in subsequent host reads that might return old data.
- \* A host might read incorrect data after background parity initialization finishes on a logical drive on a single array with multiple logical drives.
- \* A controller lockup issue might occur during the repair of an unrecoverable read error (URE) on a RAID 5 volume.
- \* A controller lockup issue might occur during SmartCache error handling.



- \* A controller lockup issue might occur during controller boot when SmartCache is enabled.
- \* A file system or application might read incorrect data when a coalesced host request encounters a fatal error.
- \* A failed drive installed during controller boot is not identified as a failed drive.
- \* The failed drive status LED is not illuminated when a good drive is replaced with a failed drive in a backplane.
- \* In configurations with backplanes, a failed drive installed as a replacement for a previously configured RAID volume is not identified as a failed drive.
- \* A rebuild of a logical drive created from SSD drives fails to start within 1,200 seconds.
- \* A performance drop during 16k to 256k sequential reads with low queue depth occurs on a logical drive with cache enabled.
- \* A controller lockup issue might occur during a simultaneous host write and background cache flush operation.
- \* Incorrect connector information is displayed for SATA drives after certain physical events in a dual I/O module enclosure configuration.
- \* A failed drive that is physically present in a drive bay is not reported correctly.
- \* Devices might drop out of a configuration after multiple create or delete drive zone group commands are issued.
- \* The drive status LED does not flash during sanitize operations if drives are attached to an expander.
- \* Cache disable status is not updated correctly when backup power source charging times out.
- \* The clear configuration command might not clear the configuration if SmartCache is enabled and the system was previously shut down ungracefully.
- \* The clear configuration command fails if a SmartCache volume has multiple UREs within a SmartCache page block size.
- \* A controller lockup issue might occur when toggling a path to an enclosure in a dual domain configuration.
- \* The controller runs in survival mode if a temperature sensor is not detected.
- \* The clear configuration command might report failures when it encounters an installed drive with failed status.
- \* A performance drop occurs during sequential workloads.

- \* A controller failure might occur when running concurrent I/O to unassigned drives and drives in a RAID logical drive.
- \* After a reboot, a bad drive might prevent controller discovery or operating system startup.
- \* A host request is incorrectly returned as Failed when a failed drive in a degraded volume is replaced.
- \* Modifying the spare configuration under an active spare rebuild causes the rebuild process to stop.
- \* Incorrect device location reporting occurs when direct-attach drives are not attached to a backplane and an enclosure management schema is not defined.
- \* RAID volume configuration settings are not applied when a disk drive transitions from unassigned to RAID usage during runtime.
- \* A RAID volume with a failed drive reappears after a clear configuration operation completes and the system is rebooted.
- \* A controller might hang during a SmartCache flush task that encounters multiple unrecoverable media errors (UREs).
- \* A response of all zeros is sent for ATA PASSTHROUGH commands, such as SMART READ DATA, through Out of Band (OOB) host transport.

### **Enhancements**

The following enhancements are part of the Smart Array controller firmware v3.00:

- \* After a firmware upgrade and reboot, the background parity initialization process starts for logical drives with incomplete or failed background parity initialization status.
- \* Previously, background surface scans for data consistency could wait up to 14 days between runs. Surface scan now restarts immediately when a consistency check fails. When no surface scan issues are found, surface scan maintains the 14 day waiting period.

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Online ROM Flash Component for Windows (x64) - HPE Smart Array P824i-p MR Gen10  
 Version: 24.23.0-0043 (A) **(Recommended)**  
 Filename: cp044919.compsig; cp044919.exe; cp044919.md5

### **Fixes**

Over-temp issue was a false IML due to a  $\geq 60$ C threshold, modified the threshold to  $> 65$ C in new version.

Please reference Customer Advisory [a00101958en\\_us](#)

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Supplemental Update / Online ROM Flash Component for Linux (x64) – HPE 12Gb/s SAS Expander Firmware for HPE Smart Array Controllers and HPE HBA Controllers  
 Version: 4.22 **(Recommended)**  
 Filename: rpm/RPMS/x86\_64/firmware-smartarray-2de15b6882-4.22-1.1.x86\_64.compsig;  
 rpm/RPMS/x86\_64/firmware-smartarray-2de15b6882-4.22-1.1.x86\_64.rpm

### **Important Note!**

- Power cycle / cold reboot is required if firmware is upgraded from version 1.31 or earlier.

### **Fixes**

- Fixes an issue where false Smart Carrier authentication errors may happen.

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Supplemental Update / Online ROM Flash Component for Linux (x64) - HPE Apollo 45xx Gen10 Backplane Expander Firmware

Version: 1.56 (C) **(Recommended)**

Filename: rpm/RPMS/x86\_64/firmware-smartarray-815b1ae26d-1.56-3.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-smartarray-815b1ae26d-1.56-3.1.x86\_64.rpm

### **Enhancements**

- Added HPE Smart Array P824i-p controller support

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Supplemental Update / Online ROM Flash Component for Linux (x64) - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208e-p, E208i-c, E208i-a, P408i-sb, P408e-m, P204i-c, P204i-b, P816i-a and P416ie-m SR Gen10

Version: 3.00 **(Critical)**

Filename: rpm/RPMS/x86\_64/firmware-smartarray-f7c07bdbbd-3.00-1.1.x86\_64.compsig;  
rpm/RPMS/x86\_64/firmware-smartarray-f7c07bdbbd-3.00-1.1.x86\_64.rpm

### **Prerequisites**

- \* Back up your data before initiating a firmware update.

### **Fixes**

The following issues have been fixed in Smart Array controller firmware v3.00:

- \* Background surface scan might not repair media errors on 12G SAS drives in RAID 1, 5, 10, and 50 logical drives.
- \* In some I/O workloads, the file system or application might read incorrect data from encrypted RAID 0 (with two or more physical drives) or RAID 10/10ADM (with four or more physical drives) logical drives.
- \* A controller might hang when a Test Unit Ready command fails during SSD logical drive Rapid Parity Initialization.
- \* During a rebuild and extreme simultaneous host I/O writes, the rebuild operation might use old data, resulting in subsequent host reads that might return old data.
- \* A host might read incorrect data after background parity initialization finishes on a logical drive on a single array with multiple logical drives.

- \* A controller lockup issue might occur during the repair of an unrecoverable read error (URE) on a RAID 5 volume.
- \* A controller lockup issue might occur during SmartCache error handling.
- \* A controller lockup issue might occur during controller boot when SmartCache is enabled.
- \* A file system or application might read incorrect data when a coalesced host request encounters a fatal error.
- \* A failed drive installed during controller boot is not identified as a failed drive.
- \* The failed drive status LED is not illuminated when a good drive is replaced with a failed drive in a backplane.
- \* In configurations with backplanes, a failed drive installed as a replacement for a previously configured RAID volume is not identified as a failed drive.
- \* A rebuild of a logical drive created from SSD drives fails to start within 1,200 seconds.
- \* A performance drop during 16k to 256k sequential reads with low queue depth occurs on a logical drive with cache enabled.
- \* A controller lockup issue might occur during a simultaneous host write and background cache flush operation.
- \* Incorrect connector information is displayed for SATA drives after certain physical events in a dual I/O module enclosure configuration.
- \* A failed drive that is physically present in a drive bay is not reported correctly.
- \* Devices might drop out of a configuration after multiple create or delete drive zone group commands are issued.
- \* The drive status LED does not flash during sanitize operations if drives are attached to an expander.
- \* Cache disable status is not updated correctly when backup power source charging times out.
- \* The clear configuration command might not clear the configuration if SmartCache is enabled and the system was previously shut down ungracefully.
- \* The clear configuration command fails if a SmartCache volume has multiple UREs within a SmartCache page block size.
- \* A controller lockup issue might occur when toggling a path to an enclosure in a dual domain configuration.

- \* The controller runs in survival mode if a temperature sensor is not detected.
- \* The clear configuration command might report failures when it encounters an installed drive with failed status.
- \* A performance drop occurs during sequential workloads.
- \* A controller failure might occur when running concurrent I/O to unassigned drives and drives in a RAID logical drive.
- \* After a reboot, a bad drive might prevent controller discovery or operating system startup.
- \* A host request is incorrectly returned as Failed when a failed drive in a degraded volume is replaced.
- \* Modifying the spare configuration under an active spare rebuild causes the rebuild process to stop.
- \* Incorrect device location reporting occurs when direct-attach drives are not attached to a backplane and an enclosure management schema is not defined.
- \* RAID volume configuration settings are not applied when a disk drive transitions from unassigned to RAID usage during runtime.
- \* A RAID volume with a failed drive reappears after a clear configuration operation completes and the system is rebooted.
- \* A controller might hang during a SmartCache flush task that encounters multiple unrecoverable media errors (UREs).
- \* A response of all zeros is sent for ATA PASSTHROUGH commands, such as SMART READ DATA, through Out of Band (OOB) host transport.

### **Enhancements**

The following enhancements are part of the Smart Array controller firmware v3.00:

- \* After a firmware upgrade and reboot, the background parity initialization process starts for logical drives with incomplete or failed background parity initialization status.
- \* Previously, background surface scans for data consistency could wait up to 14 days between runs. Surface scan now restarts immediately when a consistency check fails. When no surface scan issues are found, surface scan maintains the 14 day waiting period.

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### **Firmware - Storage Fibre Channel**

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HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for Linux (x64)

Version: 2020.09.01 (**Recommended**)

Filename: RPMS/x86\_64/firmware-fc-emulex-2020.09.01-1.22.x86\_64.compsig; RPMS/x86\_64/firmware-fc-emulex-2020.09.01-1.22.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

<b>Adapter</b>	<b>Speed</b>	<b>Universal Boot Image</b>	<b>Firmware</b>	<b>UEFI</b>	<b>Boot Bios</b>
HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0

HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0

## **Prerequisites**

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied enablement kit must be installed prior to this firmware component being identified by SUM for deployment.

The OOB driver and enablement kit are available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

The Enablement Kit requires that the target environment have the libHBAAPI package installed from your OS installation media.

Install the FC Driver Kit, reboot, and then install the Enablement Kit.

Additional requirements:

Environment must be running the syslog daemon for the flash engine to run  
 Environment must have 32-bit netlink library (libnl.so) installed for component to be able to discover Emulex Host Bus Adapters(HBAs)

## **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

### **Contains:**

32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16/32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

8 Gb HBA Standup firmware 2.10X6

8 Gb standup universal boot image 12.60a4(12.6.302.0 BIOS, 12.6.284.0 UEFI)

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### 16Gb FC Adapter:

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

### 32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for Microsoft Windows Server 2012 R2/2016/2019 x64

Version: 2020.09.01 (**Recommended**)

Filename: cp042254.compsig; cp042254.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0



HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Emulex driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

**Contains:**

32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16/32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

8 Gb HBA Standup firmware 2.10X6

8 Gb standup universal boot image 12.60a4(12.6.302.0 BIOS, 12.6.284.0 UEFI)

**Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

**16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

**32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for VMware vSphere 6.5

Version: 2020.09.01 **(Recommended)**

Filename: CP042251.compsig; CP042251.zip

**Important Note!**

Release Notes:

[HPE Host Bus Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for Fibre Channel host bus adapters and Converge Network Adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

<b>Adapter</b>	<b>Speed</b>	<b>Universal Boot Image</b>	<b>Firmware</b>	<b>UEFI</b>	<b>Boot Bios</b>
HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0

### **rerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

### **Contains:**

32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16/32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

8 Gb HBA Standup firmware 2.10X6

8 Gb standup universal boot image 12.60a4(12.6.302.0 BIOS, 12.6.284.0 UEFI)

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for VMware vSphere 6.7

Version: 2020.09.01 (**Recommended**)

Filename: CP042252.compsig; CP042252.zip

## **Important Note!**

Release Notes:

[HPE Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

<b>Adapter</b>	<b>Speed</b>	<b>Universal Boot Image</b>	<b>Firmware</b>	<b>UEFI</b>	<b>Boot Bios</b>
HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

#### **Contains:**

32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16/32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

8 Gb HBA Standup firmware 2.10X6

8 Gb standup universal boot image 12.60a4(12.6.302.0 BIOS, 12.6.284.0 UEFI)

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

**32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for VMware vSphere 7.0

Version: 2020.09.01 **(Recommended)**

Filename: CP042544.compsig; CP042544.zip

**Important Note!**

Release Notes:

[HPE Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

<b>Adapter</b>	<b>Speed</b>	<b>Universal Boot Image</b>	<b>Firmware</b>	<b>UEFI</b>	<b>Boot Bios</b>
HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	12.60a4	2.10X6	12.6.284.0	12.6.302.0
HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.6.275.12	12.6.275.12	12.6.275.7	12.6.271.0

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.



**Contains:**

32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16/32 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

16 Gb universal boot 12.6.275.12(EFI 12.6.275.7 BOOT BIOS 12.6.271.0 Firmware 12.6.275.12)

8 Gb HBA Standup firmware 2.10X6

8 Gb standup universal boot image 12.60a4(12.6.302.0 BIOS, 12.6.284.0 UEFI)

**Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC Adapter:**

- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

**16Gb FC Adapter:**

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

**32Gb FC Adapter:**

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for Linux (x64)

Version: 2020.09.01 (**Recommended**)

Filename: firmware-fc-mezz-emulex-e498500c87604ddabe3d9c5c037f53fc.log; RPMS/x86\_64/firmware-fc-mezz-emulex-2020.09.01-1.19.x86\_64.compsig; RPMS/x86\_64/firmware-fc-mezz-emulex-2020.09.01-1.19.x86\_64.rpm

**Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class	8Gb	12.40a6	2.10X6	12.4.262.0	12.4.153.0
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.4.270.10	12.4.270.10	N/A	N/A

## **Prerequisites**

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied enablement kit must be installed prior to this firmware component being identified by SUM for deployment.

The OOB driver and enablement kit are available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

The Enablement Kit requires that the target environment have the libHBAAPI package installed from your OS installation media.

Install the FC Driver Kit, reboot, and then install the Enablement Kit.

Additional requirements:

Environment must be running the syslog daemon for the flash engine to run  
Environment must have 32-bit netlink library (libnl.so) installed for component to be able to discover Emulex Host Bus Adapters(HBAs)

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

#### **Contains:**

16 Gb universal boot 12.4.270.10

8 Gb Gen8 Mezz (LPe1205A) firmware 2.10X6

8 Gb Mezz universal boot image 12.40a6(12.4.262.0 BIOS, 12.4.153.0 UEFI)

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for Microsoft Windows Server 2012R2/2016/2019 x64

Version: 2020.09.01 (**Recommended**)

Filename: cp042263.compsig; cp042263.exe

### **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class	8Gb	12.40a6	2.10X6	12.4.262.0	12.4.153.0
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.4.270.10	12.4.270.10	N/A	N/A

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Emulex driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

#### **Contains:**

16 Gb universal boot 12.4.270.10

8 Gb Gen8 Mezz (LPe1205A) firmware 2.10X6

8 Gb Mezz universal boot image 12.40a6(12.4.262.0 BIOS, 12.4.153.0 UEFI)

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

**16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 6.5

Version: 2020.09.01 **(Recommended)**

Filename: CP042260.compsig; CP042260.zip

**Important Note!**

Release Notes:

[HPE Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) Host Bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class	8Gb	12.40a6	2.10X6	12.4.262.0	12.4.153.0

HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.4.270.10	12.4.270.10	N/A	N/A
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### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

#### **Contains:**

16 Gb universal boot 12.4.270.10

8 Gb Gen8 Mezz (LPe1205A) firmware 2.10X6

8 Gb Mezz universal boot image 12.40a6(12.4.262.0 BIOS, 12.4.153.0 UEFI)

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 6.7

Version: 2020.09.01 **(Recommended)**

Filename: CP042261.compsig; CP042261.zip

### **Important Note!**

Release Notes:

## [HPE Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) Host Bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class	8Gb	12.40a6	2.10X6	12.4.262.0	12.4.153.0
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.4.270.10	12.4.270.10	N/A	N/A

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

### **Contains:**

16 Gb universal boot 12.4.270.10

8 Gb Gen8 Mezz (LPe1205A) firmware 2.10X6  
8 Gb Mezz universal boot image 12.40a6(12.4.262.0 BIOS, 12.4.153.0 UEFI)

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 7.0

Version: 2020.09.01 (**Recommended**)

Filename: CP042545.compsig; CP042545.zip

### **Important Note!**

Release Notes:

[HPE Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

This Firmware package contains following firmware versions:



Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class	8Gb	12.40a6	2.10X6	12.4.262.0	12.4.153.0
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.4.270.10	12.4.270.10	N/A	N/A

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

#### **Contains:**

16 Gb universal boot 12.4.270.10

8 Gb Gen8 Mezz (LPe1205A) firmware 2.10X6

8 Gb Mezz universal boot image 12.40a6(12.4.262.0 BIOS, 12.4.153.0 UEFI)

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

- HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters - Linux (x86\_64)

Version: 2020.09.01 (**Recommended**)

Filename: RPMS/x86\_64/firmware-fc-qlogic-2020.09.01-1.26.x86\_64.compsig; RPMS/x86\_64/firmware-fc-qlogic-2020.09.01-1.26.x86\_64.rpm

## **Important Note!**

Refer release notes available at:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:  
[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)
- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

## **Prerequisites**

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied enablement kit must be installed prior to this firmware component being identified by SUM for deployment.

The OOB driver and enablement kit are available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

## **Fixes**

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

## **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb, 16 Gb and 32 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.74.07	9.03.00	7.02	3.64

HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

### **Supported Devices and Features**

This firmware supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 6.5

Version: 2020.09.01 **(Recommended)**

Filename: CP042515.compsig; CP042515.zip

### **Important Note!**

Refer release notes available at:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

### **Fixes**

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and

Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

## **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb, 16 Gb and 32 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

## **Supported Devices and Features**

This firmware supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 6.7

Version: 2020.09.01 (**Recommended**)

Filename: CP042516.compsig; CP042516.zip

**Important Note!**

Refer release notes available at:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:  
  
[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)
- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.

- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

### **Fixes**

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

### **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb, 16 Gb and 32 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0



HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
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**Supported Devices and Features**

This firmware supports the following HPE adapters:

**8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

**16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter

**32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 7.0

Version: 2020.09.01 (**Recommended**)

Filename: CP042547.compsig; CP042547.zip

**Important Note!**

Refer release notes available at:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43

HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

### **Fixes**

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

## **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb, 16 Gb and 32 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

## **Supported Devices and Features**

This firmware supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for QLogic Fibre Channel Mezzanine Host Bus Adapters for VMware vSphere 7.0

Version: 2020.09.01 **(Recommended)**

Filename: CP042548.compsig; CP042548.zip

## **Important Note!**

Release Notes:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	8Gb	3.81.05	8.08.206	7.00	3.56
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.02.01	8.08.230	7.02	3.43

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

### **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb and 16 Gb products.

- Gen4 Fibre Channel Host Bus Adapter:
  - Package 3.12.05
  - Firmware 8.08.206
  - UEFI 7.00
  - BIOS 3.56
- Gen5 Fibre Channel Host Bus Adapter:
  - Package 6.02.01
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.43

### **Supported Devices and Features**

This Firmware component supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Firmware Flash for QLogic Mezzanine Fibre Channel Host Bus Adapters - Linux (x86\_64)

Version: 2020.09.01 (**Recommended**)

Filename: RPMS/x86\_64/firmware-fc-mezz-qlogic-2020.09.01-1.25.x86\_64.compsig; RPMS/x86\_64/firmware-fc-mezz-qlogic-2020.09.01-1.25.x86\_64.rpm

### **Important Note!**

Release Notes:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Gen/Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	Gen4/8Gb	3.81.05	8.08.206	7.00	3.56
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	Gen5/16Gb	6.02.01	8.08.230	7.02	3.43

### **Prerequisites**

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied enablement kit must be installed prior to this firmware component being identified by SUM for deployment.

The OOB driver and enablement kit are available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

### **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb and 16 Gb products.

- 8Gb Fibre Channel Host Bus Adapter:
  - Package 3.81.05
  - Firmware 8.08.206

- UEFI 7.00
  - BIOS 3.56
- 16Gb Fibre Channel Host Bus Adapter:
  - Package 6.02.01
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.43

**Supported Devices and Features**

This Firmware component is supported on the following HPE adapters:

**Gen 4 Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

**Gen 5 Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

HPE Firmware Flash for QLogic Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 6.5

Version: 2020.09.01 (**Recommended**)

Filename: CP042208.compsig; CP042208.zip

**Important Note!**

Release Notes:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	8Gb	3.81.05	8.08.206	7.00	3.56
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.02.01	8.08.230	7.02	3.43

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

## **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb and 16 Gb products.

- 8Gb Fibre Channel Host Bus Adapter:
  - Package 3.81.05
  - Firmware 8.08.206
  - UEFI 7.00
  - BIOS 3.56
- 16Gb Fibre Channel Host Bus Adapter:
  - Package 6.02.01
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.43

## **Supported Devices and Features**

This Firmware Component is supported on the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Firmware Flash for QLogic Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 6.7

Version: 2020.09.01 (**Recommended**)

Filename: CP042209.compsig; CP042209.zip

## **Important Note!**

Release Notes:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	8Gb	3.81.05	8.08.206	7.00	3.56
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.02.01	8.08.230	7.02	3.43

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

### **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb and 16 Gb products.

- 8Gb Fibre Channel Host Bus Adapter:
  - Package 3.81.05
  - Firmware 8.08.206
  - UEFI 7.00
  - BIOS 3.56
- 16Gb Fibre Channel Host Bus Adapter:
  - Package 6.02.01
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.43

### **Supported Devices and Features**

This Firmware component is supported on the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
-



HPE Firmware Online Flash for QLogic Fibre Channel Host Bus Adapters - Microsoft Windows Server  
2012R2/2016/2019 (x86\_64)

Version: 2020.09.01 **(Recommended)**

Filename: cp042518.compsig; cp042518.exe

**Important Note!**

Refer release notes available at:

[HPE QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

## **Fixes**

Fixed the following:

- Enhancements have been made to the firmware to prevent and better recover from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

- Address unexpected behavior when Fibre Channel adapters were simultaneously running traffic to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all
- Fibre Channel adapter firmware versions were not showing up as expected in the AHS log.
- Port statistics counters would sometimes not update in the event of Loss of Signal or Loss of Sync
- link downs would occur during specific frame sequences used by the HPE XP8 array after array-side link loss

## **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb, 16 Gb and 32 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE 81Q 8Gb PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter	8Gb	3.82.00	8.08.207	7.00	3.56
HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43

HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	6.03.00	8.08.231	7.02	3.43
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	1.74.07	9.03.00	7.02	3.64
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.03.06	09.04.01	7.08	0.0

### **Supported Devices and Features**

This firmware supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Firmware Online Flash for QLogic Mezzanine Fibre Channel Host Bus Adapters - Microsoft Windows Server 2012R2/2016/2019 (x86\_64)

Version: 2020.09.01 (**Recommended**)

Filename: cp042211.compsig; cp042211.exe

### **Important Note!**

Release Notes:  
[HPE QLogic Adapters Release Notes](#)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	8Gb	3.81.05	8.08.206	7.00	3.56
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.02.01	8.08.230	7.02	3.43

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download>.

### **Enhancements**

Updated the Firmware/BIOS/UEFI packages for 8 Gb and 16 Gb products.

- 8Gb Fibre Channel Host Bus Adapter:
  - Package 3.81.05
  - Firmware 8.08.206
  - UEFI 7.00
  - BIOS 3.56
- 16Gb Fibre Channel Host Bus Adapter:
  - Package 6.02.01
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.43

### **Supported Devices and Features**

This Firmware component is supported on the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

#### **16Gb Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
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## **Firmware - System**

[Top](#)

Firmware Package - Gen10 NVMe Backplane PIC Firmware

Version: 1.20 **(Optional)**

Filename: ISS\_NVMe\_BP\_PIC\_flashV1B20.fwpkg

### **Prerequisites**

iLO 5 version 1.10 or later is required.

### **Enhancements**

Initial release.

---

Online Flash Component for Linux - Gen10 NVMe Backplane PIC Firmware

Version: 1.20 (E) **(Optional)**

Filename: RPMS/x86\_64/firmware-nvmebackplane-gen10-1.20-5.1.x86\_64.compsig; RPMS/x86\_64/firmware-nvmebackplane-gen10-1.20-5.1.x86\_64.rpm

### **Important Note!**

Note: If the target device was previously updated to firmware version 1.20, it is not necessary to apply firmware update 1.20(E).

### **Prerequisites**

iLO 5 version 1.10 or later is required.

### **Enhancements**

- Added support for SUSE Linux Enterprise Server 15 OS
- 

Online Flash Component for Windows x64 - Gen10 NVMe Backplane PIC Firmware

Version: 1.20 (D) **(Optional)**

Filename: cp037722.compsig; cp037722.exe

### **Important Note!**

Note: If the target device was previously updated to firmware version 1.20, it is not necessary to apply firmware update 1.20(D).

### **Prerequisites**

iLO 5 version 1.10 or later is required.

### **Enhancements**

- Added support for Microsoft Windows Server 2019 OS

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Online ROM Flash Component for Windows x64 - Server Platform Services (SPS) Firmware for HPE Gen10 Servers

Version: 04.01.04.339 **(Recommended)**

Filename: cp040928.compsig; cp040928.exe

### **Important Note!**

#### **Important Notes:**

None

#### **Deliverable Name:**

HPE Gen10 Server Platform Services (SPS) Firmware

#### **Release Version:**

04.01.04.339

#### **Last Recommended or Critical Revision:**

04.01.04.339

#### **Previous Revision:**

04.01.04.296

#### **Firmware Dependencies:**

None

#### **Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2019-11090 and CVE-2019-11109. These issues are not unique to HPE servers.

**Problems Fixed:**

None

**Known Issues:**

None

**Prerequisites**

HPE Gen10 system ROM version 1.26 or later

HPE Gen10 Innovation Engine (IE) Firmware version 0.1.5.2 or later

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Enhancements**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2019-11090 and CVE-2019-11109. These issues are not unique to HPE servers.

**Known Issues:**

None

Online ROM Flash Component for Windows x64 - Server Platform Services (SPS) Firmware for HPE MicroServer Gen10 PlusVersion: 05.01.04.113 **(Recommended)**Filename: cp044092.compsig; cp044092.exe **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

Server Platform Services (SPS) Firmware for HPE ProLiant MicroServer Gen10 Plus (U48) Servers

**Release Version:**

05.01.04.113

**Last Recommended or Critical Revision:**

05.01.04.113

**Previous Revision:**

05.01.03.094

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

**Problems Fixed:**

None

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Enhancements**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

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Online ROM Flash Component for Windows x64 - Server Platform Services (SPS) Firmware for HPE ProLiant DL20/ML30 Gen10Version: 05.01.04.113 **(Recommended)**Filename: cp044100.compsig; cp044100.exe **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE DL20ML30Gen10SPS Server Platform Services (SPS) Firmware

**Release Version:**



05.01.04.113

**Last Recommended or Critical Revision:**

05.01.04.113

**Previous Revision:**

05.01.03.094

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

**Problems Fixed:**

None

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Enhancements**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

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Online ROM Flash for Linux - HPE Gen10 Innovation Engine Firmware for HPE Gen10 Servers Version:  
0.2.2.0 (**Optional**) Filename: RPMS/x86\_64/firmware-iegen10-0.2.2.0-1.1.x86\_64.compsig;  
RPMS/x86\_64/firmware-iegen10-0.2.2.0-1.1.x86\_64.rpm **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Gen10 Innovation Engine (IE) Firmware

**Release Version:**

0.2.2.0

**Last Recommended or Critical Revision:**

0.1.5.2

**Previous Revision:**

0.2.1.2

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an extremely rare issue where Processor or Memory temperature reporting may not be collected properly by the platform and the system fans may be running faster than expected. This issue has been seen occasionally after a server reboot and is typically corrected with a subsequent server reboot.

**Known Issues:**

None

**Prerequisites**

System ROM V1.26 or later

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an extremely rare issue where Processor or Memory temperature reporting may not be collected properly by the platform and the system fans may be running faster than expected. This issue has been seen occasionally after a server reboot and is typically corrected with a subsequent server reboot.

**Known Issues:**

None

---

Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE Gen10 ServersVersion:  
04.01.04.339 **(Recommended)**Filename: RPMS/x86\_64/firmware-spsgen10-04.01.04.339-1.1.x86\_64.compsig;  
RPMS/x86\_64/firmware-spsgen10-04.01.04.339-1.1.x86\_64.rpm **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Gen10 Server Platform Services (SPS) Firmware

**Release Version:**

04.01.04.339

**Last Recommended or Critical Revision:**

04.01.04.339

**Previous Revision:**

04.01.04.296

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2019-11090 and CVE-2019-11109. These issues are not unique to HPE servers.

**Problems Fixed:**

None

**Known Issues:**

None

**Prerequisites**

HPE Gen10 system ROM version 1.26 or later

HPE Gen10 Innovation Engine (IE) Firmware version 0.1.5.2 or later

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Enhancements**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2019-11090 and CVE-2019-11109. These issues are not unique to HPE servers.

**Known Issues:**

None

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Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE MicroServer Gen10 PlusVersion: 05.01.04.113 **(Recommended)**Filename: RPMS/x86\_64/firmware-microservergen10plussps-05.01.04.113-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-microservergen10plussps-05.01.04.113-1.1.x86\_64.rpm **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

Server Platform Services (SPS) Firmware for HPE ProLiant MicroServer Gen10 Plus (U48) Servers

**Release Version:**

05.01.04.113

**Last Recommended or Critical Revision:**

05.01.04.113

**Previous Revision:**

05.01.03.094

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

**Problems Fixed:**

None

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Enhancements**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

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Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE ProLiant DL20/ML30 Gen10Version: 05.01.04.113 **(Recommended)**Filename: RPMS/x86\_64/firmware-dl20ml30gen10sps-05.01.04.113-1.1.x86\_64.compsig; RPMS/x86\_64/firmware-dl20ml30gen10sps-05.01.04.113-1.1.x86\_64.rpm **Important**

**Note!****Important Notes:**

None

**Deliverable Name:**

HPE DL20ML30Gen10SPS Server Platform Services (SPS) Firmware

**Release Version:**

05.01.04.113

**Last Recommended or Critical Revision:**

05.01.04.113

**Previous Revision:**

05.01.03.094

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

**Problems Fixed:**

None

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Linux which is integrated into the standard Linux kernel.

**Enhancements**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

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Online ROM Flash for Windows x64 - HPE Gen10 Innovation Engine Firmware for HPE Gen10 ServersVersion: 0.2.2.0 (**Optional**)Filename: cp043588.compsig; cp043588.exe **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Gen10 Innovation Engine (IE) Firmware

**Release Version:**

0.2.2.0

**Last Recommended or Critical Revision:**

0.1.5.2

**Previous Revision:**

0.2.1.2

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an extremely rare issue where Processor or Memory temperature reporting may not be collected properly by the platform and the system fans may be running faster than expected. This issue has been seen occasionally after a server reboot and is typically corrected with a subsequent server reboot.

**Known Issues:**

None

**Prerequisites**

System ROM V1.26 or later

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Fixes**

**Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an extremely rare issue where Processor or Memory temperature reporting may not be collected properly by the platform and the system fans may be running faster than expected. This issue has been seen occasionally after a server reboot and is typically corrected with a subsequent server reboot.

**Known Issues:**

None

---

ROM Flash Firmware Package - HPE Gen10 Innovation Engine Firmware for HPE Gen10 ServersVersion: 0.2.2.0 (**Optional**)Filename: IEGen10\_0.2.2.0.fwpkg **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE Gen10 Innovation Engine (IE) Firmware

**Release Version:**

0.2.2.0

**Last Recommended or Critical Revision:**

0.1.5.2

**Previous Revision:**

0.2.1.2

**Firmware Dependencies:**

None

**Enhancements/New Features:**

None

**Problems Fixed:**

Addressed an extremely rare issue where Processor or Memory temperature reporting may not be collected properly by the platform and the system fans may be running faster than expected. This issue has been seen occasionally after a server reboot and is typically corrected with a subsequent server reboot.

**Known Issues:**

None

**Prerequisites**

System ROM V1.26 or later

iLO 5 v1.20 or later

**Fixes****Important Notes:**

None

**Firmware Dependencies:**

None

**Problems Fixed:**

Addressed an extremely rare issue where Processor or Memory temperature reporting may not be collected properly by the platform and the system fans may be running faster than expected. This issue has been seen occasionally after a server reboot and is typically corrected with a subsequent server reboot.

**Known Issues:**

None



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ROM Flash Firmware Package - Server Platform Services (SPS) Firmware for HPE Gen10 Servers Version:  
04.01.04.339 (B) **(Recommended)** Filename: SPSGen10\_04.01.04.339.fwpkg **Important Note!**

**Important Notes:**

Ver. 04.01.04.339 (B) contains updates to the component packaging and is functionally equivalent to ver. 04.01.04.339. It is not necessary to upgrade with Revision B if a previous component revision was used to upgrade the firmware to version 04.01.04.339.

**Deliverable Name:**

HPE Gen10 Server Platform Services (SPS) Firmware

**Release Version:**

04.01.04.339

**Last Recommended or Critical Revision:**

04.01.04.339

**Previous Revision:**

04.01.04.296

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2019-11090 and CVE-2019-11109. These issues are not unique to HPE servers.

**Problems Fixed:**

None

**Known Issues:**

None

**Prerequisites**

HPE Gen10 system ROM version 1.26 or later

HPE Gen10 Innovation Engine (IE) Firmware version 0.1.5.2 or later

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Enhancements**

**Important Notes:**

Ver. 04.01.04.339 (B) contains updates to the component packaging and is functionally equivalent to ver. 04.01.04.339. It is not necessary to upgrade with Revision B if a previous component revision was used to upgrade the firmware to version 04.01.04.339.

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2019-11090 and CVE-2019-11109. These issues are not unique to HPE servers.

**Known Issues:**

None

---

ROM Flash Firmware Package - Server Platform Services (SPS) Firmware for HPE Gen10 Servers Version: 05.01.04.113 (**Recommended**) Filename: DL20ML30Gen10SPS\_05.01.04.113.fwpkg **Important Note!**

**Important Notes:**

None

**Deliverable Name:**

HPE DL20ML30Gen10SPS Server Platform Services (SPS) Firmware

**Release Version:**

05.01.04.113

**Last Recommended or Critical Revision:**

05.01.04.113

**Previous Revision:**

05.01.03.094

**Firmware Dependencies:**

None

**Enhancements/New Features:**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

**Problems Fixed:**

None

**Known Issues:**

None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).

**Enhancements**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

---

Server Platform Services (SPS) FirmwareVersion: 05.01.04.113 **(Recommended)**Filename: cp044091.compsig; cp044091.zip **Enhancements**

This image contains the latest Intel Server Platform Services (SPS) Firmware which contains mitigations for a variety of security vulnerabilities. The following vulnerabilities have been addressed in this SPS release: CVE-2020-0545 and CVE-2020-0586. These issues are not unique to HPE Servers.

---

Server Platform Services (SPS) Firmware for Intel C242 and C246 PCH based systemsVersion: 05.01.04.113 **(Optional)**Filename: cp044099.compsig; cp044099.zip **Enhancements**

See release doc

---

**Software - Lights-Out Management**[Top](#)

HP Lights-Out Online Configuration Utility for Linux (AMD64/EM64T)

Version: 5.5.0-0 **(Recommended)**

Filename: hponcfg-5.5.0-0.x86\_64.compsig; hponcfg-5.5.0-0.x86\_64.rpm

**Prerequisites**

This utility requires the following minimum firmware revisions:

Integrated Lights-Out 3 firmware v1.00 or later

Integrated Lights-Out 4 firmware v1.00 or later

Integrated Lights-Out 5 firmware v1.20 or later

The management interface driver and management agents must be installed on the server.

For iLO 5, openssl v1.0.x or later is required in addition to above packages. Customers who manually compile and install openssl or intentionally relocate /usr/bin/openssl, need to set PATH environment variable to direct HPONCFG to the right/intended openssl.

### **Fixes**

Updated the OpenSSL API calls to support Host's OpenSSL FIPS mode.

---

HP Lights-Out Online Configuration Utility for Windows x64 Editions Version: 5.4.0.0 **(Optional)**

Filename: cp040708.compsig; cp040708.exe

### **Prerequisites**

This utility requires the following minimum firmware revisions:

Integrated Lights-Out 3 firmware v1.00 or later

Integrated Lights-Out 4 firmware v1.00 or later

Integrated Lights-Out 5 firmware v1.30 or later

The management interface driver must be installed on the server.

Microsoft .Net Framework 2.0 or later is required to launch HPONCFG GUI.

### **Enhancements**

Introduced support for iLO5 v2.30.

---

## **Software – Management**

[Top](#)

HPE Agentless Management Bundle Smart Component on ESXi 7.0 Version: 2020.09.01 **(Recommended)**

Filename: cp043232.compsig; cp043232.zip

### **Fixes**

Add support for distributed switch to resolve AMS issue of not reporting the Host IP address

Fix duplicate IP address reporting issue

Add fix to skip CPU and Memory Usage data collection when CPU and Memory Usage Logging is disabled

Disable Logical Disk Usage logging by default

### **Enhancements**

Added the option to enable/disable AHS Logical Disk Usage logging

---

HPE CRU Driver Bundle Smart Component for ESXi 7.0Version: 2020.04.01 (A) **(Recommended)**

Filename: cp044598.compsig; cp044598.zip

**Enhancements**

Add new supported servers

---

HPE Fiber Channel and Storage Enablement Bundle Smart Component for ESXi 7.0Version: 2020.09.01 **(Recommended)**

Filename: cp044095.compsig; cp044095.zip **Enhancements**

Supports VMware ESXi 7.0 and ESXi 7.0 U1

---

HPE iLO Driver Bundle Smart Component for ESXi 7.0Version: 2020.09.01 **(Recommended)**Filename: cp043231.compsig; cp043231.zip **Enhancements**

Supports ESXi 7.0 and ESXi 7.0 U1

---

HPE Management Bundle Smart Component for ESXi 6.5Version: 2020.09.01 **(Recommended)**Filename: cp043234.compsig; cp043234.zip **Fixes**

**Agentless Management Service**

Add support for distributed switch to resolve AMS issue of not reporting the Host IP address

Fix duplicate IP address reporting issue

Add fix to skip CPU and Memory Usage data collection when CPU and Memory Usage Logging is disabled

Disable Logical Disk Usage logging by default

**Enhancements**

**Agentless Management Service**

Added the option to enable/disable AHS Logical Disk Usage logging

---

HPE Management Bundle Smart Component for ESXi 6.7Version: 2020.09.01 **(Recommended)**Filename: cp043233.compsig; cp043233.zip **Fixes**

#### **Agentless Management Service**

Add support for distributed switch to resolve AMS issue of not reporting the Host IP address

Fix duplicate IP address reporting issue

Add fix to skip CPU and Memory Usage data collection when CPU and Memory Usage Logging is disabled

Disable Logical Disk Usage logging by default

#### **Enhancements**

##### **Agentless Management Service**

Added the option to enable/disable AHS Logical Disk Usage logging

---

HPE SDK Python ModuleVersion: 3.1.0 **(Optional)**Filename: python-iloREST-library-3.1.0.zip **Fixes**

Updated to support Restful Interface Tool 3.1.

---

HPE SMX Provider Bundle Smart Component for ESXi 7.0Version: 2020.04.01 (A) **(Recommended)**Filename: cp044591.compsig; cp044591.zip **Enhancements**

Add new supported servers

---

#### **Software - Storage Controller**

**Top**

HPE MegaRAID Storage Administrator StorCLI for VMware6.5Version: 2019.09.00 **(Optional)**

Filename: cp040118.compsig; cp040118.zip

#### **Enhancements**

Updated Product Name with the OS version.

---

HPE MegaRAID Storage Administrator StorCLI for VMware6.7Version: 2019.09.00 **(Optional)**

Filename: cp040119.compsig; cp040119.zip

### **Enhancements**

Updated Product Name with the OS version.

---

HPE Smart Array SR Event Notification Service for Windows Server 64-bit EditionsVersion:  
1.2.1.64 **(Recommended)**

Filename: cp037793.compsig; cp037793.exe

### **Enhancements**

Improved integration with Smart Update Manager

---

## **Software - Storage Fibre Channel**

[Top](#)

Emulex(BRCM) Fibre Channel over Ethernet driver for VMware vSphere 6.5Version: 2019.12.01  
(b) **(Recommended)**Filename: cp044547.compsig; cp044547.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

If the server contains only CNA adapters and lpfc driver is already been installed, post the new driver update, please remove the lpfc driver using the following command:

```
#esxcli software vib remove lpfc
```

On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

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Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

If the server contains only CNA adapters and lpfc driver is already been installed, post the new driver update, please remove the lpfc driver using the following command:

```
#esxcli software vib remove lpfc
```

### **Fixes**

Fixed the following:

Purple Screen of Death(PSOD) at random intervals on HPE FlexFabric 20Gb 2-port 650FLB Adapter

Link down after 1000 times port down and up iterations on switch.

Detaching is not completing because lpfc\_do\_work\_event can't exit.

Slab memory use after free causing memory leak.

Small Computer System Interface(SCSI) command is used after done call.



Target reset does not report original status

On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Enhancements**

Updated to Driver version 12.0.1278.0

### **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

#### **XE100 Series:**

HPE CN1200E Dual Port Converged Network Adapter

HPE FlexFabric 20Gb 2-port 650FLB Adapter

HPE FlexFabric 20Gb 2-port 650M Adapter

HPE CN1200E-T Adapter

HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

---

Emulex(BRCM) Fibre Channel over Ethernet driver for VMware vSphere 6.7Version: 2019.12.01  
(b) **(Recommended)**Filename: cp044548.compsig; cp044548.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

If the server contains only CNA adapters and lpfc driver is already been installed, post the new driver update, please remove the lpfc driver using the following command:

```
#esxcli software vib remove lpfc
```

On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due Toa Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

If the server contains only CNA adapters and lpfc driver is already been installed, post the new driver update, please remove the lpfc driver using the following command:

```
#esxcli software vib remove lpfc
```

## **Fixes**

Fixed the following:

Purple Screen of Death(PSOD) at random intervals on HPE FlexFabric 20Gb 2-port 650FLB Adapter

Link down after 1000 times port down and up iterations on switch.

Detaching is not completing because lpfc\_do\_work\_event can't exit.

Slab memory use after free causing memory leak.

Small Computer System Interface(SCSI) command is used after done call.

Target reset does not report original status

On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Updated to Driver version 12.0.1278.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

HPE CN1200E Dual Port Converged Network Adapter

HPE FlexFabric 20Gb 2-port 650FLB Adapter

HPE FlexFabric 20Gb 2-port 650M Adapter

HPE CN1200E-T Adapter

HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Fixed the following:

Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Attempts to recover from a management processor unresponsive as described in Customer Advisory "a00094722en\_us" could lead to a secondary incomplete activity and unexpected termination of process

Packets could be malformed when large amounts of traffic is sent to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Attempts to recover from a management processor unresponsive as described in Customer Advisory "a00094722en\_us" could lead to a secondary incomplete activity and unexpected termination of process

Packets could be malformed when large amounts of traffic is sent to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all

### **Enhancements**

Driver version 2.1.101.0

### **Supported Devices and Features**

This driver supports the following HPE adapters:

**8Gb Fibre Channel Host Bus Adapter:**

HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

**16Gb Fibre Channel Host Bus Adapter:**

HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

**32Gb Fibre Channel Host Bus Adapter:**

HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Fibre Channel driver component for VMware vSphere 6.7Version:  
2020.09.01 **(Recommended)**Filename: cp042512.compsig; cp042512.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Fixed the following:

Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Attempts to recover from a management processor unresponsive as described in Customer Advisory "a00094722en\_us" could lead to a secondary incomplete activity and unexpected termination of process

Packets could be malformed when large amounts of traffic is sent to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Fixes**

Fixed the following:

Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Attempts to recover from a management processor unresponsive as described in Customer Advisory "a00094722en\_us" could lead to a secondary incomplete activity and unexpected termination of process

Packets could be malformed when large amounts of traffic is sent to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all

## **Enhancements**

Driver version 3.1.36.0

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Fibre Channel driver component for VMware vSphere 7.0 Version:  
2020.09.01 **(Recommended)** Filename: cp042513.compsig; cp042513.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Fixed the following:

Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Attempts to recover from a management processor unresponsive as described in Customer Advisory "a00094722en\_us" could lead to a secondary incomplete activity and unexpected termination of process

Packets could be malformed when large amounts of traffic is sent to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Fixes**

Fixed the following:

Improved adapter driver handling of and recovery from the unexpected behavior described in Customer Advisory titled: "HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to Halt and Potentially Compromise Filesystem Data Integrity" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docLocale=en\\_US&docId=a00094722en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us)

Attempts to recover from a management processor unresponsive as described in Customer Advisory "a00094722en\_us" could lead to a secondary incomplete activity and unexpected termination of process

Packets could be malformed when large amounts of traffic is sent to an array which supports 3PAR Persistent Checksum AND another array which is running T10-PI (also known as T10-DIF) or no block checksum technology at all

## **Enhancements**

Driver version 4.1.9.0

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb Fibre Channel Host Bus Adapter:**

HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Mezzanine Fibre Channel driver component for VMware vSphere 6.5Version:  
2020.09.01 **(Recommended)**Filename: cp042193.compsig; cp042193.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Driver version 2.1.96.0



## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE QLogic Mezzanine Fibre Channel driver component for VMware vSphere 6.7Version:  
2020.09.01 **(Recommended)**Filename: cp042194.compsig; cp042194.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Driver version 3.1.31.0

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **8Gb Fibre Channel Host Bus Adapter:**

HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **16Gb Fibre Channel Host Bus Adapter:**

HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE QLogic Mezzanine Fibre Channel driver component for VMware vSphere 7.0Version:  
2020.09.01 **(Recommended)**Filename: cp042195.compsig; cp042195.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Driver version 4.1.9.0

### **Supported Devices and Features**

This driver supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

#### **16Gb Fibre Channel Host Bus Adapter:**

HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Storage Emulex Fibre Channel driver component for VMware vSphere 6.5 Version:  
2020.09.01 **(Recommended)** Filename: cp042256.compsig; cp042256.zip **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

One port of an Fibre Channel adapter could not complete to reconnect to storage after storage upgrade if the host system had been online for over 3 months

Turning on 3PAR Persistent Checksum after the host operating system was running would not result in Persistent Checksum being enabled between the adapter and 3PAR array.

Virtual Machines (VMs) could not access certain storage arrays when those arrays were attached to the VM using N-Port ID Virtualization (NPIV)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) host bus adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

One port of an Fibre Channel adapter could not complete to reconnect to storage after storage upgrade if the host system had been online for over 3 months

Turning on 3PAR Persistent Checksum after the host operating system was running would not result in Persistent Checksum being enabled between the adapter and 3PAR array.

Virtual Machines (VMs) could not access certain storage arrays when those arrays were attached to the VM using N-Port ID Virtualization (NPIV)

### **Enhancements**

Updated to Driver version 12.6.182.2

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

**16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

**32Gb FC Adapter:**

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Emulex Fibre Channel driver component for VMware vSphere 6.7Version:  
2020.09.01 **(Recommended)**Filename: cp042257.compsig; cp042257.zip **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

One port of a Fibre Channel adapter could not complete to reconnect to storage after storage upgrade if the host system had been online for over 3 months

Turning on 3PAR Persistent Checksum after the host operating system was running would not result in Persistent Checksum being enabled between the adapter and 3PAR array.

Virtual Machines (VMs) could not access certain storage arrays when those arrays were attached to the VM using N-Port ID Virtualization (NPIV)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

One port of a Fibre Channel adapter could not complete to reconnect to storage after storage upgrade if the host system had been online for over 3 months

Turning on 3PAR Persistent Checksum after the host operating system was running would not result in Persistent Checksum being enabled between the adapter and 3PAR array.

Virtual Machines (VMs) could not access certain storage arrays when those arrays were attached to the VM using N-Port ID Virtualization (NPIV)

### **Enhancements**

Updated to Driver version 12.6.182.2

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

#### **32Gb FC Adapter:**

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Emulex Fibre Channel driver component for VMware vSphere 7.0Version:  
2020.09.01 **(Recommended)**Filename: cp042258.compsig; cp042258.zip **Important Note!**

Release Notes:  
[HPE Emulex Adapters Release Notes](#)

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

Fixed the following:

One port of a Fibre Channel adapter could not complete to reconnect to storage after storage upgrade if the host system had been online for over 3 months

Turning on 3PAR Persistent Checksum after the host operating system was running would not result in Persistent Checksum being enabled between the adapter and 3PAR array.

Virtual Machines (VMs) could not access certain storage arrays when those arrays were attached to the VM using N-Port ID Virtualization (NPIV)

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

One port of a Fibre Channel adapter could not complete to reconnect to storage after storage upgrade if the host system had been online for over 3 months

Turning on 3PAR Persistent Checksum after the host operating system was running would not result in Persistent Checksum being enabled between the adapter and 3PAR array.

Virtual Machines (VMs) could not access certain storage arrays when those arrays were attached to the VM using N-Port ID Virtualization (NPIV)

### **Enhancements**

Updated to Driver version 12.6.228.4

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

#### **32Gb FC Adapter:**



HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Emulex Mezzanine Fibre Channel driver component for VMware vSphere 6.5Version:  
2020.09.01 **(Recommended)**Filename: cp042273.compsig; cp042273.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to Driver version 12.4.270.6

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Storage Emulex Mezzanine Fibre Channel driver component for VMware vSphere 6.7Version: 2020.09.01 (**Recommended**)Filename: cp042274.compsig; cp042274.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Enhancements**

Updated to Driver version 12.4.270.6

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC(Gen 4 Adapter):**

HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

### **16Gb FC (Gen 5 Adapter):**

HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Storage Emulex Mezzanine Fibre Channel driver component for VMware vSphere 7.0Version:  
2020.09.01 **(Recommended)**Filename: cp042275.compsig; cp042275.zip **Important Note!**

This component is intended to be used by HPE applications. It is a zip that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CPXXXX.xml file.

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to Driver version 12.6.228.4

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

HPHPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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Fibreutils for HPE Storage Fibre Channel Host Bus Adapters for Linux -Red Hat Enterprise Linux (RHEL)

Version: 4.1-1 (c) **(Optional)**

Filename: fibreutils-4.1-1\_rhel.x86\_64.compsig; fibreutils-4.1-1\_rhel.x86\_64.rpm

**Prerequisites**

- Requires the following packages to be installed: glibc libgcc libstdc++ bash perl

**Enhancements**

This package supports only Red Hat Enterprise Linux (RHEL) Distros

**Supported Devices and Features**

Supports the following:

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Quad Port Fibre Channel Host Bus Adapter

HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter  
HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter  
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter  
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter  
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter  
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter  
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter  
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter  
HPE CN1200E Dual Port Converged Network Adapter  
HPE CN1200E-T Converged Network Adapter  
HPE FlexFabric 20Gb 2-port 650FLB Adapter  
HPE FlexFabric 20Gb 2-port 650M Adapter  
HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter  
HPE FlexFabric 10Gb 2-port 556FLR-T Adapter  
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem  
HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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Fibreutils for HPE Storage Fibre Channel Host Bus Adapters for Linux -SuSE Linux Enterprise Server(SLES)Version: 4.1-1 (c) **(Optional)**Filename: fibreutils-4.1-1\_sles.x86\_64.compsig; fibreutils-4.1-1\_sles.x86\_64.rpm **Prerequisites**

- Requires the following packages to be installed: glibc libgcc libstdc++ bash perl

### **Enhancements**

This package supports only SuSE Linux Enterprise Server(SLES) Distros

### **Supported Devices and Features**

Supports the following:

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter  
HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter  
HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter  
HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Quad Port Fibre Channel Host Bus Adapter

HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE CN1200E Dual Port Converged Network Adapter

HPE CN1200E-T Converged Network Adapter

HPE FlexFabric 20Gb 2-port 650FLB Adapter

HPE FlexFabric 20Gb 2-port 650M Adapter

HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Emulex Fibre Channel Enablement Kit for Red Hat Enterprise Linux 7 ServerVersion:  
12.6.272.0 (**Recommended**)Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.6.272.0-1.rhel7.x86\_64.compsig;  
HP-CNA-FC-Emulex-Enablement-Kit-12.6.272.0-1.rhel7.x86\_64.rpm **Important Note!**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>



Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to version 12.6.272.0

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

#### **32Gb FC Adapter:**

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Fibre Channel Enablement Kit for Red Hat Enterprise Linux 8 ServerVersion:  
12.6.272.0 (**Recommended**)Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.6.272.0-1.rhel8.x86\_64.compsig;  
HP-CNA-FC-Emulex-Enablement-Kit-12.6.272.0-1.rhel8.x86\_64.rpm **Important Note!**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Release Notes:  
[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Enhancements**

Updated to version 12.6.272.0

## **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Fibre Channel Enablement Kit for SUSE Linux Enterprise Server 12Version:  
12.6.272.0 (**Recommended**)Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.6.272.0-  
1.sles12sp4.x86\_64.compsig; HP-CNA-FC-Emulex-Enablement-Kit-12.6.272.0-1.sles12sp4.x86\_64.rpm; HP-CNA-  
FC-Emulex-Enablement-Kit-12.6.272.0-1.sles12sp5.x86\_64.compsig; HP-CNA-FC-Emulex-Enablement-Kit-  
12.6.272.0-1.sles12sp5.x86\_64.rpm **Important Note!**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to version 12.6.272.0

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

**16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

**32Gb FC Adapter:**

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Fibre Channel Enablement Kit for SUSE Linux Enterprise Server 15Version:  
12.6.272.0 (**Recommended**)Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.6.272.0-  
1.sles15sp1.x86\_64.compsig; HP-CNA-FC-Emulex-Enablement-Kit-12.6.272.0-1.sles15sp1.x86\_64.rpm; HP-CNA-  
FC-Emulex-Enablement-Kit-12.6.272.0-1.sles15sp2.x86\_64.compsig; HP-CNA-FC-Emulex-Enablement-Kit-  
12.6.272.0-1.sles15sp2.x86\_64.rpm **Important Note!**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to version 12.6.272.0

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

### **16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

### **32Gb FC Adapter:**

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Mezzanine Fibre Channel Enablement Kit for Red Hat Enterprise Linux 7 ServerVersion: 12.4.256.0 (**Recommended**)Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-1.rhel7.x86\_64.compsig; HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-1.rhel7.x86\_64.rpm **Important Note!**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to version 12.4.256.0

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Emulex Mezzanine Fibre Channel Enablement Kit for SUSE Linux Enterprise Server 12Version: 12.4.256.0 (**Recommended**)Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-1.sles12sp4.x86\_64.compsig; HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-1.sles12sp4.x86\_64.rpm **Important Note!**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)



Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to version 12.4.256.0

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

### **8Gb FC Adapter:**

HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

### **16Gb FC Adapter:**

HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Emulex Mezzanine Fibre Channel Enablement Kit for SUSE Linux Enterprise Server 15Version:  
12.4.256.0 (**Recommended**)Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-  
1.sles15sp1.x86\_64.compsig; HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-  
1.sles15sp1.x86\_64.rpm **Important Note!**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to version 12.4.256.0

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

#### **16Gb FC Adapter:**

HPE LPe1605 16Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Emulex Smart SAN Enablement Kit for LinuxVersion: 1.0.0.0-4 (f) **(Optional)**Filename: hpe-emulex-smartsan-enablement-kit-1.0.0.0-4.x86\_64.compsig; hpe-emulex-smartsan-enablement-kit-1.0.0.0-4.x86\_64.rpm **Important Note!**

The Smart SAN enablement kit will not execute when an operating system has only the inbox fibre channel driver installed. An out of box (OOB) fibre channel driver is needed to utilize Smart SAN functionality. If any OOB driver is installed, the enablement kit will pre-enable/disable Smart SAN functionality for future use. It can then be activated once a Smart SAN enabled OOB driver is installed (see Prerequisite Notes) and after a reboot has occurred.

To obtain the 3PAR Smart SAN User Guide to go the Storage Information Library at the following link:

[Storage Information Library](#)

(<http://www.hpe.com/info/storage/docs/>)

By default, **HP 3PAR Storage** is selected under

**Products and Solutions.**

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied fibre channel driver must be installed prior to this enablement kit component if you want to enable Smart SAN functionality. The driver is available on the HPE.com website at [www.hpe.com](http://www.hpe.com).

Linux FC Driver Kit for HPE Branded Emulex FC HBAs and mezz cards, version 11.1.183.21(minimum version supported) for RedHat 7, RedHat 8 and Novell SUSE 12, SUSE 15

However, if a Smart SAN enabled driver is not installed at execution time, the component will land the enablement kit files for future use after the driver has been installed.

### **Enhancements**

Added support to SLES15SP1

Updated to version 1.0.0.0-4

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

#### **32Gb FC Adapter:**

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Smart SAN Enablement Kit for Microsoft Windows Server 64 bit operating systemsVersion: 1.0.0.1 (j) **(Recommended)**Filename: cp042255.compsig; cp042255.exe **Important Note!**

The Smart SAN enablement kit will not execute when an operating system has only the inbox fibre channel driver installed. An out of box (OOB) fibre channel driver is needed to utilize Smart SAN functionality. If any OOB driver is installed, the enablement kit will pre-enable/disable Smart SAN functionality for future use. It can then be activated once a Smart SAN enabled OOB driver is installed (see Prerequisite Notes) and after a reboot has occurred.

To obtain the 3PAR Smart SAN User Guide to go the Storage Information Library at the following link:

[Storage Information Library](#)

(<http://www.hpe.com/info/storage/docs/>)

By default, **HP 3PAR Storage** is selected under

**Products and Solutions.**

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied fibre channel driver must be installed prior to this enablement kit component if you want to enable Smart SAN functionality. The driver is available on the HPE.com website at [www.hpe.com](http://www.hpe.com).

HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver v11.1.145.16 cp030886.exe

However, if a Smart SAN enabled driver is not installed at execution time, the component will land the enablement kit files for future use after the driver has been installed.

### **Enhancements**

Updated to version 1.0.0.1

### **Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

#### **8Gb FC Adapter:**

HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84E 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb FC Adapter:**

HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1100E Quad Port 16Gb Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

**32Gb FC Adapter:**

HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter

HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for Red Hat Enterprise Linux 7 ServerVersion: 12.0.1264.0 (b) **(Recommended)**Filename: HP-CNA-FC-Broadcom-Enablement-Kit-12.0.1264.0-1.rhel7.x86\_64.compsig; HP-CNA-FC-Broadcom-Enablement-Kit-12.0.1264.0-1.rhel7.x86\_64.rpm **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link:

[https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Fixes**

Fixed the following:

On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpesc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Enhancements**

Updated to version: 12.0.1264.0

### **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

#### **XE100 Series:**

HPE CN1200E Dual Port Converged Network Adapter

HPE FlexFabric 20Gb 2-port 650FLB Adapter

HPE FlexFabric 20Gb 2-port 650M Adapter

HPE CN1200E-T Adapter

HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for Red Hat Enterprise Linux 8 ServerVersion: 12.0.1264.0 (**Recommended**)Filename: HP-CNA-FC-Broadcom-Enablement-Kit-12.0.1264.0-1.rhel8.x86\_64.compsig; HP-CNA-FC-Broadcom-Enablement-Kit-12.0.1264.0-1.rhel8.x86\_64.rpm **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>



Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Enhancements**

Updated to version: 12.0.1264.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

HPE CN1200E Dual Port Converged Network Adapter

HPE FlexFabric 20Gb 2-port 650FLB Adapter

HPE FlexFabric 20Gb 2-port 650M Adapter

HPE CN1200E-T Adapter

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HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for SUSE Linux Enterprise Server 12Version: 12.0.1264.0 (b) (**Recommended**)Filename: HP-CNA-FC-Broadcom-Enablement-Kit-12.0.1264.0-1.sles12sp4.x86\_64.compsig; HP-CNA-FC-Broadcom-Enablement-Kit-12.0.1264.0-1.sles12sp4.x86\_64.rpm **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Enhancements**

Updated to version: 12.0.1264.0

### **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

#### **XE100 Series:**

HPE StoreFabric CN1200E Dual Port Converged Network Adapter

HPE FlexFabric 20Gb 2-port 650FLB Adapter

HPE FlexFabric 20Gb 2-port 650M Adapter

HPE StoreFabric CN1200E-T Adapter

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HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for SUSE Linux Enterprise Server 15Version: 12.0.1264.0 (b) **(Recommended)**Filename: HP-CNA-FC-Broadcom-Enablement-Kit-12.0.1264.0-1.sles15sp1.x86\_64.compsig; HP-CNA-FC-Broadcom-Enablement-Kit-12.0.1264.0-1.sles15sp1.x86\_64.rpm **Important Note!**

Release Notes:

[HPE Emulex Adapters Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due Toa Firmware Issue" at the following link:

[https://support.hpe.com/hpsc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpsc/public/docDisplay?docId=emr_na-a00099050en_us)

### **Prerequisites**

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

Go to <http://www.hpe.com/support/manuals>

Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Fixes**

Fixed the following:

On any HPE ProLiant server configured with the HPE Emulex XE-102 Based network adapter HPE FlexFabric 10Gb 2-port 556FLR-T Adapter with CNA (XE100 series) firmware 12.0.1110.0, 12.0.1110.10, or 12.0.1110.11 (or later), the network adapters may experience a "link down" state that is not recoverable by a power-cycle or reset.

For more details please go through the document titled "HPE ProLiant Servers Configured With Certain HPE Emulex XE-102 Based Network Adapters May Experience Link Down Due To a Firmware Issue" at the following link: [https://support.hpe.com/hpsc/public/docDisplay?docId=emr\\_na-a00099050en\\_us](https://support.hpe.com/hpsc/public/docDisplay?docId=emr_na-a00099050en_us)

## **Enhancements**

Updated to version: 12.0.1264.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

HPE CN1200E Dual Port Converged Network Adapter

HPE FlexFabric 20Gb 2-port 650FLB Adapter

HPE FlexFabric 20Gb 2-port 650M Adapter

HPE CN1200E-T Adapter

HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

HPE FlexFabric 10Gb 2-port 556FLR-T Adapter

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HPE QLogic Fibre Channel Enablement Kit for Linux Version: 6.0.0.0-13 (**Recommended**) Filename: HP-CNA-FC-hpqlgc-Enablement-Kit-6.0.0.0-13.noarch.compsig; HP-CNA-FC-hpqlgc-Enablement-Kit-6.0.0.0-13.noarch.rpm **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

## **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

## **Enhancements**

Updated the kit to version 6.0.0.0-13

### **Supported Devices and Features**

This Enablement Kit supports the following HPE adapters:

#### **8Gb Fibre Channel Host Bus Adapter:**

HPE 81Q 8Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter

#### **16Gb Fibre Channel Host Bus Adapter:**

HPE SN1000Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1000Q 16Gb Single Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Mezzanine Fibre Channel Enablement Kit for LinuxVersion: 6.0.0.0-12 (**Recommended**)Filename: HP-CNA-FC-hpqlgc-Enablement-Kit-6.0.0.0-12.noarch.compsig; HP-CNA-FC-hpqlgc-Enablement-Kit-6.0.0.0-12.noarch.rpm **Important Note!**

Release Notes:

[HPE QLogic Adapters Release Notes](#)

### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

### **Enhancements**

Updated the kit to version 6.0.0.0-12

### **Supported Devices and Features**

This version of the enablement kit supports the following devices:

**8Gb Fibre Channel Host Bus Adapter:**

HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

**16Gb Fibre Channel Host Bus Adapter:**

HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE QLogic Smart SAN enablement kit for LinuxVersion: 3.3-3 (h) **(Optional)**Filename: hpe-qlogic-smartsan-enablement-kit-3.3-3.x86\_64.compsig; hpe-qlogic-smartsan-enablement-kit-3.3-3.x86\_64.rpm **Important Note!**

To obtain the 3PAR Smart SAN User Guide to go the Storage Information Library at the following link:

[Storage Information Library](#)

(<http://www.hpe.com/info/storage/docs/>)

By default, **HP 3PAR Storage** is selected under

**Products and Solutions.**

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied fibre channel driver must be installed prior to this enablement kit component if you want to enable Smart SAN functionality. The driver is available on the HPE.com website at [www.hpe.com](http://www.hpe.com).

Red Hat Enterprise Linux 6 Server (x86-64) FCoE/FC Driver Kit for HPE Qlogic CNAs, HBAs and mezzanine HBAs, version 8.07.00.42.06.0-k1

Red Hat Enterprise Linux 7 Server FCoE/FC Driver Kit for HPE QLogic CNAs, HBAs and mezzanine HBAs and CNAs, version 8.07.00.42.07.0-k1

SUSE Linux Enterprise Server 11 (AMD64/EM64T) FCoE/FC Driver Kit for HPE Qlogic CNAs, HBAs and mezzanine HBAs, version 8.07.00.42.11.3-k

SUSE Linux Enterprise Server 12 FCoE/FC Driver Kit for HPE QLogic CNAs, HBAs and mezzanine HBAs and CNAs version 8.07.00.42.12.0-k1

However, if a Smart SAN enabled driver is not installed at execution time, the component will land the enablement kit files for future use after the driver has been installed.

**Enhancements**

Added Support to RHEL8 and SLES15SP1

Updated to version 3.3-3

### **Supported Devices and Features**

This version of the enablement kit supports the following devices:

#### **8Gb Fibre Channel Host Bus Adapter:**

HPE 81Q PCIe Fibre Channel Host Bus Adapter

HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84Q 4P 8Gb Fibre Channel HBA

HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

#### **16Gb Fibre Channel Host Bus Adapter:**

HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

#### **32Gb Fibre Channel Host Bus Adapter:**

HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Smart SAN Enablement Kit for Microsoft Windows Server 64 bit operating systemsVersion: 1.0.0.1  
(i) **(Recommended)**Filename: cp039719.compsig; cp039719.exe **Important Note!**

The Smart SAN enablement kit will not execute when an operating system has only the inbox fibre channel driver installed. An out of box (OOB) fibre channel driver is needed to utilize Smart SAN functionality. If any OOB driver is installed, the enablement kit will pre-enable/disable Smart SAN functionality for future use. It can then be activated once a Smart SAN enabled OOB driver is installed (see Prerequisite Notes) and after a reboot has occurred.

To obtain the 3PAR Smart SAN User Guide to go the Storage Information Library at the following link:

[Storage Information Library](#)

(<http://www.hpe.com/info/storage/docs/>)

By default, **HPE 3PAR Storage** is selected under

### **Products and Solutions.**

#### **Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

<http://www.hpe.com/storage/spock/>

The HPE supplied fibre channel driver must be installed prior to this enablement kit component if you want to enable Smart SAN functionality. The driver is available on the HPE.com website at [www.hpe.com](http://www.hpe.com).

HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver v9.2.2.20, cp031252.exe

HPE Storage Fibre Channel Adapter Kit for the QLogic Storport Driver for Windows Server 2012 and 2012 R2 v9.2.2.20, cp031253.exe

HPE Storage Fibre Channel Adapter Kit for the QLogic Storport Driver for Windows Server 2016 version 9.2.2.20, cp031251.exe

HPE Storage Fibre Channel Adapter Kit for the QLogic Storport Driver for Windows Server 2019 version 9.2.9.22, cp037397.exe

However, if a Smart SAN enabled driver is not installed at execution time, the component will land the enablement kit files for future use after the driver has been installed.

#### **Enhancements**

Updated to version 1.0.0.1

#### **Supported Devices and Features**

This version of the enablement kit supports the following devices:

##### **8Gb Fibre Channel Host Bus Adapter:**

HPE 81Q PCIe Fibre Channel Host Bus Adapter

HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter

HPE 84Q 4P 8Gb Fibre Channel HBA

HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

##### **16Gb Fibre Channel Host Bus Adapter:**

HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

HPE SN1000Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1000Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter



HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter

HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

### **32Gb Fibre Channel Host Bus Adapter:**

HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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## **Software - System Management**

[Top](#)

Agentless Management Service (iLO 5) for Red Hat Enterprise Linux 7 ServerVersion: 2.3.0 **(Optional)**

Filename: amsd-2.3.0-1451.49.rhel7.x86\_64.compsig; amsd-2.3.0-1451.49.rhel7.x86\_64.rpm

### **Prerequisites**

**amsd only supported on HPE Gen10 Servers.**

**amsd provides information to the iLO 5 service providing SNMP support.**

#### **Requirements:**

Minimum iLO 5 Firmware Version = 1.1

Minimum supported OS Versions = Red Hat Enterprise Linux 7.3 Errata 3.10.0.514.6.1

### **Fixes**

Fixed the following items:

The ahslog service in the HPE Agentless Management Service (iLO 5)(amsd) for Linux may segfault during system startup. While this occurs, the user can see the "Failed to start Active Health Service Logger" message from the systemctl. Review Customer Advisory [a00099165en\\_us](#) for additional details.

When customers set the kernel parameter to disable the ipv6 in RHEL, the memory usage of HPE Agentless Management Service (AMSD) is much more stable.

Corrected the test trip cannot be generated with the test parameter in the HPE Agentless Management Service (AMSD).

Addressed ahslog stability to allow service back when iLo restarts. Customers will no longer experience the service hang after the iLO reboot.

Fiber options correctly delivers data in the reverse mode (SMA)

### **Enhancements**

Enhancements included in this release:

Support for the following new network controllers:

P10118-B21 HPE Ethernet 10/25Gb 2-port SFP28 QL41232HVCU OCP3 Adapter

P22702-B21 HPE Ethernet 10/25Gb 2-port SFP28 QL41222HVCU Adapter

874253-B21 HPE Ethernet 100Gb 1-port 842QSFP28 Adapter

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Agentless Management Service (iLO 5) for Red Hat Enterprise Linux 8 ServerVersion: 2.3.0 **(Optional)**

Filename: amsd-2.3.0-1443.35.rhel8.x86\_64.compsig; amsd-2.3.0-1443.35.rhel8.x86\_64.rpm

### **Prerequisites**

**amsd only supported on HPE Gen10 Servers.**

**amsd provides information to the iLO 5 service providing SNMP support.**

#### **Requirements:**

Minimum iLO 5 Firmware Version = 1.1

Minimum supported OS Versions = Red Hat Enterprise Linux 7.3 Errata 3.10.0.514.6.1

### **Fixes**

Fixed the following items:

The ahslog service in the HPE Agentless Management Service (iLO 5)(amsd) for Linux may segfault during system startup. While this occurs, the user can see the "Failed to start Active Health Service Logger" message from the systemctl. Review Customer Advisory [a00099165en\\_us](#) for additional details.

When customers set the kernel parameter to disable the ipv6 in RHEL, the memory usage of HPE Agentless Management Service (AMSD) is much more stable.

Corrected the test trip cannot be generated with the test parameter in the HPE Agentless Management Service (AMSD).

Addressed ahslog stability to allow service back when iLo restarts. Customers will no longer experience the service hang after the iLO reboot.

Fiber options correctly delivers data in the reverse mode (SMA)

### **Enhancements**

Enhancements included in this release:

Support for the following new network controllers:

P10118-B21 HPE Ethernet 10/25Gb 2-port SFP28 QL41232HVCU OCP3 Adapter

P22702-B21 HPE Ethernet 10/25Gb 2-port SFP28 QL41222HLCU Adapter

874253-B21 HPE Ethernet 100Gb 1-port 842QSFP28 Adapter

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Agentless Management Service (iLO 5) for SUSE Linux Enterprise Server 12 Version: 2.3.0 **(Optional)**

Filename: amsd-2.3.0-1439.30.sles12.x86\_64.compsig; amsd-2.3.0-1439.30.sles12.x86\_64.rpm

### **Prerequisites**

**amsd only supported on HPE Gen10 Servers.**

**amsd provides information to the iLO 5 service providing SNMP support.**

#### **Requirements:**

Minimum iLO 5 Firmware Version = 1.1

Minimum supported OS Versions = SUSE Linux Enterprise Server 12 SP2

### **Fixes**

Fixed the following items:

The ahslog service in the HPE Agentless Management Service (iLO 5)(amsd) for Linux may segfault during system startup. While this occurs, the user can see the "Failed to start Active Health Service Logger" message from the systemctl. Review Customer Advisory [a00099165en\\_us](#) for additional details.

When customers set the kernel parameter to disable the ipv6 in RHEL, the memory usage of HPE Agentless Management Service (AMSD) is much more stable.

Corrected the test trip cannot be generated with the test parameter in the HPE Agentless Management Service (AMSD).

Addressed ahslog stability to allow service back when iLo restarts. Customers will no longer experience the service hang after the iLO reboot.

Fiber options correctly delivers data in the reverse mode (SMA)

### **Enhancements**

Enhancements included in this release:

Support for the following new network controllers:

P10118-B21 HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCU OCP3 Adapter

P22702-B21 HPE Ethernet 10/25Gb 2-port SFP28 QL41222HLCU Adapter

874253-B21 HPE Ethernet 100Gb 1-port 842QSFP28 Adapter

Support for SUSE Linux Enterprise Server 12 Service Pack 5

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Agentless Management Service (iLO 5) for SUSE Linux Enterprise Server 15 Version: 2.3.0 **(Optional)**

Filename: amsd-2.3.0-1439.31.sles15.x86\_64.compsig; amsd-2.3.0-1439.31.sles15.x86\_64.rpm

### **Prerequisites**

**amsd only supported on HPE Gen10 Servers.**

**amsd provides information to the iLO 5 service providing SNMP support.**

#### **Requirements:**

Minimum iLO 5 Firmware Version = 1.1

Minimum supported OS Versions = SUSE Linux Enterprise Server 15

### **Fixes**

Fixed the following items:

The ahslog service in the HPE Agentless Management Service (iLO 5)(amsd) for Linux may segfault during system startup. While this occurs, the user can see the "Failed to start Active Health Service Logger" message from the systemctl. Review Customer Advisory [a00099165en\\_us](#) for additional details.

When customers set the kernel parameter to disable the ipv6 in RHEL, the memory usage of HPE Agentless Management Service (AMSD) is much more stable.

Corrected the test trip cannot be generated with the test parameter in the HPE Agentless Management Service (AMSD).

Addressed ahslog stability to allow service back when iLo restarts. Customers will no longer experience the service hang after the iLO reboot.

Fiber options correctly delivers data in the reverse mode (SMA)

### **Enhancements**

Enhancements included in this release:

Support for the following new network controllers:

P10118-B21 HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCU OCP3 Adapter

P22702-B21 HPE Ethernet 10/25Gb 2-port SFP28 QL41222HLCU Adapter

874253-B21 HPE Ethernet 100Gb 1-port 842QSFP28 Adapter

Support for SUSE Linux Enterprise Server 15 Service Pack 2

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Agentless Management Service for Windows x64 Version: 2.30.1.0 **(Optional)**

Filename: cp044612.compsig; cp044612.exe **Important Note!**

iLO Firmware Version:

This version of AMS has been tested with iLO 5 firmware version 2.30. It is recommended to install AMS 2.30.1.0 on systems with iLO 5 firmware 2.30 or newer.

About installation and enablement of SMA service:

During AMS installation in interactive mode, there is pop up message to selectively install SMA.

If Yes is selected, SMA service will be installed and set to running state.

If No is selected, SMA service will be installed but the service is not enabled.

During AMS installation in silent mode, SMA is installed but the service is not enabled.

To enable SMA service at a later time, go to the following folder: %ProgramFiles%\OEM\AMS\Service\  
(Typically c:\Program Files\OEM\AMS\Service) and execute "EnableSma.bat /f"

IMPORTANT: The SNMP service community name and permission must also be setup. This is not done by "EnableSma.bat".

To disable SMA after it has been enabled, go to the following folder: %ProgramFiles%\OEM\AMS\Service\  
(Typically c:\Program Files\OEM\AMS\Service) and execute "DisableSma.bat /f"

After installing Windows operating system, make sure all the latest Microsoft Updates are downloaded and installed (wuapp.exe can be launched to start the update process). If this is not done, a critical error may be reported in Windows Event Log, "The Agentless Management Service terminated unexpectedly."

AMS Control Panel Applet:

The AMS control panel applet UI is best displayed on the system when screen resolution is 1280 x 1024 pixels or higher and text size 100%.

Test trap generated from AMS Control Panel Applet requires iLO5 firmware version 2.10 and newer.

When in iLO5 high security mode (e.g. FIPS mode), MD5 authentication protocol will not be shown.

### **Prerequisites**

The *Channel Interface Driver for Windows X64* must be installed prior to this component.

Microsoft SNMP Service must be enabled, if SMA (System Management Assistant) is enabled.

### **Fixes**

Fixed string encoding issue on CpqHoName

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HPE Agentless Management Bundle for ESXi 7.0Version: 700.11.6.0 **(Recommended)**

Filename: amsdComponent\_700.11.6.0-24\_16357308.zip

### **Fixes**

Add support for distributed switch to resolve AMS issue of not reporting the Host IP address

Fix duplicate IP address reporting issue

Add fix to skip CPU and Memory Usage data collection when CPU and Memory Usage Logging is disabled

Disable Logical Disk Usage logging by default

### **Enhancements**

Added the option to enable/disable AHS Logical Disk Usage logging

---

HPE Fiber Channel and Storage Enablement Component for ESXi 7.0Version: 3.6.0 **(Recommended)**

Filename: fc-enablement-component\_700.3.6.0.4-1\_16239845.zip

### **Enhancements**

Supports VMware ESXi 7.0 and ESXi 7.0 U1

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HPE Insight Management WBEM Providers for Windows Server x64 EditionsVersion: 10.75.0.0 **(Optional)**

Filename: cp037689.exe

### **Prerequisites**

The HPE Insight Management WBEM Providers require the HPE ProLiant iLO 3/4 Channel Interface and Management Controller Drivers (version 3.4.0.0 or later) for Windows X64 to be installed prior to this component.

In addition, the System Management Homepage (SMH) component (version 7.2.2.9 or later) is required for a single server web-based user interface.

Make sure to apply all updates needed for the OS on the system by running Windows Update. Incomplete Windows Update may cause the HPE WBEM Providers installation failures.

### **Fixes**

Fixed the incorrect System Management Homepage red icon status of Smart Array controllers, if the controller has logical drive(s) created with HPE Smart Storage Administrator version later than 3.10.3.0.

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HPE MegaRAID Storage Administrator (HPE MRSA) for Linux 64-bitVersion: 3.113.0.0 **(Optional)**

Filename: HPE\_Linux\_64\_readme.txt; MRStorageAdministrator-003.113.000.000-00.x86\_64.rpm;  
MRStorageAdministrator-003.113.000.000-00.x86\_64\_part1.compsig; MRStorageAdministrator-003.113.000.000-  
00.x86\_64\_part2.compsig; MRStorageAdministrator-003.113.000.000-00.x86\_64\_part3.compsig;  
MRStorageAdministrator-003.113.000.000-00.x86\_64\_part4.compsig

**Important Note!**

**Prerequisites**

**Enhancements**

Initial Release

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HPE MegaRAID Storage Administrator (HPE MRSA) for Windows 64-bitVersion: 3.113.0.0 **(Optional)**

Filename: cp036916.exe; cp036916\_part1.compsig; cp036916\_part2.compsig; cp036916\_part3.compsig;  
cp036916\_part4.compsig

**Enhancements**

Initial Release

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HPE MegaRAID Storage Administrator StorCLI for Linux 64-bitVersion: 1.25.12 **(Optional)**

Filename: LINUX\_Readme.txt; storcli-1.25.12-1.noarch.compsig; storcli-1.25.12-1.noarch.rpm

**Enhancements**

Added support for the Apollo 4510 system

---

HPE MegaRAID Storage Administrator StorCLI for VMwareVersion: 1.25.12 **(Optional)**

Filename: vmware-esx-storcli-1.25.12.vib; VMWARE\_MN\_NDS\_Readme.txt

**Enhancements**

Added support for the Apollo 4510 system

---

HPE MegaRAID Storage Administrator StorCLI for VMwareVersion: 1.25.12 (**Recommended**)

Filename: storcli-esxi6.5-bundle-1.25.12.zip

**Enhancements**

Initial release

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HPE MegaRAID Storage Administrator StorCLI for VMwareVersion: 1.25.12 (**Recommended**)

Filename: storcli-esxi6.7-bundle-1.25.12.zip

**Enhancements**

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize & Expander)

---

HPE MegaRAID Storage Administrator StorCLI for Windows 64-bitVersion: 1.25.12.0 (**Optional**)

Filename: cp036918.compsig; cp036918.exe

**Enhancements**

Added support for the Apollo 4510 system

---

HPE Offline Bundle for ESXi 6.5Version: 3.6.0 (**Recommended**)

Filename: esxi6.5uX-mgmt-bundle-3.6.0-9.zip **Fixes**

**Agentless Management Service**

Add support for distributed switch to resolve AMS issue of not reporting the Host IP address

Fix duplicate IP address reporting issue

Add fix to skip CPU and Memory Usage data collection when CPU and Memory Usage Logging is disabled

Disable Logical Disk Usage logging by default

**Enhancements**

**Agentless Management Service**

Added the option to enable/disable AHS Logical Disk Usage logging



## **Supported Devices and Features**

VMware vSphere version support:

VMware vSphere 6.5 U2

VMware vSphere 6.5 U3

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HPE Offline Bundle for ESXi 6.7Version: 3.6.0 **(Recommended)**

Filename: esxi6.7uX-mgmt-bundle-3.6.0-9.zip

### **Fixes**

#### **Agentless Management Service**

Add support for distributed switch to resolve AMS issue of not reporting the Host IP address

Fix duplicate IP address reporting issue

Add fix to skip CPU and Memory Usage data collection when CPU and Memory Usage Logging is disabled

Disable Logical Disk Usage logging by default

### **Enhancements**

#### **Agentless Management Service**

Added the option to enable/disable AHS Logical Disk Usage logging

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HPE Smart Storage Administrator (HPE SSA) CLI for Linux 64-bitVersion: 4.21.7.0 **(Optional)**

Filename: ssacli-4.21-7.0.x86\_64.compsig; ssacli-4.21-7.0.x86\_64.rpm; ssacli-4.21-7.0.x86\_64.txt

### **Important Note!**

HPE SSA CLI will allow you to configure and manage your storage as before, but now with additional features, abilities, and supported devices. Existing ACUCLI scripts should only need to make minimal changes such as calling the appropriate binary or executable in order to maintain compatibility.

### **Enhancements**

Added support for HPE Smart Array S100i SR Gen10 Plus SW RAID

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HPE Smart Storage Administrator (HPE SSA) CLI for VMware 6.5Version: 4.21.6.0 **(Optional)**

Filename: HPE\_bootbank\_hpessacli-4.21.6.0-6.5.0.4240417.hpe.vib

**Enhancements**

Added support for HPE Smart Array S100i SR Gen10 Plus SW RAID

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HPE Smart Storage Administrator (HPE SSA) CLI for VMware 6.7Version: 4.21.6.0 **(Optional)**

Filename: HPE\_bootbank\_hpessacli-4.21.6.0-6.7.0.7535516.hpe.vib

**Enhancements**

Added support for HPE Smart Array S100i SR Gen10 Plus SW RAID

---

HPE Smart Storage Administrator (HPE SSA) CLI for Windows 64-bitVersion: 4.21.7.0 **(Optional)**

Filename: cp044527.compsig; cp044527.exe

**Important Note!**

HPE SSACLI will allow you to configure and manage your storage as before, but now with additional features, abilities, and supported devices. Existing ACUCLI scripts should only need to make minimal changes such as calling the appropriate binary or executable in order to maintain compatibility.

**Enhancements**

Added support for HPE Smart Array S100i SR Gen10 Plus SW RAID

---

HPE Smart Storage Administrator (HPE SSA) for Linux 64-bitVersion: 4.21.7.0 **(Optional)**

Filename: ssa-4.21-7.0.x86\_64.compsig; ssa-4.21-7.0.x86\_64.rpm; ssa-4.21-7.0.x86\_64.txt

**Important Note!**

HPE SSA replaces the existing HP Array Configuration Utility, or ACU, with an updated design and will deliver new features and functionality for various Smart Storage initiatives as they come online. HPE Smart Array Advanced Pack 1.0 and 2.0 features are now part of the baseline features of HPE SSA, with the appropriate firmware.

HPE SSA will allow you to configure and manage your storage as before, but now with additional features, abilities, and supported devices. Existing ACU scripts should only need to make minimal changes such as calling the appropriate binary or executable in order to maintain compatibility.

## **Prerequisites**

The HPE Smart Storage Administrator for Linux requires the HPE System Management Homepage software to be installed on the server. If the HPE System Management Homepage software is not already installed on your server, please download it from HPE.com and install it before installing the HPE Smart Storage Administrator for Linux.

**IMPORTANT UPDATE:** HPE SSA (GUI) for Linux can now be run without requiring the HPE System Management Homepage. HPE SSA now supports a Local Application Mode for Linux. The HPE System Management Homepage is still supported, but no longer required to run the HPE SSA GUI.

To invoke, enter the following at the command prompt:

```
ssa -local
```

The command will start HPE SSA in a new Firefox browser window. When the browser window is closed, HPE SSA will automatically stop. This is only valid for the loopback interface, and not visible to external network connections.

## **Enhancements**

Added support for HPE Smart Array S100i SR Gen10 Plus SW RAID

---

HPE Smart Storage Administrator (HPE SSA) for Windows 64-bit Version: 4.21.7.0 **(Optional)**

Filename: cp044526.compsig; cp044526.exe

## **Important Note!**

HPE SSA replaces the existing HP Array Configuration Utility, or ACU, with an updated design and will deliver new features and functionality for various Smart Storage initiatives as they come online. HPE Smart Array Advanced Pack 1.0 and 2.0 features are now part of the baseline features of HPE SSA, with the appropriate firmware.

HPE SSA will allow you to configure and manage your storage as before, but now with additional features, abilities, and supported devices. Existing ACU scripts should only need to make minimal changes such as calling the appropriate binary or executable in order to maintain compatibility.

## **Enhancements**

Added support for HPE Smart Array S100i SR Gen10 Plus SW RAID

---

HPE Smart Storage Administrator Diagnostic Utility (HPE SSADU) CLI for Linux 64-bit Version: 4.21.7.0 **(Optional)**

Filename: ssaduccli-4.21-7.0.x86\_64.compsig; ssaduccli-4.21-7.0.x86\_64.rpm; ssaduccli-4.21-7.0.x86\_64.txt

## **Important Note!**

This stand alone version of the HPE Smart Storage Administrator's Diagnostic feature is available only in CLI form. For the GUI version of Diagnostic reports, please use HPE Smart Storage Administrator (HPE SSA).

### **Enhancements**

Added support for HPE Smart Array S100i SR Gen10 Plus SW RAID

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HPE Smart Storage Administrator Diagnostic Utility (HPE SSADU) CLI for Windows 64-bitVersion: 4.21.7.0 **(Optional)**

Filename: cp044528.compsig; cp044528.exe

### **Important Note!**

This stand alone version of the HPE Smart Storage Administrator's Diagnostic feature is available only in CLI form. For the GUI version of Diagnostic reports, please use HPE Smart Storage Administrator (HPE SSA).

### **Enhancements**

Added support for HPE Smart Array S100i SR Gen10 Plus SW RAID

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HPE SMX Provider Component for ESXi 7.0Version: 3.16.00 **(Recommended)**

Filename: smxProvider\_700.03.16.00\_\_1\_.12\_14828939\_signed\_component\_1567546.zip

### **Enhancements**

Support for VMware ESXi 7.0

---

HPE Utilities Offline Bundle for ESXi 6.5Version: 10.6.0 **(Recommended)**

Filename: HPE-Util-CPNT\_6.5.0.10.6.0-32.zip

### **Important Note!**

Refer to the HPE VMware Utilities Guide for VMware vSphere 6.5 which is located at [www.hpe.com/info/vmware/proliant-docs](http://www.hpe.com/info/vmware/proliant-docs).

### **Enhancements**

Updated the Smart Storage Administrator CLI (SSACLI)

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HPE Utilities Offline Bundle for ESXi 6.7Version: 10.6.0 **(Recommended)**

Filename: HPE-Util-CPNT\_6.7.0.10.6.0-34.zip

**Important Note!**

Refer to the HPE VMware Utilities Guide for VMware vSphere 6.7 U3 which is located at [www.hpe.com/info/vmware/proliant-docs](http://www.hpe.com/info/vmware/proliant-docs).

**Enhancements**

Updated the HPE Smart Storage Administrator CLI (SSACLI)

---

HPE Utilities Offline Bundle for ESXi 7.0Version: 10.6.0 **(Recommended)**

Filename: HPE-Util-CPNT\_7.0.0.10.6.0-45.zip

**Important Note!**

Refer to the HPE VMware Utilities Guide for VMware vSphere/ESXi which is located at [www.hpe.com/info/vmware/proliant-docs](http://www.hpe.com/info/vmware/proliant-docs).

**Enhancements**

Supports VMware ESXi 7.0

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Integrated Smart Update Tools for VMware ESXi 6.5Version: 2.7.0.0 **(Recommended)**

Filename: sut-esxi6.5-offline-bundle-2.7.0.0-36.zip

**Important Note!**

Integrated Smart Update Tools for ESXi provides support for firmware and driver updates via iLO Repository

**Fixes**

Self upgrade testing from 2.5.0

**Enhancements**

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Integrated Smart Update Tools for VMware ESXi 6.7Version: 2.7.0.0 **(Recommended)**

Filename: sut-esxi6.7-offline-bundle-2.7.0.0-30.zip

**Important Note!**

Integrated Smart Update Tools for ESXi provides support for firmware and driver updates via iLO Repository

### **Fixes**

See the [iSUT Release Notes](#) for information about the issues resolved in this release

### **Enhancements**

See the [iSUT Release Notes](#) for information about the issues resolved in this release

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Integrated Smart Update Tools for VMware ESXi 7.0 Version: 700.2.7.0 **(Recommended)** Filename: sutComponent\_700.2.7.0.32-0-signed\_component-16604702.zip **Important Note!**

Integrated Smart Update Tools for ESXi 7.0 provides support for firmware and driver updates via iLO Repository

### **Fixes**

See the [iSUT Release Notes](#) for information about the issues resolved in this release

### **Enhancements**

See the [iSUT Release Notes](#) for information about the enhancements in this release.

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NVMe Drive Eject NMI Fix for Intel Xeon Processor Scalable Family for Windows Version: 1.1.0.0 (C) **(Optional)**

Filename: cp034635.compsig; cp034635.exe

### **Enhancements**

Added support for Windows Server 2019

Added support for the HPE ProLiant XL270d Gen10 and the HPE ProLiant XL420 Gen10

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