Release Notes for Gen10 Service Pack for ProLiant, v2020.03.0

BIOS (Login Required) - System ROM
Driver - Chipset
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 - NVidia
Firmware - PCIe NVMe Storage Disk
Firmware - SAS Storage Disk
Firmware - SATA Storage Disk
Firmware - Storage Controller
Firmware - Storage Fibre Channel
Firmware - System
Firmware (Entitlement Required) - Storage Controller Software - Lights-Out Management
Software - Management
Software - Storage Controller
Software - Storage Fibre Channel
Software - Storage Fibre Channel HBA
Software - System Management

BIOS (Login Required) - System ROM
Online ROM Flash Component for Linux - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers
Version: 2.32_03-09-2020 [Critical]
Filename: RPMS/x86_64/firmware-system-u38-2.32_2020_03_09-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u38-2.32_2020_03_09-1.1.x86_64.rpm

Important Notes:

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

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

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

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

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Online ROM Flash Component for Linux - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers
Version: 2.32_03-09-2020 [Critical]
Filename: RPMS/x86_64/firmware-system-u39-2.32_2020_03_09-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u39-2.32_2020_03_09-1.1.x86_64.rpm

Important Notes:

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 System ROM - U39

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

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

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
Online ROM Flash Component for Linux - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: RPMs/x86_64/firmware-system-u45-2.32_2020_03_09-1.1.x86_64.compsig; RPMs/x86_64/firmware-system-u45-2.32_2020_03_09-1.1.x86_64.rpm

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Prerequisites

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

Online ROM Flash Component for Linux - HPE ProLiant BL460c Gen10 (I41) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: RPMs/x86_64/firmware-system-i41-2.32_2020_03_09-1.1.x86_64.compsig; RPMs/x86_64/firmware-system-i41-2.32_2020_03_09-1.1.x86_64.rpm

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant BL460c Gen10 System ROM - I41

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:

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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Prerequisites

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

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
Release Version:
2.14_03-09-2020

Last Recommended or Critical Revision:
2.14_03-09-2020

Previous Revision:
2.12_12-06-2019

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

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

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant DL325 Gen10 System ROM - A41

Release Version:
2.36_03-09-2020

Last Recommended or Critical Revision:
2.36_03-09-2020

Previous Revision:
2.34_02-18-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

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

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.
Known Issues:
None

Online ROM Flash Component for Linux - HPE ProLiant DL325 Gen10 Plus (A43) Servers
Version: 1.16_01-10-2020 (Optional)
Filename: RPMS/x86_64/firmware-system-a43-1.16_2020_01_10-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-a43-1.16_2020_01_10-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-a43

Important Notes:

Important Notes:
None

Deliverable Name:
HPE ProLiant DL325 Gen10 Plus System ROM - A43

Release Version:
1.16_01-10-2020

Last Recommended or Critical Revision:
1.10_10-29-2019

Previous Revision:
1.10_10-29-2019

Firmware Dependencies:
None

Enhancements/New Features:
Enhanced the system power consumption when system is in an idle state. When running with ILO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State is enabled.

Enhanced the system performance when running some benchmarks and workloads.

Added a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.

Added a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax is enabled.

Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force Link Width is enabled.

Updated the system thermal logic to support the latest GPU adapters.

Updated the language translations (non-English modes) for System Utilities.

Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

Problems Fixed:
Addressed an issue where the system would never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress workload.

Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.

Addressed an issue where RestCli or a Redfish "Get" command could return some invalid configuration settings.

Addressed an issue where systems configured with an UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the RPl.

Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

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 never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress workload.

Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.

Addressed an issue where RestCli or a Redfish "Get" command could return some invalid configuration settings.

Addressed an issue where systems configured with an UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the RPl.

Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

Known Issues:
None

Enhancements
Enhanced the system power consumption when system is in an idle state. When running with ILO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State is enabled.

Enhanced the system performance when running some benchmarks and workloads.

Added a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.

Added a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax is enabled.

Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force Link Width is enabled.

Updated the system thermal logic to support the latest GPU adapters.

Updated the language translations (non-English modes) for System Utilities.

Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.
**Important Notes**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This System ROM is critical for customers who have enabled the HPE Smart Array s100i support.

HPE ProLiant DL360 Gen10 System ROM - U32

**Release Version:**
2.32_03-09-2020

**Last Recommended or Critical Revision:**
2.32_03-09-2020

**Previous Revision:**
2.30_02-11-2020

**Firmware Dependencies:**
None

**Enhancements/New Features:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

**Fixes**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This System ROM is critical for customers who have enabled the HPE Smart Array s100i support.

HPE ProLiant DL360 Gen10 System ROM - U32

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

**Version:** 2.36_03-09-2020 *(Critical)*

**Filename:** RPMS/x86_64/firmware-system-a40-2.36_2020_03_09-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-a40-2.36_2020_03_09-1.1.x86_64.rpm

**Important Notes!**

**Deliverable Name:**
HPE ProLiant DL385 Gen10 System ROM - A40

**Release Version:**
2.36_03-09-2020

**Last Recommended or Critical Revision:**
2.36_03-09-2020

**Previous Revision:**
2.34_02-18-2020

**Firmware Dependencies:**
None

**Enhancements/New Features:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

**Version:** 1.18_01-22-2020 *(Optional)*

**Filename:** RPMS/x86_64/firmware-system-a42-1.18_2020_01_22-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-a42-1.18_2020_01_22-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-a42-1.18_2020_01_22-1.1.x86_64_part2.compsig; RPMS/x86_64/firmware-system-a42-1.18_2020_01_22-1.1.x86_64_part3.compsig

**Important Note!**

**Deliverable Name:**
HPE ProLiant DL385 Gen10 Plus System ROM - A42

**Release Version:**
1.18_01-22-2020

**Last Recommended or Critical Revision:**
1.10_10-29-2019

**Previous Revision:**
1.10_10-29-2019

**Firmware Dependencies:**
None

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**Prerequisites**

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

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**Fixes**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

**Version:** 1.18_01-22-2020 *(Optional)*

**Filename:** RPMS/x86_64/firmware-system-a42-1.18_2020_01_22-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-a42-1.18_2020_01_22-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-a42-1.18_2020_01_22-1.1.x86_64_part2.compsig; RPMS/x86_64/firmware-system-a42-1.18_2020_01_22-1.1.x86_64_part3.compsig

**Important Note!**

**Deliverable Name:**
HPE ProLiant DL385 Gen10 Plus System ROM - A42

**Release Version:**
1.18_01-22-2020

**Last Recommended or Critical Revision:**
1.10_10-29-2019

**Previous Revision:**
1.10_10-29-2019

**Firmware Dependencies:**
Enhancements/New Features:
Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enab
Enhanced the system performance when running some benchmarks and workloads.
Add a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.
Add a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax
Add a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L
Update the system thermal logic to support the latest GPU adapters.
Update the language translations (non-English modes) for System Utilities.
Update the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

Problems Fixed:
Addressed an issue where the system would never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress workl
Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.
Addressed an issue where RestCli or a Redfish "Get" command could return some invalid configuration settings.
Addressed an issue where systems configured with an UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the Pl
Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

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 never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress workl
Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.
Addressed an issue where RestCli or a Redfish "Get" command could return some invalid configuration settings.
Addressed an issue where systems configured with an UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the Pl
Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

Known Issues:
None

Enhancements
Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enab
Enhanced the system performance when running some benchmarks and workloads.
Add a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.
Add a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax
Add a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L
Update the system thermal logic to support the latest GPU adapters.
Update the language translations (non-English modes) for System Utilities.
Update the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

Online ROM Flash Component for Linux - HPE ProLiant DL560 Gen10/DL580 Gen10 (U34) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: RPMS/x86_64/firmware-system-u34-2.32_2020_03_09-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u34-2.32_2020_03_09-1.1.x86_64.rpm

Important Note!
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i suppor
Deliverable Name:
HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34
Release Version:
2.32_03-09-2020
Last Recommended or Critical Revision:
2.32_03-09-2020
Previous Revision:
2.30_02-11-2020
Firmware Dependencies:
None
Enhancements/New Features:
None
Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

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

Fixes
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Important Note!
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.
HPE ProLiant ML110 Gen10 System ROM - U33

**Release Version:**
2.32_03-09-2020

**Last Recommended or Critical Revision:**
2.32_03-09-2020

**Previous Revision:**
2.30_02-11-2020

**Firmware Dependencies:**
None

**Enhancements/New Features:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

**Fixes**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

**Version:** 2.14_03-09-2020 (Critical)

**Filename:** RPMS/x86_64/firmware-system-u44-2.14_2020_03_09-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u44-2.14_2020_03_09-1.1.x86_64.rpm

**Important Note!**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

**Fixes**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None
Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Online ROM Flash Component for Linux - HPE ProLiant ML350 Gen10 (U41) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: RPMs/x86_64/firmware-system-u41-2.32_2020_03_09-1.1.x86_64.compsig; RPMs/x86_64/firmware-system-u41-2.32_2020_03_09-1.1.x86_64.rpm

Important Note:
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support

Deliverable Name:
HPE ProLiant ML350 Gen10 System ROM - U41

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

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

Fixes
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Online ROM Flash Component for Linux - HPE ProLiant XL230k Gen10 (U37) Server
Version: 2.32_03-09-2020 (Critical)
Filename: RPMs/x86_64/firmware-system-u37-2.32_2020_03_09-1.1.x86_64.compsig; RPMs/x86_64/firmware-system-u37-2.32_2020_03_09-1.1.x86_64.rpm

Important Note:
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support

Deliverable Name:
HPE ProLiant XL230k Gen10 System ROM - U37

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.
Known Issues:
None

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

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Online ROM Flash Component for Windows x64 - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: cp043448.compsig; cp043448.exe

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

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

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Online ROM Flash Component for Windows x64 - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: cp043408.compsig; cp043408.exe

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 System ROM - U39

Release Version:
2.32_03-09-2020
Prerequisites

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

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i suppor

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i suppor

Deliverable Name:
HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 System ROM - U40

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

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

**Fixes**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**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:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

**Prerequisites**

The "iLO 5 Channel Interface Driver" (CHIF) for Windows which is available from Service Pack for ProLiant (SPP).
Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.
Enhancements/New Features:

Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enab

Enhanced the system performance when running some benchmarks and workloads.

Added a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.

Added a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax

Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L

Updated the system thermal logic to support the latest GPU adapters.

Updated the language translations (non-English modes) for System Utilities.

Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

Problems Fixed:

Addressed an issue where the system would never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress work

Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.

Addressed an issue where RestCli or a Redfish "Get" command could return some invalid configuration settings.

Addressed an issue where systems configured with an UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the Pl;

Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

Known Issues:

None

Prerequisites

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

Fixes

Enhancements

Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enab

Enhanced the system performance when running some benchmarks and workloads.

Added a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.

Added a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax

Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L

Updated the system thermal logic to support the latest GPU adapters.

Updated the language translations (non-English modes) for System Utilities.

Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant DL360 Gen10 System ROM - U32

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
Added a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax.

Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L

Updated the system thermal logic to support the latest GPU adapters.

Updated the language translations (non-English modes) for System Utilities.

Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

Problems Fixed:
- Addressed an issue where the system would never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress workl
- Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.
- Addressed an issue where RestCti or a Redfish "Get" command could return some invalid configuration settings.
- Addressed an issue where systems configured with an UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the Pl.
- Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

Known Issues:

None

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

Enhancements
- Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enabl
- Enhanced the system performance when running some benchmarks and workloads.
- Added a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.
- Added a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax.
- Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L
- Updated the system thermal logic to support the latest GPU adapters.
- Updated the language translations (non-English modes) for System Utilities.
- Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.
Prerequisites

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

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Online ROM Flash Component for Windows x64 - HPE ProLiant MicroServer Gen10 Plus (U48) Servers
Version: 2.10_03-09-2020 (Critical)
Filename: cp043518.compsig; cp043518.exe

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant MicroServer Gen10 Plus System ROM - U48

Release Version:
2.10_03-09-2020

Last Recommended or Critical Revision:
2.10_03-09-2020

Previous Revision:
2.00_12-06-2019

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Online ROM Flash Component for Windows x64 - HPE ProLiant ML110 Gen10 (U33) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: cp043445.compsig; cp043445.exe

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant ML110 Gen10 System ROM - U33

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020
Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i suppor

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

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:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i suppor

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

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

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Deliverable Name:**
HPE ProLiant ML350 Gen10 System ROM - U41

**Release Version:**
2.32_03-09-2020

**Last Recommended or Critical Revision:**
2.32_03-09-2020

**Previous Revision:**
2.30_02-11-2020

**Firmware Dependencies:**
None

**Enhancements/New Features:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**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:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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

This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:

None

Problems Fixed:

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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:

None

ROM Flash Firmware Package - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: U38_2.32_03_09_2020.fwpkg

Important Notes:

This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:

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

Release Version:

2.32_03-09-2020

Last Recommended or Critical Revision:

2.32_03-09-2020

Previous Revision:

2.30_02-11-2020

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:

None

Fixes

Important Notes:

This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:

None

Problems Fixed:

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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:

None

ROM Flash Firmware Package - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: U39_2.32_03_09_2020.fwpkg

Important Notes:

This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:

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

Release Version:

2.32_03-09-2020

Last Recommended or Critical Revision:

2.32_03-09-2020

Previous Revision:

2.30_02-11-2020

Firmware Dependencies:

None

Enhancements/New Features:

None
Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

ROM Flash Firmware Package - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: U40_2.32_03_09_2020.fwpkg

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 System ROM - U40

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

ROM Flash Firmware Package - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: U45_2.32_03_09_2020.fwpkg

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 System ROM - U45

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Deliverable Name:
HPE ProLiant BL460c Gen10 System ROM - I41

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
Deliverable Name: HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31
Release Version: 2.32_03-09-2020
Last Recommended or Critical Revision: 2.32_03-09-2020
Previous Revision: 2.30_02-11-2020
Firmware Dependencies: None
Enhancements/New Features: None
Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.
Known Issues: None

Fixes
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.
Firmware Dependencies: None
Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.
Known Issues: None

ROM Flash Firmware Package - HPE ProLiant DL20 Gen10 (U43) Servers
Version: 2.14_03-09-2020 (Critical)
Filename: U43_2.14_03_09_2020.fwpkg

Important Note!
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.
Deliverable Name: HPE ProLiant DL20 Gen10 System ROM - U43
Release Version: 2.14_03-09-2020
Last Recommended or Critical Revision: 2.14_03-09-2020
Previous Revision: 2.12_12-06-2019
Firmware Dependencies: None
Enhancements/New Features: None
Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.
Known Issues: None

Fixes
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.
Firmware Dependencies: None
Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.
Known Issues: None
Important Note:

This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant DL325 Gen10 System ROM - A41

Release Version:
2.36_03-09-2020

Last Recommended or Critical Revision:
2.36_03-09-2020

Previous Revision:
2.34_02-18-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:

This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:

This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes
Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Important Note!
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant DL380 Gen10 System ROM - U30

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Important Note!
Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant DL385 Gen10 System ROM - A40

Release Version:
2.36_03-09-2020

Last Recommended or Critical Revision:
2.36_03-09-2020

Previous Revision:
2.34_02-18-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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**ROM Flash Firmware Package - HPE ProLiant DL580 Gen10/DL580 Gen10 (U34) Servers**

**Version:** 2.32_03-09-2020 (Critical)

**Filename:** U34_2.32_03_09_2020.fwpkg

**Important Note!**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Deliverable Name:**
HPE ProLiant DL580 Gen10/DL580 Gen10 System ROM - U34

**Release Version:**
2.32_03-09-2020

**Last Recommended or Critical Revision:**
2.32_03-09-2020

**Previous Revision:**
2.30_02-11-2020

**Firmware Dependencies:**
None

**Enhancements/New Features:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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**ROM Flash Firmware Package - HPE ProLiiant MicroServer Gen10 Plus (U48) Servers**

**Version:** 2.10_03-09-2020 (Critical)

**Filename:** U48_2.10_03_09_2020.fwpkg

**Important Note!**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Deliverable Name:**
HPE ProLiant MicroServer Gen10 Plus System ROM - U48

**Release Version:**
2.10_03-09-2020

**Last Recommended or Critical Revision:**
2.10_03-09-2020

**Previous Revision:**
2.00_12-06-2019

**Firmware Dependencies:**
None
Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

ROM Flash Firmware Package - HPE ProLiant ML110 Gen10 (U33) Servers
Version: 2.32_03-09-2020 (Critical)
Filename: U33_2.32_03_09_2020.fwpkg

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant ML110 Gen10 System ROM - U33

Release Version:
2.32_03-09-2020

Last Recommended or Critical Revision:
2.32_03-09-2020

Previous Revision:
2.30_02-11-2020

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

ROM Flash Firmware Package - HPE ProLiant ML30 Gen10 (U44) Servers
Version: 2.14_03-09-2020 (Critical)
Filename: U44_2.14_03_09_2020.fwpkg

Important Note!

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Deliverable Name:
HPE ProLiant ML30 Gen10 System ROM - U44

Release Version:
2.14_03-09-2020
Last Recommended or Critical Revision:
2.14_03-09-2020

Previous Revision:
2.12_12-06-2019

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None

Fixes

Important Notes:
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

Firmware Dependencies:
None

Problems Fixed:
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

Known Issues:
None
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Deliverable Name:**
HPE ProLiant XL230k Gen10 System ROM - U37

**Release Version:**
2.32_03-09-2020

**Last Recommended or Critical Revision:**
2.32_03-09-2020

**Previous Revision:**
2.30_02-11-2020

**Firmware Dependencies:**
None

**Enhancements/New Features:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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**Fixes**

**Important Notes:**
This version of the System ROM contains the latest support for the HPE Smart Array s100i UEFI Driver. This system ROM is critical for customers who have enabled the HPE Smart Array s100i support.

**Firmware Dependencies:**
None

**Problems Fixed:**
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/ such as single RAID 0 or 1. This issue does not impact systems that have not enabled Smart Array s100i support.

**Known Issues:**
None

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**ROM Flash Universal Firmware Package - HPE ProLiant DL325 Gen10 Plus (A43) Servers**

**Version:** 1.16_01-10-2020 *(Optional)*

**Filename:** A43_1.16_01_10_2020.fwpkg

**Important Note!**

**Important Notes:**
None

**Deliverable Name:**
HPE ProLiant DL325 Gen10 Plus System ROM - A43

**Release Version:**
1.16_01-10-2020

**Last Recommended or Critical Revision:**
1.10_10-29-2019

**Previous Revision:**
1.10_10-29-2019

**Firmware Dependencies:**
None

**Enhancements/New Features:**
Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enab
Enhanced the system performance when running some benchmarks and workloads.
Added a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.
Added a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax
Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L
Updated the system thermal logic to support the latest GPU adapters.
Updated the language translations (non-English modes) for System Utilities.
Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

**Problems Fixed:**
Addressed an issue where the system would never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress work
Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.
Addressed an issue where RestCli or a Redfish "Get" command could return some invalid configuration settings.
Addressed an issue where systems configured with an UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the Pl
Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

**Known Issues:**
None
Fixes

Important Notes:
None

Firmware Dependencies:
None

Problems Fixed:
Addressed an issue where the system would never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress work
Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.
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Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

Known Issues:
None

Enhancements

Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enabl
Enhanced the system performance when running some benchmarks and workloads.
Added a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.
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Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L
Updated the system thermal logic to support the latest GPU adapters.
Updated the language translations (non-English modes) for System Utilities.
Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

ROM Flash Universal Firmware Package - HPE ProLiant DL385 Gen10 Plus (A42) Servers
Version: 1.18_01-22-2020 (Optional)
Filename: A42_1.18_01_22_2020.fwpkg

Important Note!

Important Notes:
None

Deliverable Name:
HPE ProLiant DL385 Gen10 Plus System ROM - A42

Release Version:
1.18_01-22-2020

Last Recommended or Critical Revision:
1.10_10-29-2019

Previous Revision:
1.10_10-29-2019

Firmware Dependencies:
None

Enhancements/New Features:
Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enabl
Enhanced the system performance when running some benchmarks and workloads.
Added a new BIOS/Platform Configuration (RBSU) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.
Added a new BIOS/Platform Configuration (RBSU) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax
Added a new BIOS/Platform Configuration (RBSU) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force L
Updated the system thermal logic to support the latest GPU adapters.
Updated the language translations (non-English modes) for System Utilities.
Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

Problems Fixed:
Addressed an issue where the system would never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress work
Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.
Addressed an issue where RestCli or a Redfish "Get" command could return some invalid configuration settings.
Addressed an issue where systems configured with an UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the Pl.
Addressed an issue where systems configured with an UBM backplane will not honor a customer configured One-Time boot setting.

Known Issues:
None

Fixes

Important Notes:
None

Firmware Dependencies:
None
Problems Fixed:
Addressed an issue where the system would never enter Data Fabric C-States. Data Fabric C-States can help reduce overall power consumption of a system that is running an idle or low stress workload.
Addressed an issue where the system would report the HPE Memory Type as Unknown. This was only an issue with reporting and did not affect system behavior.
Addressed an issue where RestClir or a Redfish "Get" command could return some invalid configuration settings.
Addressed an issue where systems configured with a UBM backplane may very rarely become unresponsive during post with a red error screen (RSOD) indicating a general protection fault in the Pli.
Addressed an issue where systems configured with a UBM backplane will not honor a customer configured One-Time boot setting.

Known Issues:
None

Enhancements
Enhanced the system power consumption when system is in an idle state. When running with iLO fw version 2.12 or later, the system will enter a low power state when the Data Fabric C-State Enablement function is enabled.
Enhanced the system performance when running some benchmarks and workloads.
Added a new BIOS/Platform Configuration (RBStu) for DRAM Controller Power Down to Memory Options. This option can be used to opportunistically power down the memory controller.
Added a new BIOS/Platform Configuration (RBStu) for AMD Fmax Boost Limit to Power and Performance Options. This option can be used to configure the maximum boost frequency when AMD Fmax is enabled.
Added a new BIOS/Platform Configuration (RBStu) for XGMI Max Link Width to Power and Performance Options. This option can be used to manually configure the XGMI link width when XGMI Force Link Width is enabled.
Updated the system thermal logic to support the latest GPU adapters.
Updated the language translations (non-English modes) for System Utilities.
Updated the RESTful API HPE BIOS Attribute Registry resources to match the latest BIOS/Platform Configuration options.

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: cp040661.compsig; cp040661.exe

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

Driver - Network
Mellanox net-mst Kernel Driver Component for VMware ESXi 6.5 and 6.7
Version: 2019.01.02 (Recommended)
Filename: cp038662.compsig; cp038662.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.

Fixes
Mellanox NMST Kernel Module Driver Component for VMware ESXi 6.0 includes nmst version 4.12.0.105.

Enhancements
Mellanox NMST Kernel Module Driver Component for VMware ESXi 6.0 includes nmst version 4.12.0.105.

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>764282-B21</td>
<td>HPE InfiniBand QDR/Ethernet 10Gb 2-port S44+M Adapter</td>
<td>HP_1350110022</td>
</tr>
<tr>
<td>764283-B21</td>
<td>HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port S44+M Adapter</td>
<td>HP_1360110017</td>
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<tr>
<td>764284-B21</td>
<td>HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port S44+QSFP Adapter</td>
<td>HP_1370110017</td>
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<tr>
<td>764285-B21</td>
<td>HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port S44+FR-QSFP Adapter</td>
<td>HP_1380110017</td>
</tr>
<tr>
<td>764286-B21</td>
<td>HPE InfiniBand QRD/Ethernet 10Gb 2-port S44+FR-QSFP Adapter</td>
<td>HP_1390110022</td>
</tr>
<tr>
<td>825110-B21</td>
<td>HPE InfiniBand EDR/Ethernet 105Gb 1-port 840QSFP28 Adapter</td>
<td>HP_2180110022</td>
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<tr>
<td>825111-B21</td>
<td>HPE InfiniBand EDR/Ethernet 105Gb 2-port 840QSFP28 Adapter</td>
<td>HP_2190110032</td>
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<tr>
<td>872726-B21</td>
<td>HPE InfiniBand EDR/Ethernet 10Gb 2-port 841QSFP28 Adapter</td>
<td>HP_2200110034</td>
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<tr>
<td>879482-B21</td>
<td>HPE InfiniBand EDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter</td>
<td>HP_2210110044</td>
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<td>868779-B21</td>
<td>HPE Synergy 6410C 25/50Gb Ethernet Adapter</td>
<td>HP_2220110044</td>
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<td>777933-B21</td>
<td>HPE Ethernet 10Gb 2-port 546SFP+ Adapter</td>
<td>HP_2230110044</td>
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<td>HPE Ethernet 10Gb 2-port 546SFP+ Adapter</td>
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<td>81747-121</td>
<td>HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter</td>
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<td>817753-B21</td>
<td>HPE Ethernet 25Gb 2-port 640QSFP28 Adapter</td>
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<td>874253-B21</td>
<td>HPE Ethernet 100Gb 1-port 842QSFP28 Adapter</td>
<td>HP_2270110044</td>
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</table>
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 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 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

---

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
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-12.0.1

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
- 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 8
Version: 12.0.1261.0-1 (Optional)
Filename: kmod-be2net_bl-12.0.1261.0-1.rhel8u0.x86_64.compsig; kmod-be2net_bl-12.0.1261.0-1.rhel8u0.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.

Enhancements
Initial release.

Supported Devices and Features
- 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-12.0.1
2.0.1261.0_k4.12.14_94.41-1.sles12sp4.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
- 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_195-1.sles15sp1.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
- 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 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 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 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 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 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 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 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 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 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 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 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 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 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 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:
- 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

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.
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 Red Hat Enterprise Linux 8
Version: 12.0.1259.0-1 (Optional)
Filename: kmod-be2iscsi_bl-12.0.1259.0-1.rhel8u0.x86_64.compsig; kmod-be2iscsi_bl-12.0.1259.0-1.rhel8u0.x86_64.rpm

**Important Note!**

HPE recommends the firmware provided in **HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x86)**, version 2019.12.01 for use with these drivers.

**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 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.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-12.0.11_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 ixbge 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

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HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 12
Version: 5.6.4-1 (B) (Optional)
Filename: kmod-hp-ixgbe_bl-kmp-default-5.6.4_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; kmod-hp-ixgbe_bl-kmp-default-5.6.4_k4.12.14_94.41-1.sles12sp4.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 15
Version: 5.6.4-1 (B) (Optional)
Filename: kmod-hp-ixgbe_bl-kmp-default-5.6.4_k4.12.14_195-1.sles15sp1.x86_64.compsig; kmod-hp-ixgbe_bl-kmp-default-5.6.4_k4.12.14_195-1.sles15sp1.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 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 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

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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 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 ixgbevf Drivers for Red Hat Enterprise Linux 7
Version: 4.6.2-1 (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.rhel

**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 (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 (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_k4.12.14.94.41-1.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 (Optional)

**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

**Enhancements**

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.
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 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 ixn 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

**HPE Blade Intel ixn 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 ixn 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.

**Enhancements**
Initial release.

**Prerequisites**
This driver requires host driver version 4.1.143.0 or later.
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 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 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 Drivers for Red Hat Enterprise Linux 7
Version: 7.14.63.1-1 (B) (Optional)

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)

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.
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

**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

**Important Note!**

HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 12
Version: 7.14.63.1-1 (B) (Optional)

**Important Note!**

HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 15
Version: 7.14.63.1-2 (B) (Optional)

**Important Note!**

HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for Windows Server x64 Editions
Version: 7.13.171.0 (B) (Optional)
Filename: cp039942.compsig; cp039942.exe

**Important Note!**

HP Blade QLogic NX2 iSCSI Offload IO Daemon for Red Hat Enterprise Linux 7 Update 6
Version: 2.1.1.5.13-3 (B) (Optional)
Filename: iscsiuio_bl-2.1.1.5.13-3.rpm; iscsiuio_bl-2.1.1.5.13-3.rpm

**Enhancements**

Initial release.

**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

**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.

**Enhancements**

Initial release.

**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

**Fixes**

This product addresses an Adapter Link Down error that occurs due to the detection of a pause flood by the switch.

This product addresses Assert failures seen when powering on SR-IOV-enabled Virtual Machines with Virtual Functions from a single OneView function.
HPE FlexFabric 20Gb 2-port 630FLB Adapter
HPE FlexFabric 20Gb 2-port 630M Adapter

HPE Blade QLogic NX2 iSCSI Offload ID Daemon for Red Hat Enterprise Linux 7 Update 7
Version: 2.11.5.13-3 (B) (Optional)
Filename: iscsiui0_bl-2.11.5.13-3.rhel7u7.x86_64.compsig; iscsiui0_bl-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

HPE Blade QLogic NX2 iSCSI Offload ID Daemon for Red Hat Enterprise Linux 8 Update 0
Version: 2.11.5.13-3 (B) (Optional)
Filename: iscsiui0_bl-2.11.5.13-3.rhel8u0.x86_64.compsig; iscsiui0_bl-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

HPE Blade QLogic NX2 iSCSI Offload ID Daemon for SUSE Linux Enterprise Server 12 SP3
Version: 2.11.5.13-3 (B) (Optional)
Filename: iscsiui0_bl-2.11.5.13-3.sles12sp3.x86_64.compsig; iscsiui0_bl-2.11.5.13-3.sles12sp3.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

HPE Blade QLogic NX2 iSCSI Offload ID Daemon for SUSE Linux Enterprise Server 12 SP4
Version: 2.11.5.13-3 (B) (Optional)
Filename: iscsiui0_bl-2.11.5.13-3.sles12sp4.x86_64.compsig; iscsiui0_bl-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

HPE Blade QLogic NX2 iSCSI Offload ID Daemon for SUSE Linux Enterprise Server 15 SP0
Version: 2.11.5.13-3 (B) (Optional)
Filename: iscsiui0_bl-2.11.5.13-3.sles15sp0.x86_64.compsig; iscsiui0_bl-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

HPE Blade QLogic NX2 iSCSI Offload ID Daemon for SUSE Linux Enterprise Server 15 SP1
Version: 2.11.5.13-3 (B) (Optional)
Filename: iscsiui0_bl-2.11.5.13-3.sles15sp1.x86_64.compsig; iscsiui0_bl-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 630FL Adapter
HPE FlexFabric 20Gb 2-port 630M Adapter

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: 214.0.247.1 (Optional)
Filename: cp041786.compsig; cp041786.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 Windows 2019 - Driver Initialization failure (Yellow bangs) on (some) Virtual functions
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 2019
Version: 214.0.247.1 (Optional)
Filename: cp041787.compsig; cp041787.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 Windows 2019 - Driver Initialization failure (Yellow bangs) on (some) Virtual functions
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 Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7
Version: 1.10.0-214.0.259.0 (Optional)
Filename: kmod-bnxt_en-1.10.0-214.0.259.0.rpm; kmod-bnxt_en-1.10.0-214.0.259.0.rhel7u6.x86_64.compsig; kmod-bnxt_en-1.10.0-214.0.259.0.rhel7u7.x86_64.compsig

Important Note!
HPE recommends the firmware provided in HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86_64, version 1.8.1 or later, for use with these drivers.

Fixes
This product fixes a crash issue during system shutdown.
This product fixes a system stability issue while doing firmware upgrade.
This product fixes an issue about bnxt_en driver fails to load on a kdump kernel.
This product fixes that RDMA driver hang during unload.

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 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8
Version: 1.10.0-214.0.259.0 (Optional)
Filename: kmod-bnxt_en-1.10.0-214.0.259.0.rpm; kmod-bnxt_en-1.10.0-214.0.259.0.rhel8u0.x86_64.compsig; README

Important Note!
HPE recommends the firmware provided in HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86_64, version 1.8.1 or later, for use with these drivers.

Enhancements
Initial release.

Supported Devices and Features
This product supports the following network adapters:
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 1.10.0-214.0.259.0 (B) (Optional)
Filename: bnxt_en-kmp-default-1.10.0_k4.12.14_94.41-214.0.259.0.sles12sp4.x86_64.compsig; bnxt_en-kmp-default-1.10.0_k4.12.14_94.41-214.0.259.0.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 1.8.1 or later, for use with these drivers.

Enhancements
This product removed SUSE Linux Enterprise Server SP3 supported

Supported Devices and Features
This product supports the following network adapters:
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15
Version: 1.10.0-214.0.259.0 (Optional)
Filename: bnxt_en-kmp-default-1.10.0_k4.12.14_195-214.0.259.0.sles15sp1.x86_64.compsig; bnxt_en-kmp-default-1.10.0_k4.12.14_195-214.0.259.0.sles15sp1.x86_64.rpm; bnxt_en-kmp-default-1.10.214.0.259.0.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 1.8.1 or later, for use with these drivers.

_fixes
This product fixes a crash issue during system shutdown.
This product fixes a system stability issue while doing firmware upgrade.
This product fixes an issue about bnxt_en driver fails to load on a kdump kernel.
This product fixes that RDMA driver hang during unload.

Enhancements
This product now supports the following network adapters.
Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

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 recommends the firmware provided in HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware, version 5.10.1 or later, for use with this driver.

Fixes

This product corrects an issue network connectivity ping issue in ESXi 6.5

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

Prerequisites

HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7, version 1.10.0-214.0.259.0 or later, must be installed before installing this product. The libibverbs package must be installed on the target system prior to the installation of the RoCE library. If not already present, the libibverbs package can be obtained from the operating system install
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

### Prerequisites

HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 7 Update 7

- **Version:** 214.0.190.1 *(Optional)*
- **Filename:** libbnxt_re-214.0.190.1-rhel7u7.x86_64.compsig; libbnxt_re-214.0.190.1-rhel7u7.x86_64.rpm; README

#### Prerequisites

- HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7, version 1.10.0-214.0.259.0 or later, must be installed before installing this product.

The libibverb package must be installed on the target system before the installation of the RoCE library. If not already present, the libibverb package can be obtained from the operating system installer.

### 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

### 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

### 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

### 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

### 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

### 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

### Enhancements

- Initial release.
**Fixes**

This product adds a feature to group RoCE statistics. This product fixes an issue to avoid VM reboot when RoCE driver was loaded on VF (of Thor). This product fixes RX buffer errors which reported in dmesg when running heavy jumbo traffic.

**Enhancements**

This product 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

**Prerequisites**

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15, version 1.10.0-214.0.259.0 or later, must be installed before installing this product.

The libibverb package must be installed on the target system prior to the installation of the RoCE library. If not already present, the libibverb package can be obtained from the operating system inst...
HPE Broadcom tg3 Ethernet Drivers for Red Hat Enterprise Linux 8
Version: 3.138a-1 (Optional)
Filename: kmod-tg3-3.138a-1.rhel8u0.x86_64.compsig; kmod-tg3-3.138a-1.rhel8u0.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
Initial release.

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

HPE Broadcom tg3 Ethernet Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 3.138a-2 (Optional)
Filename: README; tg3-kmp-default-3.138a_k4.12.14_94.41-2.sles12sp4.x86_64.compsig; tg3-kmp-default-3.138a_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.

Fixes
This product now exports vendor and packager tag in RPM metadata.
This product addresses the issue that the component always be selected by HPSUM deployment.

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

HPE Broadcom tg3 Ethernet Drivers for SUSE Linux Enterprise Server 15
Version: 3.138a-2 (Optional)

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:
- 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

HPE Emulex 10/20 GbE Driver for VMware vSphere 6.5
Version: 2020.03.09 (Optional)
Filename: cp041841.compsig; cp041841.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 ar
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.

Fixes
This product corrects an issue vmnic flapping caused the network connectivity to be affected.

Supported Devices and Features
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter
**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 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.

**Fixes**
This product corrects an issue vmnic flapping caused the network connectivity to be affected.

**Supported Devices and Features**
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

**HPE Emulex 10/20 GbE Driver for Windows Server 2012 R2**
Version: 12.0.1195.0 (B) (Optional)
Filename: cp040850.compsig; cp040850.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 no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Emulex 10/20GbE Driver for Windows Server 2012 R2.

**Supported Devices and Features**
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

**HPE Emulex 10/20 GbE Driver for Windows Server 2016**
Version: 12.0.1195.0 (B) (Optional)
Filename: cp040881.compsig; cp040881.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 no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Emulex 10/20GbE Driver for Windows Server 2016.

**Supported Devices and Features**
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

**HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2012 R2**
Version: 12.0.1171.0 (B) (Optional)
Filename: cp040852.compsig; cp040852.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 no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2012 R2.
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 no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2019.

Supported Devices and Features
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

Enhancements
This product now expands the compatibility to support new firmware.

Supported Devices and Features
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

Enhancements
This product now removed supports SUSE Linux Enterprise Server 12 SP3

Supported Devices and Features
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

Important Note!
HPE recommends the firmware provided in HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64), version 2019.03.01 or later, for use with these drivers.
HPE Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 15
Version: 12.0.1280.17-1 (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_195-1.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.

**Fixes**
This product now expands the compatibility to support new firmware.

**Enhancements**
This product now supports SUSE Linux Enterprise Server 15 SP1

**Supported Devices and Features**
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.5
Version: 2020.03.09 (Optional)
Filename: cp041839.compsig; cp041839.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 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.

**Fixes**
This product corrects an issue ESXi lib naming convention in iscsi driver packages caused payload conflict for ESXi 6.5.

**Supported Devices and Features**
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.7
Version: 2020.03.09 (Optional)
Filename: cp041840.compsig; cp041840.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 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.

**Fixes**
This product corrects an issue ESXi lib naming convention in iscsi driver packages caused payload conflict for ESXi 6.7.

**Supported Devices and Features**
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric 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 (Optional)
Filename: kmod-be2iscsi-12.0.1259.0-1.rhel7u6.x86_64.compsig; kmod-be2iscsi-12.0.1259.0-1.rhel7u6.x86_64.rpm; kmod-be2iscsi-12.0.1259.0-1.rhel7u7.x86_64.compsig; kmod-be2iscsi-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**
This product now expands the compatibility to support new firmware.

**Enhancements**
This product now supports Red Hat Enterprise Linux 7.7

**Supported Devices and Features**
This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric 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 (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**
Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

HPE Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 12.0.1259.0.1 (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.

**Fixes**

This product now expands the compatibility to support new firmware.

**Enhancements**

This product now supports SUSE Linux Enterprise Server 12 SP3

**Supported Devices and Features**

This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

HPE Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 15
Version: 12.0.1259.0.1 (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; 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.

**Fixes**

This product now expands the compatibility to support new firmware.

**Enhancements**

This product now supports SUSE Linux Enterprise Server 15 SP1

**Supported Devices and Features**

This driver supports the following network adapters:
- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

HPE Intel E1R Driver for Windows Server 2012 R2
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 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

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 Icealke 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
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HP Ethernet 1Gb 4-port 366 Communication Board
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366T Adapter

**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 conversion of timestamp into 64bit value.
This product correct an issue which fix for NDIS Minisport Kernel Pointer Leakage

**Enhancements**

This product now 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
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HP Ethernet 1Gb 4-port 366 Communication Board
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366T Adapter

**HPE Intel i40e Drivers for Red Hat Enterprise Linux 7 x86_64**
Version: 2.10.19.81-1 (Optional)
Filename: kmod-hp-i40e-2.10.19.81-1.rhel7u6.x86_64.compsig; kmod-hp-i40e-2.10.19.81-1.rhel7u6.x86_64.rpm; kmod-hp-i40e-2.10.19.81-1.rhel7u7.x86_64.compsig; kmod-hp-i40e-2.10.19.81-1.rhel7

**Important Note!**

HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Fixes**

This product now fixes error message in dmesg while vlan is removed.

**Supported Devices and Features**

This product supports the following network adapters:
- HP Ethernet 1Gb 2-port 388 Adapter
- HP Ethernet 1Gb 2-port 388FLR-MMT Adapter
- HP Ethernet 1Gb 4-port 369i Adapter
- HP Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 562SFP+ Adapter
- HP Ethernet 10Gb 2-port 563i Adapter
- HP Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HP Ethernet 10Gb 2-port 568FLR-MM5SFP+ Adapter

**HPE Intel i40e Drivers for Red Hat Enterprise Linux 8**
Version: 2.10.19.81-1 (Optional)
Filename: kmod-hp-i40e-2.10.19.81-1.rhel8u0.x86_64.compsig; kmod-hp-i40e-2.10.19.81-1.rhel8u0.x86_64.rpm; kmod-hp-i40e-2.10.19.81-1.rhel8u1.x86_64.compsig; kmod-hp-i40e-2.10.19.81-1.rhel8

**Important Note!**

HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Fixes**

This product now fixes error message in dmesg while vlan is removed.

**Enhancements**

This product now supports Red Hat Enterprise Linux Server 8 update 1.

**Supported Devices and Features**

This product supports the following network adapters:
- HP Ethernet 1Gb 2-port 388i Adapter
- HP Ethernet 1Gb 2-port 388FLR-MMT Adapter
- HP Ethernet 1Gb 4-port 369i Adapter
- HP Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 562SFP+ Adapter
- HP Ethernet 10Gb 2-port 563i Adapter
- HP Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HP Ethernet 10Gb 2-port 568FLR-MM5SFP+ Adapter
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 1Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 1Gb 2-port 562SFP+ Adapter
- HPE Ethernet 1Gb 2-port 563i Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMSFP+ Adapter

**Important Note!**

HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Fixes**

This product now fixes error message in dmesg while vlan is removed.

**Enhancements**

This product now supports SUSE Linux Enterprise Server 12 SP5.

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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 1Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 1Gb 2-port 562SFP+ Adapter
- HPE Ethernet 1Gb 2-port 563i Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMSFP+ Adapter

**Important Note!**

HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Fixes**

This product now fixes error message in dmesg while vlan is removed.

**Enhancements**

This product now supports SUSE Linux Enterprise Server 12 SP5.

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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 1Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 1Gb 2-port 562SFP+ Adapter
- HPE Ethernet 1Gb 2-port 563i Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMSFP+ Adapter

**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 BSOD when change speed from 10G/25Gbps to Autonegotiation in localized OS as well as in ENU.
- This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.

**Enhancements**

This product now remove supports Synergy and Blade Server.

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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 1Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 1Gb 2-port 562SFP+ Adapter
- HPE Ethernet 1Gb 2-port 563i Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMSFP+ Adapter

**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 fix swidx to vf and vport id tracking and rdma vf id lookup
- This product correct an issue which windows crashes after setting the value MSISupported =1 and MessageNumberLimit=1
- This product correct an issue which BSOD when change speed from 10G/25Gbps to Autonegotiation in localized OS as well as in ENU.
- This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.

**Enhancements**

This product now remove supports Synergy and Blade Server.

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This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 1Gb 2-port 562SFP+ Adapter

**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 fix swidx to vf and vport id tracking and rdma vf id lookup
- This product correct an issue which windows crashes after setting the value MSISupported =1 and MessageNumberLimit=1
- This product correct an issue which BSOD when change speed from 10G/25Gbps to Autonegotiation in localized OS as well as in ENU.
- This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.

**Enhancements**

This product now remove supports Synergy and Blade Server.
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
HPE Ethernet 10Gb 2-port 562SFP+ Adapter

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 Windows crashes after setting the value MSISupported =1 and MessageNumberLimit=1
This product correct an issue which fix swidx to vf and vport id tracking and rdma vfid lookup
This product correct an issue which Host suffers KERNEL_SECURITY_CHECK_FAILURE BugCheck 139 BSOD
This product correct an issue which BSOD when change speed from 10G/25Gbps to Autonegotiation in localized OS as well as in ENU.
This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.

Enhancements
This product now remove supports Synergy and Blade Server.

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

HPE Intel i40ea Driver for Windows Server 2019
Version: 1.11.101.0 (Optional)
Filename: cp040857.compsig; cp040857.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 Windows crashes after setting the value MSISupported =1 and MessageNumberLimit=1
This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.
This product correct an issue which BSOD when change speed from 10G/25Gbps to Autonegotiation in localized OS as well as in ENU.
This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.

Enhancements
This product now remove supports Synergy and Blade Server.

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

HPE Intel i40eb Driver for Windows Server 2012 R2
Version: 1.11.101.0 (Optional)
Filename: cp040858.compsig; cp040858.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 Windows crashes after setting the value MSISupported =1 and MessageNumberLimit=1
This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.
This product correct an issue which BSOD when change speed from 10G/25Gbps to Autonegotiation in localized OS as well as in ENU.
This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.

Enhancements
This product now remove supports Synergy and Blade Server.

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

HPE Intel i40eb Driver for Windows Server 2019
Version: 1.11.101.0 (Optional)
Filename: cp040859.compsig; cp040859.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 Blue Screen of Death (BSoD) when change speed from 10G/25Gbps to Autonegotiation in localized OS as well as in ENU.
This product corrects an issue which Blue Screen of Death (BSoD) occurred while during server shutdown or restart.

Enhancements
This product now remove supports Synergy and Blade Server.

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
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
This product correct an issue which Champagne Fountain (v1.10.102.0) blue screens on Device.Network.LAN.AzureStack PCS test.
This product correct an issue which Host suffers KERNEL_SECURITY_CHECK_FAILURE BugCheck 139 BSOD.
This product correct an issue which fix Rdma VFs for ports greater than zero and Concurrent VFReset.
This product correct an issue which removed PCS fix for W52019 to investigate ghost queue problem.
This product correct an issue which BSOD when change speed from 10G/25Gbps to Autonegotiation in localized OS as well as in ENU.

Enhancements
This product now remove supports Synergy and Blade Server.

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 1Gb 2-port 568FLR-MMSFP+ Adapter

HPE Intel i40en Driver for VMware vSphere 6.5
Version: 2019.12.20 (Optional)
Filename: cp040369.compsig; cp040369.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 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 VLAN tag traffic dropped problem.

Enhancements
This product now remove supports Synergy and Blade Server.

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 1Gb 2-port 368FLR-MMM Adapter
- HPE Ethernet 1Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 1Gb 2-port 563SFP+ Adapter
- HPE Ethernet 1Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMT Adapter

HPE Intel i40en Driver for VMware vSphere 6.7
Version: 2019.12.20 (Optional)
Filename: cp040370.compsig; cp040370.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 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 VLAN tag traffic dropped problem.

Enhancements
This product now remove supports Synergy and Blade Server.

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 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 1Gb 2-port 563SFP+ Adapter
- HPE Ethernet 1Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 1Gb 2-port 568FLR-MMT Adapter

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
initial release.

Supported Devices and Features
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-MMFSP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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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

initial release.

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-MMFSP+ 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

initial release.

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-MMFSP+ 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: 3.7.61.20-1 (Optional)
Filename: kmod-hp-iavf-3.7.61.20-1.rhel7u6.x86_64.compsig; kmod-hp-iavf-3.7.61.20-1.rhel7u6.x86_64.rpm; kmod-hp-iavf-3.7.61.20-1.rhel7u7.x86_64.compsig; kmod-hp-iavf-3.7.61.20-1.rhel7u7.x86_64.rpm

Important Note!

HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

Fixes

This product addresses spurious error message when interface down by given longer timeout value to complete.

Enhancements

This product now remove supports Synergy and Blade Server.
This product now supports Red Hat Enterprise Linux Server 7 update 7.

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-MMFSP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel iavf Drivers for Red Hat Enterprise Linux 8
Version: 3.7.61.20-1 (Optional)
Filename: kmod-hp-iavf-3.7.61.20-1.rhel8u0.x86_64.compsig; kmod-hp-iavf-3.7.61.20-1.rhel8u0.x86_64.rpm; kmod-hp-iavf-3.7.61.20-1.rhel8u1.x86_64.compsig; kmod-hp-iavf-3.7.61.20-1.rhel8u1.x86_64.rpm
**Important Note!**

HPE recommends the firmware provided in **HPE Intel Online Firmware Upgrade Utility for Linux x86_64**, version 1.19.0 or later, for use with these drivers.

**Enhancements**

This product now supports Red Hat Enterprise Linux Server 8 update 1.

**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

**Enhancements**

This product now supports SUSE Linux Enterprise Server 12 SP5.

**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

**Enhancements**

This product now supports Red Hat Enterprise Linux 7 update 7.

**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 4-port 363i Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HP Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter
HPE Intel igb Drivers for Red Hat Enterprise Linux 8
Version: 6.2.2-1 (Optional)
Filename: kmod-hp-igb-6.2.2-1.rhel8u0.x86_64.compsig; kmod-hp-igb-6.2.2-1.rhel8u0.x86_64.rpm; kmod-hp-igb-6.2.2-1.rhel8u1.x86_64.compsig; kmod-hp-igb-6.2.2-1.rhel8u1.x86_64.rpm; README

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Enhancements**
This product now supports Red Hat Enterprise Linux Server 8 update 1.

**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: 6.2.2-1 (Optional)
Filename: hp-igb-kmp-default-6.2.2_k4.12.14_120-1.sles12sp5.x86_64.compsig; hp-igb-kmp-default-6.2.2_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-igb-kmp-default-6.2.2_k4.12.14_94.41-1.sles12sp4

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 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 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: 6.2.2-1 (Optional)
Filename: hp-igb-kmp-default-6.2.2_k4.12.14_195-1.sles15sp1.x86_64.compsig; hp-igb-kmp-default-6.2.2_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-igb-kmp-default-6.2.2_k4.12.14_23-1.sles15sp0.x8

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Enhancements**
This product now supports SUSE Linux Enterprise Server 15 SP1.

**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 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
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 4-port 366T Adapter
HPE Intel igb 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 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

HPE Intel ixgbe Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 5.6.4-2 (Optional)
Filename: kmod-hp-ixgbe-5.6.4-2.rhel7u6.x86_64.compsig; kmod-hp-ixgbe-5.6.4-2.rhel7u6.x86_64.rpm; kmod-hp-ixgbe-5.6.4-2.rhel7u7.x86_64.compsig; kmod-hp-ixgbe-5.6.4-2.rhel7u7.x86_64.rpm; R

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Fixes**
This product fixes an issue of an infinite recursion in device shutdown path due to a corner case when PCIe link was down. This product fixes an issue of an typo in ethtool stats.

**Enhancements**
This product now supports Red Hat Enterprise Linux Server 7 update 7.
This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Intel ixgbe Drivers for Red Hat Enterprise Linux 7.

**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

HPE Intel ixgbe Drivers for Red Hat Enterprise Linux 8
Version: 5.6.4-2 (B) (Optional)
Filename: kmod-hp-ixgbe-5.6.4-2.rhel8u0.x86_64.compsig; kmod-hp-ixgbe-5.6.4-2.rhel8u0.x86_64.rpm; kmod-hp-ixgbe-5.6.4-2.rhel8u1.x86_64.compsig; kmod-hp-ixgbe-5.6.4-2.rhel8u1.x86_64.rpm; R

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Enhancements**
This product now supports Red Hat Enterprise Linux Server 8 update 1.

**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

HPE Intel ixgbe Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 5.6.4-2 (B) (Optional)
Filename: hp-ixgbe-kmp-default-5.6.4_k4.12.14_120-2.sles12sp5.x86_64.compsig; hp-ixgbe-kmp-default-5.6.4_k4.12.14_120-2.sles12sp5.x86_64.rpm; hp-ixgbe-kmp-default-5.6.4_k4.12.14_94.41-2.sles12sp5.x86_64.compsig; hp-ixgbe-kmp-default-5.6.4_k4.12.14_94.41-2.sles12sp5.x86_64.rpm; R

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 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 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
This product addresses an issue where a link is lost on a Virtual Machine when hypervisor is restored from low-power state, such as freeze or suspend.

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**Fixes**
This product fixes an issue of an infinite recursion in device shutdown path due to a corner case when PCIe link was down. This product fixes an issue of an typo in ethtool stats.

**Enhancements**
This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 15.

**Supported Devices and Features**
These drivers support the following network adapters:
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HP Ethernet 10Gb 2-port 560FLR Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HP Ethernet 10Gb 2-port 560FLR-T Adapter
- HP Ethernet 10Gb 2-port 562T Adapter

**HPE Intel ixgbe Drivers for SUSE Linux Enterprise Server 15**
Version: 5.6.4-2 (Optional)

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**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 ixgbe driver has high CPU overhead when an SFP+ module is absent.

**Enhancements**
This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 15.

**Supported Devices and Features**
These drivers support the following network adapters:
- HP Ethernet 10Gb 2-port 560FLR Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560M Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HP Ethernet 10Gb 2-port 562FLR-T Adapter
- HP Ethernet 10Gb 2-port 562T Adapter

**HPE Intel ixgbev Drivers for Red Hat Enterprise Linux 7 x86_64**
Version: 4.6.2-2 (Optional)
Filename: kmod-hp-ixgbevf-4.6.2-2.rhel7u6.x86_64.compsig; kmod-hp-ixgbevf-4.6.2-2.rhel7u6.x86_64.rpm; kmod-hp-ixgbevf-4.6.2-2.rhel7u7.x86_64.compsig; kmod-hp-ixgbevf-4.6.2-2.rhel7u7.x86_64.

**Important Note!**
HPE recommends the firmware provided in HPE Intel Online Firmware Upgrade Utility for Linux x86_64, version 1.19.0 or later, for use with these drivers.

**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 ixgbev driver has high CPU overhead when an SFP+ module is absent.

**Enhancements**
This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Intel ixgbev Drivers for Red Hat Enterprise Linux 7.
**Enhancements**

This product now supports Red Hat Enterprise Linux Server 7 update 7.

This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the [HPE Blade Intel ixgbevf Drivers for Red Hat Enterprise Linux 7](#).

**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

**Important Note!**

HPE recommends the firmware provided in [HPE Intel Online Firmware Upgrade Utility for Linux x86_64](#), version 1.19.0 or later, for use with these drivers.

**Enhancements**

This product now supports Red Hat Enterprise Linux Server 8 update 1.

**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

**Important Note!**

HPE recommends the firmware provided in [HPE Intel Online Firmware Upgrade Utility for Linux x86_64](#), version 1.19.0 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 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

**Important Note!**

HPE recommends the firmware provided in [HPE Intel Online Firmware Upgrade Utility for Linux x86_64](#), version 1.19.0 or later, for use with these drivers.

**Fixes**

This product addresses an issue where a link is lost on a Virtual Machine when hypervisor is restored from low-power state, such as freeze or suspend.

**Enhancements**

This product no longer supports SUSE Linux Enterprise Server 15 SP1.

**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

**Important Note!**

HPE recommends the firmware provided in [HPE Intel Online Firmware Upgrade Utility for Linux x86_64](#), version 1.19.0 or later, for use with these drivers.

**Fixes**

This product addresses an issue where a link is lost on a Virtual Machine when hypervisor is restored from low-power state, such as freeze or suspend.

**Enhancements**

This product no longer supports SUSE Linux Enterprise Server 15 SP1.

**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

**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 no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Intel ixn Driver for Windows Server 2012 R2.

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: 4.1.131.0 (B) (Optional)
Filename: cp040862.compsig; cp040862.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 supports Synergy and Blade Server.

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

HPE Intel ixn Driver for Windows Server 2012 R2
Version: 3.14.132.0 (B) (Optional)
Filename: cp040863.compsig; cp040863.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 supports Synergy and Blade Server.
**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

**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 no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Intel vxn Driver for Windows Server 2012 R2.
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 4.1.131.0 (B) or later.

Enhancements
This product now remove supports Synergy and Blade Server.

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

HPE Intel vxv Driver for Windows Server 2019
Version: 2.1.138.0 (B) (Optional)
Filename: cp040872.compsig; cp040872.exe

Prerequisites
This driver requires host driver version 4.1.143.0 (B) or later.

Enhancements
This product now remove supports Synergy and Blade Server.

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

HPE Mellanox CX4LX and CXS Driver for Windows Server 2016
Version: 2.30.21713.0 (Optional)
Filename: cp039898.compsig; cp039898.exe

Fixes
This product correct an issue which could be BSOD that occurred when calling the NDK connection OID, while increasing the number of connection. This product correct an issue which system is reboot required when upgrading the driver in some cases.

Enhancements
This product now remove supports Synergy and Blade Server.

Supported Devices and Features
This driver supports the following network adapters:
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 10Gbp 2-port 548SFP+ OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port 642SFP28 OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port 644SFP28 Adapter
- HPE Infiniband FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter
- HPE Infiniband EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE Infiniband EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 100Gb 2-port 842QSFP28 Adapter
HPE Mellanox MFT Driver and Firmware Tools for Windows Server 2019
Version: 2.30.21713.0 (Optional)
Filename: cpo39899.compsig; cpo39899.exe

**Fixes**

This product correct an issue which could be BSOD that occurred when calling the NDK connection OID, while increasing the number of connection. This product correct an issue which system is reboot required when upgrading the driver in some cases.

**Enhancements**

This product now remove supports Synergy and Blade Server.

**Supported Devices and Features**

This driver supports the following network adapters:
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Infiniband EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE Infiniband EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE Ethernet 100Gb 1-port 840QSFP28 Adapter

HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 12 SP4 (AMD64/EM64T)
Version: 4.13 (Optional)
Filename: kernel-mft-mlnx-kmp-default-4.13.0_k4.4.73_5-1.sles12sp3.x86_64.compsig; kernel-mft-mlnx-kmp-default-4.13.0_k4.4.73_5-1.sles12sp3.x86_64.rpm; mft-4.13.0-102.sles12sp3.x86_64.compsig; mft-4.13.0-102.sles12sp3.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 SP3 (AMD64/EM64T) supported by this binary rpm are:
4.4.73-5default and future update kernels.
Version: 4.13 (Optional)
Filename: kernel-mft-mlnx-kmp-default-4.13.0_k4.12.14_41-1.sles12sp4.x86_64.compsig; kernel-mft-mlnx-kmp-default-4.13.0_k4.12.14_41-1.sles12sp4.x86_64.rpm; mft-4.13.0-102.sles12sp4.x86_64.rp

**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:


**Fixes**

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 SP0 (AMD64/EM64T) supported by this binary rpm are:


**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:


**Fixes**

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:


HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 15 SP0 (AMD64/EM64T)

**Version: 4.13 (Optional)**
Filename: kernel-mft-mlnx-kmp-default-4.13.0_k4.12.14_23-1.sles15sp1.x86_64.compsig; kernel-mft-mlnx-kmp-default-4.13.0_k4.12.14_23-1.sles15sp1.x86_64.rpm; mft-4.13.0-102.sles15sp1.x86_64.rpm

**Fixes**

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 SP0 (AMD64/EM64T) supported by this binary rpm are:


**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:


**Fixes**

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:


HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 6 (x86_64)

**Version: 4.7 (Recommended)**
Filename: kmod-mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel7u6.x86_64.compsig; kmod-mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel7u6.x86_64.rpm; mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel7u6.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 Drivers and Utilities” Linux Software Delivery Repository (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 4.7:

- When configuring the Time-stamping feature, Completion Queue Events (CQE) compression would be disabled. This fix entailed the removal of a warning message that appeared upon attempt to fix the issue where software reset might have resulted in an order inversion of interface names.
- Server reboot might have resulted in a system crash.
- Virtual Function (VF) mirroring offload not supported issue have been fixed.
- The number of guaranteed counters per VF have been changed and now calculated based on the number of ports mapped to that VF. This allows more VFs to have counters allocated.

**Enhancements**

Changes and new features in HPE Mellanox RoCE driver version 4.7:

- For ConnectX-4 Adapters and above:
  - Added support for monitoring selected counters and generating a notification event(Monitor _Counter_Change event) upon changes made to these counters. The counters to be monitored include:
    - Added a new API which enables posting a single WR that completes the Protection Information (PI) operation internally. This reduces CPU utilization for posting and processing multiple the hardware according to the buffer memory layout.
    - Added support to read additional Electrically Erasable Programmable Read-only Memory (EEPROM) information from high pages of modules such as SFF-8436 and SFF-8636. Such information is useful for online cables only (e.g. PCI).
    - Thresholds and alarms can be read with "offset" and "length" parameters in any cable by running: ethtool -m <DEVNAME> offset X length Y
    - Added the ability to create rules to steer Remote Direct Memory Access(RDMA) traffic, with two destinations supported:DevX object and Queue Pair (QP). Multiple priorities are also supported.
    - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named Vhost) between the host and the HCA hardware. The emulation software creates this tunnel for every managed function and issues commands via the DevX general command interface.
- For ConnectX-5 Adapters and above:
  - Added support for QP and flow counters are now set per Process ID (PID) to allow better visibility of RDMA error states. Users will be able to manually tune the Q counter to monitor specific QP events.
  - Added support for On-Demand Paging (ODP) over DC transport.
  - Added support for Address Translation Services (ATS) feature, which improves performance for virtualized PeerDirect applications by caching PA -> MA translations and preventing PCI I/O operations.
  - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named Vhost) between the host and the HCA hardware. The emulation software creates this tunnel for every managed function and issues commands via the DevX general command interface.

**Supported Devices and Features**

**SUPPORTED KERNELS:**
The kernels of Red Hat Enterprise Linux 7 Update 6 (x86_64) supported by this binary rpm are:

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 7 (x86_64)
Version: 4.7 (Recommended)
Filename: kmod-mlnx-ova_kernal-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel7u7.x86_64.compsig; kmod-mlnx-ova_kernal-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel7u7.x86_64.rpm; mlnx-ova_kernal-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel7u7.x86_64.rpm

**Important Note!**
Mellanox Ethernet + RoCE Linux driver (mlnx-ova_kernal RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "Inf OFED VPI Drivers and Utilities" Linux Software Delivery Repository (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 4.7:**
- When configuring the Time-stamping feature, Completion Queue Events (CQE) compression would be disabled. This fix entailed the removal of a warning message that appeared upon attempt to fix the issue where software reset might have resulted in an order inversion of interface names.
- Server reboot might have resulted in a system crash.
- Virtual Function (VF) mirroring offload not supported issue has been fixed.
- The number of guaranteed counters per VF have been changed and now calculated based on the number of ports mapped to that VF. This allows more VFs to have counters allocated.

**Enhancements**
Changes and new features in HPE Mellanox RoCE driver version 4.7:
- **For ConnectX-4 Adapters and above:**
  - Added support for monitoring selected counters and generating a notification event (Monitor_Counters_Change event) upon changes made to these counters. The counters to be monitored support either 32-bit or 64-bit data types.
  - Added a new API which enables posting a single WR that completes the Protection Information (PI) operation internally. This reduces CPU utilization for posting and processing multiplexed traffic on the hardware according to the buffer memory layout.
  - Added support to read additional Electrically Erasable Programmable Read-only Memory (EEPROM) information from high pages of modules such as SFF-8436 and SFF-8636. Such information includes details about active cables only (e.g., optic), but thresholds and alarms can be read with "offset" and "length" parameters in any cable by running: ethtool -m <DEVNAME> offset X length Y
- **For ConnectX-5 Adapters and above:**
  - QP counters and flow counters are now set per Process ID (PID) to allow better visibility of RDMA error states. Users will be able to manually tune the Q counter to monitor specific QP counters.
  - Added support for On-Demand Paging (ODP) over DC transport.
  - Added support for Address Translation Services (ATS) feature, which improves performance for virtualized PeerDirect applications by caching PA -> MA translations and preventing PCI I/O latencies.
  - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named Vhost) and the HCA hardware. The emulation software creates this tunnel for every managed function and issues commands via the DevX general command interface.

**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 8 (x86_64)
Version: 4.7 (Recommended)
Filename: kmod-mlnx-ova_kernal-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel8u0.x86_64.compsig; kmod-mlnx-ova_kernal-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel8u0.x86_64.rpm; mlnx-ova_kernal-4.7-OFED.4.7.1.0.0.1.g1c4bf42.rhel8u0.x86_64.rpm

**Important Note!**
Mellanox Ethernet + RoCE Linux driver (mlnx-ova_kernal RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "Inf OFED VPI Drivers and Utilities" Linux Software Delivery Repository (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 4.7:**
- When configuring the Time-stamping feature, Completion Queue Events (CQE) compression would be disabled. This fix entailed the removal of a warning message that appeared upon attempt to fix the issue where software reset might have resulted in an order inversion of interface names.
- Server reboot might have resulted in a system crash.
- Virtual Function (VF) mirroring offload not supported issue has been fixed.
- The number of guaranteed counters per VF have been changed and now calculated based on the number of ports mapped to that VF. This allows more VFs to have counters allocated.

**Enhancements**
Changes and new features in HPE Mellanox RoCE driver version 4.7:
- **For ConnectX-4 Adapters and above:**
  - Added support for monitoring selected counters and generating a notification event (Monitor_Counters_Change event) upon changes made to these counters. The counters to be monitored support either 32-bit or 64-bit data types.
  - Added a new API which enables posting a single WR that completes the Protection Information (PI) operation internally. This reduces CPU utilization for posting and processing multiplexed traffic on the hardware according to the buffer memory layout.
  - Added support to read additional Electrically Erasable Programmable Read-only Memory (EEPROM) information from high pages of modules such as SFF-8436 and SFF-8636. Such information includes details about active cables only (e.g., optic), but thresholds and alarms can be read with "offset" and "length" parameters in any cable by running: ethtool -m <DEVNAME> offset X length Y
- **For ConnectX-5 Adapters and above:**
  - QP counters and flow counters are now set per Process ID (PID) to allow better visibility of RDMA error states. Users will be able to manually tune the Q counter to monitor specific QP counters.
  - Added support for On-Demand Paging (ODP) over DC transport.
  - Added support for Address Translation Services (ATS) feature, which improves performance for virtualized PeerDirect applications by caching PA -> MA translations and preventing PCI I/O latencies.
  - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named Vhost) and the HCA hardware. The emulation software creates this tunnel for every managed function and issues commands via the DevX general command interface.

**Supported Devices and Features**
SUPPORTED KERNELS: The kernels of Red Hat Enterprise Linux 8 (x86_64) supported by this binary rpm are: 3.10.0-957.el7 - (x86_64) and future update kernels.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP3 (AMD64/EM64T)

Version: 4.7 (Recommended)

Filename: mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1cbf42.sles12sp3.x86_64.rpm; mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1cbf42.sles12sp3.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 "Int OFED VPI Drivers and Utilities" Linux Software Delivery Repository (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 4.7:
- When configuring the Time-stamping feature, Completion Queue Events (CQE) compression would be disabled. This fix entailed the removal of a warning message that appeared upon attempt
- Fixed the issue where software reset might have resulted in an order inversion of interface names.
- Server reboot might have resulted in a system crash.
- Virtual Function (VF) mirroring offload not supported issue have been fixed.
- The number of guaranteed counters per VF have been changed and now calculated based on the number of ports mapped to that VF. This allows more VFs to have counters allocated.

Enhancements
Changes and new features in HPE Mellanox RoCE driver version 4.7:
- For ConnectX-4 Adapters and above:
  - Added support for monitoring selected counters and generating a notification event (Monitor_Counter_Change event) upon changes made to these counters. The counters to be monitored include:
    - Additional support for posting a single WR that completes the Protection Information (PI) operation internally. This reduces CPU utilization for posting and processing multiple PI operations over the hardware according to the buffer memory layout.
    - Added support to read additional Electrically Erasable Programmable Read-only Memory (EEPROM) information from high pages of modules such as SFF-8436 and SFF-8636. Such information is written on active cables only (e.g., optic), but thresholds and alarms can be read with "offset" and "length" parameters in any cable by running: ethtool -m <DEVNAME> offset X length Y
    - Added the ability to create rules to steer Remote Direct Memory Access (RDMA) traffic, with two destinations supported: DevX object and Queue Pair (QP). Multiple priorities are also supported.
  - For ConnectX-5 Adapters and above:
    - QP counters and flow counters are now set per Process ID (PID) to allow better visibility of RDMA error states. Users will be able to manually tune the Q counter to monitor specific QP counters.
    - Added support for On-Demand Paging (ODP) over DC transport.
    - Added support for Address Translation Services (ATS) Feature, which improves performance for virtualized PeerDirect applications by caching PA-> MA translations and preventing PCI I/O request storms.
    - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named Vhost) for each function and issues commands via the DevX general command interface.

Supported Devices and Features
SUPPORTED KERNELS:
The kernels of SUSE LINUX Enterprise Server 12 SP3 (AMD64/EM64T) supported by this binary rpm are:
4.4.73-5.default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T)

Version: 4.7 (Recommended)

Filename: mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1cbf42.sles12sp4.x86_64.rpm; mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1cbf42.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 "Int OFED VPI Drivers and Utilities" Linux Software Delivery Repository (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 4.7:
- When configuring the Time-stamping feature, Completion Queue Events (CQE) compression would be disabled. This fix entailed the removal of a warning message that appeared upon attempt
- Fixed the issue where software reset might have resulted in an order inversion of interface names.
- Server reboot might have resulted in a system crash.
- Virtual Function (VF) mirroring offload not supported issue have been fixed.
- The number of guaranteed counters per VF have been changed and now calculated based on the number of ports mapped to that VF. This allows more VFs to have counters allocated.

Enhancements
Changes and new features in HPE Mellanox RoCE driver version 4.7:
- For ConnectX-4 Adapters and above:
  - Added support for monitoring selected counters and generating a notification event (Monitor_Counter_Change event) upon changes made to these counters. The counters to be monitored include:
    - Added a new API which enables posting a single WR that completes the Protection Information (PI) operation internally. This reduces CPU utilization for posting and processing multiple PI operations over the hardware according to the buffer memory layout.
    - Added support to read additional Electrically Erasable Programmable Read-only Memory (EEPROM) information from high pages of modules such as SFF-8436 and SFF-8636. Such information is written on active cables only (e.g., optic), but thresholds and alarms can be read with "offset" and "length" parameters in any cable by running: ethtool -m <DEVNAME> offset X length Y
    - Added the ability to create rules to steer Remote Direct Memory Access (RDMA) traffic, with two destinations supported: DevX object and Queue Pair (QP). Multiple priorities are also supported.
  - For ConnectX-5 Adapters and above:
    - QP counters and flow counters are now set per Process ID (PID) to allow better visibility of RDMA error states. Users will be able to manually tune the Q counter to monitor specific QP counters.
    - Added support for On-Demand Paging (ODP) over DC transport.
    - Added support for Address Translation Services (ATS) Feature, which improves performance for virtualized PeerDirect applications by caching PA-> MA translations and preventing PCI I/O request storms.
    - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named Vhost) for each function and issues commands via the DevX general command interface.
- Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named Vhost) for each function and issues commands via the DevX general command interface.

Supported Devices and Features
SUPPORTED KERNELS:
The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are:
4.4.73-5.default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 15 SP4 (AMD64/EM64T)

Version: 4.7 (Recommended)

Filename: mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1cbf42.sles15sp0.x86_64.rpm; mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1cbf42.sles15sp0.x86_64.rpm; mlnx-ofa_kernel-kmp-default-4.7_k4.12.14_94.41-OFED.4.7.1.0.0.1.g1cbf42.sles15sp4.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 "Int OFED VPI Drivers and Utilities" Linux Software Delivery Repository (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 4.7:
- When configuring the Time-stamping feature, Completion Queue Events (CQE) compression would be disabled. This fix entailed the removal of a warning message that appeared upon attempt
- Fixed the issue where software reset might have resulted in an order inversion of interface names.
- Server reboot might have resulted in a system crash.
- Virtual Function (VF) mirroring offload not supported issue have been fixed.
- The number of guaranteed counters per VF have been changed and now calculated based on the number of ports mapped to that VF. This allows more VFs to have counters allocated.

Enhancements
Changes and new features in HPE Mellanox RoCE driver version 4.7:
- For ConnectX-4 Adapters and above:
  - Added support for monitoring selected counters and generating a notification event (Monitor_Counter_Change event) upon changes made to these counters. The counters to be monitored include:
    - Added a new API which enables posting a single WR that completes the Protection Information (PI) operation internally. This reduces CPU utilization for posting and processing multiple PI operations over the hardware according to the buffer memory layout.
    - Added support to read additional Electrically Erasable Programmable Read-only Memory (EEPROM) information from high pages of modules such as SFF-8436 and SFF-8636. Such information is written on active cables only (e.g., optic), but thresholds and alarms can be read with "offset" and "length" parameters in any cable by running: ethtool -m <DEVNAME> offset X length Y
    - Added the ability to create rules to steer Remote Direct Memory Access (RDMA) traffic, with two destinations supported: DevX object and Queue Pair (QP). Multiple priorities are also supported.
  - For ConnectX-5 Adapters and above:
    - QP counters and flow counters are now set per Process ID (PID) to allow better visibility of RDMA error states. Users will be able to manually tune the Q counter to monitor specific QP counters.
    - Added support for On-Demand Paging (ODP) over DC transport.
    - Added support for Address Translation Services (ATS) Feature, which improves performance for virtualized PeerDirect applications by caching PA-> MA translations and preventing PCI I/O request storms.
    - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named Vhost) for each function and issues commands via the DevX general command interface.

Supported Devices and Features
SUPPORTED KERNELS:
The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are:
4.4.73-5.default - (AMD64/EM64T) and future update kernels.

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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 "InfiniFID VPD Drivers and Utilities" Linux Software Delivery Repository (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 4.7:

- When configuring the Time-stamping feature, Completion Queue Events (CQE) compression would be disabled. This fix entailed the removal of a warning message that appeared upon attempt
- Fixed the issue where software reset might have resulted in an order inversion of interface names.
- Server reboot might have resulted in a system crash.
- Virtual Function (VF) mirroring offload not supported issue have been fixed.
- The number of guaranteed counters per VF have been changed and now calculated based on the number of ports mapped to that VF. This allows more VFs to have counters allocated.

Enhancements

Changes and new features in HPE Mellanox RoCE driver version 4.7:

- For ConnectX-4 Adapters and above:
  - Added support for monitoring selected counters and generating a notification event(Monitor,Counter,Change event) upon changes made to these counters. The counters to be monitor
  - Added a new API which enables posting a single WR that completes the Protection Information (PI) operation internally. This reduces CPU utilization for posting and processing multiple
  - Added support to read additional Electrically Erasable Programmable Read-only Memory (EEEPROM) information from high pages of modules such as SFF-8436 and SFF-8636. Such info
  - Added the ability to create rules to steer Remote Direct Memory Access(RDMA) traffic, with two destinations supported:DevX object and Queue Pair (QP). Multiple priorities are also su

- For ConnectX-5 Adapters and above:
  - QP counters and flow counters are now set per Process ID (PID) to allow better visibility of RDMA error states. Users will be able to manually tune the Q counter to monitor specific QP
  - Added support for On-Demand Paging (ODP) over DC transport.
  - Added support for Address Translation Services (ATS) feature, which improves performance for virtualized PeerDirect applications by caching PA -> MA translations and preventing PCI I
  - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named V host and the HCA hardware. The emulation software creates this tunnel for every managed function and issues commands via the DevX general command interface.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 15 SP0 (AMD64/EM64T) supported by this binary rpm are:

4.12.14-23-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: 4.7 (Recommended)

Filename: mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1c4bf42.sles15sp1.x86_64.compsig; mlnx-ofa_kernel-4.7-OFED.4.7.1.0.0.1.g1c4bf42.sles15sp1.x86_64.rpm; mlnx-ofa_kernel-kmp-default-4.7_k4.12.14.4.7_k4.12.14.195-OFED.4.7.1.0.0.1.g1c4bf42.sles15sp1.x86_64.compsig; mlnx-ofa_kernel-kmp-default-4.7_k4.12.14.195-OFED.4.7.1.0.0.1.g1c4bf42.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 "InfiniFID VPD Drivers and Utilities" Linux Software Delivery Repository (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 4.7:

- When configuring the Time-stamping feature, Completion Queue Events (CQE) compression would be disabled. This fix entailed the removal of a warning message that appeared upon attempt
- Fixed the issue where software reset might have resulted in an order inversion of interface names.
- Server reboot might have resulted in a system crash.
- Virtual Function (VF) mirroring offload not supported issue have been fixed.
- The number of guaranteed counters per VF have been changed and now calculated based on the number of ports mapped to that VF. This allows more VFs to have counters allocated.

Enhancements

Changes and new features in HPE Mellanox RoCE driver version 4.7:

- For ConnectX-4 Adapters and above:
  - Added support for monitoring selected counters and generating a notification event(Monitor,Counter,Change event) upon changes made to these counters. The counters to be monitor
  - Added a new API which enables posting a single WR that completes the Protection Information (PI) operation internally. This reduces CPU utilization for posting and processing multiple
  - Added support to read additional Electrically Erasable Programmable Read-only Memory (EEEPROM) information from high pages of modules such as SFF-8436 and SFF-8636. Such info
  - Added the ability to create rules to steer Remote Direct Memory Access(RDMA) traffic, with two destinations supported:DevX object and Queue Pair (QP). Multiple priorities are also su

- For ConnectX-5 Adapters and above:
  - QP counters and flow counters are now set per Process ID (PID) to allow better visibility of RDMA error states. Users will be able to manually tune the Q counter to monitor specific QP
  - Added support for On-Demand Paging (ODP) over DC transport.
  - Added support for Address Translation Services (ATS) feature, which improves performance for virtualized PeerDirect applications by caching PA -> MA translations and preventing PCI I
  - Added support for Device Emulation in BlueField. This mechanism allows function-A to perform operations on behalf of function-B. The emulation manager creates a channel (named V host and the HCA hardware. The emulation software creates this tunnel for every managed function and issues commands via the DevX general command interface.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 15 SP0 (AMD64/EM64T) supported by this binary rpm are:

4.12.14-193-default - (AMD64/EM64T) and future update kernels.

HPE Qlogic FastLinQ 10/25/50 GBE Drivers for Red Hat Enterprise Linux 7 x86_64

Version: 8.4.28.0-1 (Optional)

Filename: kmod-qlogic-fastling-8.42.8.0-1.rhel7u6.x86_64.compsig; kmod-qlogic-fastling-8.42.8.0-1.rhel7u6.x86_64.rpm; kmod-qlogic-fastling-8.42.8.0-1.rhel7u7.x86_64.compsig; kmod-qlogic-fastling-8.42.8.6

Important Note!

HPE recommends the firmware provided in HPE Qlogic FastLinQ Online Firmware Upgrade Utility for Linux x86_64, version 1.8.0 or later, for use with these drivers.
**Fixes**

- This product addresses VM crash with VFs.
- This product addresses an issue where qedr unload causes HW error after creating bonding interfaces using NPAR functions.
- This product addresses an issue where the system crash while running VF RDMA traffic in max VFs configuration.
- This product addresses an issue where the system crash while collecting GRC dump.

**Enhancements**

- This product now remove supports Synergy and Blade Server.
- This product now supports Red Hat Enterprise Linux Server 7 update 7.

**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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**Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86_64, version 1.8.0 or later, for use with these drivers.

**Enhancements**

- Initial release.

**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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**Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86_64, version 1.8.0 or later, for use with these drivers.

**Fixes**

- This product addresses VM crash with VFs.
- This product addresses an issue where qedr unload causes HW error after creating bonding interfaces using NPAR functions.
- This product addresses an issue where the system crash while running VF RDMA traffic in max VFs configuration.
- This product addresses an issue where the system crash while collecting GRC dump.

**Enhancements**

- This product now remove supports Synergy and Blade Server.

**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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**Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86_64, version 1.8.0 or later, for use with these drivers.

**Fixes**

- This product addresses VM crash with VFs.
- This product addresses an issue where qedr unload causes HW error after creating bonding interfaces using NPAR functions.
- This product addresses an issue where the system crash while running VF RDMA traffic in max VFs configuration.
- This product addresses an issue where the system crash while collecting GRC dump.

**Enhancements**

- This product now remove supports Synergy and Blade Server.

**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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**Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86_64, version 1.8.0 or later, for use with these drivers.

**Fixes**

- This product addresses VM crash with VFs.
- This product addresses an issue where qedr unload causes HW error after creating bonding interfaces using NPAR functions.
- This product addresses an issue where the system crash while running VF RDMA traffic in max VFs configuration.
- This product addresses an issue where the system crash while collecting GRC dump.

**Enhancements**

- This product now remove supports Synergy and Blade Server.

**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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**Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86_64, version 1.8.0 or later, for use with these drivers.
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: 8.42.10.0 (Optional)*

*Filename: cp039900.compsig; cp039900.exe*

**Important Note!**

HPE recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions, version 5.2.0.0 or later, for use with these drivers.

**Fixes**

- This product corrects an issue which VLAN indication did not arrive when the driver is in UFP mode.
- This product corrects an issue that Windows system crash when VF driver on BB.
- This product corrects an issue which BSOD in windows 2019 VM when installing NDIS driver.
- This product corrects an issue which BSOD on Windows 2019 bugcheck 0x139 on QENDA.sys driver.

**Enhancements**

This product now removes supports Synergy and Blade Server.

**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+ OCSP3 Adapter
- HPE Ethernet 10Gb 2-port 523T OCSP3 Adapter
- HPE Ethernet 10Gb 2-port 521T 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: 2019.12.20 (Optional)*

*Filename: cp039895.compsig; cp039895.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 recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware, version 4.11.0 or later, for use with this driver.

**Fixes**

- This product addresses a PSOD in ESXi6.5 when running FCoE continuous reboot.

**Enhancements**

This product now removes supports Synergy and Blade Server.

**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+ OCSP3 Adapter
- HPE Ethernet 10Gb 2-port 523T OCSP3 Adapter
- HPE Ethernet 10Gb 2-port 521T 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: 2019.12.20 (Optional)*

*Filename: cp039896.compsig; cp039896.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 recommends the firmware provided in HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware, version 4.11.0 or later, for use with this driver.

**Fixes**

- This product addresses a PSOD in ESXi6.7 when running FCoE continuous reboot.

**Enhancements**

This product now removes supports Synergy and Blade Server.

**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+ OCSP3 Adapter
- HPE Ethernet 10Gb 2-port 523T OCSP3 Adapter
- HPE Ethernet 10Gb 2-port 521T 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
Enhancements
This product now remove supports Synergy and Blade Server.

Supported Devices and Features
This product supports the following network adapters:
- HPE Ethernet 10Gb 2-port S21T Adapter
- HPE Ethernet 10Gb 2-port S24SFP+ 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

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 S21T Adapter
- HPE Ethernet 10Gb 2-port S24SFP+ 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

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 S21T Adapter
- HPE Ethernet 10Gb 2-port S24SFP+ 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

HPE QLogic FastLinQ Open-iSCSI Driver for SUSE Linux Enterprise Server 12 SP3
Version: 2.0-873.113-1 (D) (Optional)
Filename: qlgc-open-iscsi-2.0_873.113.sles12sp3-1.x86_64.compsig; qlgc-open-iscsi-2.0_873.113.sles12sp3-1.x86_64.rpm; README
Enhancements
This product now remove supports Synergy and Blade Server.

Supported Devices and Features
This product supports the following network adapters:
- HPE Ethernet 10Gb 2-port S21T Adapter
- HPE Ethernet 10Gb 2-port S24SFP+ 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

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 now remove supports Synergy and Blade Server.

Supported Devices and Features
This product supports the following network adapters:
- HPE Ethernet 10Gb 2-port S21T Adapter
- HPE Ethernet 10Gb 2-port S24SFP+ 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

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 now remove supports Synergy and Blade Server.
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

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

HPE QLogic FastLinQ Open-SCSI 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.rpm; README

Enhancements

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
- HPE StoreFabric CN1300R-T Converged Network Adapter

Fixes

This product addresses an iSCSI discovery failure with VLAN.

Enhancements

This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade QLogic NX2 iSCSI Offload IO Daemon for Red Hat Enterprise Linux.

This product no longer supports Synergy servers and devices. The Synergy-specific product is not yet available. You should continue to use version 2.11.5.13-3 of this product until the new Synergy

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 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
- HP FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HP Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HP StoreFabric CN1100R-T Converged Network Adapter

Enhancements

This product now supports Red Hat Enterprise 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 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
- HP FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HP Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HP StoreFabric CN1100R-T Converged Network Adapter

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
- HP FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HP Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HP StoreFabric CN1100R-T Converged Network Adapter
**Fixes**

This product addresses an iSCSI discovery failure with VLAN.

**Enhancements**

This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise.

This product no longer supports Synergy servers and devices. The Synergy-specific product is not yet available. You should continue to use version 2.11.5.13-3 of this product until the new Synergy product is available.

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port S21T Adapter
- HPE Ethernet 10Gb 2-port S245F+ Adapter
- HPE Ethernet 10Gb 2-port S305F+ Adapter
- HPE Ethernet 10Gb 2-port S30T Adapter
- HP FlexFabric 10Gb 2-port S33F+R-T Adapter
- HP FlexFabric 10Gb 2-port S33F-S+R+P Adapter
- HP FlexFabric 10Gb 4-port S36F+R-T Adapter
- HP Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HP Ethernet 10/25Gb 2-port 622F-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HP StoreFabric CN1100R-T Converged Network Adapter

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**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port S21T Adapter
- HPE Ethernet 10Gb 2-port S245F+ Adapter
- HPE Ethernet 10Gb 2-port S305F+ Adapter
- HPE Ethernet 10Gb 2-port S30T Adapter
- HP FlexFabric 10Gb 2-port S33F+R-T Adapter
- HP FlexFabric 10Gb 2-port S33F-S+R+P Adapter
- HP FlexFabric 10Gb 4-port S36F+R-T Adapter
- HP Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HP Ethernet 10/25Gb 2-port 622F-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HP StoreFabric CN1100R-T Converged Network Adapter

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**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port S21T Adapter
- HPE Ethernet 10Gb 2-port S245F+ Adapter
- HPE Ethernet 10Gb 2-port S305F+ Adapter
- HPE Ethernet 10Gb 2-port S30T Adapter
- HP FlexFabric 10Gb 2-port S33F+R-T Adapter
- HP FlexFabric 10Gb 2-port S33F-S+R+P Adapter
- HP FlexFabric 10Gb 4-port S36F+R-T Adapter
- HP Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HP Ethernet 10/25Gb 2-port 622F-SFP28 Converged Network Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HP StoreFabric CN1100R-T Converged Network Adapter
HPE Ethernet 10Gb 2-port 521T Adapter
HPE Ethernet 10Gb 2-port 524SFP+ Adapter
HP Ethernet 10Gb 2-port 530SFPP+ 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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**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 recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for VMware, version 1.26.0 or later, for use with this driver.

**Fixes**

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

**Enhancements**

This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere.

This product no longer supports Synergy servers and devices. The Synergy-specific product is not yet available. You should continue to use version 2019.08.02 of this product until the new Synergy product is available.

**Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFPP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Dual Port Converged Network Adapter

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HPE Ethernet 10Gb 2-port 521T Adapter
HPE Ethernet 10Gb 2-port 524SFP+ Adapter
HP Ethernet 10Gb 2-port 530SFPP+ 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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**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 recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for VMware, version 1.26.0 or later, for use with this driver.

**Fixes**

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

**Enhancements**

This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere.

This product no longer supports Synergy servers and devices. The Synergy-specific product is not yet available. You should continue to use version 2019.08.02 of this product until the new Synergy product is available.

**Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFPP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Dual Port Converged Network Adapter

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HPE Ethernet 10Gb 2-port 521T Adapter
HPE Ethernet 10Gb 2-port 524SFP+ Adapter
HP Ethernet 10Gb 2-port 530SFPP+ 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 Drivers for Red Hat Enterprise Linux 7 x86_64
Filename: kmod-netxtreme2-7.14.63.1-1.x86_64.compsig; kmod-netxtreme2-7.14.63.1-1.x86_64.rpm; kmod-netxtreme2-7.14.63.1-1.x86_64.compsig; kmod-netxtreme2-7.14.63.1-1.x86_64.rpm

**Important Note!**

HPE recommends the firmware provided in HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64, version 2.26.0 or later, for use with these drivers.

**Fixes**

This product fixes an issue where the network interface fail to connect to iSCSI target.

**Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 530SFPP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Dual Port Converged Network Adapter
**Important Note!**

HPE recommends the firmware provided in **HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64**, version 2.26.0 or later, for use with these drivers.

**Fixes**

This product fixes an issue where the network interface fail to connect to iSCSI target.

**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

**HPE QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 12 x86_64**

Version: 7.14.63.1-1 *(Optional)*


**Important Note!**

HPE recommends the firmware provided in **HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64**, version 2.26.0 or later, for use with these drivers.

**Fixes**

This product fixes an issue where the network interface fail to connect to iSCSI target.

**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

**HPE QLogic NX2 10/20 GbE Multifunction Drivers for SUSE Linux Enterprise Server 15**

Version: 7.14.63.1-1 *(Optional)*


**Important Note!**

HPE recommends the firmware provided in **HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64**, version 2.26.0 or later, for use with these drivers.

**Fixes**

This product fixes an issue where the network interface fail to connect to iSCSI target.

**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

**HPE QLogic NX2 10/20 GbE Multifunction Drivers for Windows Server x64 Editions**

Version: 7.13.171.0 *(Optional)*

Filename: cp040875.compsig; cp040875.exe

**Important Note!**

HP recommends the firmware provided in **HPE QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions**, version 5.2.0.0 or later, for use with these drivers.

**Fixes**

This product addresses an Adapter Link Down error that occurs due to the detection of a pause flood by the switch. This product addresses Assert failures seen when powering on SR-IOV-enabled Virtual Machines with Virtual Functions from a single OneView function.

**Enhancements**

This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the **HPE Blade QLogic NX2 10/20 GbE Multifunction Drivers for Windows Server**.

This product no longer supports Synergy servers and devices. The Synergy-specific product is not yet available. You should continue to use version 7.13.165.0 of this product until the new Synergy p

**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
**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 OCPC3 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 OCPC3 Adapter
- Intel(R) I350 Gigabit Network Connection

**Linux Intel Drivers build bundle for for SUSE Linux Enterprise Server**

Version: 1.0.0.0 (Optional)

Filename: hp-i40e-2.10.19.81-1.all.src.rpm; hp-iavf-3.7.61.20-1.all.src.rpm; hp-igb-6.2.2-1.all.src.rpm; hp-ixgbe-5.6.4-2.all.src.rpm; hp-ixgbevf-4.6.2-2.all.src.rpm; i40e-README; iavf-README; ice-0.12.24-1.rhel7u6.x86_64.rpm; kmod-hp-i40e-2.10.19.81-1.rhel7u7.x86_64.rpm; kmod-hp-i40e-2.10.19.81-1.rhel8u0.x86_64.rpm; kmod-hp-i40e-2.10.19.81-1.rhel8u1.x86_64.rpm; kmod-hp-iavf-3.7.61.20-1.rhel8u0.x86_64.rpm; kmod-hp-iavf-3.7.61.20-1.rhel8u1.x86_64.rpm; kmod-hp-igb-6.2.2-1.rhel7u6.x86_64.rpm; kmod-hp-igb-6.2.2-1.rhel7u7.x86_64.rpm; kmod-hp-igb-6.2.2-1.rhel8u0.x86_64.rpm; kmod-hp-igb-6.2.2-1.rhel8u1.x86_64.rpm; kmod-hp-ixgbe-5.6.4-2.rhel7u6.x86_64.rpm; kmod-hp-ixgbe-5.6.4-2.rhel7u7.x86_64.rpm; kmod-hp-ixgbe-5.6.4-2.rhel8u0.x86_64.rpm; kmod-hp-ixgbe-5.6.4-2.rhel8u1.x86_64.rpm; kmod-hp-ixgbevf-4.6.2-2.rhel7u6.x86_64.rpm; kmod-hp-ixgbevf-4.6.2-2.rhel7u7.x86_64.rpm; kmod-hp-ixgbevf-4.6.2-2.rhel8u0.x86_64.rpm; kmod-hp-ixgbevf-4.6.2-2.rhel8u1.x86_64.rpm; kmod-ice-0.12.24-1.rhel7u6.x86_64.rpm; kmod-ice-0.12.24-1.rhel7u7.x86_64.rpm; kmod-ice-0.12.24-1.rhel8u0.x86_64.rpm; kmod-ice-0.12.24-1.rhel8u1.x86_64.rpm; kmod-irdma-0.13.41-1.rhel7u6.x86_64.rpm; kmod-irdma-0.13.41-1.rhel7u7.x86_64.rpm; kmod-irdma-0.13.41-1.rhel8u0.x86_64.rpm; kmod-irdma-0.13.41-1.rhel8u1.x86_64.rpm; kmod-ixgbe-README; kmod-ixgbevf-README

**Enhancements**

Initial release.

**Marvell FastLinQ 10/25/50 GbE Drivers for Windows Server x64 Editions**

Version: 8.42.10.0 (Optional)

Filename: cp041118.compsig; cp041118.exe

**Important Note!**

HPE recommends the firmware provided in Marvell FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions, version 5.2.0.0 or later, for use with these drivers.

**Enhancements**

Initial release.

**Supported Devices and Features**

This product supports the following network adapters:
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HCLCU Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCQ Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HCLCU Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HQCQ Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HCLCU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HQCQ Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HCLCU Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HQCQ Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HCLCU Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HQCQ Adapter

**Mellanox CX4LX and CX5 Driver for Windows Server 2016**

Version: 2.30.21713.0 (Optional)

Filename: cp041202.compsig; cp041202.exe

**Enhancements**

Initial release.
This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port SFP+ MX6421A-ACAB OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP28 MX512F-ACAT Adapter
- HPE Ethernet 10Gb 2-port SFP28 MX512A-ACAI OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MX4121A-XCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP28 MX516A-CCAT Adapter

**Enhancements**

- Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port SFP+ MX6421A-ACAB OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP28 MX512F-ACAT Adapter
- HPE Ethernet 10Gb 2-port SFP28 MX512A-ACAI OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MX4121A-XCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP28 MX516A-CCAT Adapter

**Mellanox CX4LX and CX5 Driver for Windows Server 2019**

Version: 2.30.21713.0 *(Optional)*

File name: cp041203.compsig; cp041203.exe

**Enhancements**

- Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port SFP+ MX6421A-ACAB OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP28 MX512F-ACAT Adapter
- HPE Ethernet 10Gb 2-port SFP28 MX512A-ACAI OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MX4121A-XCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP28 MX516A-CCAT Adapter

**Enhancements**

- Initial release.

**Supported Devices and Features**

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port SFP+ MX6421A-ACAB OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP28 MX512F-ACAT Adapter
- HPE Ethernet 10Gb 2-port SFP28 MX512A-ACAI OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MX4121A-XCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP28 MX516A-CCAT Adapter

**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 40G speed, the "port type" field is "FIBER" regardless of the actual speed of the link.
- 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

**Fixes**

No Fixes were included in version 3.16.11.10.

**Enhancements**

- Changed 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**

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<td>HPE InfiniBand QDR/Ethernet 10Gb 2-port S44+M Adapter</td>
<td>HP_1350110023</td>
</tr>
<tr>
<td>764283-B21</td>
<td>HPE InfiniBand PDR/Ethernet 10Gb/40Gb 2-port S44+M Adapter</td>
<td>HP_1360110017</td>
</tr>
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<td>HPE Ethernet 10Gb 2-port S46FLR-SFP+ Adapter</td>
<td>HP_2240110004</td>
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</table>

**Important Note!**

**Known Issues in version 4.16.14.2:**

- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- ECN statistic counters accumulatorsPeriod and ecnMarkedPackets display wrong values and cannot be cleared.
- The hardware can offload only up to 256 Bytes of headers.
- The "esxcli network nic stats v if stats" command no longer supports the "ifindex" parameter.
- 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
- Genove 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 Ox1: firmware internal error
  - extSync Ox04ee
- The 'esxcli mellanox uplink link info -u <vmnic name> -a' 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

For further information on the release notes for ESXi 6.5 Driver Version 4.16.14.2 follow the below link:

https://www.mellanox.com/page/products_dyn?product_family=29&mtag=vmware_driver

**Fixes**

The following issues have been fixed in version 4.16.14.2:

-...

**Enhancements**

- Initial release.

**Supported Devices and Features**

-...

**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 40G speed, the "port type" field is "FIBER" regardless of the actual speed of the link.
- 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

**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**

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</table>
Enhancements

Changes and New Features in smart component version 2019.06.19:
- Added support for the following adapters:
  - HPE Ethernet 10/25Gb 2-port 6425FP28 Adapter (HPE Part Number: P13188-B21)
  - HPE Ethernet 10/25Gb 2-port 6425FP28 OCP3 Adapter (HPE Part Number: P10112-B21)
  - HPE Ethernet 10Gb 2-port 5485FP+ OCP3 Adapter (HPE Part Number: P11341-B21)

New features and changes in version 4.16.14.2:
- Removed a VF (Virtual Fuction) driver limitation. Now the driver can support the maximum number of VFs supported by the firmware.

Supported Devices and Features

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<td>825111-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 84Q5FP28 Adapter</td>
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<td>872725-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 84Q5FP28 Adapter</td>
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<tr>
<td>879482-B21</td>
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Important Note!

- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- ECN statistic counters accumulatorsPeriod and ecnMarkedRoccePackets 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 "exclsl network snioicv fc stats" command is not supported. When running this command on a vmnic, 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 cannot change its 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 device name, is displayed.
- Operations on vnics which are in passthru mode are not supported.
- Setting the "exclsl mellanox uplink link info -u <vmnic name>" command reports the 'Auto negotiation' capability always as 'true'.
- SMP MAxS (betndiscov, sminfo, linkinfo, smdmp, smpquery, ibdagent, and smpquery) are not supported on the VFs.
- IPv6 as inner packet is not supported.
- Firmware VF configuration must be N+1 (while N is the required VF number). For example: If your configuration requires 10 VFs, the firmware must be set to support 16 VFs (ESXi Limitation).
- 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.
- Releasing the driver when the SR-IOV VFs are ON, will result in Purple Screen of Death (PSOD).
- A PSOD may occur during vMotion over ENS(Enhanced Network stack) VMk.
- VGF traffic over VXLAN interfaces is currently not supported.
- VFS with SR-IOV cannot be powered on when running low on available vectors.
- 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 iMF1504: interrupted by vMotion; guest PSOD" during ENS uplink detachment from the ENS DVS.
- 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 63

For further information on the release notes for ESXi 6.7 Driver Version 4.17.15.16 follow the below link:
https://www.mellanox.com/page/products_dyn?product_family=29&mtag=vmware_driver

Fixes

The following issues have been fixed in version 4.17.15.16:
- Fixed an issue that prevented ESXi from being discovered via the CDP (Cisco Discovery Protocol) protocol on ConnectX-4 Lx adapter cards.

Enhancements

Changes and New Features in smart component version 2019.06.19:
- Added support for the following adapters:
  - HPE Ethernet 10/25Gb 2-port 6425FP28 Adapter (HPE Part Number: P13188-B21)
  - HPE Ethernet 10/25Gb 2-port 6425FP28 OCP3 Adapter (HPE Part Number: P10112-B21)
  - HPE Ethernet 10Gb 2-port 5485FP+ OCP3 Adapter (HPE Part Number: P11341-B21)

New features and changes in version 4.17.15.16:
- Enhanced Network Stack (ENS)

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Enhancements

VM65/67 nms 4.12.0.105

Driver - Storage
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/

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
HPE ProLiant Gen10 Smart Array Controller (64-bit) Driver for Red Hat Enterprise Linux 7 (64-bit)
Version: 1.2.10-025 (Recommended)
Filename: kmod-smartpqi-1.2.10-025.rhel7u6.x86_64.compsig; kmod-smartpqi-1.2.10-025.rhel7u7.x86_64.rpm; kmod-smartpqi-1.2.10-025.rhel7u7.x86_64.compsig; kmod-smartpqi-1.2.10-025.rhel7u7.

Fixes

Controller could stop responding while processing PQI reset during a power cycle due to all pending IO's not completed at the time of the power cycle.

HPE ProLiant Gen10 Smart Array Controller (64-bit) Driver for Red Hat Enterprise Linux 8 (64-bit)
Version: 1.2.10-027 (Recommended)
Filename: kmod-smartpqi-1.2.10-027.rhel8u0.x86_64.compsig; kmod-smartpqi-1.2.10-027.rhel8u1.x86_64.rpm; kmod-smartpqi-1.2.10-027.rhel8u1.x86_64.compsig; kmod-smartpqi-1.2.10-027.rhel8u1.

Fixes

Add support for Red Hat Linux Enterprise 8 update 1

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of Red Hat Enterprise Linux 8 (64-bit) supported by this binary rpm are:
- default - Red Hat Enterprise Linux 8 Update 0 (64-bit).

HPE ProLiant Gen10 Smart Array Controller (64-bit) Driver for SUSE LINUX Enterprise Server 12 (64-bit)
Version: 1.2.10-027 (Recommended)
Filename: smartpqi-kmp-default-1.2.10-027.sles12sp4.x86_64.compsig; smartpqi-kmp-default-1.2.10-027.sles12sp4.x86_64.rpm; smartpqi-kmp-default-1.2.10-027.sles12sp5.x86_64.compsig; smartpqi-

Important Note!

- 

Fixes

Add support for SuSE Linux Enterprise Server 12 SP5

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 Smart Array Controller (64-bit) Driver for SUSE LINUX Enterprise Server 15 (64-bit)
Version: 1.2.10-025 (Recommended)
Filename: smartpqi-kmp-default-1.2.10-025.sles15sp0.x86_64.compsig; smartpqi-kmp-default-1.2.10-025.sles15sp0.x86_64.rpm; smartpqi-kmp-default-1.2.10-025.sles15sp1.x86_64.compsig; smartpqi-

Fixes

Controller could stop responding while processing PQI reset during a power cycle due to all pending IO's not completed at the time of the power cycle.

Supported Devices and Features

The kernels of SUSE LINUX Enterprise Server 15 (64-bit) supported by this driver diskette are:
- default - SUSE LINUX Enterprise Server 15 (64-bit) and future errata kernels

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 HP

**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 HP

**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.

Version: 106.166.0.1022 (Recommended)
Filename: cp041257.compsig; cp041257.exe

**Fixes**
- When executing a "PCS-E2Launch" the system cause stop responding due to the internal controller command accessing the cmdinfo SRB.

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 controller (64-bit) Driver for vSphere 6.5
Version: 7.706.09.00 (Recommended)
Filename: Release_Notes_lsi-mr3-7.706.09.00-1OEM_6.5.txt; VMW-ESX-6.5.0-Is1_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 H

**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-Is1_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 H

**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; kmc

**Enhancements**
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.

Enhancements

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize & Expander)

**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 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.sles12sp3.x86_64.rpm

Enhancements

Added ProLiant features support (Megacell status, AHS, Spade, Sanitize & Expander)

**SUPPORTED KERNELS:**
The kernels of SUSE LINUX Enterprise Server 15 (64-bit) supported by this binary rpm are:

Enhancements

**Driver - Storage Fibre Channel and Fibre Channel Over Ethernet**
HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Windows 2012R2 and Windows 2016
Version: 12.4.243.4 (Recommended)
Filename: cp039579.compsig; cp039579.exe

**Important Note!**

Release Notes:
HPE StoreFabric 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:
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

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

**Enhancements**

Updated to driver version 12.4.243.4

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:**
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

**LPe16000 (16Gb) FC:**
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPE1605 Mezz

**LPe31000/32000 (16Gb/32Gb) FC:**
HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Windows 2019
Version: 12.4.243.4 (Recommended)
Filename: cp039578.compsig; cp039578.exe

**Important Note!**

Release Notes:
HPE StoreFabric 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:
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 drivers.

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

**Enhancements**

Updated to driver version 12.4.243.4

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:

```
elxdrvr-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:**
- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

**LPe16000 (16Gb) FC:**
- 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 StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

**LPe31000/32000 (16Gb/32Gb) FC:**
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Windows Server 2012 R2
Version: 9.3.3.20 (b) (Recommended)
Filename: cp039716.compsig; cp039716.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:

**Fixes**

Fixed the following:
- System take long time to boot and driver enable
- Virtual Machine missing path to Logical Units (LUNs)
- Port logout incorrect vp index used
- Blue Screen of Death (BSOD) after hpqlafwupdate completes update
- Initiator does not send Non Volatile Memory Express Process Login (NVMe PRLI) when the Target registers both Small Computer System Interface Fibre Channel Protocol (SCSI FCP) and Non-
Added support for the following:
- Non Volatile Memory Express (NVMe) is not enabled by default
- Determine Peripheral Component Interconnect (PCI) function number from Peripheral Component Interconnect (PCI) Interrupt pin
- Added simplified fabric discovery code

**Supported Devices and Features**

This driver supports the following HPE adapters:

**Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

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HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Windows Server 2019
Version: 9.3.3.20 (b) (Recommended)
Filename: cp039718.compsig; cp039718.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/

**Fixes**

Fixed the following:
- System takes long time to boot and driver enable
- Virtual Machine missing path to Logical Units (LUNs)
- Port logout incorrect vp index used
- On Windows 2016 Server observed Blue Screen of Death (BSOD) while doing firmware flashing using QLogic Converge Console Graphical User Interface (QCC_GUI)
- Blue Screen of Death (BSOD) after hpqlafwupdate completes update
- Initiator does not send Non Volatile Memory Express Process Login (NVMe PRLI) when the Target registers both Small Computer System Interface Fibre Channel Protocol (SCSI FCP) and Non

**Enhancements**

Updated to version 9.3.3.20

Added support for the following:
- Non Volatile Memory Express (NVMe) is not enabled by default
- Determine Peripheral Component Interconnect (PCI) function number from Peripheral Component Interconnect (PCI) Interrupt pin
- Added simplified fabric discovery code

**Supported Devices and Features**

This driver supports the following HPE adapters:

**Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA
Fixes

Fixed the following:

- System take long time to boot and driver enable
- Virtual Machine missing path to Logical Units (LUNs)
- Port logout incorrect vp index used
- Blue Screen of Death (BSOD) after hpqlafwupdate completes update
- Initiator does not send Non Volatile Memory Express Process Login (NVMe PRLI) when the Target registers both Small Computer System Interface Fibre Channel Protocol (SCSI FCP) and Non

Enhancements

Updated to version 9.3.3.20

Added support for the following:

- Non Volatile Memory Express (NVMe) is not enabled by default
- Determine Peripheral Component Interconnect (PCI) function number from Peripheral Component Interconnect (PCI) Interrupt pin
- Added simplified fabric discovery code

Supported Devices and Features

This driver supports the following HPE adapters:

Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

Gen 5 Fibre Channel Host Bus Adapter:

- HPE QMH2572 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

Gen 6 Fibre Channel Host Bus Adapter:

- HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

Gen 7 Fibre Channel Host Bus Adapter:

- HPE SN1616Q 32Gb 2P FC HBA
- HPE SN1616Q 32Gb 1P FC HBA

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 (b) (Recommended)

Filename: cp039577.compsig; cp039577.exe

Important Note!

Release Notes:

HPE StoreFabric 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

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 12.0.1192.0

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 StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 4-port 650SM Adapter
- HPE StoreFabric CN1200E-T Adapter
Important Note!

Release Notes:

HPE StoreFabric 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:

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

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:


**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 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

Supported Devices and Features

This driver supports the following HPE adapters:

**Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA
Important Note!

Release Notes:
HPE StoreFabric 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:

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 drivers and applications.

Prerequisites

Please consult SPOCK for a list of supported configurations available at the following link:

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 StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter
- HPE FlexFabric 20Gb 2-port 650M Adapter
- HPE StoreFabric CN1200ET Adapter

Red Hat Enterprise Linux 7 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and 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 StoreFabric 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:

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 drivers and applications.

Prerequisites

Please consult SPOCK for a list of supported configurations available at the following link:

Enhancements

Updated to Driver version 12.4.270.3

Added support to the following:
- reset the link of the adapter instead of doing an infinite PLOGI retry.

Supported Devices and Features

This component is supported on following Emulex Fibre Channel Host Bus adapters:

8Gb FC:
- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
HPE StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

LPe31000/32000 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

Red Hat Enterprise Linux 7 Update 6 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and mezzanine Host Bus Adapters
Version: 12.4.270.3 (Recommended)
Filename: kmod-elx-lpfc-12.4.270.3-1.el7u6.x86_64.rpm

Important Note!

Release Notes:
HPE StoreFabric 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 drivers and applications.

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 drivers and applications.

Enhancements
Updated to driver version 12.4.270.3

Added support to the following:
- Reset the link of the adapter instead of doing an infinite PLOGI retry.

Supported Devices and Features
This component is supported on following Emulex Fibre Channel Host Bus adapters:

8Gb FC:
- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE StoreFabric 81E 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

LPe31000/32000 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

Red Hat Enterprise Linux 7 Update 6 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters and 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.el7u6.x86_64.rpm

Important Note!

Release Notes:
HPE StoreFabric 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.
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 drivers and applications.

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:

**Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

Enhancements

Updated driver version to 10.01.00.57.08.0-k1

Supported Devices and Features

This driver supports the following HPE adapters:

**Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

Enhancements

Updated driver version to 12.0.1259.0-k1

Supported Devices and Features

This driver supports the following Red Hat Enterprise Linux 8 Server FC and CNA drivers:

**Red Hat Enterprise Linux 8 Server FC Driver Kit for HPE QLogic Host Bus Adapters and mezzanine Host Bus Adapters**

Version: 10.01.00.57.08.0-k1

Filename: kmod-qlgc-qla2xxx-10.01.00.57.08.0-k1-1.rhel8u0.x86_64.compsig; kmod-qlgc-qla2xxx-10.01.00.57.08.0-k1-1.rhel8u0.x86_64.rpm

**Important Note!**

Release Notes:

HPE StoreFabric 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

Initial driver for Red Hat Enterprise Linux Server 8 version 10.01.00.57.08.0-k1

Supported Devices and Features

This driver supports the following Red Hat Enterprise Linux 8 Server FC and CNA drivers:

**Red Hat Enterprise Linux 8 Server FC Driver Kit for HPE Emulex(BRCM) Converged Network Adapters(CNAs) and mezzanine Converged Network Adapters(CNAs)**

Version: 12.0.1259.0-k1

Filename: kmod-brcmfcoe-12.0.1259.0-1.rhel8u0.x86_64.compsig; kmod-brcmfcoe-12.0.1259.0-1.rhel8u0.x86_64.rpm

**Important Note!**

Release Notes:

HPE StoreFabric 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 [https://www.broadcom.com/support/manuals](https://www.broadcom.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.
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 drivers and applications.

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 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

Red Hat Enterprise Linux 8 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and mezzanine Host Bus Adapters

Version: 12.4.270.3 (Recommended)
Filename: kmod-elx-lpfc-12.4.270.3-1.elrhel8u0.x86_64.compsig; kmod-elx-lpfc-12.4.270.3-1.elrhel8u0.x86_64.rpm

Important Note!

Release Notes:
HPE StoreFabric 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 drivers and applications.

Enhancements

Updated to driver version 12.4.270.3

Added support to the following:
- Reset the link of the adapter instead of doing an infinite PLOGI retry.

Supported Devices and Features

This component is supported on following Emulex Fibre Channel Host Bus adapters:

8Gb FC:
- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE StoreFabric B8E 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

LPe31000/32000 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA
**Important Note!**

**Release Notes:**

HPE StoreFabric 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:

**Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**

- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**

- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

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**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

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HPE StoreFabric CN1200E-T Adapter

SUSE Linux Enterprise Server 12 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and 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 StoreFabric 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.broadcom.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.

Prerequisites

Please consult SPOCK for a list of supported configurations available at the following link:
http://www.hpe.com/support/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.broadcom.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.

Enhancements

Updated to driver version 12.4.270.3
Added support to the following:
- Reset the link of the adapter instead of doing an infinite PLOGI retry.

Supported Devices and Features

This component is supported on following Emulex Fibre Channel Host Bus adapters:

8Gb FC:
- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE StoreFabric BNE 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- 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 StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

LPe32000/32200 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2P FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

SUSE Linux Enterprise Server 12 Service Pack 3 FC Driver Kit for HPE QLogic Host Bus Adapters and mezzanine Host Bus Adapters
Version: 8.08.00.08.12.3-k12 (Recommended)
Filename: qlgc-qla2xxx-kmp-default-8.08.00.08.12.3_k4.4.73-5-1.sles12sp3.x86_64.compsig; qlgc-qla2xxx-kmp-default-8.08.00.08.12.3_k4.4.73-5-1.sles12sp3.x86_64.rpm

Important Note!

Release Notes:
HPE StoreFabric 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/support/spock/

Fixes

Fixed the following:
- Flash read
- Read Diagnostic Parameters (RDP) respond data format
- Cleanup trace buffer initialization
- Unintended wait
- Incomplete login in point-to-point mode
- Restore World Wide Port Name (WWPN) of Physical Port for fabric configuration only for loop down
Enhancements
Updated Driver for:
SuSE Linux Enterprise Server 12 service pack 3 (SLES12 sp3) version 8.08.00.08.12.3-k12

Added support for the following:
- Add more Firmware debug information
- Add error handling for Port Login (PLOGI) Extended Link Service (ELS) passthrough
- Improved secure flash support messages

Supported Devices and Features
This driver supports the following HPE adapters:

Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

Gen 6 Fibre Channel Host Bus Adapter:
- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

SUSE Linux Enterprise Server 12 Service Pack 3 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and mezzanine Host Bus Adapters
Version: 12.4.270.3 (Recommended)
Filename: elx-lpfc-kmp-default-12.4.270.3_k4.4.126_94.22-1.sles12sp3.x86_64.compsig; elx-lpfc-kmp-default-12.4.270.3_k4.4.126_94.22-1.sles12sp3.x86_64.rpm

Important Note!
Release Notes:
HPE StoreFabric 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:
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
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 install

Prerequisites
Please consult SPOCK for a list of supported configurations available at the following link:
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:
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
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 install

Enhancements
Updated to driver version 12.4.270.3

Added support to the following:
- Reset the link of the adapter instead of doing an infinite PLOGI retry

Supported Devices and Features
This component is supported on following Emulex Fibre Channel Host Bus adapters:

8Gb FC:
- HPE 81E 8Gb Single Port PCIe fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

LPe31000/32000 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
SUSE Linux Enterprise Server 15 FC Driver Kit for HPE QLogic Host Bus Adapters and 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 StoreFabric 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
Initial Driver of 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:

Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

Gen 5 Fibre Channel Host Bus Adapter:
- HPE QMH267216Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

Gen 6 Fibre Channel Host Bus Adapter:
- HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

Gen 7 Fibre Channel Host Bus Adapter:
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

SUSE Linux Enterprise Server 15 FCoE Driver Kit for HPE Emulex(BRCM) Converged Network Adapters(CNAs) and mezzanine Converged Network Adapters(CNAs)
Version: 12.0.1259.0 (Recommended)

Important Note!
Release Notes:
HPE StoreFabric 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

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

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 StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE FlexFabric 200Gb 2-port 650FLB Adapter
**HPE FlexFabric 20Gb 2-port 650M Adapter**

**HPE StoreFabric CN1200E-T Adapter**

**SUSE Linux Enterprise Server 15 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and 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

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**Important Note!**

**Release Notes:**

**HPE StoreFabric 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:

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

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Please consult SPOCK for a list of supported configurations available at the following link:


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:

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

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**Enhancements**

Updated to driver version 12.4.270.3

Added support to the following:

- Reset the link of the adapter instead of doing an infinite PLOGI retry.

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**Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC:**

- HPE B1E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE B2E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE StoreFabric B84E 4-Port Fibre Channel Host Bus Adapter

**LPe16000 (16Gb) FC:**

- 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 StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

**LPe31000/32000 (16Gb/32Gb) FC:**

- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2P FC HBA
- HPE StoreFabric SN1600E 32Gb 1P FC HBA

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**SUSE Linux Enterprise Server 15 Service Pack 0 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and mezzanine Host Bus Adapters**

**Version:** 12.4.270.3 *(Recommended)*

**Filename:** elx-lpfc-kmp-default-12.4.270.3_k4.12.14_23-1.sles15sp0.x86_64.compsig; elx-lpfc-kmp-default-12.4.270.3_k4.12.14_23-1.sles15sp0.x86_64.rpm

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**Important Note!**

**Release Notes:**

**HPE StoreFabric 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:

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

---

Please consult SPOCK for a list of supported configurations available at the following link:


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:
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 enhancements.

**Enhancements**

Updated to driver version 12.4.270.3

Added support to the following:
- Reset the link of the adapter instead of doing an infinite PLOGI retry.

**Supported Devices and Features**

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC:**
- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE StoreFabric SN4E 4-Port Fibre Channel Host Bus Adapter

**LPe16000 (16Gb) FC:**
- 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 StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

**LPe31000/32000 (16Gb/32Gb) FC:**
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

**SUSE Linux Enterprise Server 15 Service Pack 0 Fibre Channel Driver Kit Host Bus Adapters for HPE QLogic and mezzanine Host Bus Adapters**

Version: 10.01.00.57.15.0-k1 (Recommended)

Filename: qlgc-qla2xxx-kmp-default-10.01.00.57.15.0-k1_k4.12.14_23-1.sles15sp0.x86_64.compsig; qlgc-qla2xxx-kmp-default-10.01.00.57.15.0-k1_k4.12.14_23-1.sles15sp0.x86_64.rpm

**Important Note!**

Release Notes:

HPE StoreFabric 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:


**Enhancements**

Updated Driver for:

SuSE Linux Enterprise Server 15 Service Pack 0 version 10.01.00.57.15.0-k1

**Supported Devices and Features**

This driver supports the following HPE adapters:

**Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

**Driver - System**

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://persistentmemory.hpe.com/windows/nvdimm

Driver - System Management

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.

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.

iLO 5 Channel Interface Driver for Windows Server 2012 R2
Version: 4.3.0.0 (Optional)
Filename: cp034070.compsig; cp034070.exe

Enhancements

- Enabled message-signaled interrupts to avoid interrupt sharing with the Universal Serial Bus controller in iLO 5.
- Added support for the HPE ProLiant DL325 Gen10.

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: 4.3.0.0 (B) (Optional)
Filename: cp035112.compsig; cp035112.exe

Enhancements

- Added support for Windows Server 2019
- Added support for the HPE ProLiant XL270d Gen10 and the HPE ProLiant XL420 Gen10

iLO 5 Channel Interface Driver for Windows Server 2016 and Server 2019
Version: 4.6.0.0 (Optional)
Filename: cp040014.compsig; cp040014.exe

Enhancements

- Add support for iLO 5 version 2.x firmware.
- Add support for HPE ProLiant Gen10 Plus servers.

iLO 5 Channel Interface Driver for Windows Server 2016 and Server 2019
Version: 4.6.0.0 (B) (Optional)
Filename: cp041582.compsig; cp041582.exe

Enhancements

TBD

Driver - Video

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.
Enhancements
- Add support for iLO 5 version 2.x firmware.
- Add support for HPE ProLiant Gen10 Plus servers.

Firmware - Blade Infrastructure
HPE BladeSystem c-Class Virtual Connect Firmware, Ethernet plus 8Gb 20-port and 8/16Gb 24-port FC Edition Component for Windows
Version: 4.80 (Recommended)
Filename: cp039109.exe

Prerequisites
The 4.80 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 4.80 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 4.80 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

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

Important Notes
- 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 specific 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, 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 or more HPE SUM information can be found via HPE Smart Update Manager online help or at https://www.hpe.com/servers/hpsum/documentation.
- **FIPS**
- **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 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.
- 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, 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 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.

**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 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 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 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 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 link for more information.

**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 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 me 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 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 4.95 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.

Online HPE BladeSystem c-Class Onboard Administrator Firmware Component for Windows
Version: 4.95 (Recommended)
Filename: cp039066.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.
Firmware - Lights-Out Management
Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5
Version: 1.40 (a) (Recommended)
Filename: RPM/B_i86_64/firmware-iios-1.40-1.1.x86_64.compsig; RPM/B_i86_64/firmware-ilo5-1.40-1.1.x86_64.rpm

- 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 its firmware update first and then proceed to update the OA.
  - The OA will continue to use the firmware image that was loaded at the time it was last booted, not the first image on the USB device.

- 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 ISO URL. If the URL is invalid, the OA will use the ISO image on the DVD or USB device.
  - 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 ISO image must include all components that are required for the EFM blade firmware update process.

- FIPS

- 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 will not be released immediately after the iLO reboots.

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 where Interconnects were not receiving IP address from iLO.
  - Addressed an issue where Blade Location information was not displayed correctly in SHOW SERVER STATUS ALL CLI command.

- Security
  - None

Issues and workarounds

- Browsers
  - OA GUI is not accessible in Chrome versions 43.0.2357.10 to 44.0.2383.4. This issue was caused by a "regression" in Chrome (or WebKit). Customers should use an alternative browser like Firefox, IE, or Chrome.
  - SSL-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, iLO window using SSL 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.

- 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 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. 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 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 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 iLO manual reset of the iLO releases these addresses immediately.

- 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 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 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 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 4.95 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.
**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**

The following issues are resolved in this version:
- User interface fixes and improvements.
- The text "R&D Server" is incorrectly displayed in the ILO web interface navigation pane.
- 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:**
- HPESBBHF03907

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**

- 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)
- Enables 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
- Support for Gemalto SafeNet and SafeNet AT key managers
- InfoSight Optimized AHS Download
- Show IOMte wear level
- Workload performance advisor: provides server tuning recommendations to improve server performance

**Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5**

Version: 2.14 (Recommended)

Filename: RPMS/x86_64/flash-component-ilo-5-2.14-1.1/x86_64.rpm; RPMS/x86_64/flash-component-ilo-5-2.14-1.1.x86_64.part1.compsig; RPMS/x86_64/flash-component-ilo-5-2.14-1.1.x86_64.part2.compsig
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
NETBIO/NSNS
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
- Fixed the issue where PMBUS power supply is being detected when a Flex Slot is installed.

Enhancements
- Support new Accelerators:
  - Xilinx Alveo U250
  - Xilinx Alveo US5
- User can now define pre-caution threshold alert value for the inlet ambient sensor.

Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5
Version: 2.14 (Recommended)
Filename: RPMS/x86_64/firmware-ilo5-2.14-1.1.x86_64.rpm; RPMS/x86_64/firmware-ilo5-2.14-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-ilo5-2.14-1.1.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
- SMTP Client
- DNS 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
- NETBIO/NSNS
- 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
- Fixed the issue where PMBUS power supply is being detected when a Flex Slot is installed.

Enhancements
- Support new Accelerators:
  - Xilinx Alveo U250
  - Xilinx Alveo US5
- User can now define pre-caution threshold alert value for the inlet ambient sensor.

Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5
Version: 1.40 (Recommended)
Filename: cp038901.compsig; cp038901.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 Stateless Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- SSH Server
- RDP 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)

Prequisites

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
- HPQLOCFG Windows 5.3.0
- HPQLOCFG 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

The following issues are resolved in this version:
- User interface fixes and improvements.
- The text “R&D Server” is incorrectly displayed in the iLO web interface navigation pane.
- 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:

Enhancements

- 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 (disability 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
- 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

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 Stateless Address Assignment
- DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
- Integrated Remote Console
- OA Single Sign-On
- HP-SIM Single Sign-On
- SSH Server
- RDP Client
- DDNS Client
- RIBCL over IPv6
- SNMP
- AlertMail
- Remote Syslog
- WinDBG Support

Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5
Version: 2.14 (Recommended)
Filename: cp042927.exe; cp042927_part1.compsig; cp042927_part2.compsig
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
NETBIDS-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
- Fixed the issue where PMBUS power supply is being detected when a Flex Slot is installed.

Enhancements
- Support new Accelerators:
  - Xilinx Alveo U250
  - Xilinx Alveo U50
- User can now define pre-caution threshold alert value for the inlet ambient sensor.

Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5
Version: 2.1.4 (Recommended)
Filename: cp042988.exe; cp042988_part1.compsig; cp042988_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 Stateless 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
- DNS 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
  - NETBIDS-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
- Fixed the issue where PMBUS power supply is being detected when a Flex Slot is installed.

Enhancements
- Support new Accelerators:
  - Xilinx Alveo U250
  - Xilinx Alveo U50
- User can now define pre-caution threshold alert value for the inlet ambient sensor.

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 Stateless 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

The following issues are resolved in this version:
- User interface fixes and improvements.
- The text "RIB Server" is incorrectly displayed in the ILO web interface navigation pane.
- 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:
- HPESSHBF03907

For the latest security bulletins and vulnerabilities, please visit:
https://support.hpe.com/bsnww/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

- 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
- Support for Gemalto SafeNet and SafeNet AT Key managers
- InfoSight Optimized AHV Download
- Show IVMxe wear level
- Workload performance advisor: provides server tuning recommendations to improve server performance

Online ROM Flash Firmware Package - HPE Integrated Lights-Out 5
Version: 2.14 (Recommended)
Filename: ilo5_214.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 Stateless 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
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
- Fixed the issue where PMBUS power supply is being detected when a Flex Slot is installed.

Enhancements
- Support new Accelerators:
  - Xilinx Alveo U250
  - Xilinx Alveo U50
- User can now define pre-caution threshold alert value for the inlet ambient sensor.

Firmware - Network
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 adapters:
- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade Intel Online Firmware Upgrade Utility for VMware
Version: 1.0.7 (Optional)
Filename: CP040426.compsig; CP040426.zip

Important Note!
HPE recommends the HPE Blade Intel ixgbe Drivers for VMware, versions 2019.12.20, 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.

Supported Devices and Features
This package supports the following 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: 1.0.5 (Optional)
Filename: cp040422.compsig; cp040422.exe

Important Note!
HPE recommends 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 adapters:
- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter

HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux
Version: 1.0.9 (Optional)
Filename: firmware-nic-qlnx2-bi-1.0.9-1.1.x86_64.compsig; firmware-nic-qlnx2-bi-1.0.9-1.1.x86_64.rpm

Important Note!
HPE recommends the 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.
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

HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware
Version: 1.0.8 (Optional)
Filename: CP039870.compsig; CP039870.zip

Important Note!
HPE recommends HPE Blade QLogic NX2 10/20GbE Multifunction Drivers for VMware, versions 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.

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.

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

HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 1.0.0.9 (Optional)
Filename: cp039871.compsig; cp039871.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 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.

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

HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Linux x86_64
Version: 1.8.1 (Optional)
Filename: firmware-nic-bcm-nxe-1.8.1-1.1.x86_64.compsig; firmware-nic-bcm-nxe-1.8.1-1.1.x86_64.rpm

Important Note!
HPE recommends the HPE Broadcom NetXtreme-E Drivers for Linux, versions 1.10.0-214.0.259.0 or later, for use with this firmware.

Prerequisites
This package requires the appropriate driver for your network adapter be installed an 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**
- This product now supports Red Hat Enterprise Linux 7.7
- This product now supports SUSE Linux Enterprise Server 15 SP1
- 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

HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware
Version: 5.10.1 (Optional)
Filename: CP041782.compsig; CP041782.zip

**Important Note!**
HPE recommends HPE Broadcom NetXtreme-E Drivers for VMware, versions 2019.08.02 or later, for use with this firmware.

This software package contains NVM Image version 214.0.286015 with the following firmware versions:

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**Prerequisites**
- This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

**Enhancements**
- This product now supports the following network adapters.
  - HPE Ethernet 10Gb 2-port 535FLR-T Adapter
  - HPE Ethernet 10Gb 2-port 535T 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

HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 5.2.0.5 (Optional)
Filename: cp041783.compsig; cp041783.exe

**Important Note!**
HPE recommends HPE Broadcom NetXtreme-E Driver for Windows, versions 214.0.247.1 or later, for use with this firmware.

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

**Enhancements**
- This product now supports the following network adapters.
  - HPE Ethernet 10Gb 2-port 535FLR-T Adapter
  - HPE Ethernet 10Gb 2-port 535T 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

HPE Broadcom NX1 Online Firmware Upgrade Utility for Linux x86_64
Version: 2.25.1 (Optional)
Filename: firmware-nic-broadcom-2.25.1-1.1.x86_64.compsig; firmware-nic-broadcom-2.25.1-1.1.x86_64.rpm
**Important Note!**

HPE recommends HPE Broadcom tg3 Ethernet Drivers, versions 3.138a or later, for use with this firmware.

**Prerequisites**

This package requires the appropriate driver for your network adapter to be installed and all Ethernet ports to be 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 Legacy Boot Protocol (System Utilities -> System Configuration -> NIC HII menu -> BA Configuration Menu) changes from None to PXE.

This product addresses an issue where it would be forced to exit System Utilities when select Port 2 & Port 3 (System Utilities -> System Configuration -> NIC HII menu).

**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 VMware**

Version: 1.26.1 (Optional)
Filename: CP042268.compsig; CP042268.zip

**Important Note!**

HPE recommends HP Broadcom tg3 Ethernet Drivers for VMware, versions 2015.10.01, for use with this firmware.

This software package contains combo image v20.14.62 with the following firmware versions:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE Ethernet 1Gb 2-port 330i Adapter (22BD)</td>
<td>2.10</td>
<td>20.14.2</td>
<td>1.5.12</td>
<td>20.14.28</td>
<td>214.0.221.0</td>
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<tr>
<td>HPE Ethernet 1Gb 4-port 331i Adapter (22BE)</td>
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<tr>
<td>HPE Ethernet 1Gb 4-port 331FLR Adapter</td>
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<tr>
<td>HPE Ethernet 1Gb 4-port 331T Adapter</td>
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</tr>
<tr>
<td>HPE Ethernet 1Gb 2-port 332i Adapter (22E8)</td>
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</tr>
<tr>
<td>HPE Ethernet 1Gb 2-port 332T Adapter</td>
<td>1.40</td>
<td>20.14.2</td>
<td>1.5.12</td>
<td>20.14.28</td>
<td>214.0.221.0</td>
</tr>
</tbody>
</table>

**Prerequisites**

This product requires the appropriate driver for your device and operating system to be installed before firmware is updated.

**Fixes**

This product addresses an issue where Legacy Boot Protocol (System Utilities -> System Configuration -> NIC HII menu -> BA Configuration Menu) changes from None to PXE.

This product addresses an issue where it would be forced to exit System Utilities when select Port 2 & Port 3 (System Utilities -> System Configuration -> NIC HII menu).

**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: 5.2.0.5 (Optional)
Filename: cp042269.compsig; cp042269.exe

**Important Note!**

HPE recommends HPE Broadcom nx1 1Gb Driver for Windows Server x64 Editions, version 214.0.0.2 or later, for use with this firmware.

This software package contains combo image v20.14.62 with the following firmware versions:

<table>
<thead>
<tr>
<th></th>
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<td>HPE Ethernet 1Gb 2-port 330i Adapter (22BD)</td>
<td>2.10</td>
<td>20.14.2</td>
<td>1.5.12</td>
<td>20.14.28</td>
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<td>HPE Ethernet 1Gb 4-port 331FLR Adapter</td>
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<tr>
<td>HPE Ethernet 1Gb 2-port 332T Adapter</td>
<td>1.40</td>
<td>20.14.2</td>
<td>1.5.12</td>
<td>20.14.28</td>
<td>214.0.221.0</td>
</tr>
</tbody>
</table>

**Prerequisites**

This product requires the appropriate driver for your device and operating system to be installed before firmware is updated.

**Fixes**

This product addresses an issue where Legacy Boot Protocol (System Utilities -> System Configuration -> NIC HII menu -> BA Configuration Menu) changes from None to PXE.

This product addresses an issue where it would be forced to exit System Utilities when select Port 2 & Port 3 (System Utilities -> System Configuration -> NIC HII menu).

**Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
Prerequisites

- 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 Firmware Flash for Emulex Converged Network Adapters for Linux (x64)
Version: 2019.12.01 (Recommended)
Filename: RPM/x86_64/flash-cna-emulex-2019.12.01-1.25.x86_64.dmg

Important Note!

Release Notes:
HPE StoreFabric 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 https://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 drivers and applications.

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 your OS installation media.
- Environment must have 32-bit netlink library (libnl.so) installed for component to be able to discover Emulex HBA/CNAs
- Environment must be running the syslog daemon for the flash engine to run

Note: To enable the FCoE/SCSI protocol on devices that support it, please install the appropriate Emulex FCoE/SCSI driver. The FCoE protocol also requires the HPE Emulex FCoE Enablement Kit 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).

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 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

HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5
Version: 2019.12.01 (Recommended)
Filename: CP039568.dmg

Important Note!

Release Notes:
HPE StoreFabric 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 https://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 drivers and applications.
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 adapters.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).

**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 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

**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 adapters.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).

**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 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
HPE StoreFabric 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:
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 drivers and applications.

### 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:


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](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](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 adapters.
- Full adapter name is not displayed for HPE FlexFabric 20Gb 2-port 650M Adapter in some Rom Based Setup Utility (RBSU).

### 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 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

**HPE Intel Online Firmware Upgrade Utility for Linux x86_64**

Version: 1.19.11 (Optional)

Filename: firmware-nic-intel-1.19.11-1.1.x86_64.compsig; firmware-nic-intel-1.19.11-1.1.x86_64.rpm

**Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- HPE Intel i3g Drivers for Linux, versions 6.2.1 or later
- HPE Intel i3gbe Drivers for Linux, versions 5.6.4 or later
- HPE Intel i40e Drivers for Linux, versions 2.10.19.30 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 LLDP are disabled.

This product addresses an issue where " Firmware Image Properties", "Device Level Configuration", and "Link Speed Status" options in NIC HII menu will disappear when F7 is pressed.

This product addresses an issue where Firmware upgrade fail in SLES15 with secureboot enabled.

This product addresses an issue where POST when ESC is Pressed to Enter The BIOS Setup Utility with HP Ethernet 1Gb 4-port 366FLR Adapter.

This product addresses an issue where there is no VLAN function under Legacy mode.

### Enhancements

This product now supports Red Hat Enterprise Linux 8.

This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the [HPE Blade Intel Online Firmware Upgrade Utility for Linux](http://www.hpe.com/servers/spp/download)

This product no longer supports Synergy servers and devices. The Synergy-specific Intel NIC firmware product is not yet available. You should continue to use version 3.11.7 of this product until the new version is available.

### 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 3617 Adapter
- HPE Ethernet 1Gb 2-port 560FLR-MMFSP+ Adapter
- HPE Ethernet 1Gb 2-port 562T Adapter
- HPE Ethernet 1Gb 2-port 562SFP+ Adapter
- HPE Ethernet 1Gb 2-port 562FLR-T Adapter
- HPE Ethernet 1Gb 2-port 562FLR-SP+ Adapter
- HPE Ethernet 1Gb 2-port 560FLR-SP+ Adapter
- HPE Ethernet 1Gb 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 56FLR-MMT Adapter

HPE Intel Online Firmware Upgrade Utility for VMware
Version: 3.12.12 (Optional)
Filename: CP040151.compsig; CP040151.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 2019.12.20
- HPE Intel ixgben Drivers for VMware, versions 2019.12.20
- HPE Intel i40en Drivers for VMware, versions 2019.12.20

This software package contains the following firmware versions for the below listed supported network adapters:

<table>
<thead>
<tr>
<th>NIC</th>
<th>EEPROM/NVM Version</th>
<th>OROM Version</th>
<th>Single NVM Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP Ethernet 1Gb 2-port 361i Adapter</td>
<td>8000106F</td>
<td>1.2529.0</td>
<td>N/A</td>
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<td>HP Ethernet 1Gb 2-port 361T Adapter</td>
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<td>1.2529.0</td>
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<tr>
<td>HP Ethernet 1Gb 2-port 363i Adapter</td>
<td>80000D00</td>
<td>1.2529.0</td>
<td>N/A</td>
</tr>
<tr>
<td>HPE Ethernet 1Gb 4-port 366i Communication Board</td>
<td>80000EBF</td>
<td>1.2529.0</td>
<td>N/A</td>
</tr>
<tr>
<td>HP Ethernet 1Gb 4-port 366i Adapter</td>
<td>8000105E</td>
<td>1.2529.0</td>
<td>N/A</td>
</tr>
<tr>
<td>HP Ethernet 1Gb 4-port 366FLR Adapter</td>
<td>80001060</td>
<td>1.2529.0</td>
<td>N/A</td>
</tr>
<tr>
<td>HP Ethernet 1Gb 4-port 366T Adapter</td>
<td>8000105F</td>
<td>1.2529.0</td>
<td>N/A</td>
</tr>
<tr>
<td>HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter</td>
<td>80001069</td>
<td>1.2529.0</td>
<td>N/A</td>
</tr>
<tr>
<td>HPE Ethernet 1Gb 4-port 369 Adapter</td>
<td>80001DE9</td>
<td>1.2529.0</td>
<td>N/A</td>
</tr>
<tr>
<td>HP Ethernet 1Gb 2-port 560FLR-SFP+ Adapter</td>
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<td>1.2529.0</td>
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</tr>
<tr>
<td>HP Ethernet 1Gb 2-port 568i Adapter</td>
<td>80001DEE</td>
<td>1.2529.0</td>
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<tr>
<td>HPE Ethernet 1Gb 2-port 568FLR-MMSFP+ Adapter</td>
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<td>80001DE9</td>
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<td>HPE Ethernet 1Gb 2-port 568FLR-MTF Adapter</td>
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<td>HPE Ethernet 1Gb 2-port 568FLR-MTF Adapter</td>
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<td>1.2529.0</td>
<td>10.51.3</td>
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<tr>
<td>HP Ethernet 1Gb 2-port 568FLR-MMT Adapter</td>
<td>80006424</td>
<td>1.2529.0</td>
<td>10.51.3</td>
</tr>
</tbody>
</table>

The combo image v1.2529.0 includes: Boot Agent: 1GbE - v1.5.88, 10GbE - v2.4.34, 40GbE - v1.1.10 & UEFI Drivers: 1GbE - v9.0.03, 10GbE - v7.4.06, 40GbE - v3.9.11
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 LLDP are disabled.
This product addresses an issue where "Firmware Image Properties", "Device Level Configuration", and "Link Speed Status" options in NIC HII menu will disappear when F7 is pressed.
This product addresses an issue where POST when ESC Is Pressed to Enter The BIOS Setup Utility with HP Ethernet 1Gb 4-port 366FLR Adapter.
This product addresses an issue where there is no VLAN function under Legacy mode.

Enhancements
This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Intel Online Firmware Upgrade Utility for VMware.
This product no longer supports Synergy servers and devices. The Synergy-specific Intel NIC firmware product is not yet available. You should continue to use version 3.11.7 of this product until the is available.

Supported Devices and Features
This package supports the following network adapters:
- HP Ethernet 1Gb 4-port 367i Adapter
- HP Ethernet 1Gb 4-port 368FLR Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MTM Adapter
- HP Ethernet 1Gb 2-port 369i Adapter
- HPE Ethernet 1Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 1Gb 2-port 568FLR-MMSFP+ Adapter
- HP Ethernet 1Gb 2-port 568FLR-MMT Adapter
- HP Ethernet 1Gb 4-port 366i Communication Board
- HP Ethernet 1Gb 2-port 368i Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HP Ethernet 1Gb 4-port 369i Adapter

HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 5.2.0.0 (Optional)
Filename: cp040152.compsig; cp040152.exe

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 LLDP are disabled.
This product addresses an issue where "Firmware Image Properties", "Device Level Configuration", and "Link Speed Status" options in NIC HII menu will disappear when F7 is pressed.
This product addresses an issue where POST when ESC Is Pressed to Enter The BIOS Setup Utility with HP Ethernet 1Gb 4-port 366FLR Adapter.
This product addresses an issue where there is no VLAN function under Legacy mode.

Enhancements
This product no longer supports ProLiant Blade servers and devices. Those servers and devices are now supported by the HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Edi
This product no longer supports Synergy servers and devices. The Synergy-specific Intel NIC firmware product is not yet available. You should continue to use version 3.11.7 of this product until the is available.

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 36FLR-MMT Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HP Ethernet 1Gb 2-port 560FLR-T Adapter
- HP Ethernet 1Gb 2-port 368i Adapter
- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HP Ethernet 4-port 366i Communication Board
- HP Ethernet 1Gb 2-port 368e Adapter
- HP Ethernet 1Gb 2-port 363e Adapter
- HP Ethernet 1Gb 2-port 563e Adapter
- HPE Ethernet 1Gb 4-port 366i Adapter
- HP Ethernet 1Gb 2-port 368i Adapter
- HP Ethernet 1Gb 2-port 560i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HP Ethernet 1Gb 2-port 568FLR-MMT Adapter

HPE QLogic FastLinQ Online Firmware Upgrade Utility for Linux x86_64
Version: 1.8.12 (Optional)
Filename: firmware-nic-qlogic-flq-1.8.12-1.1.x86_64.compsig; firmware-nic-qlogic-flq-1.8.12-1.1.x86_64.rpm

Important Note!
HPE recommends HPE QLogic FastLinQ 10/25/50GbE Drivers for Linux, versions 8.42.8.0-1 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 addresses an issue where 2nd port reports "function type: disabled" with HPE Ethernet 10Gb 2-port 524SFP+ Adapter.

Enhancements
This product now remove supports Synergy and Blade Server.
This product now supports Red Hat Enterprise Linux 8.

Supported Devices and Features
This product supports the following network adapters:
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP 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

HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware
Version: 4.11.9 (Optional)
Filename: CP039777.compsig; CP039777.zip

Important Note!
HPE recommends HPE QLogic FastLinQ 10/25/50GbE Multifunction Drivers for VMware, versions 2019.12.20 or later, for use with this firmware.

This software package contains combo image v8.50.22. This combo image includes: Boot Code (MFW): 8.50.9.0, UEFI: 4.1.9.2 and PXE: 2.0.19. The users will only see the combo image versions in supported adapters.

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 2nd port reports "function type: disabled" with HPE Ethernet 10Gb 2-port 524SFP+ Adapter.

Enhancements
This product now remove supports Synergy and Blade Server.

Supported Devices and Features
This product supports the following network adapters:
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HP 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
HPE QLogic FastLinQ Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 5.2.0.0 (Optional)
Filename: cp039779.compsig; cp039779.exe

**Important Note!**
HPE recommends HPE QLogic FastLinQ 10/25/50GbE Driver for Windows Server x64 Editions, versions 8.42.10.0 or later, for use with the firmware in this product.

**Prerequisites**
This product requires the appropriate driver for your device and operating system to be installed before firmware is updated.

**Fixes**
This product addresses an issue where it failed to boot into iSCSI Boot LUN when Windows OS installed.
This product addresses an issue where 2nd port reports "function type: disabled" with HPE Ethernet 10Gb 2-port 524SFP+ Adapter.

**Enhancements**
This product now removes support for Synergy and Blade Server.

**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 CN1200R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

---

HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64
Version: 2.26.30 (Optional)
Filename: firmware-nic-qlogic-nx2-2.26.30-1.1.x86_64.compsig; firmware-nic-qlogic-nx2-2.26.30-1.1.x86_64.rpm

**Important Note!**
HPE recommends HPE 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 to be installed and all Ethernet ports brought up (ifup ethX or ifconfig ethX up) before firmware can be updated.

**Fixes**
This product addresses an Overheat issue that system shuts down automatically due to NIC temperature exceeding threshold.

**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: 1.26.30 (Optional)
Filename: CP043318.compsig; CP043318.zip

**Important Note!**
HPE recommends HPE QLogic NX2 10/20GbE Multifunction Drivers for VMware, versions 2019.12.20 or later, for use with this firmware.

This software package contains combo image v7.18.27 with the following firmware versions:

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>HP Ethernet 10Gb 2-port 530SFP+ Adapter</td>
<td>7.15.77</td>
<td>7.14.13</td>
<td>8.4.3</td>
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<tr>
<td>HP Ethernet 10Gb 2-port 530T Adapter</td>
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<tr>
<td>HP Ethernet 10Gb 2-port 533FLR-T Adapter</td>
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<td>HP StoreFabric CN1100R Dual Port Converged Network Adapter</td>
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<td>HPE StoreFabric CN1100R-T Converged Network Adapter</td>
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</tbody>
</table>

**Prerequisites**
This product requires the appropriate driver for your device and operating system to be installed before firmware is updated.

**Fixes**
This product addresses an Overheat issue that system shuts down automatically due to NIC temperature exceeding threshold.

**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
**Important Note!**

HPE recommends HPE QLogic NX2 10/20GbE Multifunction Drivers for Windows Server x64 Editions, version 7.13.171.0 or later, for use with this firmware.

This software package contains combo image v7.18.27 with the following firmware versions:

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<tr>
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</thead>
<tbody>
<tr>
<td>HP Ethernet 10Gb 2-port SFP+ Adapter</td>
<td>7.15.77</td>
<td>7.14.13</td>
<td>8.4.3</td>
<td>n/a</td>
<td>n/a</td>
<td>7.14.4</td>
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</tbody>
</table>

**Prerequisites**

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

**Fixes**

This product addresses an Overheat issue that system shuts down automatically due to NIC temperature exceeding threshold.

**Supported Devices and Features**

This product supports the following network adapters:

- HP Ethernet 10Gb 2-port SFP+ Adapter
- HP Ethernet 10Gb 2-port T Adapter
- HP Ethernet 10Gb 2-port T Adapter
- HP FlexFabric 10Gb 4-port SFP+ Adapter
- HP FlexFabric 10GbB 4-port SFP+ Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HP StoreFabric CN1100R-T Converged Network Adapter

**Intel Online Firmware Upgrade Utility for Linux x86_64**

Version: 1.19.10 (Optional)
Filename: firmware-nic-is-intel-1.19.10-1.1.x86_64.compsig; firmware-nic-is-intel-1.19.10-1.1.x86_64.rpm

**Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- Intel igb Drivers for Linux, versions 6.2.0 or later

**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 package supports the following network adapters:

- Intel(R) I350 Gigabit Backplane Connection
- Intel(R) I350 Gigabit Network Connection
- HPE Ethernet 1Gb 4-port BaseT 1350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT 1350-T4 OCP3 Adapter

**Intel Online Firmware Upgrade Utility for VMware**

Version: 3.12.10 (Optional)
Filename: CP041196.compsig; CP041196.zip

**Important Note!**

This software package contains the following firmware versions for the below listed supported network adapters:

<table>
<thead>
<tr>
<th>NIC</th>
<th>EEPROM/NVM Version</th>
<th>OROM Version</th>
</tr>
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<tr>
<td>HPE Ethernet 1Gb 4-port BaseT 1350-T4 Adapter</td>
<td>8001099</td>
<td>1.2529.0</td>
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<tr>
<td>HPE Ethernet 1Gb 4-port BaseT 1350-T4 OCP3 Adapter</td>
<td>8001097</td>
<td>1.2529.0</td>
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<tr>
<td>Intel(R) I350 Gigabit Backplane Connection</td>
<td>800108E</td>
<td>1.2529.0</td>
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<tr>
<td>Intel(R) I350 Gigabit Network Connection</td>
<td>800108F</td>
<td>1.2529.0</td>
</tr>
</tbody>
</table>

The combo image v1.2529.0 includes: Boot Agent: 1GbE - v1.5.8B & UEFI Drivers: 1GbE - v9.0.03.

**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 package supports the following network adapters:

- Intel(R) I350 Gigabit Backplane Connection
- Intel(R) I350 Gigabit Network Connection
- HPE Ethernet 1Gb 4-port BaseT 1350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT 1350-T4 OCP3 Adapter
Intel Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 5.2.0.0 (Optional)
Filename: cp041197.compsig; cp041197.exe

**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 package supports the following network adapters:
- HPE Ethernet 1Gb 4-port BaseT 1350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT 1350-T4 OCP3 Adapter
- Intel(R) 1350 Gigabit Backplane Connection
- Intel(R) 1350 Gigabit Network Connection

Marvell FastLinQ Online Firmware Upgrade Utility for Linux x86_64
Version: 1.8.13 (Optional)
Filename: firmware-nic-is-marvell-flq-1.8.13-1.1.x86_64.compsig; firmware-nic-is-marvell-flq-1.8.13-1.1.x86_64.rpm

**Important Note!**
HPE recommends Marvell FastLinQ 10/25/50GbE Drivers for Linux, versions 8.42.8.0-1 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.

**Enhancements**
Initial release.

**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+ QL41134HLCLU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLCU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLCU 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 VMware
Version: 4.11.14 (Optional)
Filename: CP041147.compsig; CP041147.zip

**Important Note!**
This software package contains combo image v8.50.78. This combo image includes: Boot Code (MFW): 8.50.9.0 and UEFI: 6.1.6.9.

**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 QL41232HQCU OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HLCLU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLCU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLCU 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: 5.2.0.0 (Optional)
Filename: cp041148.compsig; cp041148.exe

**Important Note!**
HPE recommends Marvell FastLinQ 10/25/50 GbE Drivers for Windows Server x64 Editions 8.42.10.0 or later, for use with the firmware in this product.

**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 QL41232HQCU OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HLCLU Adapter
Important Note!

Known Issues in firmware 14.26.XXXX :
- Hardware arbitration is currently disabled in Open Compute Project (OCP)3.0 cards. It will be supported on future releases for the same hardware.
- Secure state is not updated after firmware burning due to the following behavior.
- By default, mifwreset takes the lowest supported fresset level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the 3 explicitly in mifwreset.
- Since Packet Facing enforce max_tc value is "1", features that require multiple Traffic Class (TC)s will not be active when this mode is available.

Fixes

Fixes in version 14.26.XXXX :
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Updated the latest version of Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox Ethernet only Mezzanine adapters 1.0.0 supported on HPE Synergy Servers is available on HPE support center.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- By default, mifwreset takes the lowest supported fresset level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the 3 explicitly in mifwreset.
- Since Packet Facing enforce max_tc value is "1", features that require multiple Traffic Class (TC)s will not be active when this mode is available.

Enhancements

Firmware for the following device is updated to 14.26.1040 :
P11338-B21 (HPE Ethernet 10Gb 2-port SFP+) Adapter

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Mellanox Ethernet Only Adapters</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>P11338-B21</td>
<td>HPE Ethernet 10Gb 2-port SFP+</td>
<td>HPE00000000038</td>
</tr>
</tbody>
</table>

Known Issues for FW version 2.42.5044 :
- When using the QSF module RTXM320-SB1, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
- Enabling/disabling cpq, timestamp using mifwconfig 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 mifwconfig when the PF is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading 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 value derived from the MAC address. For all driver/firmware/software purposes, the lattervalue should be used.
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters
- On Pilolt SL230, PCIe link occasionally does not come up at Gen3 speed
- Rh3.3 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 the 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 MCF21041-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 to using MFT 3.0.0-3
- RM-MDFMS should not be enabled when working with InfiniBand on MLNX_OFED 2.0.3
- RM-MVDL read-only files 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 as the same as ConnectX-3 VF device ID due to driver limitations.
- RSGD while driving PCIe (legacy) on G9 servers. This occurs only when PCIe boot fails and BIOS boots from HDD. Currently it is pending BIOS fix.
- Changing port protocol from EHT to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
- RDP over FIPv6 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.
- SGGMEM 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.
- B329B: 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 OCB8 buffer

Known Issues for FW version 14.26.1040 :
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- Secure state is not updated after firmware burning due to the following behavior.
- Since Packet Facing enforce max_tc value is "1", features that require multiple Traffic Class (TC)s 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 for FW version 16.26.1040 :
- Occasionally Blue-screen might occur when using mifwreset for Socket Direct devices on Windows.
- SX_KDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are processed by the SX_KDMA table.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- The sw_reset option is not supported when ATS is enabled.
- When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header.
- DCL29: When running ibdump, loopback traffic is mirroring into the kernel driver.
- RM#440329: When setting the PF_BAR2_SIZE value higher than the maximum supported size.
Enhancements

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.

Fixes submitted in version 14.26.1040:

- A function was misbehaving when a PCIe TLP was set with a poisoned indication.
- The "destroy mkey" command was getting stuck when rebooting the hypervisor.
- The total firmware reset time is increased by 1 second.

Fixes submitted in version 16.26.1040:

- On rare occasions, when firmware coalesce Host stuck events occur, an async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hosts.
- Unexpected queue pairs transitioned to error in lossy tests.
- Limited the maximum amount of a PF.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Stability issues with RDMA over Converged Ethernet (RoCE) retransmissions under stress were affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Large number of packets dropped when running Jumbo frames with TTL rewrite.
- Limited the number of the elements in the Quality of Service (QoS) tree to 2k.
- Note: Creating more than 250 Vport_tc for every TC is not allowed.
- Queue Pair (QP) flow query was always taking port 1, Firmware will now reply the proper port, 1 or 2, for the dual port RoCE net device.
- The nack counters constantly reported as "0".
- In a rare scenario when the driver is executing the "zer" command and the QP is in Send Queue (SQ) drain state, the firmware might post event of broken Work Queue (WQ) instead of send

Fixes submitted in version 14.26.1040:

- Firmware for the following devices is updated to 16.26.1040:
  779799-B21 (HPE Ethernet 10G 2-port 546SFP+ Adapter)
  779793-B21 (HPE Ethernet 10G 2-port 546SFP+ Adapter)

- Firmware for the following devices are updated to 14.26.1040:
  817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

- Firmware for the following devices are updated to 14.26.1040:
  817751-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

- Firmware for the following device is updated to 16.26.1040:
  874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

Fixes submitted in version 12.26.1040:

- Firmware for the following devices is updated to 12.26.1040:
  779793-B21 (HP Ethernet 10G 2-port 546SFP++ Adapter)
  779799-B21 (HP Ethernet 10G 2-port 546SFP++ Adapter)

New features and changes in version 14.26.1040 and 16.26.1040:

- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmqfd.
- The ICMD Query Caps indicate support and expose the list of the supported counters.
- Enabled a new feature User Context Object (DEVX) which is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX context.
- Support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- Reliability improvements and security hardening enhancements were done.

New features and changes in version 16.26.1040:

- Added support for the following features:
  - Address Translation Service (ATS) support for MKEY and UMEM.
  - Exposing the VPD on the VF.
  - Hairpin Drop Counter.
  - Hairpin and TM RNOV QPs to work deviced.
  - Creating software managed steering tables in eSwitch/FDB.

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
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<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>779793-B21</td>
<td>HP Ethernet 10G 2-port 546SFP++ Adapter</td>
<td>HP_1200111023</td>
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<td>817749-B21</td>
<td>HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter</td>
<td>HP_2090110004</td>
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<tr>
<td>817751-B21</td>
<td>HPE Ethernet 25Gb 2-port 640SFP28 Adapter</td>
<td>HP_2420110004</td>
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<tr>
<td>874253-B21</td>
<td>HPE Ethernet 100Gb 1-port 842QSFP28 Adapter</td>
<td>HPE0000000014</td>
</tr>
</tbody>
</table>

Important Note!

Fixes submitted in firmware 12.26.1040:

- Secure state is not updated after firmware burning due to the following behavior.
  - Default, misfxwreset takes the lowest supported fwsreset level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the
  - Workaround: Set the reset level to 3 explicitly in misfxwreset.
  - 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 in firmware 16.26.1040:

- Occasionally Bluebscreen might occur when using misfxwreset for Socket Direct devices on Windows.
  - SX_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDMA table.
  - Workaround: Use SX_RDMA with Dual Port GVMI instead.
  - Hardware arbitration is currently disabled in DCOP 0.0 cards. It will be supported on future releases for the same hardware.
  - The sx_reset option is not supported when ATS is enabled.
  - When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header. Meaning, using VLAN push/pop may
  - The features that may be affected by this and not work properly are:
    - Host chaining
    - hairpinning in FDB
    - TTL modify in FDB
    - VGT+
  - DC LAG can function only in case there is a single PF per port without any active VFs.
  - Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
  - Firmware asserts may occur when setting the PF_BAR2_SIZE value higher than the maximum supported size (maximum PF_BAR2_SIZE is 4 for .
  - Workaround: Configure within limits (NIC PF_BAR2_SIZE <= 4).
  - CWNNM AOM cable is currently not supported.

Fixes submitted in version 12.26.1040:

- IPoIB did not function when there were Dynamically Connected Transport (DC) CNAK Queue Pairs (QPs) active.
  - On rare occasions, when firmware coalesce Host stuck events occur, an async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hos
  - Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
Enhancements

Firmware for the following devices are updated to 12.26.1040:
- 825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)
- 825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

Firmware for the following devices are updated to 16.26.1040:
- 879482-B21 (HPE InfiniBand EDR/Ethernet 40/50G 2-port S47FLR-QSF Adapter)
- 877276-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

Changes and New features in firmware version 12.26.1040 and 16.26.1040:
- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdif. They can be called via the vscc space. The counters' values are returned only via the trav
- Added support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- The following functionalities are still managed by the Kernel:
  - Resource cleaning
  - UCTX stamping
  - Blocking the physical address and IRQ from these UCTX
- Added support for the following features:
  - Address Translation Service (ATS) support for MKY and UNEM.
  - Exposing the Vital Product Data (VPD) on Virtual Function (VF).
  - Hairpin Drop Counter.
  - Hairpin and TM RNIO QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/Forwarding Table (FDB).

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>825110-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter</td>
<td>HP_2190101032</td>
</tr>
<tr>
<td>825111-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter</td>
<td>HP_219011032</td>
</tr>
<tr>
<td>877276-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter</td>
<td>HP_20000000009</td>
</tr>
<tr>
<td>877276-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter</td>
<td>HP_20000000009</td>
</tr>
</tbody>
</table>

Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on VMware ESXi 6.5

Important Note!

- Using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-S81, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come
- 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.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.
- Reboot the server.

Workaround:
- Reboot the server.

When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- When downgrading from firmware v2.30.8000 and using MF 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.
- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-S81, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come
- 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.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.
- Reboot the server.

Workaround:
- Reboot the server.

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].

In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcfg.

When SRIOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu 12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing the

Workaround:
- Enable SR-IOV in the BIOS.

When downgrading from firmware v2.30.8000 and using MF 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.

Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on VMware ESXi 6.5

Version: 1.0.5 (Recommended)
Filename: CP04532.compsig; CP04532.zip
Online Firmware Upgrade Utility (ESXi 6.5) for Mellanox Open Ethernet cards

**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
  - 764285-B21

- **New features in firmware version 2.42.5000:**
  - 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.
  - Added support for the following features.
    - new TLV: CK3_GLOBAL_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
    - User MAC configuration.
    - Automatically collecting madump 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.
  - Hardware arbitration is currently disabled in OC3.0 cards. It will be supported on future releases for the same hardware.
  - Since Packet Facing 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.

- **Supported Devices:**

<table>
<thead>
<tr>
<th>HP Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>764282-B21</td>
<td>HP InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter</td>
<td>HP_1350110023</td>
</tr>
<tr>
<td>764283-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter</td>
<td>HP_1360110017</td>
</tr>
<tr>
<td>764284-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter</td>
<td>HP_1370110017</td>
</tr>
<tr>
<td>764285-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter</td>
<td>HP_1380110017</td>
</tr>
<tr>
<td>764286-B21</td>
<td>HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter</td>
<td>HP_1390110023</td>
</tr>
</tbody>
</table>

**Fixed Issues in firmware 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.

**Known Issues in firmware 14.26.4012 and 14.26.6000:**

- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Hardware arbitration is currently disabled in OC3.0 cards. It will be supported on future releases for the same hardware.
- Since Packet Facing 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.

**Supported Devices and Features**

- 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_driver_info() 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.

**Know Issues in firmware 16.26.4012 and 16.26.6000:**

- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Hardware arbitration is currently disabled in OC3.0 cards. It will be supported on future releases for the same hardware.
- Occasionally Bluescreen might occur when using mlxconfreset for Socket Direct devices on Windows.
- SX_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDMA table.
- Hardware arbitration is currently disabled in OC3.0 cards. It will be supported on future releases for the same hardware.
- The sw_reset action fails in case it is initiated during live-patch flow.
- Occasionally Bluescreen might occur when using mlxconfreset for Socket Direct devices on Windows.
- SX_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDMA table.
- Hardware arbitration is currently disabled in OC3.0 cards. It will be supported on future releases for the same hardware.
- The sw_reset option is not supported when ATS is enabled
- When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header.
- DC LAG can function only in case there is a single PF per port without any active VPs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
- Firmware asserts may occur when setting the PF_BAR2_SIZE value higher than the maximum supported size (maximum PF_BAR2_SIZE is 4).
- CWDMA AOM cable is currently not supported
- PF_BAR2 and ATS cannot be enabled together, i.e. when PF_BAR2 is enabled, ATS cannot be enabled too.

**Important Note**

- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Hardware arbitration is currently disabled in OC3.0 cards. It will be supported on future releases for the same hardware.
- Since Packet Facing 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.
Fixes

Fixes in version 14.26.6000:
- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being held.

Fixes in version 14.26.4012:
- Updated the firmware behavior to report PLDM version 1.1.0 regardless of whether Redfish was enabled or not.
- Enabled the option to prevent clock and capture CPLD GPIOs glitch upon firmware reset.
- Fixed an issue that caused performance degradation when working in dual-port devices under bidirectional traffic stress.
- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hos.
- Updated the maximum amount of dumps created on a Physical Function (PF).
- Renamed the GRP Mellanox Vendor Specific External Capability mask enum from IDiagnosticCountersSupported to IDiagnosticSataSupported.
- Fixed a stability issue in RoCE retransmissions under stress affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe TLP was set with a poisoned indication.
- Fixed an issue that caused large number of packet to drop when running jumbo frames with Time to live (TTL) rewrite.
- Limited the number of the elements in the QoS tree 2K. Creating more than 250 Vport tc for every TC was not allowed.
- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being held.

Fixes in version 16.26.6000:
- Fixed an issue that prevented PCI link from being established when the firmware was corrupted.
- Fixed an issue that triggered a firmware assert and resulted in a wrong deallocation of a resource when Packet Pacing was enabled, and a QP was being destroyed.
- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being held.
- Fixed an issue that triggered a firmware assert and resulted in a wrong deallocation of a resource when Packet Pacing was enabled, and a QP was being destroyed.

Fixes in version 16.26.4012:
- Updated the firmware behavior to report PLDM version 1.1.0 regardless of whether Redfish was enabled or not.
- Enabled the option to prevent clock and capture CPLD GPIOs glitch upon firmware reset.
- Fixed an issue that slowed the firmware flows when executing many destroy XIRQ commands on an XIRQ that supported DC transport service.
- Fixed an issue that caused performance degradation when working in dual-port devices under bidirectional traffic stress.
- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hos.
- Updated the maximum amount of dumps created on a Physical Function (PF).
- Renamed the GRP Mellanox Vendor Specific External Capability mask enum from IDiagnosticCountersSupported to IDiagnosticSataSupported.
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- Limited the number of the elements in the QoS tree 2K. Creating more than 250 Vport tc for every TC was not allowed.
- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being held.

Enhancements

Firmware for the following devices is updated to 14.26.4012:
P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4121A-XCAT Adapter)

Firmware for the following devices is updated to 14.26.6000:
P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4621A-ACAB OCP3 Adapter)

Firmware for the following devices is updated to 16.26.4012:
P13188-B21 (HPE Ethernet 10/25Gb 2-port SPF28 MCKX512F-ACAT Adapter )
P21927-B21 (HPE Ethernet 100Gb 2-Port SPF28 MCKX516A-CCAT Adapter)

Firmware for the following devices is updated to 16.26.6000:
P10112-B21 (HPE Ethernet 10Gb 2-port SPF28 MCKX562A-ACAI OCP3 Adapter)

New features and changes in version 14.26.4012 and 16.26.4012:
- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdif. They can be called via the vscc space. The counters' values are returned only via the trace.
- Added support for the following:
  - Reporting the supported affiliated and unaffiliated asynchronous events to DEVA users through the command interface.
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - creating software managed steering tables in eSwitch/FD

New features and changes in version 14.26.6000 and 16.26.6000:
- Explicit Congestion Notification (ECN) is now automatically copied from the inner header to the outer header, unless defined otherwise in the SW steering. To disable this feature, need to write
- The eth_link_down_counter now counts logical link downs as well

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Mellanox Ethernet Only Adapters</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>P21930-B21</td>
<td>HPE Ethernet 10Gb 2-port SPF+ MCKX4121A-XCAT Adapter</td>
<td>MT_0000000414</td>
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<tr>
<td>P11341-B21</td>
<td>HPE Ethernet 10Gb 2-port SPF+ MCKX4621A-ACAB OCP3 Adapter</td>
<td>MT_0000000238</td>
</tr>
<tr>
<td>P13188-B21</td>
<td>HPE Ethernet 10/25Gb 2-port SPF28 MCKX512F-ACAT Adapter</td>
<td>MT_0000000416</td>
</tr>
<tr>
<td>P10112-B21</td>
<td>HPE Ethernet 10/25Gb 2-port SPF28 MCKX562A-ACAI OCP3 Adapter</td>
<td>MT_0000000241</td>
</tr>
<tr>
<td>P21927-B21</td>
<td>HPE Ethernet 100Gb 2-Port SPF28 MCKX516A-CCAT Adapter</td>
<td>MT_0000000417</td>
</tr>
</tbody>
</table>

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Ethernet 10Gb 2-port SPF28+ Adapter
Version: 1.0.1 (Recommended)
Filename: CP040054.compsig, CP040054.zip

Important Notes:

Known Issues in firmware 14.26.XXXX:
- Hardware arbitration is currently disabled in Open Compute Project (OCP)3.0 cards. It will be supported on future releases for the same hardware.
- Error state is not updated after firmware burning due to the following issue.
- By default, mifxreset takes the lowest supported firmware revision. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the firmware to/from 3 explicitly in mifxreset.
- Since Packet Pacing enforce max_ifc value is “1", features that require multiple Traffic Class (TC) s will not be active when this mode is available.

Fixes

Fixes in version 14.26.XXXX:
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Fixed a rare issue that resulted in "destroy mkey" command getting stuck when rebooting the hypervisor.
- The total firmware reset time is increased by 1 second.

Enhancements

Firmware for the following device is updated to 14.26.1040:
P11341-B21 (HPE Ethernet 10Gb 2-port SPF28+ Adapter)
Enhancements

Firmware for the following devices are updated to 2.42.5044:
- 779799-B21 (HP Ethernet 10Gb 2-port S4862F-8X Adapter)
- 779793-B21 (HP Ethernet 10Gb 2-port 54102P+ Adapter)

Firmware for the following devices are updated to 14.26.1040:
- 817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)
- 817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)
- 817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

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.

The latest version of Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox Ethernet only Mezzanine adapters 1.0.0 supported on HPE Synergy Servers is available on HPE support center, [here](https://support.hpe.com).
Firmware for the following device is updated to 16.26.1040:
874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

New features and changes in version 14.26.1040 and 16.26.1040:

- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdif.
- The ICMD Query Caps indicates support and expose the list of the supported counters.
- Enabled a new feature User Context Object (DEVX) which is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX context.
- Support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- Reliability improvements and security hardening enhancements were done.

New features and changes in version 16.26.1040:

- Added support for the following features:
  - Address Translation Service (ATS) support for MKEY and UMEM.
  - Exposing the VPD on the VF.
  - Hairpin Drop Counter.
  - Hairpin and TM RNOV QPs to work with DEVX.
  - Creating software managed steering tables in eswitch/FDB.

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Mellanox Ethernet Only Adapters</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>779793-B21</td>
<td>HP Ethernet 10Gb 2-port 546SFP+</td>
<td>Adapter HP_1200011023</td>
</tr>
<tr>
<td>779799-B21</td>
<td>HP Ethernet 10Gb 2-port 546FLR-SFP+</td>
<td>Adapter HP_2200110014</td>
</tr>
<tr>
<td>817749-B21</td>
<td>HP Ethernet 25Gb 2-port 640FLR-SFP28</td>
<td>Adapter HP_2690110034</td>
</tr>
<tr>
<td>817753-B21</td>
<td>HP Ethernet 25Gb 2-port 640SFP28</td>
<td>Adapter HP_2200110034</td>
</tr>
<tr>
<td>874253-B21</td>
<td>HP Ethernet 100Gb 1-port 842QSFP28</td>
<td>Adapter HP_20000100014</td>
</tr>
</tbody>
</table>

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: 1.0.1 (Recommended)
FileVersion: CP039802.compsig: CP039802.zip

Important Note!

Known Issues in firmware 12.26.1040:

- Secure state is not updated after firmware burning due to the following behavior.
  By default, mixfwreset takes the lowest supported fswreset level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the firmware might not function as expected.

Workaround:
- Set the reset level to 3 explicitly in mixfwreset.
- Since Packet Pacing enforce max_iC 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 in firmware 16.26.1040:

- Occasionally a Blue Screen might occur when using mixfwreset for Socket Direct devices on Windows.
- If Data In Flight (DIF) is enabled, the firmware might not function as expected.

Workaround: Use SX_RDMA with Dual Port GVM instead.

- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- The srii_reset option is not supported when ATS is not enabled.
- When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header. Meaning, using VLAN push/pop may return packets with incorrect VLAN headers.
- The firmware might be affected by this and not work properly at all.

- DC LAG can function only in case there is a single PF per port without any active VFs.
- Firmware asserts may occur when setting the maximum supported size where the reported size is less than the maximum supported size.

Workaround: Configure within limits (NIC PF_BAR2_SIZE <= 4).

- CWMN AOM cable is currently not supported.

Fixes

Fixes submitted in version 12.26.1040:

- IPoIB could not to function when there were Dynamically Connected Transport (DC) CNAK Queue Pairs (QPs) active.
- On rare occasions, when firmware coalesced Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the host
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.

Workaround:
- Call syscl to manually reset the PF BAR.
- Use SX_RDMA with Dual Port GVMM instead.

- DC LAG can function only in case there is a single PF per port without any active VFs.
- Firmware asserts may occur when setting the maximum supported size where the reported size is less than the maximum supported size.

Workaround: Configure within limits (NIC PF_BAR2_SIZE <= 4).

- CWMN AOM cable is currently not supported.

Enhancements

Firmware for the following devices are updated to 12.26.1040:
825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 842QSFP28 Adapter)
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 842QSFP28 Adapter)

Firmware for the following devices are updated to 16.26.1040:
879482-B21 (HPE InfiniBand FDR/Ethernet 40Gb 50Gb 2-port 547FLR-QSF Adapter)
877276-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 842QSFP28 Adapter)

Changes and New features in firmware version 12.26.1040 and 16.26.1040:

- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdif. They can be called via the vsec space. The counters’ values are returned only via the tracer.
- User Context Object (DEVX) is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX contexts. The allowed functionalities are:
  - Resource cleaning
  - UCTX stamping
  - Blocking the physical address and IQN from these UCTX
  - Added support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.

130/237
Enhancements

Changes and New features in firmware version 16.2.10.40:

- Added support for the following features:
  - Address Translation Service (ATS) support for MKEY and UMEM.
  - Exposing the Vital Product Data (VPD) on Virtual Function (VF).
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/Forwarding Table (FOB).

Supported Devices and Features

<table>
<thead>
<tr>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter</td>
<td>HP_2180110032</td>
</tr>
<tr>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter</td>
<td>HP_2190110032</td>
</tr>
<tr>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter</td>
<td>HPE0000000009</td>
</tr>
<tr>
<td>HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter</td>
<td>HPE0000000022</td>
</tr>
</tbody>
</table>

Important Note!

Known Issues in firmware 2.42.5000, 2.42.5056:

- When using the Quad Small Form-factor Pliable (QSFP) module RTXM320-S81, 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 mgmctimestamp using miscconfig is not supported.
  
  Workaround: Please use the miscconfig utility (not mgmctimestamp).

- firmware version 2.42.5056:
  
  - InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
  
  - 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 |

Franky Lin

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and InfiniBand mode) devices on VMware ESXi 6.7

Version: 1.0.3 (Recommended)

Filename: CP042533.compsis, CP042533.zip

Fixes

Fixes in version 2.42.5000:

- PortRoIPkt counter was prevented from being cleared after resetting.

  Workaround: Reboot the server.

- 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 ratio of 1:1.

  Workaround: Reboot the server.

- The link does not come up on the first restart after a driver reload.

  Workaround: Reboot the server.

- 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.

  Workaround: Reboot the server.

- 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.

  Workaround: Reboot the server.

- The server hangs and resolves in NVR when running "milfsh -d m4103_pci_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the NIC is down.

  Workaround: Reboot the server.

- Missing the panic notification when the port is neither active nor armed.

  Workaround: Do not write to read-only fields if you wish to preserve them.

- When using the Quad Small Form-factor Pliable (QSFP) module RTXM320-S81, 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 mgmctimestamp using miscconfig is not supported.

  Workaround: Please use the miscconfig utility (not mgmctimestamp).

- firmware version 2.42.5056:

  - InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter

  - 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 |

Franky Lin

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and InfiniBand mode) devices on VMware ESXi 6.7

Version: 1.0.3 (Recommended)

Filename: CP042533.compsis, CP042533.zip

Fixes

Fixes in version 2.42.5000:

- PortRoIPkt counter was prevented from being cleared after resetting.

  Workaround: Reboot the server.

- 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 ratio of 1:1.

  Workaround: Reboot the server.

- The server hangs and resolves in NVR when running "milfsh -d m4103_pci_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the NIC is down.

  Workaround: Reboot the server.

- Missing the panic notification when the port is neither active nor armed.

  Workaround: Do not write to read-only fields if you wish to preserve them.

- When using the Quad Small Form-factor Pliable (QSFP) module RTXM320-S81, 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 mgmctimestamp using miscconfig is not supported.

  Workaround: Please use the miscconfig utility (not mgmctimestamp).

Franky Lin

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and InfiniBand mode) devices on VMware ESXi 6.7

Version: 1.0.3 (Recommended)

Filename: CP042533.compsis, CP042533.zip

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
764285-B21

New features in firmware version 2.42.5000:
Supported Devices:

<table>
<thead>
<tr>
<th>HP Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>764282-B21</td>
<td>HP InfiniBand QDR/Ethernet 10Gb 2-port S44+M Adapter</td>
<td>HP_1350110023</td>
</tr>
<tr>
<td>764283-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port S44+M Adapter</td>
<td>HP_1360110017</td>
</tr>
<tr>
<td>764284-B21</td>
<td>HP InfiniBand FDR/Ethernet 100Gb 2-port S44+QSFP Adapter</td>
<td>HP_1370110017</td>
</tr>
<tr>
<td>764285-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port S44+FLR-QSFP Adapter</td>
<td>HP_1380110017</td>
</tr>
<tr>
<td>764286-B21</td>
<td>HP InfiniBand QDR/Ethernet 10Gb 2-port S44+FLR-QSFP Adapter</td>
<td>HP_1390110023</td>
</tr>
</tbody>
</table>

Important Note!


- 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_tcv 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 in firmware 16.26.4012 and 16.26.6000:

- In rare cases, following a server powerup, a fatal error (device’s health compromised) message might appear with ext_synd 0x8d1d. The error will be accompanied by a failure to use mlxcon.
- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Creating an NvMe offload task while running the LPFW flow may cause the device to become unstable.
- The sw_reset action fails in case it is initiated during live-patch flow.
- Occasionally Bluescreen might occur when using mlxfiswrest for Socket Direct devices on Windows.
- SX_RDM is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDM table.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- The sw_reset option is not supported when ATS is enabled.
- When using the hairpin feature, and using VLAN strip or using the "modify swvport context" command, the packets can have an incorrect VLAN header.
- DC CIC can function only in case there is a single PF per port without any active VFs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
- Firmware asserts may occur when setting the PF_BAR2_SIZE value higher than the maximum supported size (maximum PF_BAR2_SIZE is 4).
- CWDMA4 AOM cable is currently not supported.
- PF_BAR2 and ATS cannot be enabled together, i.e. when PF_BAR2 is enabled, ATS cannot be enabled too.

Fixes

Fixes in version 14.26.6000:

- Fixed an issue that cause the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being blocked.

Fixes in version 14.26.4012:

- Updated the firmware behavior to report PLDM version 1.1.0 regardless of whether Redfish was enabled or not.
- Enabled the option to prevent clock and capture CPLD GPIDs glitch upon firmware reset.
- Fixed an issue that caused a function to misbehave when a PCIe Traffic Light Protocol(TLP) was set with a poisoned indication.
- Fixed a rare issue that resulted in "destroy mkey " command getting stuck when rebooting the hypervisor.

Fixes in version 16.26.6000:

- Fixed an issue that prevented PCI link from being established when the firmware was corrupted.
- Fixed an issue that triggered a firmware assert and resulted in a wrong deallocation of a resource when Packet Pacing was enabled, and a QP was being destroyed.
- Fixed an issue that cause the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being blocked.

Fixes in version 16.26.4012:

- Updated the firmware behavior to report PLDM version 1.1.0 regardless of whether Redfish was enabled or not.
- Enabled the option to prevent clock and capture CPLD GPIDs glitch upon firmware reset.
- Fixed an issue that slowed the firmware flows when executing many destroy XRQ commands.
- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hosts.
- Limited the maximum amount of dumps created on a Physical Function(PF).
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Fixed a stability issue in RoCE retransmissions under stress affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe TLP was set with a poisoned indication.
- Fixed an issue that caused large number of packets to drop when running jumbo frames with Time to live (TTL) rewrite.
- Limited the number of the elements in the QoS tree 2K. Creating more than 250 Vport, Tc for every TC was not allowed.
- Fixed the query QP flow. Instead of always taking port 1, FW will now reply the proper port, 1 or 2, for the dual port RDMA over Converged Ethernet(RoCE) net device.
- Fixed an issue that caused theック counts to constantly be reported as "0".
- In a rare scenario when the driver was executing the "2err" command and the Queue pair(QP) was in SQ drain state, the firmware might post event of broken Work Queue (WQ) instead of sending it.

Enhancements

Firmware for the following devices is updated to 14.26.4012:

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ 48X21A-XXCAT Adapter)

Firmware for the following devices is updated to 14.26.6000:

P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX421A-ACAB DC3P Adapter)

Firmware for the following devices is updated to 16.26.4012:

P13188-B21 (HPE Ethernet 10/25Gb 2-port SPF28 MCKX512F-ACAT Adapter )
P21927-B21 (HPE Ethernet 100Gb 2-Port SPF28 MCKX516A-CAAT Adapter)

Firmware for the following devices is updated to 16.26.6000:

P10112-B21 (HPE Ethernet 10/25Gb 2-port SPF28 MCKX562A-AC1 OCP3 Adapter)

New features and changes in version 14.26.4012 and 16.26.6000:

- Enabled the firmware by using the ICMDS commands to deal with diagnostic counters similar to cmdif. They can be called via the vscc space. The counters’ values are returned only via the tracertool.
- Zero-Touch-RoCE counters are now available to the user for debugging purposes when using the Zero-Touch-RoCE feature.
- Added Address Translation Service (ATS) support for MKEY and UMEM VPD. Added support for exposing the VPD on the VF.
Added support for the following:
- Reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Hairpin Drop Counter.
- Hairpin and TM RNDV QPs to work with DevX.
- Creating software managed steering tables in eSwitch/FD.

New features and changes in version 14.26.6000 and 16.26.6000:
- Explicit Congestion Notification (ECN) is now automatically copied from the inner header to the outer header, unless defined otherwise in the SW steering. To disable this feature, need to write
- The eth_link_down_counter now counts logical link downs as well.

### Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Mellanox Ethernet Only Adapters</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>P21930-B21</td>
<td>HPE Ethernet 10Gb 2-port SFP++ MCX4121A-XCHT Adapter</td>
<td>MT_0000000014</td>
</tr>
<tr>
<td>P11341-B21</td>
<td>HPE Ethernet 10Gb 2-port SFP++ MCX4621A-ACAB OCP3 Adapter</td>
<td>MT_0000000028</td>
</tr>
<tr>
<td>P11388-B21</td>
<td>HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACT Adapter</td>
<td>MT_0000000046</td>
</tr>
<tr>
<td>P10112-B21</td>
<td>HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-AALC OCP3 Adapter</td>
<td>MT_00000000241</td>
</tr>
<tr>
<td>P21927-B21</td>
<td>HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter</td>
<td>MT_0000000017</td>
</tr>
</tbody>
</table>

Online Firmware Upgrade Utility (Linux x86_64) for HPE Ethernet 10Gb 2-port SFP+ Adapter
Version: 1.0.1 (Recommended)
Filename: firmware-nic-mellanox-nic-ft-1.0.1-1.1.x86_64.compsig; firmware-nic-mellanox-nic-ft-1.0.1-1.1.x86_64.rpm

### Important Note!

Known Issues in firmware 14.26.XXXX:
- Hardware arbitration is currently disabled in Open Compute Project (OCP) 3.0 cards. It will be supported on future releases for the same hardware.
- Secure state is not updated after firmware burning due to the following behavior.
  - By default, mlxfwreset takes the lowest supported firmware level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the secure state is not updated.
  - Since Packet Facing enforce max_tc value is "1", features that require multiple Traffic Class (TC)s will not be active when this mode is available.

**Fixes**

- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Fixed a rare issue that resulted in "destroy mkey" command getting stuck when rebooting the hypervisor.
- The total firmware reset time is increased by 1 second.

### Enhancements

- Firmware for the following device is updated to 14.26.1040:
  - P11338-B21 (HPE Ethernet 10Gb 2-port SFP+ Adapter)

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 IPS 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.

Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox Ethernet only adapters
Version: 1.0.11 (Recommended)
Filename: firmware-nic-mellanox-ethernet-only-1.0.11-1.1.x86_64.compsig; firmware-nic-mellanox-ethernet-only-1.0.11-1.1.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 is to differentiate the packages for HPE Synergy Servers, which use the Mellanox Ethernet only Mezzanine adapters. The latest version of Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox Ethernet only Mezzanine adapters 1.0.0.0 supported on HPE Synergy Servers is available on HPE support center.

**Known Issues for FW version 2.42.5044:**
- When using the QSFP module RTXM320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
- Enabling/disabling cli_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.
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 14.26.1040:

- 817749-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)
- 817753-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)
- 817749-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

Firmware for the following devices are updated to 14.26.1040:

- 817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

Firmware for the following devices are updated to 16.26.1040:

- 847652-B21 (AMCr 10/25Gb 2-port 640SFP28 Adapter)

New features and changes in version 14.26.1040 and 16.26.1040:

- Added support for the following features:
  - Address Translation Service (ATS) support for MKEy and UNEM.
  - Exposing the VPD on the VF.
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.

Creating software managed steering tables in eSwitch/FDB.
Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox IB only ConnectX4 and ConnectX5 devices on Linux x86_64 platform
Version: 1.0.4 (Recommended)
Filename: firmware-nic-mellanox-ib-cx4-cx5-1.0.4-1.1.x86_64.compsig; firmware-nic-mellanox-ib-cx4-cx5-1.0.4-1.1.x86_64.rpm

Important Notes

Known Issues in firmware 12.26.1040:
- Secure state is not updated after firmware burning due to the following behavior. By default, mixfrewset takes the lowest supported freset level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the firmware will not be updated.
- Since Packet facing priority 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 in firmware 16.26.1040:
- Occasionally Blue screen might occur when using mixfrewset for Socket Direct devices on Windows.
- RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDMA table.

Workaround: Use SX_RDMA with Dual Port GVM instead.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- When using the hairpin feature, and using VLAn strip or using the "modify esw vport command" context, the packets can have an incorrect VLAn header. Meaning, VLAn push/pop may not work properly.
- The features that may be affected by this and not work properly are:
  - Host chaining
  - Mirroring in FDB
  - TTL modify in FDB
  - VGT+
  - DC LAG can function only in case there is a single PF per port without any active VFs.
  - Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
  - Firmware asserts may occur when setting the PF_BAR2_SIZE value higher than the maximum supported size (maximum PF_BAR2_SIZE is 4).

Workaround: Configure within limits (NIC PF_BAR2_SIZE <= 4).
- CWDMD4 AOM cable is currently not supported.

Fixes

Fixes submitted in version 12.26.1040:
- IPoIB could not to function when there were Dynamically Connected Transport (DC) CNAK Queue Pairs (QPs) active.
- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the host ports.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.

Fixes submitted in version 16.26.1040:
- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the host ports.
- Unexpected queue pairs transitioned to error in isory tests.
- Limited the maximum amount of dumps created on a PF.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Stabilize issues where RDMA over Converged Ethernet (RoCE) retransmissions under stress were affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Large number of packets dropped when running Jumbo frames with TTL rewrite.
- Limited the number of the elements in the Quality of Service (QoS) tree 2K.
- Note: Creating more than 250 Vport_tc for every TC is not allowed.
- Queue Pair (QP) flow query was always taking port 1, Firmware will now reply the proper port, 1 or 2, for the dual port RoCE net device.
- The track counters currently reported as “0”.
- In a rare scenario when the driver is executing the “2en” command and the QP is in Send Queue (SQ) drain state, the firmware might post event of broken Work Queue (WQ) instead of send

Enhancements

Firmware for the following devices are updated to 12.26.1040:
843400-B21 (HPE Apollo X10 InfiniBand EDR (100Gb) 2-port Adapter)
872723-B21 (HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter)

Firmware for the following devices are updated to 16.26.1040:
872725-B21 (HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter)

Changes and New features in firmware version 16.26.1040:
- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdif. They can be called via the vscc space. The counters’ values are returned only via the tctrack.
- User Context Object (DEVX) is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX contexts. The allowed functionalities
  The following functionalities are still managed by the Kernel:
  - Resource cleaning
  - UCTX stamping
  - Blocking the physical address and IRQ from these UCTX
  - Added support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- This release contains important reliability improvements and security hardening enhancements. Mellanox recommends upgrading your device firmware to this release to improve the device

Changes and New features in firmware version 16.26.1040:
- Added support for the following features:
  - Address Translation Service (ATS) support for MKKEY and UMEM.
  - Exposing the Virtual Product Data (VPD) on Virtual Function (VF).
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/Forwarding Table (FDB).

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Device Name</th>
<th>PSID</th>
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</thead>
<tbody>
<tr>
<td>843400-B21</td>
<td>HPE Apollo X10 InfiniBand EDR (100Gb) 2-port Adapter</td>
<td>HP2900110102</td>
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<tr>
<td>872725-B21</td>
<td>HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter</td>
<td>HPE0000000018</td>
</tr>
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Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
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<tbody>
<tr>
<td>779733-B21</td>
<td>HPE Ethernet 10Gb 2-port 546SPF+ Adapter</td>
<td>HP_2900110102</td>
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<td>787967-B21</td>
<td>HPE Ethernet 10Gb 2-port 546SPF+ Adapter</td>
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<tr>
<td>874753-B21</td>
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<td>HPE0000000018</td>
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Supported Devices and Features

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<tr>
<td>779733-B21</td>
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<td>787967-B21</td>
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<td>874753-B21</td>
<td>HPE Ethernet 10Gb 2-port 841QSFP28 Adapter</td>
<td>HPE0000000014</td>
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<td>872723-B21</td>
<td>HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter</td>
<td>HPE0000000018</td>
</tr>
<tr>
<td>872725-B21</td>
<td>HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter</td>
<td>HPE0000000018</td>
</tr>
</tbody>
</table>
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: 1.0.7 (Recommended)
Filename: firmware-hca-mellanox-vpi-connexx4-1.0.7-1.1.x86_64.compsig; firmware-hca-mellanox-vpi-connexx4-1.0.7-1.1.x86_64.rpm

**Important Note!**

**Known Issues in firmware 12.26.1040:**
- Secure state is not updated after firmware burning due to the following behavior.
  - By default, mixwrsset takes the lowest supported fwreset level. Changing to/from secure boot keeps the firmware versions the same except when changing INI changes. As a result, the Workaround: Set the reset level to 3 explicitly in mixwrsset.
- 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 in firmware 16.26.1040:**
- Occasionally Blue screens might occur when using mixwrsset for Socket Direct devices on Windows.
- SX_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDMA table.
- Workaround: Use SX_RDMA with Dual Port GWVM instead.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- The sw_reset option is not supported when ATS is enabled.
- When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header. Meaning, using VLAN push/pop may cause issues.
- The features that may be affected by this and not work properly are:
  - HA Context
  - Mirroring in FDB
  - TTL modify in FDB
  - VGT+
- DC LAG can function only in case there is a single PF per port without any active VFs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
- Firmware asserts may occur when setting the PF_BAR2_SIZE value higher than the maximum supported size (maximum PF_BAR2_SIZE is 4 for .
  Workaround: Configure within limits (NIC PF_BAR2_SIZE <= 4).
- COWN4 AGM cable is currently not supported.

**Fixes**

**Fixes submitted in version 12.26.1040:**
- IPoIB could not function when there were Dynamically Connected Transport (DC) CNACK Queue Pairs (QPs) active.
- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the host
- The GMP Mellanox Vendor Specific External Capability mask enum from IdiagnosticCountersSupported from IdiagnosticCountersSupported.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.

**Fixes submitted in version 16.26.1040:**
- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the host
- Unexpected queue pairs transitioned to error in lossy tests.
- Limited the maximum amount of dumps created on a PF.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IdiagnosticCountersSupported to IdiagnosticCountersSupported.
- Stability issues with RDMA over Converged Ethernet (RoCE) retransmissions under stress were affecting Zero-Touch RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Large number of packets dropped when running Jumbo frames with TTL rewrite.
- Limited the number of the elements in the Quality of Service (QoS) tree 2k.
  Note: Creating more than 250 Vport_tc for every TC is not allowed.
- Queue Pair (QP) flow query was always taking port 1, Firmware will now reply the proper port, 1 or 2, for the dual port RoCE net device.
- The net counters constantly reported as "0".
- In a rare scenario when the driver is executing the "Zerr" command and the QP is in Send Queue (SQ) drain state, the firmware might post event of broken Work Queue (WQ) instead of send

**Enhancements**

**Firmware for the following devices are updated to 12.26.1040:**
825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

**Firmware for the following devices are updated to 16.26.1040:**
879492-B21 (HPE InfiniBand EDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

**Changes and New features in firmware version 12.26.1040 and 16.26.1040:**
- Enabled the firmware by using the ICM commands to deal with diagnostic counters similar to cmdif. They can be called via the vscc space. The counters’ values are returned only via the tsx
- User Context Object (DEVX) is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX contexts. The allowed functionalities The following functionalities are still managed by the Kernel:
  - Resource cleaning
  - UCTX stamping
  - Blocking the physical address and IRQ from these UCTX
- Added support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Zero-Touch RoCE counters are now available to the user for debugging purposes when using the Zero-Touch RoCE feature.
- This release contains important reliability improvements and security hardening enhancements. Mellanox recommends upgrading your device firmware to this release to improve the device fir

**Changes and New features in firmware version 16.26.1040:**
- Added support for the following features:
  - Address Translation Service (ATS) support for MKEY and UMEM.
  - Exposing the Vital Product Data (VPD) on Virtual Function (VF).
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/Forwarding Table (FDB).

**Supported Devices and Features**

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>825110-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter</td>
<td>HP_2180110032</td>
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<tr>
<td>825111-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter</td>
<td>HP_2190110032</td>
</tr>
<tr>
<td>872726-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter</td>
<td>HPE000000009</td>
</tr>
<tr>
<td>879482-B21</td>
<td>HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter</td>
<td>HPE000000022</td>
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</table>

Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on Linux x86_64 platform
Version: 1.0.1 (Recommended)
Filename: firmware-hca-mellanox-vpi-connexx6-mft-1.0.1-1.1.x86_64.compsig; firmware-hca-mellanox-vpi-connexx6-mft-1.0.1-1.1.x86_64.rpm

**Important Note!**

Firmware version 20.25.7020 supports only InfiniBand mode of Operation.

**Fixes**
Enhancements

**Firmware for the following devices are updated to 2.42.7020:**
- HPE Infiband HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter
- HPE Infiband HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter
- HPE Infiband HDR100/Ethernet 200Gb 2-port 940QSFP56 x16 Adapter

**Supported Devices and Features**

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
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<tbody>
<tr>
<td>P06254-B21</td>
<td>HPE Infiband HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter</td>
<td>P062540000034</td>
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<tr>
<td>P06250-B21</td>
<td>HPE Infiband HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter</td>
<td>P062500000035</td>
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<tr>
<td>P06251-B21</td>
<td>HPE Infiband HDR100/Ethernet 200Gb 2-port 940QSFP56 x16 Adapter</td>
<td>P062510000036</td>
</tr>
</tbody>
</table>

Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox VPI and Infiband mode devices on Linux x86_64 platform
Version: 1.0.10 (Recommended)
Filename: firmware-hca-mellanox-vpi-eth-b-1.0.10-1.1.x86_64.compsig; firmware-hca-mellanox-vpi-eth-b-1.0.10-1.1.x86_64.rpm

**Important Note!**

**Known Issues in firmware 2.42.5000, 2.42.5056:**

- **New features in firmware version 2.42.5056:**
  - Added support for the following features:
    - New TLV: `CIX_GLOBALCONF` to enable/disable timestamp on incoming packets through mlxconfig configuration.

- **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
  - 764285-B21

**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 very small value.
- The server hangs and results in NMI when running `mifxtop -d mti4033_pci_cro` while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the PCIe Gen3 link will cause misbehavior of sideband management resulting in communication loss.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can only raise a 1G link and only if the switch port allows it.

**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 Infiband on a VPI adapter device.
Online Firmware Upgrade Utility (Linux x86_64) for Mellanox Open Ethernet cards

Version: 1.0.1 (Recommended)
Filename: firmware-nic-open-mellanox-eth-mft-1.0.1-1.1.x86_64.compsig; firmware-nic-open-mellanox-eth-mft-1.0.1-1.1.x86_64.rpm

**Important Note!**

**Supported Devices and Features**

**Supported Devices:***

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<thead>
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<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>764282-B21</td>
<td>HP InfiniBand QDR/Ethernet 10Gb 2-port S44+M Adapter</td>
<td>HP_1350110023</td>
</tr>
<tr>
<td>764283-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port S44+M Adapter</td>
<td>HP_1360110017</td>
</tr>
<tr>
<td>764284-B21</td>
<td>HP InfiniBand FDR/Ethernet 100Gb/40Gb 2-port S44+QSPF Adapter</td>
<td>HP_1370110017</td>
</tr>
<tr>
<td>764285-B21</td>
<td>HP InfiniBand FDR/Ethernet 100Gb 2-port S44+FLR-QSPF Adapter</td>
<td>HP_1380110017</td>
</tr>
<tr>
<td>764286-B21</td>
<td>HP InfiniBand QDR/Ethernet 100Gb 2-port S44+FLR-QSPF Adapter</td>
<td>HP_1390110023</td>
</tr>
</tbody>
</table>

**Known Issues in firmware 14.26.4012 and 14.26.6000:**

- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Enhanced the option to prevent clock and capture CPLD GPDUs which upon firmware reset.
- Fixed an issue that caused a function to misbehave when a PCIe TLP was set with a poisoned indication.
- Fixed an issue that prevented PCI link from being established when the firmware was corrupted.
- Fixed an issue that lié an issue that triggered a firmware assert and resulted in a wrong deallocation of a resource when Packet Pacing was enabled, and a QP was being destroyed.
- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being blocked

**Known Issues in firmware 16.26.4012 and 16.26.6000:**

- Due to a rare case, following a server powerup, a fatal error (device's health compromised) message might appear with ext_syst 0x8d1d. The error will be accompanied by a failure to use mlx4endl.
- Enabled the option to prevent clock and capture CPLD GPDUs which upon firmware reset.
- Fixed an issue that caused a function to misbehave when a PCIe Traffic Light Protocol(TLP) was set with a poisoned indication.
- Fixed an issue that caused an issue to occur when Packet Pacing was enabled, and a QP was being destroyed.
- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being blocked

**Fixed in version 14.26.6000:**

- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being blocked.

**Fixed in version 14.26.4012:**

- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being blocked

**Fixed in version 16.26.6000:**

- Fixed an issue that prevented PCI link from being established when the firmware was corrupted.
- Fixed an issue that lié an issue that triggered a firmware assert and resulted in a wrong deallocation of a resource when Packet Pacing was enabled, and a QP was being destroyed.
- Fixed an issue that caused the firmware to hang when an FLR occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was being blocked

**Enhancements**

- Firmware for the following devices is updated to 14.26.4012:
  - P21930-B21 (HP Ethernet 10Gb 2-port SPF+ MCL4I2A1-XCAT Adapter)
- Firmware for the following devices is updated to 14.26.6000:
  - P11341-B21 (HP Ethernet 10Gb 2-port SPF+ MCL4I2A1-ACAB DC3P Adapter)
- Firmware for the following devices is updated to 16.26.4012:
  - P13188-B21 (HP Ethernet 10/25Gb 2-port SPF28 MCK512F-ACAT Adapter )
  - P12972-B21 (HP Ethernet 100Gb 2-Port QSPF28 MCK516A-CCAT Adapter)
- Firmware for the following devices is updated to 16.26.6000:
  - P10112-B21 (HP Ethernet 10/25Gb 2-port SPF28 MCK562A-ACAI DC3P Adapter)
New features and changes in version 14.26.4012 and 16.26.4012 :

- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmif. They can be called via the vsc space. The counters’ values are returned only via the tra.
- Zero-Touch-ROCc counters are now available to the user for debugging purposes when using the Zero-Touch-ROCc feature.
- Added Address Translation Service (ATS) support for MKey and UMEM VPD. Added support for exposing the VPD on the VF.
- Added support for the following:
  - Reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
  - Hairpin Drop Counter.
  - Hairpin and TM RNOQ 0s to work with DevX.
  - Creating software managed steering tables in eSwitch/FD.

New features and changes in version 14.26.6000 and 16.26.6000 :

- Explicit Congestion Notification (ECN) is now automatically copied from the inner header to the outer header, unless defined otherwise in the SW steering. To disable this feature, need to write
- The eth_link_down_counter now counts logical link downs as well.

Supported Devices and Features

<table>
<thead>
<tr>
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<th>Mellanox Ethernet Only Adapters</th>
<th>PSID</th>
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<tbody>
<tr>
<td>P21092-B21</td>
<td>HPE Ethernet 10Gb 2-port SFP+</td>
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<td>P11341-B21</td>
<td>HPE Ethernet 10Gb 2-port SFP+</td>
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<td>HPE Ethernet 10Gb 2-port SFP+</td>
<td>MT_0000000416</td>
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<td>MT_0000002241</td>
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<tr>
<td>P21927-B21</td>
<td>HPE Ethernet 10Gb 2-port QSFP+</td>
<td>MT_0000000417</td>
</tr>
</tbody>
</table>

Online Firmware Upgrade Utility (Windows x64) for HPE Ethernet 10Gb 2-port QSFP+ Adapter

Version: 1.0.0.1 (Recommended)
Filename: cp040055.exe

Important Note

Known Issues in firmware 14.26.????:

- Hardware arbitration is currently disabled in Open Compute Project (OCP)3.0 cards. It will be supported on future releases for the same hardware.
- Secure state is not updated after firmware burning due to the following behavior.
- By default, mifxreset takes the lowest supported firmware level.
- Since Packet Facing enforce max_tcv value is "1", features that require multiple Traffic Class (TC)’s will not be active when this mode is available.

Fixes

Fixes in version 14.26.????:

- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Fixed a rare issue that resulted in "destroy mkey " command getting stuck when rebooting the hypervisor.
- The total firmware reset time is increased by 1 second.

Enhancements

Firmware for the following device is updated to 14.26.1040:

P11338-B21 (HPE Ethernet 10Gb 2-port SFP+ Adapter)

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Mellanox Ethernet Only Adapters</th>
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<tr>
<td>P11338-B21</td>
<td>HPE Ethernet 10Gb 2-port SFP+</td>
<td>MT_000000038</td>
</tr>
</tbody>
</table>

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox Ethernet only adapters

Version: 1.0.0.11 (Recommended)
Filename: cp040050.exe

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

The latest version of Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox Ethernet only Mezzanine adapters 1.0.0.0 supported on HPE Synergy Servers is available on HPE support centre

Known Issues for FW version 2.42.5044:

- When using the QSFP module RTXM320-SB1, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
- When using the N首款 enabling/disabling 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.
- When SR-IOV setup, using misconfig 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 driver utilities that read the GUID value derived from the MAC address. For all driver/software purposes, the latter value should be used.
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX®-3 adapters
- On Plix1 BL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL 6.3 driver causes kernel panic whe SR-IOV is enabled on VPI cards due to driver compatibility issue.
- In advanced steering mode, sideband management connectivity may be lost when having more than 8 QP per mg.
- 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 th
- MFT tools might leave the flash semaphore locked when 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-SRA module
- Gen2 failure at temperature sweep up to 10C/min for MT27181A-EVR-BV only.
- PCle Gen2 link unstable at temperature sweep of 10C/min for MT27181A-EVR-BV
- Bloom filter is currently not supported.
- Firmware downgrade message When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3
- RM4DMP5 should not be enabled when working with Infineon on MLNX_OFED-2.0.3
- RM4VDP 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.
- RSDO while running PCIe (legacy) on 9G servers. This occurs only when PCIe 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, server reboot could get stuck due to a kernel panic in mlx-4_en_get_drvinfo() that is called from asynchronous event handler.
- SN2298: When running bidump, loopback traffic is mirroring into the kernel driver.
- AHS reports wrong MTU size
- RMF#46523: MAC address that are set from the OS using ifconfig are not reflected in the OCB8 buffer.

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Known Issues for FW version 14.26.1040:
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- Security state is not updated after firmware burning due to the following behavior.
- Since Packet Fencing 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 for FW version 16.26.1040:
- Occasionally BlueScreen might occur when using mlxwreset for Socket Direct devices on Windows.
- SX_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDMA table.
- Hardware arbitration is currently disabled in OPC3.0 cards. It will be supported on future releases for the same hardware.
- The sx_reset option is not supported when ATs is enabled.
- When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header.
- DC LAG can function only in case there is a single PF per port without any active VFs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
- Firmware asserts may occur when setting the PF_BAR2_SIZE value higher than the maximum supported size.

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.

Fixes submitted in version 14.26.1040:
- A function was misbehaving when a PCIe TLP was set with a poisoned indication.
- The "destroy mkey" command was getting stuck when rebooting the hypervisor.
- The total firmware reset time is increased by 1 second.

Fixes submitted in version 16.26.1040:
- On rare occasions, when firmware coalesce Host stuck events occur, an async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the has
- Unexpected queue pairs transitioned to error in lossy tests.
- Limited the maximum amount of dumps created on a PF.
- Renamed the SMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Stability issues with RDMA over Converged Ethernet (RoCE) retransmissions under stress were affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Large number of packets dropped when running Jumbo frames with TTL rewrite.
- Limited the number of the elements in the Quality of Service (QoS) tree 2K.
- Note: Creating more than 250 Vport_tc for every TC is not allowed.
- Queue Pair (QP) flow query was always taking port 1, Firmware will now reply the proper port, 1 or 2, for the dual port RoCE net device.
- The nack counters constantly reported as "0".
- In a rare scenario when the driver is executing the "2err" command and the QP is in Send Queue (SQ) drain state, the firmware might post event of broken Work Queue (WQ) instead of send

Enhancements
Firmware for the following devices are updated to 2.42.5044:
779797-B21 (HP Ethernet 10G 2-port S466LR-SFP+ Adapter)
779793-B21 (HP Ethernet 10G 2-port S466FP+ Adapter)
Firmware for the following devices are updated to 14.26.1040:
817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)
817753-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)
Firmware for the following devices is updated to 16.26.1040:
874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)
New features and changes in version 14.26.1040 and 16.26.1040:
- Enabled the firmware by using the ICMF commands to deal with diagnostic counters similar to cmdif.
- The ICMF Query Caps indicate support and expose the list of the supported counters.
- Enabled a new feature User Context Object (DEVX) which is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX context
- Support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Zero-Touch-RoCE counters are now available to the user for debugging purposes when using the Zero-Touch-RoCE feature.
- Reliability improvements and security hardening enhancements were done.
- Added support for the following features:
  - Address Translation Service (ATS) support for MKEY and UMEM.
  - Exposing the VPD on the VF.
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/FDB.

Supported Devices and Features

**HPE Part Number** | **Mellanox Ethernet Only Adapters** | **PSID**
--- | --- | ---
779793-B21 | HP Ethernet 10Gb 2-port S466FP+ Adapter | HP_1200111023
779799-B21 | HP Ethernet 10Gb 2-port S466LR-SFP+ Adapter | HP_2240110004
817749-B21 | HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter | HP_2690110034
817753-B21 | HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter | HP_2420110034
874253-B21 | HPE Ethernet 100Gb 1-port 842QSFP28 Adapter | HP/AIDS/00000000014

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox IB only ConnectX4 and ConnectX5 devices on Windows x86_64 platform
Version: 1.0.0.4 (Recommended)
Filename: cp039799.exe

Important Note:
Known Issues in firmware 12.26.1040:
- Secure state is not updated after firmware burning due to the following behavior.
- By default, mlxwreset takes the lowest supported freset level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the
  Workaround: Set the reset level to 3 explicitly in mlxwreset.
- Since Packet Fencing 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 in firmware 16.26.1040:
- Occasionally BlueScreen might occur when using mlxwreset for Socket Direct devices on Windows.
- SX_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDMA table.
  Workaround: Use SX_RDMA with Dual Port GVMI instead.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.

140/237
**Enhancements**

This release contains important reliability improvements and security hardening enhancements. Mellanox recommends upgrading your device firmware to this release to improve the device firmware.

- Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- Added support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.

**Supported Devices and Features**

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>843400-B21</td>
<td>HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter</td>
<td>HPE2920111032</td>
</tr>
<tr>
<td>872723-B21</td>
<td>HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter</td>
<td>872725-B21</td>
</tr>
<tr>
<td>817725-B21</td>
<td>HPE InfiniBand EDR 100Gb 1-port 8412QSFP28 Adapter</td>
<td>817725-B21</td>
</tr>
</tbody>
</table>

**Fixed Issues in firmware 12.26.1040:**

- Creating software managed steering tables in eSwitch/Forwarding Table (FDB).
- Hairpin and TM RNDV QPs to work with DevX.
- Hairpin Drop Counter.
- Mirroring in FDB.
- TTL modify in FDB.
- VGT+
- DC LAG can function only in case there is a single PF per port without any active VPs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.

**Workaround:** Configure within limits (NIC PF_BARZ_SIZE <= 4).

- CWNN4 AOM cable is currently not supported.

**Changes and New features in firmware version 12.26.1040:**

- Added support for the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Enabled the firmware by using the ICM commands to deal with diagnostic counters similar to cmdif. They can be called via the vsec space. The counters' values are returned only via the trace.
- User Context Object (DevX) is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX contexts. The allowed functionalities are:
  - Resource cleaning
  - UCFT stamping
  - Blocking the physical address and IRQ from these UCTX

- The following functionalities are still managed by the Kernel:
  - Address Translation Service (ATS) support for MKEye and UMEM.
  - Exposing the Vital Product Data (VPD) on Virtual Function (VF).
  - Hairpin Drop Counter.
  - Hairpin and TM RNOV QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/Forwarding Table (FDB).
  - Address Translation Service (ATS) support for MKEye and UMEM.
  - Exposing the Vital Product Data (VPD) on Virtual Function (VF).
  - Hairpin Drop Counter.
  - Hairpin and TM RNOV QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/Forwarding Table (FDB).
Fixes
Fixes submitted in version 12.26.1040:
- IPoIB could not to function when there were Dynamically Connected Transport (DC) CNAK Queue Pairs (QPs) active.
- On rare occasions, when firmware coalesce Host stuck event occurs, an async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the host QPs.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.

Fixes submitted in version 16.26.1040:
- On rare occasions, when firmware coalesce Host stuck event occurs, an async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the host QPs.
- Unexpected queue pairs transitioned to error in isisy tests.
- Limited the maximum amount of dumps created on a PF.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Stability issues with RDMA over Converged Ethernet (RoCE) retransmissions under stress were affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Large number of packets dropped when running Jumbo frames with TTI rewrite.
- Limited the number of the elements in the Quality of Service (QoS) tree 2K.
- Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- Added support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- In a rare scenario when the driver is executing the "2err" command and the QP is in Send Queue (SQ) drain state, the firmware might post event of broken Work Queue (WQ) instead of send

Enhancements
Firmware for the following devices are updated to 12.26.1040:
- 825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)
- 825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

Firmware for the following devices are updated to 16.26.1040:
- 879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)
- 872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

Changes and New features in firmware version 12.26.1040 and 16.26.1040:
- Enabled the firmware by using the icmd commands to deal with diagnostic counters similar to cmmd. They can be called via the vscc space. The counters' values are returned only via the tra
- User Context Object (DEVX) is a containerized sandbox per user, to access PMF command securely by using General Object commands, UMEM and UCTX contexts. The allowed functionalities
- The following functionalities are still managed by the Kernel:
  - Resource cleaning
  - UCTX stamping
  - Blocking the physical address and IRQ from these UCTX
- Added support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- This release contains important reliability improvements and security hardening enhancements. Mellanox recommends upgrading your device firmware to this release to improve the device fir

Changes and New features in firmware version 16.26.1040:
- Added support for the following features:
  - Address Translation Service (ATS) support for MKEY and UMEM.
  - Exposing the Vital Product Data (VPD) on Virtual Function (VF).
  - Hairpin Drop Counter.
  - Hairpin and TM RN0V QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/Forwarding Table (FDB).

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>825110-B21</td>
<td>HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter</td>
<td>825111-B21</td>
</tr>
<tr>
<td>879482-B21</td>
<td>HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter</td>
<td>872726-B21</td>
</tr>
</tbody>
</table>

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on Windows x64_64 platform
Version: 1.0.0.10 (Recommended)
Filename: cp042534.compsig; cp042534.exe

Important Notes!
Known Issues in firmware 2.42.5000, 2.42.5056:
- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-5B1, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come
  - Workaround: Reboot the server.
- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-5B1, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come
  - Workaround: Reboot the server.
- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-5B1, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come
  - 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 v
  - Workaround: Please use the GUID value returned by the fabric/driver utilities (not 0x0000).
- 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 v
  - 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 v
  - 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 cau
  - Workaround: Clear the semaphore using MFT command: 'fint -clear_semaphore'.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
  - Workaround: Reduce the number of QP per mcg.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the micconfig tool: You are trying to override configurable FW by non-configu
  - Workaround: You are trying to override configurable FW by non-configu
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the micconfig tool: You are trying to override configurable FW by non-configu
  - Workaround: You are trying to override configurable FW by non-configu
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the micconfig tool: You are trying to override configurable FW by non-configu
  - Workaround: You are trying to override configurable FW by non-configu
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
  - 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 v
  - 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 cau
  - Workaround: Clear the semaphore using MFT command: 'fint -clear_semaphore'.
- Cable Info MAD reports a wrong cable info when using the MC210411-SR4 module.
  - Workaround: When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the micconfig tool: You are trying to override configurable FW by non-configu
  - Workaround: When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the micconfig tool: You are trying to override configurable FW by non-configu
  - Workaround: When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the micconfig tool: You are trying to override configurable FW by non-configu
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
764285-B21
764286-B21

New features in firmware version 2.42.5000:
- Added support for the following features.
  - new TLV: CK3_GLOBAL_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting matdump 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.

Supported Devices and Features

Supported Devices:

<table>
<thead>
<tr>
<th>HP Part Number</th>
<th>Device Name</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>764282-B21</td>
<td>HP InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter</td>
<td>HP_1350110023</td>
</tr>
<tr>
<td>764283-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter</td>
<td>HP_1360110017</td>
</tr>
<tr>
<td>764284-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter</td>
<td>HP_1370110017</td>
</tr>
<tr>
<td>764285-B21</td>
<td>HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter</td>
<td>HP_1380110017</td>
</tr>
<tr>
<td>764286-B21</td>
<td>HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter</td>
<td>HP_1390110023</td>
</tr>
</tbody>
</table>

Online Firmware Upgrade Utility (Windows x64) for Mellanox Open Ethernet cards
Version: 1.0.0.1 (Recommended)
Filname: cp042854_compsig.exe cp042854.exe

Important Note

- 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 in firmware 16.26.4012 and 16.26.6000:
- In rare cases, following a server powerup, a fatal error (device's health compromised) message might appear with ext_synd 0x81d. The error will be accompanied by a failure to use mlxconfig.
- Due to the string DB not being updated after Live-Patch, the tracer cannot function after Live-Patch.
- Creating an NvMe offloaded target while running the LPWP flow may cause the device to become unstable.
- sw_reset action fails in case it is initiated during live-patch flow.
- Occasionally Bluecreen might occur when using mlxcoldreset for Socket Direct devices on Windows.
- SX_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX_RDMA table.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- The sw_reset option is not supported when ATS is enabled.
- While using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header.
- DC LAG can function only in case there is a single PF per port without any active VPs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
- Firmware asserts may occur when setting the PF_BAR2_SIZE value higher than the maximum supported size (maximum PF_BAR2_SIZE is 4).
- CTDRA4 ADM cable is currently not supported
- PF_BAR2 and ATS cannot be enabled together, i.e. when PF_BAR2 is enabled, ATS cannot be enabled too.

Fixes

Fixes in version 14.26.6000:
- Adapter card MCK349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCK349A-XCCN does not respond to ethtool "identify" command (ethtool -p/-i/-id).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.
- Workaround: Set the default RoCE mode in the software to RoCE v2 (also when 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_drivinfo() 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 OCB buffer.
- The adapter card cannot raise a 10Gb link vs a 40GbE 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.
Enhancements

Firmware for the following devices is updated to 14.26.4012:
- P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4121A-XCAT Adapter)
- P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4621A-ACAB OCP3 Adapter)

Firmware for the following devices is updated to 14.26.6000:
- P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4621A-ACAB OCP3 Adapter)
- P21927-B21 (HPE Ethernet 100Gb 2-port QSFP28 MCKX562A-CCAT Adapter)

Firmware for the following devices is updated to 16.26.4012:
- P3188-B21 (HPE Ethernet 10/25Gb 2-port SFPP28 MCKX512F-ACAT Adapter)
- P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCKX516A-CCAT Adapter)

New features and changes in version 14.26.4012 and 16.26.4012:
- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdfl. The counters’ values are returned only via the tr
- Added Address Translation Service (ATS) support for MKEY and UMEM VPD Added support for exposing the VPD on the VF.
- Added support for the following:
  - Reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - creating software managed steering tables in eSwitch/FD

New features and changes in version 14.26.6000 and 16.26.6000:
- Explicit Congestion Notification (ECN) is now automatically copied from the inner header to the outer header, unless defined otherwise in the SW steering. To disable this feature, need to write
- The eth_link_down_counter now counts logical link downs as well
- The eth_link_down_counter now counts logical link downs as well
- Updated the firmware behavior to report PDM version 1.1.0 regardless of whether Redfish is enabled or not.
- Fixed an issue that prevented PCI link from being established when the firmware was corrupted.
- Fixed an issue that triggered a firmware assert and resulted in a wrong deallocation of a resource when Packet Pacing was enabled, and a QP was being destroyed.
- Fixed an issue that caused the firmware to hang when an FRU occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was been

Fixes in version 14.26.4012:
- Updated the firmware behavior to report PDM version 1.1.0 regardless of whether Redfish was enabled or not.
- Enabled the option to prevent clock and capture CPLD GPIOs glitch upon firmware reset.
- Fixed an issue that caused performance degradation when working in dual-port devices under bidirectional traffic stress.
- On rare occasions, when firmware caleos Host stick events occur, an async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hos
- Fixed an issue that resulted in unexpected queue pairs transitioned to error in lossy tests.
- Renamed the gmp Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Fixed a stability issue in RoCE retransmissions under stress affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe TLP was set with a poisoned indication.
- Fixed an issue that caused large number of packet to drop when running Jumbo frames with Time to live (TTL) rewrite
- Limited the maximum amount of dumps created on a Physical Function(PF)
- Fixed an issue that caused large number of packet to drop when running Jumbo frames with Time to live (TTL) rewrite
- Limited the number of the elements in the QoS tree 2K. Creating more than 250 Vport_tc for every TC was not allowed
- Fixed the query QP flow. Instead of always taking port 1, FW will now reply the proper port, 1 or 2, for the dual port RDMA over Converged Ethernet(RoCE) net device.
- Fixed an issue that caused the nack counters to constantly be reported as "0".
- In a rare scenario when the driver was executing the “2err” command and th Queue pair(QP) was in SQ drain state, the firmware might post event of broken Work Queue (WQ) instead of sen

Enhancements

Firmware for the following devices is updated to 14.26.4012:
- P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4121A-XCAT Adapter)
- P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4621A-ACAB OCP3 Adapter)

Firmware for the following devices is updated to 14.26.6000:
- P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4621A-ACAB OCP3 Adapter)
- P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCKX516A-CCAT Adapter)

Firmware for the following devices is updated to 16.26.4012:
- P3188-B21 (HPE Ethernet 10/25Gb 2-port SFPP28 MCKX512F-ACAT Adapter)
- P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCKX516A-CCAT Adapter)

Firmware for the following devices is updated to 16.26.6000:
- P10112-B21 (HPE Ethernet 10/25Gb 2-port SFPP28 MCKX562A-ACAI OCP3 Adapter)

New features and changes in version 14.26.4012 and 16.26.4012:
- Added support for the following
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - creating software managed steering tables in eSwitch/FD

New features and changes in version 14.26.6000 and 16.26.6000:
- Explicit Congestion Notification (ECN) is now automatically copied from the inner header to the outer header, unless defined otherwise in the SW steering. To disable this feature, need to write
- The eth_link_down_counter now counts logical link downs as well
- Updated the firmware behavior to report PDM version 1.1.0 regardless of whether Redfish was enabled or not.
- Enabled the option to prevent clock and capture CPLD GPIOs glitch upon firmware reset.
- Fixed an issue that caused performance degradation when working in dual-port devices under bidirectional traffic stress.
- On rare occasions, when firmware caleos Host stick events occur, an async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hos
- Fixed an issue that resulted in unexpected queue pairs transitioned to error in lossy tests.
- Renamed the gmp Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Fixed a stability issue in RoCE retransmissions under stress affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe TLP was set with a poisoned indication.
- Fixed an issue that caused large number of packet to drop when running Jumbo frames with Time to live (TTL) rewrite
- Limited the maximum amount of dumps created on a Physical Function(PF)
- Fixed an issue that caused large number of packet to drop when running Jumbo frames with Time to live (TTL) rewrite
- Limited the number of the elements in the QoS tree 2K. Creating more than 250 Vport_tc for every TC was not allowed
- Fixed the query QP flow. Instead of always taking port 1, FW will now reply the proper port, 1 or 2, for the dual port RDMA over Converged Ethernet(RoCE) net device.
- Fixed an issue that caused the nack counters to constantly be reported as "0".
- In a rare scenario when the driver was executing the “2err” command and th Queue pair(QP) was in SQ drain state, the firmware might post event of broken Work Queue (WQ) instead of sen

Fixes in version 16.26.6000:
- Fixed an issue that prevented PCI link from being established when the firmware was corrupted.
- Fixed an issue that triggered a firmware assert and resulted in a wrong deallocation of a resource when Packet Pacing was enabled, and a QP was being destroyed.
- Fixed an issue that cause the firmware to hang when an FRU occurred at the same time as the teardown. As a result, the teardown flow took a lock, and never released it because it was been

Fixes

Initial release.

Enhancements

Initial release.

Supported Devices and Features

<table>
<thead>
<tr>
<th>HPE Part Number (Mellanox Ethernet Only Adapters)</th>
<th>PSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4121A-XCAT Adapter)</td>
<td>MT_0000000414</td>
</tr>
<tr>
<td>P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCKX4621A-ACAB OCP3 Adapter)</td>
<td>MT_0000000238</td>
</tr>
<tr>
<td>P3188-B21 (HPE Ethernet 10/25Gb 2-port SFPP28 MCKX512F-ACAT Adapter)</td>
<td>MT_0000000446</td>
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<tr>
<td>P10112-B21 (HPE Ethernet 10Gb 2-port SFPP28 MCKX562A-ACAI OCP3 Adapter)</td>
<td>MT_0000000241</td>
</tr>
<tr>
<td>P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCKX516A-CCAT Adapter)</td>
<td>MT_0000000417</td>
</tr>
</tbody>
</table>

Firmware - NVDIMM

Firmware Package - 16GB NVDIMM-N DDR4-2666
Version: 1.04 (A) (Recommended)
Filename: nvdimm-16gb-1.04.fwpkg

Fixes

Initial release.

Enhancements

Initial release.

Firmware package for HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Servers
Version: 01.02.00.575 (Recommended)
Filename: dcpmm_01.02.00.575.fwpkg

Enhancements

Initial release of Firmware for HPE Persistent Memory for Gen10 Servers.

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.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: 1.2.0.5375 (Recommended)
Filename: RPMS/x86_64/firmware-dcpmm-1.2.0.5375-1.1.x86_64.compsig; RPMS/x86_64/firmware-dcpmm-1.2.0.5375-1.1.x86_64.rpm

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.

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: cp037531.compsig; cp037531.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.

Firmware - PCIe NVMe Storage Disk
Online NVMe SSD Flash Component for VMware ESXi - MT001600KWHAC, MT003200KWHAD and MT006400KWHAE Drives
Version: HPS1 (Recommended)
Filename: CP040212.compsig; CP040212.zip

Fixes
- Fix Increase the host PCIe completion time larger than default 50mS

Online NVMe SSD Flash Component for Linux (x64) - MK000400KWDUK, VK000480KWDUE, MK000800KWDUL, MK000960KWDUF, MK001600KWDUN and VK001920KWDUN Drives
Version: HPK4 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-b45e49679c-HPK4-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b45e49679c-HPK4-3.1.x86_64.rpm

Fixes
- Fixed timing issue to pass VMware VSAN certification. Downgrading to any previous version of firmware is not allowed.

Enhancements
- Added support for RHEL8.

Online NVMe SSD Flash Component for Linux (x64) - MD0400KEFH, MO0800KEFHP, MO1600KEFHPQ, MQ2000KEFHR, MT0800KEXUU and MT1600KEXUV Drives
Version: HPK4 (D) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-2a5b65f157-HPK4-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2a5b65f157-HPK4-4.1.x86_64.rpm

Enhancements
- Added support for SLES15SP1.

Online NVMe SSD Flash Component for Linux (x64) - VDO001000KWJSE, VDO002000KWJSF, VDO004000KWJSW, VTO004000KWJSU, MO001600KWJSN and MO003200KWJSQ Drives
Version: HPK1 (D) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-1656c1814a-HPK1-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1656c1814a-HPK1-4.1.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

Enhancements
- Added support for SLES15SP1.

Online NVMe SSD Flash Component for Linux (x64) - VS000480KWDUP, VS000960KWDUQ, MS000400KWDUR, and MS000800KWDUT Drives
Version: HPK4 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-95a2e5abcb-HPK4-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-95a2e5abcb-HPK4-3.1.x86_64.rpm

Fixes
- Fixed timing issue to pass VMware VSAN certification. Downgrading to any previous version of firmware is not allowed.

Enhancements
- Added support for RHEL8.
Fixes

- Resolves an issue where the drive may fail to be recognized after a warm reboot.
- Corrects a potential data integrity issue during unaligned data transfers.
- Fixes an issue where the drive may become disabled during improper access of error registers.
- Once HPK2 is downloaded, the drive cannot be changed back to HPK0 firmware.

Enhancements

- Added support for SLES15SP1.

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- Fixes an issue where the drive may become disabled during improper access of error registers.
- Once HPK2 is downloaded, the drive cannot be changed back to HPK0 firmware.

Enhancements

- Added support for SLES15SP1.
Version: HPK4 (Recommended)
Filename: CP040194.compsig; CP040194.zip

**Fixes**
- Fixes a potential latency issue caused by an incorrect pre-fetch algorithm.
- Resolves an issue with a possible bus hang during a system reboot.
- Once HPK4 is downloaded, the drive firmware cannot be changed back to an earlier firmware version (eg, HPK3 or HPK2) due to security changes.

**Online NVMe SSD Flash Component for Windows (x64) - ET000750KWITF, E0000750KWITXC and E0000375KWIUJC Drives**
Version: HPK2 (Critical)
Filename: cp039036.compsig; cp039036.exe; cp039036.md5

**Fixes**
- Resolves an issue where the drive may fail to be recognized after a warm reboot.
- Corrects a potential data integrity issue during unaligned data transfers.
- Fixes an issue where the drive may become disabled during improper access of error registers.
- Once HPK2 is downloaded, the drive cannot be changed back to HPK0 firmware.

**Online NVMe SSD Flash Component for Windows (x64) - MK000400KWDUK, VK000480KWDU, MK000080KWDU, VK000960KWDU, MK001600KWDU, and VK001920KWDUH Drives**
Version: HPK4 (Recommended)
Filename: cp038857.compsig; cp038857.exe; cp038857.md5

**Fixes**
- Resolves an issue where the drive may fail to be recognized after a warm reboot.
- Corrects a potential data integrity issue during unaligned data transfers.
- Fixes an issue where the drive may become disabled during improper access of error registers.
- Once HPK4 is downloaded, the drive cannot be changed back to an earlier firmware version (eg, HPK3 or HPK2) due to security changes.

**Online NVMe SSD Flash Component for Windows (x64) - MO0400KEFHN, MO0800KEFHP, MO1600KEFHQ, MO2000KEFHR, MT0800KEFJU, and MT1600KEKXUV Drives**
Version: HPK4 (Recommended)
Filename: cp038859.compsig; cp038859.exe; cp038859.md5

**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.

**Online NVMe SSD Flash Component for Windows (x64) - VS000480KWDO, MS000400KWDO, MS000800KWDO, MS001600KWDO, and MS003200KWDO Drives**
Version: HPK4 (Recommended)
Filename: cp040923.compsig; cp040923.exe; cp040923.md5

**Fixes**
- Fixed timing issue to pass VMware VSAN certification. Downgrading to any previous version of firmware is not allowed.

**Online NVMe SSD Flash Component for Windows (x64) - LO0400KEF3Q, LO0800KEF3R, LO1600KEF3T, LO2000KEF3U, LT0800KEVXA, LT1600KEVVB, and LT2000KEVVC Drives**
Version: HPK4 (Recommended)
Filename: cp040243.compsig; cp040243.exe; cp040243.md5

**Fixes**
- Fixed timing issue to pass VMware VSAN certification. Downgrading to any previous version of firmware is not allowed.

**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 additional support.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**
- Online drive firmware flash update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional support.

**Firmware - SAS Storage Disk**
**Online HDD/SDD Flash Component for Linux (x64) - EG000300JWBHR Drives**
Version: HPD4 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-2e4c61fc63-HPD4-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2e4c61fc63-HPD4-3.1.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.
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Online HDD/SDD Flash Component for Linux (x64) - EG000300JWFVB Drives
Version: HPD2 (D) (Optional)
Filename: rpm/RPMS/x86_64/firmware-hdd-c5cd837c29-HPD2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-c5cd837c29-HPD2-4.1.x86_64.rpm

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Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG000600JWEBH and EG000300JWEBF Drives
Version: HPD4 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-2a9e289524-HPD4-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2a9e289524-HPD4-3.1.x86_64.rpm

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- 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 co
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Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG000600JWNJP and EG001200JWNQ Drives
Version: HPD3 (D) (Optional)
Filename: rpm/RPMS/x86_64/firmware-hdd-f0c91d2fe3-HPD3-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-f0c91d2fe3-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 co
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would requir
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG000400JWFVR and EG000300JWFVQ Drives
Version: HPD2 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-HPD2-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-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 is NOT supported. Only offline firmware flashing of drives is supported for these co
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would requir
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Fixes
- This firmware includes a change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).

Online HDD/SDD Flash Component for Linux (x64) - EG000400JWFVQ Drives
Version: HPD1 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-HPD1-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-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 is NOT supported. Only offline firmware flashing of drives is supported for these co
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Enhancements
- Added support for RHEL8.

Fixes
- Fix issue with Drive Hang on Read Retry Step 50 Controller code correction - When "command aging timer expire" AND "I_T nexus loss" occurs at the same time, HDD reports sense code, 06
- This firmware includes a change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).

Online HDD/SDD Flash Component for Linux (x64) - E000800JUDKQ, E001600JUDKU, MO000800JUDKV, MO001600JUDLA and MO003200JUDLB Drives
Version: HPD3 (B) (Optional)
Filename: rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-HPD3-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-HPD3-3.1.x86_64.rpm

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- 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 co
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Online HDD/SDD Flash Component for Linux (x64) - E000400JUDKF, E000800JUDKQ, E001600JUDKR, MO000400JUDKU, MO000800JUDKV, MO001600JUDLA and MO003200JUDLB Drives
Version: HPD2 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-HPD2-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-HPD2-3.1.x86_64.rpm

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Enhancements
- Added support for RHEL8.

Fixes
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- This firmware includes a change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).

Online HDD/SDD Flash Component for Linux (x64) - MB002000JWFVN and MB004000JWFVP Drives
Version: HPD2 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-c7af557147-HPD2-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-c7af557147-HPD2-3.1.x86_64.rpm

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- Fix issue with Drive Hang on Read Retry Step 50 Controller code correction - When "command aging timer expire" AND "I_T nexus loss" occurs at the same time, HDD reports sense code, 06

Online HDD/SDD Flash Component for Linux (x64) - MB004000WVVK and MB006000WVVL Drives
Version: HPD3 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-f6d00bd17e-HPD3-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-f6d00bd17e-HPD3-1.1.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 special considerations.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB006000WVZD and MB4000WVZC Drives
Version: HPD2 (B) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-e800ed3b9-HPD2-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-e800ed3b9-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 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 special considerations.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

**Fixes**
- Fix issue with drive Hang on read retry Step 50 Controller code correction - When "command aging timer expire" AND "I_T nexus loss" occurs at the same time, HDD reports sense code, 06-1.
- Drive may report sense 02/04/02 instead of 02/04/01 if MODE SELECT command comes before drive ready.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MO000400WUFT, MO000800WUFS, MO001600WUFP, MO003200WUGA, MO000400WUGC, MO000400WUGD and MO000800WUGD and MO001600WUGJ Drives
Version: HPD7 (D) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-b04257b77b-HPD7-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b04257b77b-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 special considerations.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

**Fixes**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - VOD009600WTBK, VOD012000WTBL, VOD0038400WTBN, VOD0076800WTP, MO000800WUBQ, MO001600WUBT, MO003200WUBU, MC Version: HPD7 (D) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-9ad359dac1-HPD7-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-9ad359dac1-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 special considerations.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

**Fixes**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG000300WJNH and EG0001200WJNK Drive
Version: HPD2 (B) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-24fe569b72-HPD2-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-24fe569b72-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 special considerations.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

**Fixes**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG001800WFVC Drives
Version: HPD3 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-693b9a2853-HPD3-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-693b9a2853-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 special considerations.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

**Fixes**
- Added support for RHEL8.
Online HDD/SDD Flash Component for Linux (x64) - EG001800JWJNL and EG002400JWJNN Drive
Version: HPD2 (E) (Recommended)
Filename: rpm/RPMs/x86_64/firmware-hdd-852266afdf-HPD2-2.1.x86_64.compsig; rpm/RPMs/x86_64/firmware-hdd-852266afdf-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.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updating to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG003000FHSM, EG005000FSCPK, EG006000FCSP, EG006000FCSQ, and EG006000FCSN Drives
Version: HPD5 (F) (Recommended)
Filename: rpm/RPMs/x86_64/firmware-hdd-0a38b25661-HPD5-5.1.x86_64.compsig; rpm/RPMs/x86_64/firmware-hdd-0a38b25661-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.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updating to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG001800JWJNL, EG002400JWJNN, and EG003000FHSM Drives
Version: HPD2 (E) (Recommended)
Filename: rpm/RPMs/x86_64/firmware-hdd-7c1a17349f-HPD2-5.1.x86_64.compsig; rpm/RPMs/x86_64/firmware-hdd-7c1a17349f-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 or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives 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 updating to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG001800JWJNL, EG002400JWJNN, and EG003000FHSM Drives
Version: HPD5 (F) (Recommended)
Filename: rpm/RPMs/x86_64/firmware-hdd-7fc5497116-HPD5-4.1.x86_64.compsig; rpm/RPMs/x86_64/firmware-hdd-7fc5497116-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.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updating to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG001800JWJNL, EG002400JWJNN, and EG003000FHSM Drives
Version: HPD5 (F) (Recommended)
Filename: rpm/RPMs/x86_64/firmware-hdd-31f91b8622-HPD5-6.1.x86_64.compsig; rpm/RPMs/x86_64/firmware-hdd-31f91b8622-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.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updating to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG001800JWJNL, EG002400JWJNN, and EG003000FHSM Drives
Version: HPD5 (F) (Recommended)
Filename: rpm/RPMs/x86_64/firmware-hdd-31f91b8622-HPD5-6.1.x86_64.compsig; rpm/RPMs/x86_64/firmware-hdd-31f91b8622-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.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updating to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EG001800JWJNL, EG002400JWJNN, and EG003000FHSM Drives
Version: HPD5 (F) (Recommended)
Filename: rpm/RPMs/x86_64/firmware-hdd-8a2c06a48b-HPD5-6.1.x86_64.compsig; rpm/RPMs/x86_64/firmware-hdd-8a2c06a48b-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.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updating to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.
Online HDD/SDD Flash Component for Linux (x64) - EH000300JWCPK, EH000600JWCPFL, and EH000900JWCPN Drives
Version: HPD5 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-3d97759111-HPD5-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3d97759111-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 is NOT supported. Only offline firmware flashing of drives is supported for these controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require manual update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EH000600JWCP and EH000900JWCPH Drives
Version: HPD7 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-a05f29cef3-HPD7-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a05f29cef3-HPD7-3.1.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require manual update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EH000900JWHPK and EH000600JWPH Drives
Version: HPD4 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-8d68452816-HPD4-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8d68452816-HPD4-1.1.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require manual update.

**Fixes**
- Drive would stop responding on read retry Step 50 of Controller code correction.
- In extremely rare cases, internal drive testing found that if I_T nexus loss is greater than 2 seconds, data loss might occur. If this rare condition occurs, the drive reports sense code 06/29/04.
- Drive may report sense code 02/04/02 instead of 02/04/01 if MODE SENSE and MODE SELECT command come before drive ready. The drive name will no longer display in the list, and the sy

Online HDD/SDD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK, and EH0600JDYTL Drives
Version: HPD5 (E)
Filename: rpm/RPMS/x86_64/firmware-hdd-1cbab97ff0-HPD5-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1cbab97ff0-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require manual update.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK, and EH0600JDYTL Drives
Version: HPD4 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-b9340d29be-HPD4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b9340d29be-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 controllers.
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Online HDD/SDD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK, and EH0600JDYTL Drives
Version: HPD7 (C)
Filename: rpm/RPMS/x86_64/firmware-hdd-1cbab97ff0-HPD7-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1cbab97ff0-HPD7-3.1.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 controllers.
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Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK, and EH0600JDYTL Drives
Version: HPD6 (F)
Filename: rpm/RPMS/x86_64/firmware-hdd-b9340d29be-HPD6-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b9340d29be-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require manual update.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK, and EH0600JDYTL Drives
Version: HPD6 (F) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-b9340d29be-HPD6-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b9340d29be-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require manual update.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK, and EH0600JDYTL Drives
Version: HPD4 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-c7df7ceedb-HPD4-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-c7df7ceedb-HPD4-1.1.x86_64.rpm

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK, and EH0600JDYTL Drives
Version: HPD4 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-8d68452816-HPD4-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8d68452816-HPD4-1.1.x86_64.rpm

**Enhancements**
- Added support for RHEL8.

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- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require uninstallation.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

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- 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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require uninstallation.
- 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 RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require uninstallation.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require uninstallation.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require uninstallation.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require uninstallation.
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Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require uninstallation.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require uninstallation.
- 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 RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB012000WDFD Drives
Version: HPD2 (D) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-HPD2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-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 specific installation steps.
- 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 RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB014000WRTW, MB012000WRTF and MB010000WRTF Drives
Version: HPD2 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-HPD2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB014000WUDB Drive
Version: HPD2 (B) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-HPD2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB1000JVYZL, MB2000JVYZN, MB3000JVYZP and MB4000JVYZQ Drives
Version: HPD3 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-HPD2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB2000JFDIL and MB4000JFDIN Drives
Version: HPD6 (E) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-HPD2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB2000JFEML and MB4000JFEMO Drives
Version: HPD6 (E) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-HPD2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.
Online HDD/SDD Flash Component for Linux (x64) - MB2000JFEP and MB4000JFEPB Drives
Version: HPD5 (E) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-HPD5-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB4000JEFNC and MB6000JEFND Drives
Version: HPD9 (D) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-df22f7effd-HPD9-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-df22f7effd-HPD9-5.1.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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB6000JEQNL and MB6000JEQNN Drives
Version: HPD9 (E) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-0f923833e9-HPD9-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0f923833e9-HPD9-3.1.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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for SLES15.

Online HDD/SDD Flash Component for Linux (x64) - MB6000JEQXY and MB6000JEQYB Drives
Version: HPD9 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-df22f7effd-HPD9-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-df22f7effd-HPD9-3.1.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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB6000JEFQV and MB6000JEFQA Drives
Version: HPD2 (E) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-df22f7effd-HPD2-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-df22f7effd-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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB6000JVEVY Drives
Version: HPD2 (E) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-0595c2a887-HPD2-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0595c2a887-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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB8000JFEQ Drives
Version: HPD5 (E) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-HPD5-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB8000JFEQ Drives
Version: HPD5 (E) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-HPD5-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB8000JFEQ Drives
Version: HPD5 (E) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-HPD5-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-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 manual updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL8.
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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an additional update to the firmware version.
- 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.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an additional update to the firmware version.
- 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.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an additional update to the firmware version.
- 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.

Fixes
- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation, neither the SSD nor the data can be retrieved.
- 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-a0092491en_us

Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an additional update to the firmware version.
- Offline 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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an additional update to the firmware version.
- 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.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an additional update to the firmware version.
- 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.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an additional update to the firmware version.
- 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.

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 retrieved.
- 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-a0092491en_us
Online HDD/SDD Flash Component for Linux (x64) - VO007680IWGCN and VO015300IWCLC Drives
Version: HPD3 (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-4c048aaeb0-HPD8-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-4c048aaeb0-HPD8-1.1.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 drive 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 update to the 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.
- 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)

Online HDD/SDD Flash Component for Linux (x64) - VO0480JFDGT, VO0960JFDGU, VO1920JFDGV, and VO3840JFDHA Drives
Version: HPD8
Filename: rpm/RPMS/x86_64/firmware-hdd-8ed8893abd-HPD8-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8ed8893abd-HPD8-1.1.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 update to the 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.
- 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)

Online HDD/SDD Flash Component for Linux (x64) - VO019203EUEQQ Drives
Version: HPD2 (D) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-5d9e841607-HPD8-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-5d9e841607-HPD8-1.1.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 update to the sub-version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for VMware ESXi - EG0003001W9HR Drives
Version: HPD4 (B) (Recommended)
Filename: CP040530.compsig; CP040530.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.
- 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 update to the sub-version like (B) (C) (D) etc.

**Enhancements**
- Added support for VMware 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - EG0003001W9PB Drives
Version: HPD2 (D) (Recommended)
Filename: CP040631.compsig; CP040631.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.
- 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 update to the sub-version like (B) (C) (D) etc.

**Enhancements**
- Added support for VMware 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - EG0006001W9UV and EG0012001WFVA Drives
Version: HPD4 (B) (Recommended)
Filename: CP040661.compsig; CP040661.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.
- 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 update to the sub-version like (B) (C) (D) etc.

**Enhancements**
- Added support for VMware 6.7 U2.
Enhancements

- Added support for VMware 6.7 U2.

Fixes

- Free up more DRAM for user data to improve DRAM management.
- Drive would stop responding on read retry Step 50 of Controller code correction.
- In extremely rare cases, internal drive testing found that if I_T nexus loss is greater than 2 seconds, data loss might occur. If this rare condition occurs, the drive reports sense code 06/29/04
- Drive may report sense code 02/04/02 instead of 02/04/01 if MODE SENSE and MODE SELECT command come before drive ready. The drive name will no longer display in the list, and the sy
**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 6.7 U2.

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**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 drive 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 a sub version like (B) (C) (D) etc..

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**Fixes**

- Fix issue with Drive Hang on Read Retry Step 50 Controller code correction - When "command aging timer expire" AND "I_T nexus loss" occurs at the same time, HDD reports sense code, 06.
- Drive may report sense 02/04/02 instead of 02/04/01 if MODE SENSE and MODE SELECT command come before drive ready.

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**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 drive 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 a sub version like (B) (C) (D) etc..

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**Fixes**

- Fix issue with Drive Hang on read retry Step 50 Controller code correction - When "command aging timer expire" AND "I_T nexus loss" occurs at the same time, HDD reports sense code, 06.
- Drive may report sense 02/04/02 instead of 02/04/01 if MODE SENSE and MODE SELECT command come before drive ready.

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**Enhancements**

- Added support for VMware 6.7 U2.

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**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.

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**Enhancements**

- Added support for VMware 6.7 U2.
Online HDD/SDD Flash Component for VMware ESXi - MB4000JEQNL and MB6000JEQNN Drives
Version: HPDB (E) (Recommended)
Filename: CP039424.compsig; CP039424.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 drive is supported.
- 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 firmware update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**
- Added support for ESXi 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB6000JEQUV and MB6000JEQVA Drives
Version: HPDB (E) (Recommended)
Filename: CP040519.compsig; CP040519.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 drive is supported.
- 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 firmware update.
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB6000JYVZD and MB4000JYVZC Drives
Version: HPDN (B) (Recommended)
Filename: CP040636.compsig; CP040636.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 drive is supported.
- 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 firmware update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**
- Added support for ESXi 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MM1000JFJTH Drives
Version: HPDB (D) (Optional)
Filename: CP038874.compsig; CP038874.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 drive is supported.
- 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 firmware update.
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MM1000JFJTH Drives
Version: HPDB (D) (Optional)
Filename: CP040692.compsig; CP040692.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 drive is supported.
- 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 firmware update.
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MO000400JWTBQ, MO000800JWTBR, MO001600JWTBT, MO003200JWTBU, MO006400JWTBG, EO000400JWTGC, EO000800JWTGD and EO001600JWTG Drives
Version: HPD7 (B) (Recommended)
Filename: CP040758.compsig; CP040758.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 drive is supported.
- 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 firmware update.
- 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 6.7 U2.
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
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**
- Improved performance during a raid 5 drive rebuild.

**Enhancements**
- Added support for VMware 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - EG0003001W5IP, EG0006001WJNH and EG0012001WNJN Drive
Version: HPD1 (B) (Recommended)
Filename: CP041563.compsig; CP041563.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 drive
- 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
- 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 6.7 U3.

Online HDD/SDD Flash Component for VMware ESXi - EG001800IWPVC Drives
Version: HPD3 (B) (Recommended)
Filename: CP040556.compsig; CP040556.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 drive
- 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
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Online HDD/SDD Flash Component for VMware ESXi - EG001800IWPVC and EG002400IWN Drive
Version: HPD2 (B) (Recommended)
Filename: CP041560.compsig; CP041560.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 drive
- 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
- 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 6.7 U3.

Online HDD/SDD Flash Component for VMware ESXi - EG0300FCSPH, EG0450FCSFPK, EG0600FCSPL, and EG0900FCSPN Drives
Version: HPD3 (E) (Recommended)
Filename: CP040531.compsig; CP040531.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 drive
- 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
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - EG0300FCHLV, EG0600FCHMA, EG0900FCHMB, and EG1200FCHMC Drives
Version: HPD5 (F) (Recommended)
Filename: CP040614.compsig; CP040614.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 drive
- 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
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - EG0300FCKXA, EG0600FCKMC, EG0900FCKKB, and EG1200FCKDA Drives
Version: HPD6 (F) (Recommended)
Filename: CP039426.compsig; CP039426.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 drive
- 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
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..
Enhancements
- Added support for ESXi 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - EG1800JEMDB Drive
Version: HPD5 (F) (Recommended)
Filename: CP040573.compsig; CP040573.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 drive
- 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
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - EH000600JWCPF and EH000900JWCPH Drives
Version: HPD7 (B) (Recommended)
Filename: CP040536.compsig; CP040536.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 drive
- 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
- 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 6.7 U2.
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 drive
- 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
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - EH03001EDHC, EH04501EDHD, and EH06001EDHE Drives
Version: HPD4 (F) (Recommended)
Filename: CP039423.compsig; CP039423.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 drive
- 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
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for ESXi 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB004000JWKGU Drive
Version: HPD1 (B) (Recommended)
Filename: CP041492.compsig; CP041492.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 drive
- 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
- 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 6.7 U3.

Online HDD/SDD Flash Component for VMware ESXi - MB006000JWKGN Drive
Version: HPD1 (B) (Recommended)
Filename: CP041489.compsig; CP041489.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 drive
- 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
- 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 6.7 U3.

Online HDD/SDD Flash Component for VMware ESXi - MB008000JWJRP and MB006000JWJRP Drives
Version: HPD4 (B) (Recommended)
Filename: CP040693.compsig; CP040693.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 drive
- 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
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB008000JWRTD Drive
Version: HPD1 (B) (Recommended)
Filename: CP041478.compsig; CP041478.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 drive
- 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
- 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 6.7 U3.

Online HDD/SDD Flash Component for VMware ESXi - MB010000JWAYK and MB008000JWAYH Drives
Version: HPD5 (C) (Critical)
Filename: CP040637.compsig; CP040637.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 drive
- 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
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB14000IWUD8 Drive
Version: HPD2 (B) (Recommended)
Filename: CP041510.compsig; CP041510.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 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 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 6.7 U3.

Online HDD/SDD Flash Component for VMware ESXi - MB10003JVZL, MB20003JVZN, MB30003JVZP and MB40003JVZQ Drives
Version: HPD3 (B) (Recommended)
Filename: CP040660.compsig; CP040660.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 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 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB20003FDSL and MB40003FDSN Drives
Version: HPD4 (B) (Recommended)
Filename: CP040513.compsig; CP040513.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 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 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB20003JFEP and MB40003JFEPB Drives
Version: HPD5 (B) (Recommended)
Filename: CP040514.compsig; CP040514.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 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 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB40003JFNC and MB60003JFNND Drives
Version: HPD9 (B) (Recommended)
Filename: CP039427.compsig; CP039427.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 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 customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for ESXi 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB40003JEXYA and MB60003JEXYB Drives
Version: HPD9 (B) (Recommended)
Filename: CP040533.compsig; CP040533.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 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 customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for ESXi 6.7 U2.
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.
- 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.
- 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 6.7 U2.

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.
- 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.
- 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 6.7 U2.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for ESXi 6.7 U2.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U2.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U3.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U4.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U5.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U6.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U7.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U8.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U9.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U10.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U11.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U12.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U13.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U14.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U15.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U16.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U17.

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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for DAS 6.7 U18.
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.
- 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-a00992491en_us

Enhancements
- Added support for VMware 6.7 U2.

Fixes
- Improved performance during a raid 5 drive rebuild.
- Fixed an issue where an 04-40-C2 error occurred during a power cycle. A case was seen where completion notice for writing system information was discarded during a power cycle and the SSD failed.

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.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to the HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00992491en_us

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.

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 drive 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 online drive firmware update.
Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG000300JWFVB Drives
Version: HPD2 (C) (Optional)
Filename: cp040455.compsig; cp040455.exe; cp040455.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require drivers.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG000600JWJNH and EG001200JWJNK Drive
Version: HPD2 (B) (Recommended)
Filename: cp041565.compsig; cp041565.exe; cp041565.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require drivers.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG000600JWEBH and EG000300JWEBF Drives
Version: HPD4 (B) (Recommended)
Filename: cp040475.compsig; cp040475.exe; cp040475.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require drivers.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG000600JWFUV and EG001200JWFVA Drives
Version: HPD3 (C) (Optional)
Filename: cp040454.compsig; cp040454.exe; cp040454.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require drivers.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG000600JWJNP and EG002400JWJNN Drive
Version: HPD2 (B) (Recommended)
Filename: cp041562.compsig; cp041562.exe; cp041562.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require drivers.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- This firmware includes a change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).
Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG001800JWJNR and EG002400W3NT Drives
Version: HPD5 (Recommended)
Filename: cp041697.compsig; cp041697.exe; cp041697.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.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require this change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).

Fixes
- This firmware includes a change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).

Online HDD/SDD Flash Component for Windows (x64) - EG0300FCSPH, EG0450FCSPK, EG0600FCSPL, and EG0900FCSPN Drives
Version: HPD2 (D) (Recommended)
Filename: cp040420.compsig; cp040420.exe; cp040420.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 drives.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require this change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG0300JEHLV, EG0600JEMCV, EG0900JEHMB, and EG1200JEHMC Drives
Version: HPD5 (E) (Recommended)
Filename: cp040434.compsig; cp040434.exe; cp040434.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 drives.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require this change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG0600JETKA, EG0900JETKB, and EG1200JETKC Drives
Version: HPD7 (B) (Recommended)
Filename: cp040401.compsig; cp040401.exe; cp040401.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 drives.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require this change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG0600JEMDB Drives
Version: HPD5 (D) (Recommended)
Filename: cp040571.compsig; cp040571.exe; cp040571.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 drives.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require this change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - EG1800JEHMD Drive
Version: HPD6 (E) (Recommended)
Filename: cp040442.compsig; cp040442.exe; cp040442.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 drives.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require this change to reduce response times on random read/write workloads where commands are sent at slow interval (one every few hundred milliseconds).

Enhancements
Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements


Online HDD/SDD Flash Component for Windows (x64) - EG1800JFHMH Drives
Version: HPD7 (D) (Recommended)
Filename: cp040444.compsig; cp040444.exe; cp040444.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSES would require an update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements


Online HDD/SDD Flash Component for Windows (x64) - EH000300JWCPK, EH000600JWCPL, and EH000900JWCPN Drives
Version: HPD7 (B) (Recommended)
Filename: cp040427.compsig; cp040427.exe; cp040427.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSES would require an update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Free up more DRAM for user data to improve DRAM management.
- Drive would stop responding on read retry Step 50 of Controller code correction.
- In extremely rare cases, internal drive testing found that if I_T nexus loss is greater than 2 seconds, data loss might occur. If this rare condition occurs, the drive reports sense code 06/29/04.
- Drive may report sense code 02/04/02 instead of 02/04/01 if MODE SENSE and MODE SELECT command came before drive ready. The drive name will no longer display in the list, and the sy

Enhancements


Online HDD/SDD Flash Component for Windows (x64) - EH000900JWHPP, EH000600JWHPN and EH000300JWHPL Drives
Version: HPD7 (B) (Recommended)
Filename: cp041668.compsig; cp041668.exe; cp041668.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSES would require an update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Drive would stop responding on read retry Step 50 of Controller code correction.
- In extremely rare cases, internal drive testing found that if I_T nexus loss is greater than 2 seconds, data loss might occur. If this rare condition occurs, the drive reports sense code 06/29/04.
- Drive may report sense code 02/04/02 instead of 02/04/01 if MODE SENSE and MODE SELECT command came before drive ready. The drive name will no longer display in the list, and the sy

Enhancements

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
Enhancements


Online HDD/SDD Flash Component for Windows (x64) - MB006000JWGIN Drive
Version: HPD1 (B) (Recommended)
Filename: cp041487.compsig; cp041487.exe; cp041487.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 offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements


Enhancements


Enhancements


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Enhancements


Enhancements


Enhancements


Import 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 offline firmware flashing.
- 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


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


Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB014000JWUDB Drive
Version: HPD2 (B) (Recommended)
Filename: cp041519.compsig; cp041519.exe; cp041519.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customer intervention.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB1000JYZL, MB2000JYZN, MB3000JYZP and MB4000JYZQ Drives
Version: HPD3 (B) (Recommended)
Filename: cp040473.compsig; cp040473.exe; cp040473.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customer intervention.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB2000JFDSL and MB4000JFDSN Drives
Version: HPD4 (D) (Recommended)
Filename: cp040405.compsig; cp040405.exe; cp040405.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customer intervention.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB2000JFEML and MB4000JFEMN Drives
Version: HPD6 (D) (Critical)
Filename: cp040446.compsig; cp040446.exe; cp040446.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customer intervention.
- 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

Online HDD/SDD Flash Component for Windows (x64) - MB2000JFEPA and MB4000JFEPB Drives
Version: HPD5 (D) (Recommended)
Filename: cp040408.compsig; cp040408.exe; cp040408.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customer intervention.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB4000JEFNC and MB6000JEFD Drives
Version: HPD9 (D) (Recommended)
Filename: cp040398.compsig; cp040398.exe; cp040398.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customer intervention.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB4000JEQNL and MB6000JEQNN Drives
Version: HPDB (D) (Recommended)
Filename: cp040390.compsig; cp040390.exe; cp040390.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customer intervention.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB4000JEYA and MB6000JEYB Drives
Version: HPD9 (B) (Recommended)
Filename: cp040423.compsig; cp040423.exe; cp040423.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB6000JEQV and MB8000JEQVA Drives
Version: HPDB (D) (Recommended)
Filename: cp040414.compsig; cp040414.exe; cp040414.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB6000JVVYV Drives
Version: HPD2 (D) (Optional)
Filename: cp040424.compsig; cp040424.exe; cp040424.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB8000JFECQ Drives
Version: HPD7 (C) (Optional)
Filename: cp040421.compsig; cp040421.exe; cp040421.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.
Enhancements

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an online drive firmware update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an online drive firmware update.
- 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.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an online drive firmware update.
- 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.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an online drive firmware update.
- 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.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
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Enhancements

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Fixes
- Improved performance during a raid 5 drive rebuild.
- Fixed an issue where an unexpected error occurred during a power cycle. A case was seen where completion notice for writing system information was discarded during a power cycle and the power-on self-test did not complete.

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Fixes
- Improved performance during a raid 5 drive rebuild.
- Fixed an issue where an unexpected error occurred during a power cycle. A case was seen where completion notice for writing system information was discarded during a power cycle and the power-on self-test did not complete.
Fixes
- This firmware includes a fix that changes the response to "SMART READ LOG" command from 04/80/80 to 05/26/00, which prevents the drive from incorrectly reporting an error.

Enhancements
- Added support for VMware 6.7 U2.

Online HDD/SSD Flash Component for ESXi - MB001000GWFWK and MB002000GWFWL Drives
Version: HPG6 (B) (Recommended)
File Name: CP040785.compsig; CP040785.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 drive is supported.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- This firmware includes a fix that changes the response to "SMART READ LOG" command from 04/80/80 to 05/26/00, which prevents the drive from incorrectly reporting an error.

Enhancements
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- 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 6.7 U2.

Online HDD/SSD Flash Component for ESXi - MB010000GWFWA, MB004000GWFWA, MB004000GWFWL Drives
Version: HPG1 (B) (Recommended)
File Name: CP040691.compsig; CP040691.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 drive is supported.
- 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.
- 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 6.7 U2.

Online HDD/SSD Flash Component for ESXi - MB012000GWTFE and MB014000GWTFF Drives
Version: HPG6 (Optional)
File Name: CP042459.compsig; CP042459.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 drive is supported.
- 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.

Fixes
- Problems Fixed:
  - Persistent Write Cache release size was miscalculated when disk write operation completed before command complete was reported to host which could result in slow sequential write performance.
  - Drive would stop operations when disk received COMRESET command during firmware download (DOWNLOAD MICROCODE command).
  - NOTE: If this error occurs, data integrity is maintained and reboot is required to restart the drive operation.

Enhancements
- Added support for VMware 6.7 U3.

Enhancements/New Features:
- Improved robustness of Adjacent Track Interference (ATI) mitigation in System.

Online HDD/SSD Flash Component for ESXi - MB014000GWTFN, MB012000GWRTL and MB010000GWRTK Drives
Version: HPG2 (B) (Recommended)
File Name: CP041453.compsig; CP041453.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 drive is supported.
- 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.
- 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 6.7 U3.

Enhancements/New Features:
- Added support for VMware 6.7 U2.

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 drive is supported.
- 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.
- 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 6.7 U2.

Online HDD/SSD Flash Component for ESXi - MB1000GDUNU, MB2000GDUNV, MB3000GDU0A, and MB4000GDUPB Drives
Version: HPG4 (G) (Recommended)
File Name: CP040506.compsig; CP040506.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 drive is supported.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Fixes
- Problems Fixed:
  - Persistent Write Cache release size was miscalculated when disk write operation completed before command complete was reported to host which could result in slow sequential write performance.
  - Drive would stop operations when disk received COMRESET command during firmware download (DOWNLOAD MICROCODE command).
  - NOTE: If this error occurs, data integrity is maintained and reboot is required to restart the drive operation.

Enhancements
- Added support for VMware 6.7 U2.

Online HDD/SSD Flash Component for ESXi - MB4000GEFNA and MB6000GEFNB Drives
Version: HPG6 (E) (Recommended)
File Name: CP039421.compsig; CP039421.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 drive is supported.
- 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.
- 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 6.7 U2.
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 in AHCI configuration. Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing of drives.

Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements
- Added support for ESXi 6.7 U2.

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Fixes
- Fixed an issue with performance drops during mixed workload operations.

Enhancements
- Added support for ESXi 6.7 U2.
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.
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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 HP Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00072768en_us

Enhancements
- Added support for VMware 6.7 U2.

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Enhancements
- Added support for VMware 6.7 U3.

Important Note!
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Fixes
- Fixes a potential unresponsiveness during a Secure Erase operation, and fixes an incorrect error reporting issue during certain SATA protocol transfers.

Enhancements
- Added support for VMware 6.7 U2.

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Enhancements
- Added support for VMware 6.7 U2.
Online HDD/SDD Flash Component for Linux (x64) - MB001000GWBC and MB002000GWCB Drives
Version: HPG6 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-68b12e54d2-HPG6-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-68b12e54d2-HPG6-3.1.x86_64.rpm

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- 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 controllers.
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**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB001000GWFWK and MB002000GWFWL Drives
Version: HPG6 (B) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-bfc4af697b-HPG6-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-bfc4af697b-HPG6-2.1.x86_64.rpm

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**Fixes**
- This firmware includes a fix that changes the response to "SMART READ LOG" command from 04/88/80 to 05/26/00, which prevents the drive from incorrectly reporting an error.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB001000GWJAN, MB002000GWFWA and MB004000GWFWB Drives
Version: HPG1 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-d39e7a7e75-HPG1-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-d39e7a7e75-HPG1-3.1.x86_64.rpm

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**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB002000GWFGH and MB001000GWFGF Drives
Version: HPG3 (B) (Optional)
Filename: rpm/RPMS/x86_64/firmware-hdd-0b575b5895-HPG3-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0b575b5895-HPG3-5.1.x86_64.rpm

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**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB004000GWKGV Drive
Version: HPG1 (B) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-ca21e169e2-HPG1-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-ca21e169e2-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB006000GWBXQ and MB008000GWBYL Drives
Version: HPG8 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-a1fd19f9ca-HPG8-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a1fd19f9ca-HPG8-3.1.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB008000GWGDR Drive
Version: HPG1 (B) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-7f2a266e6d-HPG1-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7f2a266e6d-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**
- Added support for RHEL8.
Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Online HDD/SDD Flash Component for Linux (x64) - MB008000GWRTC Drive
Version: HPG1 (B) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-82894b9e0a-HPG1-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-82894b9e0a-HPG1-2.1.x86_64.rpm

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require 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.

Online HDD/SDD Flash Component for Linux (x64) - MB010000GWWAYN and MB008000GWAYL Drives
Version: HPG5 (D) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-cc819d4bff-HPG5-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-cc819d4bff-HPG5-4.1.x86_64.rpm

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require 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. Includes additional fixes to improve error handling and reliability.

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB012000GWDFE Drives
Version: HPG2 (D) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-059b8654a6-HPG2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-059b8654a6-HPG2-4.1.x86_64.rpm

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require 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. Includes additional fixes to improve error handling and reliability.

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB012000GWDFE and MB014000GWFF Drives
Version: HPG5 (Optional)
Filename: rpm/RPMS/x86_64/firmware-hdd-678255e146-HPG5-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-678255e146-HPG5-1.1.x86_64.rpm

Enhancements
- Added support for RHEL8.

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require 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. Includes additional fixes to improve error handling and reliability.

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB014000GWRTN, MB012000GWRTL and MB010000GWRTK Drives
Version: HPG2 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-6b7ce3da0e-HPG2-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6b7ce3da0e-HPG2-3.1.x86_64.rpm

Enhancements
- Improved robustness of Adjacent Track Interference (ATI) mitigation in System.

Online HDD/SDD Flash Component for Linux (x64) - MB014000GWRTN, MB012000GWRTL, and MB010000GWRTK Drives
Version: HPG2 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-6b7ce3da0e-HPG2-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6b7ce3da0e-HPG2-3.1.x86_64.rpm

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB014000GWUDA Drive
Version: HPG2 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-41cdb1c9da-HPG2-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-41cdb1c9da-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 controllers. Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB1000GDUNU, MB2000GDUNV, MB3000GDUPA, and MB4000GDUPB Drives
Version: HPG4 (G) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-3ab4c70e64-HPG4-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3ab4c70e64-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 controllers. Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB2000GVYZE, MB2000GVYZF, MB3000GVYZH, and MB4000GVYZK Drives
Version: HPG4 (G) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-0a7010918e-HPG4-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0a7010918e-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 controllers. Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB2000GCWLT, MB3000GCWLW, and MB4000GCWLW Drives
Version: HPG4 (G) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-2e70ca7412-HPG4-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2e70ca7412-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 controllers. Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB2000GFEHM and MB4000GFEHM Drives
Version: HPG6 (F) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-70e3962f98-HPG6-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-70e3962f98-HPG6-6.1.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 controllers. 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 RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB4000GFEAN and MB6000GFEANB Drives
Version: HPG6 (F) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-40277d55d3-HPG6-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-40277d55d3-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 controllers. Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB4000GEQNH and MB6000GEQNK Drives
Version: HPGB (F) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-bfc95f0628-HPGB-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-bfc95f0628-HPGB-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 controllers. 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 RHEL8.
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.

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB6000GEBTP Drives
Version: HPG4 (F) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-3243f0e9a0-HPG4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3243f0e9a0-HPG4-6.1.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require the latest firmware version to be updated.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB6000GEQUT and MB6000GEQUU Drives
Version: HPG2 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-1d7f19120b-HPGB-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1d7f19120b-HPGB-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require the latest firmware version to be updated.
- 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 RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB6000GEXXV Drives
Version: HPG2 (G) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-a629fc8a59-HPG2-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a629fc8a59-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require the latest firmware version to be updated.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB6000GVYYU Drives
Version: HPG6 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-0a7d4aa47f-HPG6-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0a7d4aa47f-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require the latest firmware version to be updated.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - MB8000GFECR Drives
Version: HPG6 (C) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-6d922fc9a8-HPG6-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6d922fc9a8-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require the latest firmware version to be updated.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.
Online HDD/SSD Flash Component for Linux (x64) - MK000240GWCEU, MK000480GWCEV, MK000960GWCF and MK001920GWCFB Drives
Version: HPQ3 (D) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-7677644a25-HPQ3-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7677644a25-HPQ3-4.1.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 controllers.
- Online firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SSD Flash Component for Linux (x64) - MK000480GWSSC, MK000960GWSSD, MK001920GWSS and MK003840GWSSF Drives
Version: HPG1 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-693cc138-HPG1-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-693cc138-HPG1-1.1.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 controllers.
- Online firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Fixed an issue with performance drops during mixed workload operations.

Enhancements
- Added support for RHEL8.

Online HDD/SSD Flash Component for Linux (x64) - MM1000GFJTE Drives
Version: HPQ3 (H) (Critical)
Filename: rpm/RPMS/x86_64/firmware-hdd-3e34285be7-HPQ3-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3e34285be7-HPQ3-3.1.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 controllers.
- Online firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- 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 RHEL8.

Online HDD/SSD Flash Component for Linux (x64) - MM1000GEFQV and MM2000GEFRA Drives
Version: HPQ3 (E) (Optional)
Filename: rpm/RPMS/x86_64/firmware-hdd-ec908c3650-HPQ3-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-ec908c3650-HPQ3-5.1.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 controllers.
- Online firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- 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 RHEL8.

Online HDD/SSD Flash Component for Linux (x64) - MR000240GWFLU, MR000480GWFLV, VXR000480GWFM, MR000960GWFM, MR001920GWFFM and VRO001920GWFFMC Drives
Version: HPGE (B) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-916dd4ff20-HPGE-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-916dd4ff20-HPGE-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 controllers.
- Online firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.
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 additional steps.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RH8L.

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 additional steps.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RH8L.

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 additional steps.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RH8L.

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 additional steps.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RH8L.

Online Drive Firmware Update Available for Smart Array Controls in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional steps.

Enhancements

- Added support for RH8L.

Online Drive Firmware Update Available for Smart Array Controls in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional steps.

Enhancements

- Added support for RH8L.

Online Drive Firmware Update Available for Smart Array Controls in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional steps.

Enhancements

- Added support for RH8L.

Online Drive Firmware Update Available for Smart Array Controls in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional steps.

Enhancements

- Added support for RH8L.

Online Drive Firmware Update Available for Smart Array Controls in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional steps.

Enhancements

- Added support for RH8L.
**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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for RHEL8.

**Online HDD/SDD Flash Component for Linux (x64) - VK000480GWTHA, VK000960GWTHB, VK001920GWTHC and VK003840GWTHD Drives**

Version: HPG1 (B) *(Optional)*  
Filename: rpm/RPMs/x86_64/firmware-hdd-492a9952f6-HPG1-2.1.x86_64.rpm  
rpm/RPMs/x86_64/firmware-hdd-492a9952f6-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 is NOT supported. Only offline firmware flashing of drives is supported for these controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for RHEL8.

**Online HDD/SDD Flash Component for Linux (x64) - VK003840GWXSL Drive**

Version: HPG2 (3) *(Recommended)*  
Filename: rpm/RPMs/x86_64/firmware-hdd-1c1f327bc4-HPG2-3.1.x86_64.rpm  
rpm/RPMs/x86_64/firmware-hdd-1c1f327bc4-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 is NOT supported. Only offline firmware flashing of drives is supported for these controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for RHEL8.

**Online HDD/SDD Flash Component for Linux (x64) - VK007680GWXSN Drive**

Version: HPG2 (3) *(Recommended)*  
Filename: rpm/RPMs/x86_64/firmware-hdd-b460823770-HPG2-3.1.x86_64.rpm  
rpm/RPMs/x86_64/firmware-hdd-b460823770-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 is NOT supported. Only offline firmware flashing of drives is supported for these controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for RHEL8.

**Online HDD/SDD Flash Component for Linux (x64) - VK0080GEY3N, VK0120GEYJR, VK0240GEYJQ, VK0480GEYJR, VK0800GEYJT, VK1600GEYJU, LK0200GEYMR, LK0480GFJSK, LK0800GEYMU, LK1600GEYM Drive**

Version: HPG5 (B) *(Recommended)*  
Filename: rpm/RPMs/x86_64/firmware-hdd-ee2b63de1d-HPG5-2.1.x86_64.rpm  
rpm/RPMs/x86_64/firmware-hdd-ee2b63de1d-HPG5-2.1.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for RHEL8.

**Online HDD/SDD Flash Component for Linux (x64) - VK0120GFDEKE, VK0240GFDEKF, VK0480GFDEKH, VK0960GFDEKK, VK1920GFDEKL, and VK3840GFDEKN Drives**

Version: HPG1 (G) *(Recommended)*  
Filename: rpm/RPMs/x86_64/firmware-hdd-a24b05c742-HPG1-7.1.x86_64.rpm  
rpm/RPMs/x86_64/firmware-hdd-a24b05c742-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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for RHEL8.

**Online HDD/SDD Flash Component for Linux (x64) - VK0240GEPQN, VK0480GEPQP, and VK0960GEPQQ Drives**

Version: HPG1 (F) *(Recommended)*  
Filename: rpm/RPMs/x86_64/firmware-hdd-1a516522d1-HPG1-6.1.x86_64.rpm  
rpm/RPMs/x86_64/firmware-hdd-1a516522d1-HPG1-6.1.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require offline firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**

- Added support for RHEL8.

**Online HDD/SDD Flash Component for Linux (x64) - VR000150GWEP and VR000480GWEP Drives**

Version: HPG1 (D) *(Critical)*  
Filename: rpm/RPMs/x86_64/firmware-hdd-b7eb905efe-HPG1-4.1.x86_64.rpm  
rpm/RPMs/x86_64/firmware-hdd-b7eb905efe-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 specific methods or updates.
- 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 RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - XP0032GEFEN, XP0032GDZME, XP0064GEFEP, and XP0064GDZMF Drives
Version: HPS8 (G) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-f286f98973-HPS8-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-f286f98973-HPS8-7.1.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 specific methods or updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Prerequisites
- Drive models XP0032GEFEN, XP0032GDZME, XP0064GDZMF, and XP0064GEFEP must have firmware version HPS5 installed prior to updating to firmware version HPS8.

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for Linux (x64) - XP0120GFJSL and XP0240GFJSL Drives
Version: HPS4 (G) (Recommended)
Filename: rpm/RPMS/x86_64/firmware-hdd-d355375539-HPS4-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-d355375539-HPS4-7.1.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 specific methods or updates.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL8.

Online HDD/SDD Flash Component for VMware ESXi - EK000200GWEPD, EK000400GWEPF, EK000800GWEPF, and EK001600GWEPH Drives
Version: HPG3 (C) (Recommended)
Filename: CP040680.compsig; CP040680.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.
- Drive models EK000200GWEPD, EK000400GWEPF, EK000800GWEPF, and EK001600GWEPH must have firmware version HPS5 installed prior to updating to firmware version HPS8.

Enhancements
- Added support for VMware 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB002000GWFGH and MB001000GWFGF Drives
Version: HPG3 (D) (Optional)
Filename: CP040652.compsig; CP040652.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.
- Drive models MB002000GWFGH and MB001000GWFGF must have firmware version HPS5 installed prior to updating to firmware version HPS8.

Enhancements
- Added support for VMware 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB004000GWKGV Drive
Version: HPG1 (B) (Recommended)
Filename: CP041493.compsig; CP041493.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.
- Drive models MB004000GWKGV must have firmware version HPS5 installed prior to updating to firmware version HPS8.

Enhancements
- Added support for VMware 6.7 U3.

Online HDD/SDD Flash Component for VMware ESXi - MB006000GWBXQ and MB008000GWBYL Drives
Version: HPG8 (B) (Recommended)
Filename: CP040789.compsig; CP040789.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 drive.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**
- Eliminates a potential hang on 4TB under certain pattern-dependent read conditions.
- Eliminates the possibility of a weak read signal under a sequenced combination of read/write conditions.
- Provides reliability enhancements involving head fly height dynamics.
- Enables download Mode 0Eh activation by Mode 0Fh.

**Enhancements**
- Added support for VMware 6.7 U2.

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**Online HDD/SDD Flash Component for VMware ESXi - MB0060000GKG Drive**

**Version:** HPG1 (B) *(Recommended)*

**Filename:** CP041520.compsig; CP041520.zip

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**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 drive.
- 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.
- 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 6.7 U3.

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**Online HDD/SDD Flash Component for VMware ESXi - MB0080000GWRTE Drive**

**Version:** HPG1 (B) *(Recommended)*

**Filename:** CP041481.compsig; CP041481.zip

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**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 drive.
- 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.
- 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 6.7 U3.

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**Online HDD/SDD Flash Component for VMware ESXi - MB0100000GWAYN and MB0080000GWAYL Drives**

**Version:** HPG5 (C) *(Critical)*

**Filename:** CP040638.compsig; CP040638.zip

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**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 drive.
- 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.
- 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 HPE Smart Array P824i-p MR Gen10 Controller.
- Added support for VMware 6.7 Update1.

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**Online HDD/SDD Flash Component for VMware ESXi - MB0120000GWDFE Drives**

**Version:** HPG2 (C) *(Critical)*

**Filename:** CP040685.compsig; CP040685.zip

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**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 drive.
- 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.
- 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 6.7 U2.

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**Online HDD/SDD Flash Component for VMware ESXi - MB0140000GWUDA Drive**

**Version:** HPG2 (B) *(Recommended)*

**Filename:** CP041507.compsig; CP041507.zip

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**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 drive.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..
Online HDD/SDD Flash Component for VMware ESXi - MB1000GVYZE, MB2000GVYZF, MB3000GVYZH, and MB4000GVYZK Drives
Version: HPG4 (E) (Recommended)
Filename: CP040554.compsig; CP040554.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 drive is supported.
- 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 offline firmware flashing.
- 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 6.7 U3.

Online HDD/SDD Flash Component for VMware ESXi - MB2000GCWLT, MB3000GCWLU, and MB4000GCWLV Drives
Version: HPG4 (G) (Recommended)
Filename: CP040507.compsig; CP040507.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 drive is supported.
- 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 offline firmware flashing.
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB2000GFEMH and MB4000GFEMK Drives
Version: HPGB (E) (Critical)
Filename: CP040642.compsig; CP040642.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 drive is supported.
- 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 offline firmware flashing.
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB4000GEQNH and MB6000GEQNK Drives
Version: HPGB (E) (Critical)
Filename: CP039425.compsig; CP039425.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 drive is supported.
- 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 offline firmware flashing.
- 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 ESXi 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MB6000GEQUT and MB8000GEQUU Drives
Version: HPGB (E) (Critical)
Filename: CP040632.compsig; CP040632.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 drive is supported.
- 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 offline firmware flashing.
- 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.
- Online firmware update fails when drives are connected behind AHCI controller.

Enhancements
- Added support for VMware 6.7 U2.
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.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require special offline firmware flashing.
- 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 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MK003840GWHTK Drives
Version: HPQ6 (B) (Recommended)
Filename: CP041321.compsig; CP041321.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.
- 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 special offline firmware flashing.
- 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 6.7 U3.

Enhancements
- Added support for VMware 6.7 U2.

Online HDD/SDD Flash Component for VMware ESXi - MK0960GECQK Drives
Version: HPQ3 (H) (Critical)
Filename: CP039422.compsig; CP039422.zip

Enhancements
- Added support for VMware 6.7 U2.

Enhancements
- Added support for VMware 6.7 U2.

Enhancements
- Added support for VMware 6.7 U2.

Enhancements
- Added support for VMware 6.7 U3.
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
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 6.7 U2.

Online HDD/SSD Flash Component for VMware ESXi - V0000480GWZB, V0000480GWZC, V0000960GWZD, V0001920GWZE, MK000240GWZF, MK000480GWZFH, MK000960GWZEK and MK001920GWZK
Version: HPGE (B) (Optional)
Filename: CP041318.compsig; CP041318.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 drive
- 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
- 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 6.7 U3.

Online HDD/SSD Flash Component for VMware ESXi - V0000480GWZBF, V0000960GWZSH, V0001920GWZSK, MK000480GWUFG, MK000960GWUGH, and MK001920GWUGK Drives
Version: HPGE (B) (Recommended)
Filename: CP040788.compsig; CP040788.zip

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.

Enhancements
- Added support for VMware 6.7 U2.

Online HDD/SSD Flash Component for VMware ESXi - V0000480GWTHA, V0000960GWTHB, V0001920GWTHC and V0003840GWTHD Drives
Version: HPGE (B) (Optional)
Filename: CP041496.compsig; CP041496.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 drive
- 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
- 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 6.7 U3.

Online HDD/SSD Flash Component for VMware ESXi - V0003840GWXL Drive
Version: HPGE (B) (Recommended)
Filename: CP040786.compsig; CP040786.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 drive
- 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
- 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.

Enhancements
- Added support for VMware 6.7 U2.

Online HDD/SSD Flash Component for VMware ESXi - V0007860GWZNX Drive
Version: HPGE (B) (Recommended)
Filename: CP040787.compsig; CP040787.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 drive
- 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
- 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.
**Enhancements**
- Added support for VMware 6.7 U2.

**Online HDD/SDD Flash Component for VMware ESXi - VK0080GEYJN, VK0120GEYJP, VK0240GEYJQ, VK0480GEYJR, VK0800GEYJT, VK1600GEY3U, LK0200GEYMR, LK0480GFJSK, LK0800GEYMU, LK1600GEY**
  - **Version:** HPG5 (B) *(Recommended)*
  - **Filename:** CP041559.compsig; CP041559.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.
- 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.
- 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 6.7 U3.

**Online HDD/SDD Flash Component for VMware ESXi - VR000150GWEPP and VR000480GWEPR Drives**
  - **Version:** HPG1 (C) *(Critical)*
  - **Filename:** CP040667.compsig; CP040667.zip

**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.
- 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.
- 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 6.7 U2.

**Online HDD/SDD Flash Component for VMware ESXi - XP0032GEFEN, XP0032GDZME, XP0064GEFEP, and XP0064GDZMF Drives**
  - **Version:** HPS8 (F) *(Recommended)*
  - **Filename:** CP040503.compsig; CP040503.zip

**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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Prerequisites**
- Drive models XP0032GEFEN, XP0032GDZME, XP0064GDZMF, and XP0064GEFEP must have firmware version HPS6 installed prior to updating to firmware version HPS8.

**Enhancements**
- Added support for VMware 6.7 U2.

**Online HDD/SDD Flash Component for VMware ESXi - XP0120GFJSL and XP0240GFJSN Drives**
  - **Version:** HPS4 (F) *(Recommended)*
  - **Filename:** CP040520.compsig; CP040520.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.
- 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.
- 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 6.7 U2.

**Online HDD/SDD Flash Component for Windows (x64) - VK0080GEYJN, VK0120GEYJP, VK0240GEYJQ, VK0480GEYJR, VK0800GEYJT, VK1600GEY3U, LK0200GEYMR, LK0480GFJSK, LK0800GEYMU, LK1600GEY**
  - **Version:** HPQ5 (B) *(Recommended)*
  - **Filename:** cp041557.compsig; cp041557.exe; cp041557.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.
- 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.
- 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 6.7 U2.

**Online HDD/SDD Flash Component for Windows (x64) - VK0080GEYJN, VK0120GEYJP, VK0240GEYJQ, VK0480GEYJR, VK0800GEYJT, VK1600GEY3U, LK0200GEYMR, LK0480GFJSK, LK0800GEYMU, LK1600GEY**
  - **Version:** HPQ5 (B) *(Recommended)*
  - **Filename:** cp041557.compsig; cp041557.exe; cp041557.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.
- 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.
- 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 6.7 U2.

**Online HDD/SDD Flash Component for Windows (x64) - XP0032GEFEN, XP0032GDZME, XP0064GEFEP, and XP0064GDZMF Drives**
  - **Version:** HPS8 (E) *(Recommended)*
  - **Filename:** cp040400.compsig; cp040400.exe; cp040400.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.
- 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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**
**Prerequisites**

Drive models XP0032GEFEN, XP0032GDZME, XP0064GDZMF, and XP0064GEFEP must have firmware version HPS6 installed prior to updating to firmware version HPS8.

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - EK0002000GWEFD, EK0004000GWEPE, EK0008000GWEPF and EK0016000GWEPH Drives**

Version: HPG3 (C) (Recommended)

File name: cp040489.compsig; cp040489.exe; cp040489.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MB0010000GWBCB and MB0020000GWCBDB Drives**

Version: HPG6 (B) (Recommended)

File name: cp040791.compsig; cp040792.exe; cp040792.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**

- This firmware includes a fix that changes the response to "SMART READ LOG" command from 04/80/80 to 05/26/00, which prevents the drive from incorrectly reporting an error.

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MB0010000GWFWK and MB0020000GWFWL Drives**

Version: HPG6 (B) (Recommended)

File name: cp040791.compsig; cp040792.exe; cp040792.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Fixes**

- This firmware includes a fix that changes the response to "SMART READ LOG" command from 04/80/80 to 05/26/00, which prevents the drive from incorrectly reporting an error.

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MB0010000GWJAN, MB0020000GWFWA and MB0040000GWFWBD Drives**

Version: HPG1 (B) (Recommended)

File name: cp040483.compsig; cp040483.exe; cp040483.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MB0020000GWFGH and MB0010000GWFGF Drives**

Version: HPG3 (D) (Optional)

File name: cp040452.compsig; cp040452.exe; cp040452.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MB0040000GWKGV Drive**

Version: HPG1 (B) (Recommended)

File name: cp041495.compsig; cp041495.exe; cp041495.md5

**Important Note!**

- Online firmware flashing of drives attached to a Smart Array controller in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..
Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB006000GWBXIQ and MB008000GWBYL Drives
Version: HPQ8 (B) (Recommended)
Filename: cp040796.compsig; cp040796.exe; cp040796.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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Eliminates a potential hang on 4TB under certain pattern-dependent read conditions
- Eliminates the possibility of a weak read signal under a sequenced combination of read/write conditions
- Provides reliability enhancements involving head fly height dynamics
- Enables download Mode 08h activation by Mode 0Fh

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB006000GWKGR Drive
Version: HPG1 (B) (Recommended)
Filename: cp041522.compsig; cp041522.exe; cp041522.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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SDD Flash Component for Windows (x64) - MB010000GWRTC Drive
Version: HPG3 (C) (Critical)
Filename: cp040448.compsig; cp040448.exe; cp040448.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.
- 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

Online HDD/SDD Flash Component for Windows (x64) - MB010000GWAYN and MB008000GWAYL Drives
Version: HPG5 (C) (Critical)
Filename: cp040457.compsig; cp040457.exe; cp040457.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.
- 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

Online HDD/SDD Flash Component for Windows (x64) - MB012000GWDFE Drives
Version: HPQ6 (Optional)
Filename: cp042461.compsig; cp042461.exe; cp042461.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.
- 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
Fixes

Problems Fixed:
- Persistent Write Cache release size was miscalculated when disk write operation completed before command complete was reported to host which could result in slow sequential write perform
- Drive would stop operations when disk received COMRESET command during firmware download (DOWNLOAD MICROCODE command).

NOTE: If this error occurs, data integrity is maintained and reboot is required to restart the drive operation.

Enhancements

Enhancements/New Features:
- Improved robustness of Adjacent Track Interference (ATI) mitigation in System.

Online HDD/SSD Flash Component for Windows (x64) - MB014000GWRTN, MB012000GWRTL and MB010000GWRTK Drives
Version: HPG2 (B) (Recommended)
Filename: cp041454.compsig; cp041454.exe; cp041454.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 drive
- 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 requir
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements


Online HDD/SSD Flash Component for Windows (x64) - MB014000GWUDA Drive
Version: HPG2 (B) (Recommended)
Filename: cp041509.compsig; cp041509.exe; cp041509.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 drive
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would requir
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements


Online HDD/SSD Flash Component for Windows (x64) - MB10000GDUNU, MB20000GDUNV, MB30000GDUPA, and MB40000GDUPB Drives
Version: HPG4 (F) (Recommended)
Filename: cp040403.compsig; cp040403.exe; cp040403.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 co
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would requir
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements


Online HDD/SSD Flash Component for Windows (x64) - MB10000GVYZE, MB20000GVYZF, MB30000GVYZH, and MB40000GVYZK Drives
Version: HPG4 (F) (Recommended)
Filename: cp040430.compsig; cp040430.exe; cp040430.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 co
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would requir
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements


Online HDD/SSD Flash Component for Windows (x64) - MB20000GCWLT, MB30000GCWLU, and MB40000GCWLV Drives
Version: HPG4 (F) (Recommended)
Filename: cp040404.compsig; cp040404.exe; cp040404.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 co
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would requir
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements


Online HDD/SSD Flash Component for Windows (x64) - MB20000GFEMH and MB40000GFEMK Drives
Version: HPG6 (E) (Critical)
Filename: cp040447.compsig; cp040447.exe; cp040447.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 co
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would requir
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

-
The firmware also corrects settings preservation after a code download, and includes enhancements.

**Enhancements**

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**Online HDD/SSD Flash Component for Windows (x64) - MB4000GEFNA and MB6000GEFNBI Drives**
Version: HPQ6 (F) (Recommended)
File Name: cp040387.compsig; cp040387.exe; cp040387.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

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**Enhancements**

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**Online HDD/SSD Flash Component for Windows (x64) - MB4000GEQNNH and MB6000GEQNNK Drives**
Version: HPQ8 (E) (Critical)
File Name: cp040391.compsig; cp040391.exe; cp040391.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

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**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.

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**Enhancements**

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**Online HDD/SSD Flash Component for Windows (x64) - MB6000GEBTP Drives**
Version: HPQ4 (E) (Recommended)
File Name: cp040428.compsig; cp040428.exe; cp040428.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

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**Enhancements**

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**Online HDD/SSD Flash Component for Windows (x64) - MB6000GEQUT and MB8000GEQUU Drives**
Version: HPQ8 (E) (Critical)
File Name: cp040451.compsig; cp040451.exe; cp040451.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

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**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.
- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

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**Enhancements**

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**Online HDD/SSD Flash Component for Windows (x64) - MB6000GEQUT Drives**
Version: HPQ2 (F) (Recommended)
File Name: cp040409.compsig; cp040409.exe; cp040409.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

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**Enhancements**

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**Online HDD/SSD Flash Component for Windows (x64) - MB6000GEQCU Drives**
Version: HPQ2 (E) (Recommended)
File Name: cp040485.compsig; cp040485.exe; cp040485.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

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**Enhancements**
**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MB6000GYVZB and MB4000GYZA Drives**
Version: HPG4 (B) *(Recommended)*
Filename: cp040459.compsig; cp040459.exe; cp040459.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 cases.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional software.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MB8000GFECR Drives**
Version: HPG6 (B) *(Recommended)*
Filename: cp040410.compsig; cp040410.exe; cp040410.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 cases.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional software.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MM1000GEFQV and MM2000GEFRA Drives**
Version: HPG3 (H) *(Critical)*
Filename: cp040388.compsig; cp040388.exe; cp040388.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 cases.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional software.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**


**Enhancements**

- Error Recovery Optimization Enhancements

**Online HDD/SDD Flash Component for Windows (x64) - MM000480GWSSC, MK000960GWSSD, MK001920GWSSE and MK003840GWSSF Drives**
Version: HPG1 *(Recommended)*
Filename: cp041678.compsig; cp041678.exe; cp041678.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 cases.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional software.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MK0960GECQK Drives**
Version: HPG3 (H) *(Critical)*
Filename: cp040388.compsig; cp040388.exe; cp040388.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 cases.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional software.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MB6000GYVZB and MB4000GYZA Drives**
Version: HPG4 (B) *(Recommended)*
Filename: cp040459.compsig; cp040459.exe; cp040459.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 cases.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional software.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

**Enhancements**


**Online HDD/SDD Flash Component for Windows (x64) - MM1000GEFQV and MM2000GEFRA Drives**
Version: HPG3 (H) *(Critical)*
Filename: cp040388.compsig; cp040388.exe; cp040388.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 cases.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require additional software.
- 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**

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require online firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SSD Flash Component for Windows (x64) - MM1000GFJTE Drives
Version: HPG5 (B) (Optional)
Filename: cp040472.compsig; cp040472.exe; cp040472.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require online firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SSD Flash Component for Windows (x64) - VR000960GWFLA, VR000960GWFLB, VR000960GWFLC, VR000960GWFLD, VR000960GWFLM Drives
Version: HPG5 (B) (Recommended)
Filename: cp041320.compsig; cp041320.exe; cp041320.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require online firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SSD Flash Component for Windows (x64) - VK000150GWCNN, VK000240GWCNP, VK000480GWCNQ, VK000960GWCNR and VK001600GWCNT Drives
Version: HPGE (B) (Recommended)
Filename: cp040476.compsig; cp040476.exe; cp040476.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require online firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SSD Flash Component for Windows (x64) - VK000240GWCFD, VK000480GWCFE, VK000960GWCFH and VK001920GWCFK Drives
Version: HPG3 (C) (Recommended)
Filename: cp040477.compsig; cp040477.exe; cp040477.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require online firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SSD Flash Component for Windows (x64) - VK000240GWEZB, VK000480GWEZC, VK000960GWEZD, VK001920GWEZE and VK003840GWEZF Drives
Version: HPGE (B) (Optional)
Filename: cp041320.compsig; cp041320.exe; cp041320.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require online firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

Online HDD/SSD Flash Component for Windows (x64) - VK000240GWJPD, VK000480GWJPE, VK000960GWJPF, VK001920GWJPH, VK003840GWJKV, MK000240GWJPN, and MK000960GWJPP Drives
Version: HPGE (B) (Critical)
Filename: cp040469.compsig; cp040469.exe; cp040469.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require online firmware flashing.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require online firmware flashing.
- 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 HPES firmware is downloaded to the drive, the new HPES 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-a0072776en
Online HDD/SDD Flash Component for Windows (x64) - VK000240GWSRQ, VK000480GWSRR, VK000960GWSRT, VK001920GWSRU and VK003840GWSRV Drives
Version: HPQ2 (B) (Recommended)
Filename: cp041312.compsig; cp041312.exe; cp041312.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require
- 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.

Online HDD/SDD Flash Component for Windows (x64) - VK000240GWTSV, VK000480GWTTA, VK000960GWTTB, VK001920GWTTD, MK000480GWTTG, MK000960GWTTK, MK001920GWTTM Drives
Version: HPQ3 (B) (Recommended)
Filename: cp040797.compsig; cp040797.exe; cp040797.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require
- 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.

Online HDD/SDD Flash Component for Windows (x64) - VK000480GWSXF, VK000960GWSXH, VK001920GWSXK, MK000480GWUGF, MK000960GWUGH, MK001920GWUGK Drives
Version: HPG2 (B) (Recommended)
Filename: cp040795.compsig; cp040795.exe; cp040795.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require
- 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 Secure Erase operation, and fixes an incorrect error reporting issue during certain SATA protocol transfers.

Online HDD/SDD Flash Component for Windows (x64) - VK000480GWSA, VK000960GWSAS, MK000480GWUGF, MK000960GWUGH, MK001920GWUGK Drives
Version: HPG1 (B) (Optional)
Filename: cp041498.compsig; cp041498.exe; cp041498.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require
- 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.

Online HDD/SDD Flash Component for Windows (x64) - VK000080GWTSN Drive
Version: HPG1 (B) (Optional)
Filename: cp040793.compsig; cp040793.exe; cp040793.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require
- 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.

**Enhancements**
- Added support for Windows 2019.

Online HDD/SDD Flash Component for Windows (x64) - VK000380GWSXG Drive
Version: HPQ2 (B) (Recommended)
Filename: cp040794.compsig; cp040794.exe; cp040794.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require
- 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.

**Enhancements**
- Added support for Windows 2019.

Online HDD/SDD Flash Component for Windows (x64) - VK000760GWSXN Drive
Version: HPQ2 (B) (Recommended)
Filename: cp040794.compsig; cp040794.exe; cp040794.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 controllers.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..
- 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 trigger exception.
- Improvements to Secure lock fix during multi-thread read tests with high freq. power cycling.

**Enhancements**


**Online HDD/SSD Flash Component for Windows (x64) - VK0120GFDE, VK0240GFDFK, VK0480GFDFKH, VK0960GFDFKX, VK1920GFDFKL, and VK3840GFDFKN Drives**

**Version:** HPF1 (E) *(Recommended)*

**Filename:** cp040412.compsig; cp040412.exe; cp040412.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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**


**Online HDD/SSD Flash Component for Windows (x64) - VK0240GEPQ, VK0480GEPQ, and VK0960GEPQ Drives**

**Version:** HPF1 (E) *(Recommended)*

**Filename:** cp040417.compsig; cp040417.exe; cp040417.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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**


**Online HDD/SSD Flash Component for Windows (x64) - VR000480GEPQ, and VR0240GEPQ Drives**

**Version:** HPF1 (C) *(Critical)*

**Filename:** cp040478.compsig; cp040478.exe; cp040478.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.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

**Enhancements**


**Online HDD/SSD Flash Component for Windows (x64) - MB6000GVYYU Drives**

**Version:** HPF2 (E) *(Recommended)*

**Filename:** CP042004.md5; RPMS/x86_64/firmware-d6020-2.74-5.1.x86_64.compsig; RPMS/x86_64/firmware-d6020-2.74-5.1.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.
- 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 6.7 U2.

**Firmware - Storage Controller**

**HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)**

**Version:** 2.74 *(Recommended)*

**Filename:** CP042004.md5; RPMS/x86_64/firmware-d6020-2.74-5.1.x86_64.compsig; RPMS/x86_64/firmware-d6020-2.74-5.1.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 sto 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 8

Supported Devices and Features

The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters:

- HP Smart Array P841 Controller
- HP Smart Array P441 Controller
- HP Smart HBA H241
- HP Smart Array P741m Controller
- HPE Smart Array P408e-p Controller
- HPE Smart Array 8208e-p Controller
- HPE Smart Array P408e-m Controller

HPE D6020 12G SAS Disk Enclosure ROM Flash Component for VMware (ESXi)
Version: 2.74 (E) (Recommended)
Filename: CP042003.compsig; CP042003.md5; CP042003.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 sto 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:

- HP Smart Array P841 Controller
- HP Smart Array P441 Controller
- HP Smart HBA H241
- HP Smart Array P741m Controller
- HPE Smart Array P408e-p Controller
- HPE Smart Array 8208e-p Controller
- HPE Smart Array P408e-m Controller

HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for Windows (x64)
Version: 2.74 (E) (Recommended)
Filename: cp042006.compsig; cp042006.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 sto 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
Supported Devices and Features

- The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters:
  - HP Smart Array P841 Controller
  - HP Smart Array P441 Controller
  - HP Smart HBA H241
  - HP Smart Array P741m Controller
  - HPE Smart Array P408e-p Controller
  - HPE Smart Array E208e-p Controller
  - HPE Smart Array P408e-m Controller

HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)
Version: 0105 (Recommended)
Filename: CP041301.compsig; CP041301.md5; CP041301.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 D8000(or any sto 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:

- SAS drive LED behavior was corrected to align with the Smart Array specification, specifically:
  - The Activity LED of a sanitize erase drive now turns ON when connected.
  - The Array present LED now turns ON for the SAS drive.
  - The Activity LED now blinks on all drives during a SAS drive rebuild.

- The Serial Output Buffer (SOB) has a fixed size for stored entries. Now, when the buffer is full, the oldest entries are cleared or committed to persistent storage (if available). For this reason successful request to read the SOB.

- The drive activity LED has been changed to a function as described in the installation and maintenance guide.

- The reboot flag was changed to issue a hard reset, which enables the service delivery subsystem (ZPSDS) information be shared across (expanded across) the internal expanders to all device

- The drive activity LED on the SAS disk drives was changed to support the ACTIVE_LOW signal state. The ACTIVE_LOW signal state is the default operation state for most drives.

- The reboot flag was changed to issue a hard reset, which enables the service delivery subsystem (ZPSDS) information be shared across (expanded across) the internal expanders to all device

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- The drive activity LED has been changed to a function as described in the installation and maintenance guide.

- The reboot flag was changed to issue a hard reset, which enables the service delivery subsystem (ZPSDS) information be shared across (expanded across) the internal expanders to all device

- The drive activity LED on the SAS disk drives was changed to support the ACTIVE_LOW signal state. The ACTIVE_LOW signal state is the default operation state for most drives.

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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:

- HP Smart Array P408e-p Controller
- HP Smart Array E208e-p Controller

HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)
Version: 0105 (Recommended)
Filename: CP041302.md5; RPMS/x86_64/firmware-d8000-0105-1.1.x86_64.compsig; RPMS/x86_64/firmware-d8000-0105-1.1.x86_64.rpm

Important Note

**IMPORTANT**: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**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:

- SAS drive LED behavior was corrected to align with the Smart Array specification, specifically:
  - The Activity LED of a sanitize erase drive now turns ON when connected.
  - The Array present LED now turns ON for the SAS drive.
  - The Activity LED now blinks on all drives during a SAS drive rebuild.

- The Serial Output Buffer (SOB) has a fixed size for stored entries. Now, when the buffer is full, the oldest entries are cleared or committed to persistent storage (if available). For this reason successful request to read the SOB.

- The drive activity LED has been changed to a function as described in the installation and maintenance guide.

- The reboot flag was changed to issue a hard reset, which enables the service delivery subsystem (ZPSDS) information be shared across (expanded across) the internal expanders to all device

- The drive activity LED on the SAS disk drives was changed to support the ACTIVE_LOW signal state. The ACTIVE_LOW signal state is the default operation state for most drives.

- The drive activity LED has been changed to a function as described in the installation and maintenance guide.

- The reboot flag was changed to issue a hard reset, which enables the service delivery subsystem (ZPSDS) information be shared across (expanded across) the internal expanders to all device

- The drive activity LED on the SAS disk drives was changed to support the ACTIVE_LOW signal state. The ACTIVE_LOW signal state is the default operation state for most drives.

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Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

200/237
The SCSI WRITE BUFFER MODE was changed from activate to soft reset. This change improves the host ability to detect and report whether the enclosure is going to perform a disruptive or non-disruptive operation.

With I/O module firmware v0105 and PQI firmware 2.02, the slot power cycle issue has been resolved by changing the power cycle SES request to return a failure when a partner slot is not compatible.

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

HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for Windows (x64)
Version: 0105 (Recommended)
Filename: cp041303.compsig; cp041303.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 controller, all I/O to the system must be 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.

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:

- SAS drive LED behavior was corrected to align with the Smart Array specification, specifically:
  - The Activity LED of a sanitize erase drive now turns ON when connected.
  - The Array present LED now turns ON for the SAS drive.
  - The Activity LED now blinks on all drives during a SAS drive rebuild.
- The Serial Output Buffer (SOB) has a fixed size for stored entries. Now, when the buffer is full, the oldest entries are cleared or committed to persistent storage (if available). For this reason, the successful request to read the SOB.
- The drive activity LED has been changed to a function as described in the installation and maintenance guide.
- The reboot flag was changed to issue a hard reset, which enables the service delivery subsystem (ZPSDS) information to be shared across (expanded across) the internal expanders to all device drivers.
- The drive activity LED on the SAS disk drives was changed to support the ACTIVE_LOW signal state. The ACTIVE_LOW signal state is the default operation state for most drives.
- The SCSI WRITE BUFFER MODE was changed from activate to soft reset. This change improves the host ability to detect and report whether the enclosure is going to perform a disruptive or non-disruptive operation.
- With I/O module firmware v0105 and PQI firmware 2.02, the slot power cycle issue has been resolved by changing the power cycle SES request to return a failure when a partner slot is not compatible.

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 SmartArray P408e-p Controller
- HPE SmartArray E208e-p Controller

Online ROM Flash Component for ESXi (x64) – HPE Smart Array P824i-p MR Gen10
Version: 24.23.0-0042 (Optional)
Filename: CP036878.compsig; CP036878.zip

Enhancements

- Added support for the Apollo 4510 system

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-9f082dffb4-1.00-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-9f082dffb4-1.00-2.1.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

Online ROM Flash Component for Linux (x64) – HPE SAS Expander Firmware for HPE D2500sb Storage Blade
Version: 2.02 (Recommended)
Filename: rpm/RPMS/x86_64/firmware-smartarray-1d0696d939-2.02-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-1d0696d939-2.02-1.1.x86_64.rpm

Fixes

- Hard drives may not show up after a power cycle or hot plug when in bays 1 through 10.

Online ROM Flash Component for Linux (x64) – HPE Smart Array P824i-p MR Gen10
Version: 24.23.0-0042 (A) (Optional)
Filename: CP040180.md5; CP040180.scexe; deb/firmware-cafee96e4_24.23.0.0042-1.1_amd64.deb; rpm/RPMS/x86_64/firmware-smartarray-cafee96e4-24.23.0.0042-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-cafee96e4-24.23.0.0042-1.1.x86_64.rpm

Fixes
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 (Recommended)
Filename: CP040617.compsig; CP040617.zip

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.

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.

Online ROM Flash Component for VMware ESXi – HPE Apollo 2000 Gen10 Backplane Expander Firmware
Version: 1.00 (C) (Optional)
Filename: CP037611.compsig; CP037611.zip

Important Note!
Customers who already installed firmware version 1.00 do not need to update to 1.00 (C).

Enhancements
- Added support for VMware vSphere 6.7 OS

Online ROM Flash Component for VMware ESXi - HPE Apollo 45xx Gen10 Backplane Expander Firmware
Version: 1.56 (D) (Recommended)
Filename: CP043368.compsig; CP043368.zip

Enhancements
- Added HPE Smart Array P824i-p controller support

Online ROM Flash Component for VMware ESXi - HPE SAS Expander Firmware for HPE D2500sb Storage Blade
Version: 2.02 (Recommended)
Filename: CP041629.compsig; CP041629.zip

Enhancements
- Added support for VMware vSphere 6.7 OS

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

Enhancements
- Added support for Microsoft Windows Server 2019 OS

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.

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

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

Online ROM Flash Component for Windows (x64) - HPE SAS Expander Firmware for HPE D2500sb Storage Blade
Version: 2.02 (Recommended)
Filename: cp041631.compsig; cp041631.exe; cp041631.md5

**Fixes**
- Hard drives may not show up after a power cycle or hot plug when in bays 1 through 10

Online ROM Flash Component for Windows (x64) - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208i-c, E208i-a, P408e-m, P204i-c, P204i-b, P816i-a and P416ie-m SR
Version: 2.65 (Critical)
Filename: cp043370.compsig; cp043370.exe; cp043370.md5

**Fixes**
- Prevents a potential data inconsistency from occurring after experiencing an Unrecoverable Read Error (URE) on a drive configured in RAID 1/10/ADM Fault Tolerant Mode.
- Prevents a potential data inconsistency from occurring during initial configuration and operation of a volume configured in RAID 5/6/50/60 Fault Tolerant Mode.
  - For additional information regarding Compute and Storage platforms, reference [Customer Bulletin a0097210en_us](#).
- HPE does NOT recommend independently updating to Firmware Versions Newer than 1.99 for HPE Smart Array SR Gen10 Controllers on HPE SimpliVity Gen10 systems.
  - For additional information regarding SimpliVity platforms, reference [Customer Bulletin a0097566en_us](#).

**IMPORTANT:** RAID 0 and drives in HBA Mode are not affected.

Online ROM Flash Component for Windows (x64) - HPE Smart Array P824i-p MR Gen10
Version: 24.23.0-0042 (A) (Recommended)
Filename: cp040218.compsig; cp040218.exe; cp040218.md5

**Fixes**
- Fixes Firmware downgrade issue

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.

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

Supplemental Update / Online ROM Flash Component for Linux (x64) - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208i-c, E208i-a, P408e-m, P204i-c, P204i-b, P816
Version: 2.65 (Critical)
Filename: rpm/RPMS/x86_64/firmware-smartarray-f7c07bdbbd-2.65-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-f7c07bdbbd-2.65-1.1.x86_64.rpm

**Fixes**
- Prevents a potential data inconsistency from occurring after experiencing an Unrecoverable Read Error (URE) on a drive configured in RAID 1/10/ADM Fault Tolerant Mode.
- Prevents a potential data inconsistency from occurring during initial configuration and operation of a volume configured in RAID 5/6/50/60 Fault Tolerant Mode.
  - For additional information regarding Compute and Storage platforms, reference [Customer Bulletin a0097210en_us](#).
- HPE does NOT recommend independently updating to Firmware Versions Newer than 1.99 for HPE Smart Array SR Gen10 Controllers on HPE SimpliVity Gen10 systems.
  - For additional information regarding SimpliVity platforms, reference [Customer Bulletin a0097566en_us](#).

**IMPORTANT:** RAID 0 and drives in HBA Mode are not affected.

**Firmware - Storage Fibre Channel**

HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for Linux (x64)
Version: 2019.12.02 (Recommended)
Filename: RPMS/x86_64/firmware-fc-emulex-2019.12.02-1.1.x86_64.compsig; RPMS/x86_64/firmware-fc-emulex-2019.12.02-1.1.x86_64.rpm

**Important Note!**
- Release Notes: [HPE StoreFabric 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:
  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...
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</table>

**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)

**Fixes**

Fix the following:

Where Host Bus Adapters reporting address NACKs (No Acknowledgements) from external temperature sensors.

**Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

Contains:

- 16/32 Gb HBA/Mezz universal boot 12.4.270.14
- 16 Gb HBA/Mezz universal boot 12.4.270.10
- 8 Gb standup/mezz firmware 2.10X6
- 8 Gb standup/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:**
- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE StoreFabric BAE 4-Port Fibre Channel Host Bus Adapter

**LPe16000 (16Gb) FC:**
- 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 StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

**LPe31000/32000 (16Gb/32Gb) FC:**
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
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Fixes

Fix the following:

Where Host Bus Adapters reporting address NACKs (No Acknowledgements) from external temperature sensors.

Enhancements

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

Contains:

- 16/32 Gb HBA/Mezz universal boot 12.4.270.14
- 16 Gb HBA/Mezz universal boot 12.4.270.10
- 8 Gb standup/mezz firmware 2.10X6
- 8 Gb standup/mezz universal boot image 12.40a6 (12.4.262.0 BIOS, 12.4.153.0 UEFI)
This component is supported on following Emulex Fibre Channel Host Bus adapters:

8Gb FC:
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz

LPe31000/32000 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

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**Important Note**

Release Notes:
HPE StoreFabric 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:
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

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**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

### Fixes
Fix the following:
Where Host Bus Adapters reporting address NACKs (No Acknowledgements) from external temperature sensors.

### Enhancements
We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

### Contains:
- 16/32 Gb HBA/Mezz universal boot 12.4.270.14
- 16 Gb HBA/Mezz universal boot 12.4.270.10
- 8 Gb standup/mezz firmware 2.10X6
- 8 Gb standup/mezz universal boot image 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:
- HPE 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HPE 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

#### LPe16000 (16Gb) FC:
- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

#### LPe31000/32000 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

---

**Important Note!**

Release Notes:
HPE StoreFabric 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:
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 drivers and applications.

---

### HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for Windows 2012 R2/2016/2019 x64
Version: 2019.12.02 (Recommended)
Filename: cp042603.compsig; cp042603.exe

---

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<tr>
<th>Adapter</th>
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<th>Universal Boot Image</th>
<th>Firmware</th>
<th>UEFI</th>
<th>Boot Bios</th>
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<td>HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class</td>
<td>Gen4 / LPE12000/8Gb</td>
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</table>
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 i

Fixes

Fix the following:

Where Host Bus Adapters reporting address NACKs (No Acknowledgements) from external temperature sensors.

Enhancements

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

Contains:

16/32 Gb HBA/Mezz universal boot 12.4.270.14
16 Gb HBA/Mezz universal boot 12.4.270.10
8 Gb standup/mezz firmware 2.10X6
8 Gb standup/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:

- HP B11G 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP B21G 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:

- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz

LPe31000/32000 (16Gb/32Gb) FC:

- HP StoreFabric SN1200E 16Gb 2P FC HBA
- HP StoreFabric SN1200E 16Gb 1P FC HBA
- HP StoreFabric SN1600E 32Gb 2p FC HBA
- HP StoreFabric SN1600E 32Gb 1p FC HBA

Importan Note!

Refer release notes available at:

HPE StoreFabric QLogic Adapter Release Notes

This Firmware package contains following firmware versions:

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<td>HP StoreFabric SN1200E 16Gb 2P FC HBA</td>
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<td>HP StoreFabric SN1200E 16Gb 1P FC HBA</td>
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<tr>
<td>HP StoreFabric SN1600E 32Gb 1p FC HBA</td>
<td>Gen7/32G</td>
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</table>

Prerequisites
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](http://www.hpe.com/servers/spp/download).

**Fixes**

Fixed the following:

In extremely rare cases, the following QLogic Fibre Channel (FC) Host Bus Adapters (HBAs), SN1100Q, SN1600Q and SN1610Q may cause the host Operating System (OS) to stop. Subsequent OS n HPE updated the Firmware/BIOS/UEFI (Boot Image) packages for these adapters to eliminate possible exposure to this extremely rare but critical issue.


**Enhancements**

Updated the Firmware/BIOS/UEFI packages for following:

- **Gen4 Fibre Channel Host Bus Adapter:**
  - Package 3.81.05
  - 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

- **Gen6 Fibre Channel Host Bus Adapter:**
  - Package 1.73.08
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.64

- **Gen7 Fibre Channel Host Bus Adapter:**
  - Package 02.02.18
  - Firmware 09.02.20
  - UEFI 7.08
  - BIOS 0.8

**Supported Devices and Features**

This firmware supports the following HPE adapters:

**Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

**Gen 5 Fibre Channel Host Bus Adapter:**
- HPE QM2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

**HPE Firmware Flash for Qlogic Fibre Channel Host Bus Adapters for VMware vSphere 6.5**

Version: 2019.12.03 *(Recommended)*

Filename: CP042995.compsig; CP042995.zip

**Important Note!**

Refer release notes available at:

[HPE StoreFabric QLogic Adapter Release Notes](#)

This Firmware package contains following firmware versions:

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</table>

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:


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
**Fixes**

**Fixed the following:**

In extremely rare cases, the following QLogic Fibre Channel (FC) Host Bus Adapters (HBAs), SN1100Q, SN1600Q and SN1610Q may cause the host Operating System (OS) to stop. Subsequent OS n HPE updated the Firmware/BIOS/UEFI (Boot Image) packages for these adapters to eliminate possible exposure to this extremely rare but critical issue.

For more details please go through the document titled “HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating Systerr


**Enhancements**

Updated the Firmware/BIOS/UEFI packages for following:

- **Gen4 Fibre Channel Host Bus Adapter:**
  - Package 3.81.05
  - 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

- **Gen6 Fibre Channel Host Bus Adapter:**
  - Package 1.73.08
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.64

- **Gen7 Fibre Channel Host Bus Adapter:**
  - Package 02.02.18
  - Firmware 09.02.20
  - UEFI 7.08
  - BIOS 0.0

**Supported Devices and Features**

This firmware supports the following HPE adapters:

- **Gen4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
  - HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

- **Gen5 Fibre Channel Host Bus Adapter:**
  - HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

- **Gen6 Fibre Channel Host Bus Adapter:**
  - HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

- **Gen7 Fibre Channel Host Bus Adapter:**
  - HPE SN1610Q 32Gb 2P FC HBA
  - HPE SN1610Q 32Gb 1P FC HBA

**HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 6.7**

Version: 2019.12.03 (Recommended)

Filename: CP042996.compsig; CP042996.zip

**Important Note!**

Refer release notes available at:

HPE StoreFabric QLogic Adapter Release Notes

This firmware package contains following firmware versions:

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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/

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
In extremely rare cases, the following QLogic Fibre Channel (FC) Host Bus Adapters (HBAs), SN1100Q, SN1600Q and SN1610Q may cause the host Operating System (OS) to stop. Subsequent OS n HPE updated the Firmware/BIOS/UEFI (Boot Image) packages for these adapters to eliminate possible exposure to this extremely rare but critical issue.


### Enhancements

Updated the Firmware/BIOS/UEFI packages for following:

- **Gen4 Fibre Channel Host Bus Adapter:**
  - Package 3.81.05
  - 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

- **Gen6 Fibre Channel Host Bus Adapter:**
  - Package 1.73.08
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.64

- **Gen7 Fibre Channel Host Bus Adapter:**
  - Package 02.02.15
  - Firmware 09.02.20
  - UEFI 7.08
  - BIOS 9.0

### Supported Devices and Features

This firmware supports the following HPE adapters:

#### Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

#### Gen 6 Fibre Channel Host Bus Adapter:
- HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

#### Gen 7 Fibre Channel Host Bus Adapter:
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

HPE Firmware Online Flash for QLogic Fibre Channel Host Bus Adapters - Microsoft Windows Server 2016/2019 (x86_64)

**Version:** 2019.12.03 (Recommended)

**Filename:** cp042998.compsig; cp042998.exe

### Important Note!

Refer release notes available at:

[HPE StoreFabric QLogic Adapter Release Notes](https://www.hpe.com/storage/spock/)

This Firmware package contains following firmware versions:

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<td>Gen4/8Gb</td>
</tr>
<tr>
<td>HPE StoreFabric 84Q 4P 8Gb Fibre Channel HBA</td>
<td>Gen4/8Gb</td>
</tr>
<tr>
<td>HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem</td>
<td>Gen4/8Gb</td>
</tr>
<tr>
<td>HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem</td>
<td>Gen5/16Gb</td>
</tr>
<tr>
<td>HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter</td>
<td>Gen5/16Gb</td>
</tr>
<tr>
<td>HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter</td>
<td>Gen6/16Gb</td>
</tr>
<tr>
<td>HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter</td>
<td>Gen6/32Gb</td>
</tr>
<tr>
<td>HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter</td>
<td>Gen6/32Gb</td>
</tr>
<tr>
<td>HPE SN1610Q 32Gb 2P FC HBA</td>
<td>Gen7/32Gb</td>
</tr>
<tr>
<td>HPE SN1610Q 32Gb 1P FC HBA</td>
<td>Gen7/32Gb</td>
</tr>
</tbody>
</table>

### Prerequisites

Please consult SPOCK for a list of supported configurations available at the following link:

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:

In extremely rare cases, the following QLogic Fibre Channel (FC) Host Bus Adapters (HBAs), SN1100Q, SN1600Q and SN1610Q may cause the host Operating System (OS) to stop. Subsequent OS n HPE updated the Firmware/BIOS/UEFI (Boot Image) packages for these adapters to eliminate possible exposure to this extremely rare but critical issue.

For more details please go through the document titled “HPE ProLiant, Synergy and Superdome Flex Host Bus Adapters (HBA) - Certain Fibre Channel HBA Firmware May Cause the Operating System to stop” https://support.hpe.com/hpesc/public/docDisplay?docLocale=en_US&docId=a00094722en_us

**Enhancements**

Updated the Firmware/BIOS/UEFI packages for following:

- Gen4 Fibre Channel Host Bus Adapter:
  - Package 3.81.05
  - 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

- Gen6 Fibre Channel Host Bus Adapter:
  - Package 1.73.08
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.64

- Gen7 Fibre Channel Host Bus Adapter:
  - Package 02.02.18
  - Firmware 09.02.20
  - UEFI 7.08
  - BIOS 0.0

**Supported Devices and Features**

This firmware supports the following HPE adapters:

**Gen 4 Fibre Channel Host Bus Adapter:**
- HPE B1Q PCIe Fibre Channel Host Bus Adapter
- HPE B2Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric B4Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN16100Q 32Gb 2P FC HBA
- HPE SN16100Q 32Gb 1P FC HBA

**Firmware - System**

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).
Enhancements

- Added support for Microsoft Windows Server 2019 OS

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 release:

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 release:

Problems Fixed:
None

Known Issues:
None

Important Note!

Important Notes:
None

Deliverable Name:
Server Platform Services (SPS) Firmware for HPE ProLiant DL20/ML30 Gen10 Servers

Release Version:
05.01.03.078

Last Recommended or Critical Revision:
05.01.03.078

Previous Revision:
05.00.03.107

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
This revision of the Silicon Platform Services (SPS) Firmware provides mitigation to the latest CSME security vulnerabilities, also known as Local Escalation Privilege. This vulnerability is defined in CV

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 Silicon Platform Services (SPS) Firmware provides mitigation to the latest CSME security vulnerabilities, also known as Local Escalation Privilege. This vulnerability is defined in CV

Known Issues:
None

Online ROM Flash for Linux - HPE Gen10 Innovation Engine Firmware for HPE Gen10 Servers
Version: 0.2.1.2 (B) (Optional)
Filename: RPMS/x86_64/firmware-iegen10-0.2.1.2-2.1.x86_64.compsig; RPMS/x86_64/firmware-iegen10-0.2.1.2-2.1.x86_64.rpm

Important Note!

Important Notes:
None

Deliverable Name:
HPE Gen10 Innovation Engine (IE) Firmware

Release Version:
0.2.1.2

Last Recommended or Critical Revision:
0.1.5.2

Previous Revision:
0.2.0.11

Firmware Dependencies:
None

Enhancements/New Features:
Added support for HPE Persistent Memory featuring Intel Optane DC Persistent Memory.

Problems Fixed:
None

Known Issues:
None

Enhancements

Important Notes:
None

Firmware Dependencies:
None

Enhancements/New Features:
Added support for HPE Persistent Memory featuring Intel Optane DC Persistent Memory.

Known Issues:
None

Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE Gen10 Servers
Version: 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:
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 revision:

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 revision:

Known Issues:
None

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Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE ProLiant DL20/ML30 Gen10
Version: 05.01.03.078 (Recommended)
Filename: RPMS/x86_64/firmware-dl20ml30gen10sps-05.01.03.078-1.1.x86_64.compsig; RPMS/x86_64/firmware-dl20ml30gen10sps-05.01.03.078-1.1.x86_64.rpm

Important Note!

Important Notes:
None

Deliverable Name:
Server Platform Services (SPS) Firmware for HPE ProLiant DL20/ML30 Gen10 Servers

Release Version:
05.01.03.078

Last Recommended or Critical Revision:
05.01.03.078

Previous Revision:
05.00.03.107

Firmware Dependencies:
None

Enhancements/New Features:
None

Problems Fixed:
This revision of the Silicon Platform Services (SPS) Firmware provides mitigation to the latest CSME security vulnerabilities, also known as Local Escalation Privilege. This vulnerability is defined in CV

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 Silicon Platform Services (SPS) Firmware provides mitigation to the latest CSME security vulnerabilities, also known as Local Escalation Privilege. This vulnerability is defined in CV

Known Issues:
None

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Online ROM Flash for Windows x64 - HPE Gen10 Innovation Engine Firmware for HPE Gen10 Servers
Version: 0.2.1.2 (Optional)
Filename: cp039812.compsig; cp039812.exe

Important Note!

Important Notes:
None
Deliverable Name: HPE Gen10 Innovation Engine (IE) Firmware

Release Version: 0.2.1.2

Last Recommended or Critical Revision: 0.1.5.2

Previous Revision: 0.2.0.11

Firmware Dependencies: None

Enhancements/New Features:

Added support for HPE Persistent Memory featuring Intel Optane DC Persistent Memory.

Problems Fixed: None

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).

Enhancements

Important Notes: None

Firmware Dependencies: None

Enhancements/New Features:

Added support for HPE Persistent Memory featuring Intel Optane DC Persistent Memory.

Known Issues: None

Important Note!

Important Notes: None

Deliverable Name: HPE Gen10 Innovation Engine (IE) Firmware

Release Version: 0.2.1.2

Last Recommended or Critical Revision: 0.1.5.2

Previous Revision: 0.2.0.11

Firmware Dependencies: None

Enhancements/New Features:

Added support for HPE Persistent Memory featuring Intel Optane DC Persistent Memory.

Problems Fixed: None

Known Issues: None

Prerequisites

System ROM V1.26 or later

ILO 5 v1.20 or later

Enhancements

Important Notes: None

Firmware Dependencies: None

Enhancements/New Features:
Added support for HPE Persistent Memory featuring Intel Optane DC Persistent Memory.

**Known Issues:**
None

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**Important Note!**

**Important Notes:**
None

**Deliverable Name:**
Server Platform Services (SPS) Firmware for HPE ProLiant DL20/ML30 Gen10 Servers

**Release Version:**
05.01.03.078

**Last Recommended or Critical Revision:**
05.01.03.078

**Previous Revision:**
05.00.03.107

**Firmware Dependencies:**
None

**Enhancements/New Features:**
None

**Problems Fixed:**
This revision of the Silicon Platform Services (SPS) Firmware provides mitigation to the latest CSME security vulnerabilities, also known as Local Escalation Privilege. This vulnerability is defined in CV

**Known Issues:**
None

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**Prerequisites**

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

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**Fixes**

**Important Notes:**
None

**Firmware Dependencies:**
None

**Problems Fixed:**
This revision of the Silicon Platform Services (SPS) Firmware provides mitigation to the latest CSME security vulnerabilities, also known as Local Escalation Privilege. This vulnerability is defined in CV

**Known Issues:**
None

---

**Prerequisites**

HPE Gen10 system ROM version 1.26 or later
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 firmware:

- Server Platform Services (SPS) Firmware for Intel C242 and C246 PCH based systems
  - Version: 05.01.03.078 (Recommended)
  - Filename: cp040639.compsig; cp040639.zip

Firmware (Entitlement Required) - Storage Controller

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)
- Version: 4.12 (Recommended)
- Filename: CP036703.md5; RPMs/x86_64/firmware-d3000-4.12-1.1.x86_64.compsig; RPMs/x86_64/firmware-d3000-4.12-1.1.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 controller) this may 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 fix is incorporated in this version:
- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure.

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:
- HP Smart Array P841 Controller
- HP Smart Array P441 Controller
- HP Smart Array H241
- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller
- HPE Smart Array P408e-m Controller
- HP Smart Array P741m Controller
- HPE Smart Array P416ie-m Controller

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)
- Version: 4.12 (Recommended)
- Filename: CP036702.compsig; CP036702.md5; CP036702.zip

Important Note!

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.

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 fix is incorporated in this version:
- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure.

Please refer to the Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.
The following enhancement has been added in this version:
- Added support of VMware vsphere 6.7

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:
- HP Smart Array P841 Controller
- HP Smart Array P441 Controller
- HP Smart HBA H241
- HP Smart Array P741m Controller
- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller
- HPE Smart Array P408e-m Controller
- HPE Smart Array P416ie-m Controller

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for Windows (x64)
Version: 4.12 (Recommended)
Filename: cp036704.compsig; cp036704.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 sto 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 fix is incorporated in this version:
- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure.

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:
- HP Smart Array P841 Controller
- HP Smart Array P441 Controller
- HP Smart HBA H241
- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller
- HPE Smart Array P408e-m Controller
- HP Smart Array P741m Controller
- HPE Smart Array P416ie-m Controller

Software - Lights-Out Management
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: 5.3.0.0 (Optional)
Filename: cp037416.compsig; cp037416.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 CNSA security state from iLO5 v1.40 or later.
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 drivers.

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:
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.

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:


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:
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.
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:
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz

LPe31000/32000 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

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Emulex Fibre Channel driver component for VMware vSphere 6.7
Version: 2019.12.02 (Recommended)
Filename: cp041714.compsig; cp041714.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 H

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

Prerequisites
Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/cds/repg/ssock/

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

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:
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz

LPe31000/32000 (16Gb/32Gb) FC:
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA
**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 vbsdepot.hpe.com webpages, plus an HPE Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:
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.

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
```

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:


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:
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.

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.
- Linking is not completing because lpfc_do_work_event can't exit.
- Snot memory leak after freeing memory leaks.
- Small Computer System Interface (SCSI) command is used after done call.
- Target reset does not report original status

**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 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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**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 vbsdepot.hpe.com webpages, plus an HPE Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:
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.

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
```

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:


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:
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.

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 25Gb 2-port 650FLB Adapter
- Detecting is not completing because lpfc_do_work_event can’t exit.
- Slab memory use after freeing memory leak.
- Small Computer System Interface (SCSI) command is used after done call.
- Target reset does not report original status

**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 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

- **Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
  - HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

- **Gen 5 Fibre Channel Host Bus Adapter:**
  - HPE QMH2572 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
  - HPE StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

- **Gen 6 Fibre Channel Host Bus Adapter:**
  - HPE StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

- **Gen 7 Fibre Channel Host Bus Adapter:**
  - HPE SN1610Q 32Gb 2P FC HBA
  - HPE SN1610Q 32Gb 1P FC HBA

**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 H.

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storageworks/spock/

**Fixes**

Driver run into a Purple Screen of Death (PSOD) after Invalid entry, prints in the vmkernel log;

```
"WARNING: qnativefc: vmhba2(12:0.0): Invalid ISP SCSI completion handle(281) req=1
WARNING: qnativefc: vmhba2(12:0.0): Invalid ISP SCSI completion handle(282) req=1"
```

**Enhancements**

Driver version 2.1.96.0

**Supported Devices and Features**

This driver supports the following HPE adapters:

- **Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
  - HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

- **Gen 5 Fibre Channel Host Bus Adapter:**
  - HPE QMH2572 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
  - HPE StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

- **Gen 6 Fibre Channel Host Bus Adapter:**
  - HPE StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
  - HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

- **Gen 7 Fibre Channel Host Bus Adapter:**
  - HPE SN1610Q 32Gb 2P FC HBA
  - HPE SN1610Q 32Gb 1P FC HBA

**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 H.

**Prerequisites**

Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storageworks/spock/
Fixed the following:

Driver run into a Purple Screen of Death (PSOD) after Invalid entry, prints in the vmkernel log;

"WARNING: qnativfec: vmhba(12:0.0): Invalid ISP SCSI completion handle(281) req=1
WARNING: qnativfec: vmhba2(12:0.0): Invalid ISP SCSI completion handle(282) req=1"

Enhancements

Driver version 3.1.31.0

Supported Devices and Features

This driver supports the following HPE adapters:

Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

Gen 6 Fibre Channel Host Bus Adapter:
- HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

Gen 7 Fibre Channel Host Bus Adapter:
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

Software - Storage Fibre Channel HBA

Fibreutils for HPE Storage Fibre Channel Host Bus Adapters for Linux - Red Hat Enterprise Linux (RHEL)
Version: 4.1-1 (b) (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

Fixes

Fixed adapter_info code to display correct Vendor name instead of Unknown

Enhancements

This package supports only Red Hat Enterprise Linux (RHEL) Distros

Supported Devices and Features

Supports the following:
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter
- HP LPe1605 16Gb Fibre Channel Host Bus Adapter
- HP QMH2672 16GB FC HBA for c-Class BladeSystem
- HP QMH2572 8GB Fibre Channel Host Bus Adapter
- HP FlexFabric 20Gb 2-port 65OM Adapter
- HP FlexFabric 20Gb 2-port 650FLB Adapter
- HP FlexFabric 10Gb 2-port 556FLR+ Adapter
- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP StoreFabric 84E 4-port 8Gb Fibre Channel Host Bus Adapter
- HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HP StoreFabric SN1100Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1610Q 32Gb 2P FC HBA
- HP StoreFabric SN1610Q 32Gb 1P FC HBA
- HP StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HP StoreFabric SN1100Q 16Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP StoreFabric CN1200E-T 10GBase-T Converged Network Adapter
- HP StoreFabric CN1200E 10Gb Converged Network Adapter

Fibreutils for HPE Storage Fibre Channel Host Bus Adapters for Linux - SuSE Linux Enterprise Server (SLES)
Version: 4.1-1 (b) (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

This component is supported on following Emulex Fibre Channel Host Bus adapters:

8Gb FC:
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1000Q 16Gb Single Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000Q 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1000E 16Gb 4-port PCIe Fibre Channel Host Bus Adapter
- HP StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HP StoreFabric SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1200Q 16Gb Single Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP StoreFabric CN1200E-T 10GBASE-T Converged Network Adapter
- HP StoreFabric CN1200E 10Gb Converged Network Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 1P 16Gb Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 4-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE Emulex Fibre Channel Enablement Kit for Red Hat Enterprise Linux 7 Server
  Version: 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!

Release Notes:
HPE StoreFabric Emulex Adapters Release Notes

Version 12.4.256.0 (Recommended)

Pattern:

To obtain the guide:

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 drivers and applications.

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.

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:

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 drivers and applications.

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:
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1000Q 16Gb Single Port Fibre Channel Host Bus Adapter

LPe16000 (16Gb) FC:
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000Q 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz
**HPE Emulex Fibre Channel Enablement Kit for Red Hat Enterprise Linux 8 Server**

Version: 12.4.256.0 (Recommended)

Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-1.rpm

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**Important Note**

Release Notes:
HPE StoreFabric 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:
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 drivers and applications.

**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 as a system prerequisite.)

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:
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 drivers and applications.

**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:**
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

**LPe16000 (16Gb) FC:**
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz

**LPe31000/32000 (16Gb/32Gb) FC:**
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

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**HPE Emulex Fibre Channel Enablement Kit for SUSE Linux Enterprise Server 12**

Version: 12.4.256.0 (Recommended)

Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-1.rpm

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**Important Note**

Release Notes:
HPE StoreFabric 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:
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 drivers and applications.

**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 as a system prerequisite.)

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:
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 drivers and applications.
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:
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

**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:**
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPE1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

**LPe16000 (16Gb) FC:**
- HP S100OE 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz

**LPe32000/32020 (16Gb/32Gb) FC:**
- HP StoreFabric SN1200E 16Gb 2P FC HBA
- HP StoreFabric SN1200E 16Gb 1P FC HBA
- HP StoreFabric SN1600E 32Gb 2p FC HBA
- HP StoreFabric SN1600E 32Gb 1p FC HBA

HPE Emulex Fibre Channel Enablement Kit for SUSE Linux Enterprise Server 15

Version: 12.4.256.0 (Recommended)

Filename: HP-CNA-FC-Emulex-Enablement-Kit-12.4.256.0-1.sles15sp0.sles15sp1.x86_64.rpm

**Important Note!**

Release Notes: [HPE Storefabric 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:
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

**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.

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:
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

**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:**
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP LPE1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

**LPe16000 (16Gb) FC:**
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz
LPe31000/32000 (16Gb/32Gb) FC:

- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

HPE Emulex Smart SAN Enablement Kit for Linux
Version: 1.0.0.0-4 (Optional)
Filename: 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 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 go to 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.

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:**
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter

**LPe16000 (16Gb) FC:**
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter

**LPe31000/32000 (16Gb/32Gb) FC:**
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

HPE Emulex Smart SAN Enablement Kit for Windows 64 bit operating systems
Version: 1.0.0.1 (Recommended)
Filename: cp039580.compsig; cp039580.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 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 go to 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 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**
Supported Devices and Features

This component is supported on following Emulex Fibre Channel Host Bus adapters:

**8Gb FC:**
- HP 81E 8Gb Single Port PCIe Fibre Channel Host Bus Adapter
- HP 82E 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HP StoreFabric 84E 4-Port Fibre Channel Host Bus Adapter
- HP LPe1205A 8Gb Fibre Channel Host Bus Adapter for BladeSystem c-Class

**LPe16000 (16Gb) FC:**
- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter

**LPe31000/32000 (16Gb/32Gb) FC:**
- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

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**HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for Red Hat Enterprise Linux 7 Server**

**Version:** 12.0.1264.0 *(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 StoreFabric 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:

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 drivers and applications.

**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.

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:

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 drivers and applications.

**Enhancements**

Updated to version: 12.0.1264.0

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**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 CN1200ET Adapter

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**HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for Red Hat Enterprise Linux 8 Server**

**Version:** 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 StoreFabric 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:

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 drivers and applications.

**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.

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:

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 drivers and applications.
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 drivers and applications.

**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

**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.

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 drivers and applications.

**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

**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.

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 drivers and applications.
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

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

**HPE QLogic Fibre Channel Enablement Kit for Linux**
Version: 6.0.0.0-11 (b) *(Optional)*
Filename: HP-CNA-FC-hpqlgc-Enablement-Kit-6.0.0.0-11.noarch.compsig; HP-CNA-FC-hpqlgc-Enablement-Kit-6.0.0.0-11.noarch.rpm

**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/

**Fixes**
Fixed the following:
- Non Volatile Memory Express (NVME) targets not seen when Non Volatile Memory Express (NVME) Id and Subsys Id are different
- Apps initialization delay seen with N_Port ID Virtualization (NPV) ports
- Apps issues seen with Non Volatile Memory Express (NVME) target in Red Hat Enterprise Linux (RHEL)
- Apps issues seen with Non Volatile Memory Express (NVME) target in N_Port ID Virtualization (NPV) configuration
- BSG interface fails if /tmp is mounted with tmpfs on shared memory

**Enhancements**
Updated the kit to version 6.0.0.0-11

Added support for the following:
- Red Hat Enterprise Linux 8 (RHEL 8) and SUSE Linux Enterprise Server 15 Service Pack 1 (SLES15SP1)
- Allow SDGetActiveRegions Application Interface (API) for Gen 6 Fibre Channel Host Bus Adapters
- Restrict application features for Non Volatile Memory Express (NVME) targets
- Add Non Volatile Random Access Memory (NVRAM) parameter to select Fibre Channel Protocol (FCP) or Non Volatile Memory Express (NVME) targets

**Supported Devices and Features**
This version of the enablement kit supports the following devices:

**Gen 4 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 StoreFabric SN1000Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 5 Fibre Channel Host Bus Adapter:**
- HPE QMH2572 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter

**Gen 6 Fibre Channel Host Bus Adapter:**
- HPE StoreFabric SN1100Q 16Gb 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16Gb 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN11600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN11600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

**Gen 7 Fibre Channel Host Bus Adapter:**
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

HPE QLogic Smart SAN enablement kit for Linux
Version: 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 to the Storage Information Library at the following link:
http://www.hpe.com/info/storage/docs/

By default, HP 3PAR Storage is selected under

Products and Solutions.
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.

- 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, 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 FCsFC/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 enablement kit is supported on the following HPE adapters:

Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

Gen 6 Fibre Channel Host Bus Adapter:
- HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

Gen 7 Fibre Channel Host Bus Adapter:
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

HPE QLogic Smart SAN Enablement Kit for Windows 64 bit operating systems
Version: 1.0.0.1 (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 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 go to the Storage Information Library at the following link:

Storage Information Library
(http://www.hpe.com/info/storage/dsrc/)

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 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 enablement kit is supported on the following HPE adapters:

Gen 4 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 StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- 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 StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

Gen 6 Fibre Channel Host Bus Adapter:
- HPE StoreFabric SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
HPE StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
HPE StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

Gen 7 Fibre Channel Host Bus Adapter:
- HPE SN1610Q 32Gb 2P FC HBA
- HPE SN1610Q 32Gb 1P FC HBA

### Software - System Management
Agentless Management Service (iLO 5) for Red Hat Enterprise Linux 7 Server
Version: 2.1.0 (Optional)
Filename: amsd-2.1.0-1406.73.rhel7.x86_64.compsig; amsd-2.1.0-1406.73.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:
  - Addressed memory leaks
  - Corrected segfaults reported in ahslog
  - Improved synchronization between iLO and amsd

#### Enhancements
- New features enabled with this release:
  - All storage sub-agents are now independent services
  - Added support for new network controllers

Agentless Management Service (iLO 5) for Red Hat Enterprise Linux 8 Server
Version: 2.1.0 (Optional)
Filename: amsd-2.1.0-1406.75.rhel8.x86_64.compsig; amsd-2.1.0-1406.75.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 8

#### Fixes
- Fixed the following items:
  - Addressed memory leaks
  - Corrected segfaults reported in ahslog
  - Improved synchronization between iLO and amsd

#### Enhancements
- New features enabled with this release:
  - All storage sub-agents are now independent services
  - Added support for new network controllers

Agentless Management Service (iLO 5) for SUSE Linux Enterprise Server 12
Version: 2.1.0 (Optional)
Filename: amsd-2.1.0-1406.76.sles12.x86_64.compsig; amsd-2.1.0-1406.76.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:
  - Addressed memory leaks
  - Corrected segfaults reported in ahslog
  - Improved synchronization between iLO and amsd

#### Enhancements
- New features enabled with this release:
  - All storage sub-agents are now independent services
  - Added support for new network controllers

Agentless Management Service (iLO 5) for SUSE Linux Enterprise Server 15
Version: 2.1.0 (Optional)
Filename: amsd-2.1.0-1406.78.sles15.x86_64.compsig; amsd-2.1.0-1406.78.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:
  - Addressed memory leaks
  - Corrected segfaults reported in ahslog
  - Improved synchronization between iLO and amsd

Enhancements

- New features enabled with this release:
  - All storage sub-agents are now independent services
  - Added support for new network controllers

Agentless Management Service for Windows X64
Version: 2.12.0.0 (Optional)
Filename: cp042810.compsig; cp042810.exe

Important Note!

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), MDS authentication protocol will not be shown.

HPE Insight Management WBEM Providers for Windows Server x64 Editions
Version: 10.75.0.0 (Optional)
Filename: cp037889.exe

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 the intermittent failure to query SNMP data from OS IP address(es).

HPE Insight Management WBEM Providers for Windows Server x64 Editions
Version: 3.113.0.0 (Optional)
Filename: HPE_Linux_64_readme.txt; MRStorageAdministrator-003.113.000.000-00.x86_64_part1.compsig; MRStorageAdministrator-003.113.000.000-00.x86_64_part3.compsig; MRStorageAdministrator-003.113.000.000-00.x86_64_part4.compsig

Important Note!

Enhancements
HPE MegaRAID Storage Administrator (HPE MRSA) for Windows 64-bit
Version: 3.113.0.0 (Optional)
Filename: cp036916.exe; cp036916_part1.compsig; cp036916_part2.compsig; cp036916_part3.compsig; cp036916_part4.compsig

Enhancements
Initial Release

HPE MegaRAID Storage Administrator StorCLI for Linux 64-bit
Version: 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 VMware
Version: 1.25.12 (Recommended)
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 VMware
Version: 1.25.12 (Recommended)
Filename: storcli-esxi6.5-bundle-1.25.12.zip

Enhancements
- Added ProLiant features support (Megacell status, AHS, Spade, Sanitize & Expander)

HPE MegaRAID Storage Administrator StorCLI for VMware
Version: 1.25.12 (Recommended)
Filename: storcli-esxi6.7-bundle-1.25.12.zip

Enhancements
- Added support for the Apollo 4510 system

HPE Offline Bundle for ESXi 6.5
Version: 3.5.0 (Recommended)
Filename: esxi6.5uX-mgmt-bundle-3.5.0-12.zip

Fixes
- WBEM Providers
  - Fix incorrect CacheOperationalStatus data for Smart Array B140i Controller
  - Fix memory leak issues causing ESXi host to become unresponsive or crash

Agentless Management Service
- Fix buffer overrun when acquiring vib summary from ESXi host database
- Fix cpqSetPciSlotBoardName for empty slots with no CPU
- Fix cpqSetPciSlotBoardName for FC Adapters with specific Device IDs
- Disable multiple IPv6 support in Gen9 to fix Host discovery issues due to missing support in iLO
- Fix AMS hang when total IPv6 address string sizes exceed 256 bytes

Supported Devices and Features
- VMware vSphere version support:
  - VMware vSphere 6.5 U2
  - VMware vSphere 6.5 U3

HPE Offline Bundle for ESXi 6.7
Version: 3.5.0 (Recommended)
Filename: esxi6.7uX-mgmt-bundle-3.5.0-12.zip

Fixes
- WBEM Providers
  - Fix incorrect CacheOperationalStatus data for Smart Array B140i Controller
  - Fix memory leak issues causing ESXi host to become unresponsive or crash

Agentless Management Service
- Fix buffer overrun when acquiring vib summary from ESXi host database
- Fix cpqSetPciSlotBoardName for empty slots with no CPU
- Fix cpqSetPciSlotBoardName for FC Adapters with specific Device IDs
- Disable multiple IPv6 support in Gen9 to fix Host discovery issues due to missing support in iLO
- Fix AMS hang when total IPv6 address string sizes exceed 256 bytes
HPE Smart Storage Administrator (HPE SSA) CLI for Linux 64-bit
Version: 4.17.6.0 (Optional)
Filename: ssacli-4.17-6.0.x86_64.compsig; ssacli-4.17-6.0.x86_64.rpm; ssacli-4.17-6.0.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.

**Fixes**
- Split Mirror Primary Array’s Acceleration Mode displays an invalid message that indicates caching can be enabled or disabled for each individual logical drive even if the array does not contain a logical drive.

---

HPE Smart Storage Administrator (HPE SSA) for VMware 6.5
Version: 4.17.6.0 (Optional)
Filename: ssa-4.17-6.0-6.5.0.vib

**Fixes**
- Split Mirror Primary Array’s Acceleration Mode displays an invalid message that indicates caching can be enabled or disabled for each individual logical drive even if the array does not contain a logical drive.

---

HPE Smart Storage Administrator (HPE SSA) for VMware 6.7
Version: 4.17.6.0 (Optional)
Filename: ssa-4.17-6.0-6.7.0.vib

**Fixes**
- Split Mirror Primary Array’s Acceleration Mode displays an invalid message that indicates caching can be enabled or disabled for each individual logical drive even if the array does not contain a logical drive.

---

HPE Smart Storage Administrator (HPE SSA) for Windows 64-bit
Version: 4.17.6.0 (Optional)
Filename: cp042018.compsig; cp042018.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. 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.

**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 a prerequisite, use the HPE SSA CLI.

**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 SSA CLI must be used.

To invoke, enter the following at the command prompt:
```
ssa -local
```

The command will start HP SSA in a new Firefox browser window. When the browser window is closed, HP SSA will automatically stop. This is only valid for the loopback interface, and not visible to external networks.

**Fixes**
- Split Mirror Primary Array’s Acceleration Mode displays an invalid message that indicates caching can be enabled or disabled for each individual logical drive even if the array does not contain a logical drive.

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HPE Smart Storage Administrator Diagnostic Utility (HPE SSADU) CLI for Linux 64-bit
Version: 4.17.6.0 (Optional)
Filename: ssaducli-4.17-6.0.x86_64.compsig; ssaducli-4.17-6.0.x86_64.rpm; ssaducli-4.17-6.0.x86_64.txt

**Important Note!**
This standalone 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.

**Fixes**
- Split Mirror Primary Array’s Acceleration Mode displays an invalid message that indicates caching can be enabled or disabled for each individual logical drive even if the array does not contain a logical drive.
HPE Smart Storage Administrator Diagnostic Utility (HPE SSADU) CLI for Windows 64-bit
Version: 4.17.6.0 (Optional)
Filename: cp042020.compsig; cp042020.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 Administ

Fixes
Split Mirror Primary Array's Acceleration Mode displays an invalid message that indicates caching can be enabled or disabled for each individual logical drive even if the array does not contain a logi

HPE Utilities Offline Bundle for ESXi 6.5
Version: 3.5.5 (Recommended)
Filename: esxi6.5-util-bundle-3.5.5-3.zip; relnotes.txt

Important Note!
Refer to the HPE VMware Utilities Guide for VMware vSphere 6.5 U3 which is located at HPE Information Library.

Enhancements
Updated the Smart Storage Administrator CLI (SSACLI)

HPE Utilities Offline Bundle for ESXi 6.7
Version: 3.5.5 (Recommended)
Filename: esxi6.7-util-bundle-3.5.5-3.zip; relnotes.txt

Important Note!
Refer to the HPE VMware Utilities Guide for VMware vSphere 6.7 U3 which is located at HPE Information Library.

Enhancements
Updated the Smart Storage Administrator CLI (SSACLI)

Integrated Smart Update Tools for VMware ESXi 6.5
Version: 2.5.0.0 (Recommended)
Filename: sut-esxi6.5-offline-bundle-2.5.0.0-73.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
Updated from 2.4.5

Integrated Smart Update Tools for VMware ESXi 6.7
Version: 2.5.0.0 (Recommended)
Filename: sut-esxi6.7-offline-bundle-2.5.0.0-75.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
Updated from ISUT 2.4.5

NVMe Drive Eject NMI Fix for Intel Xeon Processor Scalable Family for Windows
Version: 1.1.0.0 (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