Release Notes for Gen10 Service Pack for ProLiant, v2021.10.0

BIOS (Login Required) - System ROM
Driver - Chipset
Driver - Lights-Out Management
Driver - Network
Driver - Storage
Driver - Storage Controller
Driver - Storage Fibre Channel and Fibre Channel Over Ethernet
Driver - System
Driver - System Management
Driver - Video
Firmware - Blade Infrastructure
Firmware - Lights-Out Management
Firmware - Network
Firmware - NVDIMM
Firmware - PCIe NVMe Storage Disk
Firmware - Power Management
Firmware - SAS Storage Disk
Firmware - SATA Storage Disk
Firmware - Storage Controller
Firmware - Storage Fibre Channel
Firmware - System
Software - Lights-Out Management
Software - Management
Software - Storage Controller
Software - Storage Fibre Channel
Software - Storage Fibre Channel HBA
Software - System Management

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

REMOVED Online ROM Flash Component for Linux - HPE ProLiant DL360 Gen10 (U32) Servers
Version: 2.54_09-03-2021 **(Optional)**
Filename: RPMS/x86_64/firmware-system-u32-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u32-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

REMOVED - This version of the ROM flash component is NO LONGER AVAILABLE for download. It has been removed from the web for a flash update issue where systems upgraded to version 2.52 instead of version 2.54. A new version of the flash component has been made available at https://support.hpe.com/hpesc/public/swd/detail?swItemId=MTX_43406e51bec44caeba82f694b6.

Deliverable Name:

HPE ProLiant DL360 Gen10 System ROM - U32

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

REMOVED - This version of the ROM flash component is NO LONGER AVAILABLE for download. It has been removed from the web for a flash update issue where systems upgraded to version 2.52 instead of version 2.54. A new version of the flash component has been made available at https://support.hpe.com/hpesc/public/swd/detail?swItemId=MTX_43406e51bec44caeba82f694b6.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u38-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u38-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this

option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE Apollo 4200 Gen10 Plus/HPE ProLiant XL420 Gen10 Plus (U50) Servers
Version: 1.52_09-22-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u50-1.52_2021_09_22-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-u50-1.52_2021_09_22-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-u50-1.52_2021_09_22-1.1.x86_64_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE Apollo 4200 Gen10 Plus/ProLiant XL420 Gen10 Plus System ROM - U50

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

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 NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not

supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Online ROM Flash Component for Linux - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u39-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u39-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u40-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u40-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL645d Gen10 Plus (A48) Servers
Version: 2.50_07-29-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-a48-2.50_2021_07_29-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-a48-2.50_2021_07_29-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-a48-2.50_2021_07_29-1.1.x86_64_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL645d Gen10 Plus System ROM - A48

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.44_05-21-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

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- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Linux - HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL675d Gen10 Plus (A47) Servers
Version: 2.50_07-29-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-a47-2.50_2021_07_29-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-a47-2.50_2021_07_29-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-a47-2.50_2021_07_29-1.1.x86_64_part2.compsig

Important Note!

Important Notes:

Deliverable Name:

HPE ProLiant XL675d Gen10 Plus System ROM - A47

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.40_02-23-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

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- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-

core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Linux - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u45-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u45-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL270d Gen10 System ROM - U45

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE DL110 Gen10 Plus Telco (U56) Servers
Version: 1.52_09-22-2021 (B) **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u56-1.52_2021_09_22-2.1.x86_64.rpm; RPMS/x86_64/firmware-system-u56-1.52_2021_09_22-2.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-u56-1.52_2021_09_22-2.1.x86_64_part2.compsig

Important Note!

Important Notes:

Ver. 1.52_09-22-2021(B) contains updates to the firmware packaging and is functionally equivalent to ver. 1.52_09-22-2021. It is not necessary to upgrade with Revision B if a previous component revision was used to upgrade the firmware to version 1.52_09-22-2021.

Deliverable Name:

HPE ProLiant DL110 Gen10 Plus Telco System ROM - U56

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.42_05-26-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where Intel VROC SATA and sSATA Controller shows as Unknown under firmware information page in RBSU.

Addressed an issue where an error "Incorrect firmware file or no supported device" occurs when flashing the firmware of Intel E810 Ethernet Adapters.

Addressed an issue where the server hangs when launching Embedded iPXE when IPv4 certification is enrolled and Network location is set as iPXE Auto-Start-Script.

Addressed an issue where the server hangs at POST when configured with Intel® Xeon® Silver 4314 Processor and Intel® OptaneTM Persistent Memory 200 Series installed.

Addressed an issue where the server hangs when running Safe Mode boot without a DIMM installed on DIMM slot1.

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

Ver. 1.52_09-22-2021(B) contains updates to the firmware packaging and is functionally equivalent to ver. 1.52_09-22-2021. It is not necessary to upgrade with Revision B if a previous component revision was used to upgrade the firmware to version 1.52_09-22-2021.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Intel VROC SATA and sSATA Controller shows as Unknown under firmware information page in RBSU.

Addressed an issue where an error "Incorrect firmware file or no supported device" occurs when flashing the firmware of Intel E810 Ethernet Adapters.

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Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory

Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Online ROM Flash Component for Linux - HPE ProLiant BL460c Gen10 (I41) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-i41-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-i41-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant BL460c Gen10 System ROM - I41

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u31-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u31-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE ProLiant DL20 Gen10 (U43) Servers
Version: 2.52_09-16-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u43-2.52_2021_09_16-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u43-2.52_2021_09_16-1.1.x86_64.rpm

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE ProLiant DL20 Gen10 System ROM - U43

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-20-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

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 updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

Online ROM Flash Component for Linux - HPE ProLiant DL325 Gen10 (A41) Servers
Version: 2.50_07-08-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-a41-2.50_2021_07_08-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-a41-2.50_2021_07_08-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL325 Gen10 System ROM - A41

Release Version:

2.50_07-08-2021

Last Recommended or Critical Revision:

2.50_07-08-2021

Previous Revision:

2.46_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Enhancements

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Online ROM Flash Component for Linux - HPE ProLiant DL325/DL325 v2/DL345 Gen10 Plus (A43) Servers
Version: 2.50_08-09-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-a43-2.50_2021_08_09-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-a43-2.50_2021_08_09-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-a43-2.50_2021_08_09-1.1.x86_64_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL325/DL325 v2/DL345 Gen10 Plus System ROM - A43

Release Version:

2.50_08-09-2021

Last Recommended or Critical Revision:

2.50_08-09-2021

Previous Revision:

2.44_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

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Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Linux - HPE ProLiant DL360/DL380 Gen10 Plus (U46) Servers
Version: 1.52_09-22-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u46-1.52_2021_09_22-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-u46-1.52_2021_09_22-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-u46-1.52_2021_09_22-1.1.x86_64_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL360/DL380 Gen10 Plus System ROM - U46

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled

by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

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 NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Online ROM Flash Component for Linux - HPE ProLiant DL365/DL385/DL385 v2 Gen10 Plus (A42) Servers
Version: 2.50_08-09-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-a42-2.50_2021_08_09-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-a42-2.50_2021_08_09-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-a42-2.50_2021_08_09-1.1.x86_64_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL365/DL385/DL385 v2 Gen10 Plus System ROM - A42

Release Version:

2.50_08-09-2021

Last Recommended or Critical Revision:

2.50_08-09-2021

Previous Revision:

2.44_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and

Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584,

CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

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Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Linux - HPE ProLiant DL380 Gen10 (U30) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u30-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u30-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL380 Gen10 System ROM - U30

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE ProLiant DL385 Gen10 (A40) Servers
Version: 2.50_07-08-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-a40-2.50_2021_07_08-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-a40-2.50_2021_07_08-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL385 Gen10 System ROM - A40

Release Version:

2.50_07-08-2021

Last Recommended or Critical Revision:

2.50_07-08-2021

Previous Revision:

2.46_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Enhancements

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Online ROM Flash Component for Linux - HPE ProLiant DL560 Gen10/DL580 Gen10 (U34) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u34-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u34-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE ProLiant MicroServer Gen10 Plus (U48) Servers
Version: 2.52_09-16-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u48-2.52_2021_09_16-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u48-2.52_2021_09_16-1.1.x86_64.rpm

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance. None

Deliverable Name:

HPE MicroServer Gen10 Plus System ROM - U48

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

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 updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance. None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

Online ROM Flash Component for Linux - HPE ProLiant ML110 Gen10 (U33) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u33-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u33-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant ML110 Gen10 System ROM - U33

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE ProLiant ML30 Gen10 (U44) Servers
Version: 2.52_09-16-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u44-2.52_2021_09_16-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u44-2.52_2021_09_16-1.1.x86_64.rpm

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE ProLiant ML30 Gen10 System ROM - U44

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-20-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

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 updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

Online ROM Flash Component for Linux - HPE ProLiant ML350 Gen10 (U41) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u41-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u41-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant ML350 Gen10 System ROM - U41

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Linux - HPE ProLiant XL220n/XL290n Gen10 Plus 1U Node and 2U Node Configure-to-order Server (U47)
Version: 1.52_09-22-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u47-1.52_2021_09_22-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-u47-1.52_2021_09_22-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-u47-1.52_2021_09_22-1.1.x86_64_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL220n Gen10 Plus 1U/XL290n Gen10 Plus 2U Node CTO System ROM - U47

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

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 NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Online ROM Flash Component for Linux - HPE ProLiant XL225n Gen10 Plus (A46) Servers
Version: 2.50_07-29-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-a46-2.50_2021_07_29-1.1.x86_64.rpm; RPMS/x86_64/firmware-system-a46-2.50_2021_07_29-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-system-a46-2.50_2021_07_29-1.1.x86_64_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL225n Gen10 Plus System ROM - A46

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.44_05-21-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added support for the 4SFF 24G x4NVMe/SAS UBM1 Storage Controller backplane.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

- Addressed an issue that can result in Corrected Memory Error Threshold Events being logged to the Integrated Management Log (IML) in cases when they should not be logged. The system monitors corrected errors and notifies the user when action is required due to an increased risk of an Uncorrected Memory Error. Corrected Memory errors are a normal and expected occurrence and do not always indicate a higher risk of an Uncorrected Memory Error. Previous revisions of the System ROM were incorrectly logging Corrected Memory Error Threshold Events to the IML when action should not have been required, resulting in unnecessary scheduled downtime to replace DIMMs. It is recommended that the System ROM be updated to this version before replacing DIMMs due to Corrected Memory Error Threshold Events.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

- Addressed an issue that can result in Corrected Memory Error Threshold Events being logged to the Integrated Management Log (IML) in cases when they should not be logged. The system monitors corrected errors and notifies the user when action is required due to an increased risk of an Uncorrected Memory Error. Corrected Memory errors are a normal and expected occurrence and do not always indicate a higher risk of an Uncorrected Memory Error. Previous revisions of the System ROM were incorrectly logging Corrected Memory Error Threshold Events to the IML when action should not have been required, resulting in unnecessary scheduled downtime to replace DIMMs. It is recommended that the System ROM be updated to this version before replacing DIMMs due to Corrected Memory Error Threshold Events.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added support for the 4SFF 24G x4NVMe/SAS UBM1 Storage Controller backplane.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Linux - HPE ProLiant XL230k Gen10 (U37) Server
Version: 2.54_09-03-2021 **(Recommended)**
Filename: RPMS/x86_64/firmware-system-u37-2.54_2021_09_03-1.1.x86_64.compsig; RPMS/x86_64/firmware-system-u37-2.54_2021_09_03-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL230k Gen10 System ROM - U37

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049519.compsig; cp049519.exe

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this

option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE Apollo 4200 Gen10 Plus/HPE ProLiant XL420 Gen10 Plus (U50) Servers
Version: 1.52_09-22-2021 **(Recommended)**
Filename: cp049095.exe; cp049095_part1.compsig; cp049095_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE Apollo 4200 Gen10 Plus/ProLiant XL420 Gen10 Plus System ROM - U50

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not

supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Online ROM Flash Component for Windows x64 - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049573.compsig; cp049573.exe

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049576.compsig; cp049576.exe

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL645d Gen10 Plus (A48) Servers
Version: 2.50_07-29-2021 **(Recommended)**
Filename: cp047407.exe; cp047407_part1.compsig; cp047407_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL645d Gen10 Plus System ROM - A48

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.44_05-21-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Windows x64 - HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL675d Gen10 Plus (A47) Servers
Version: 2.50_07-29-2021 **(Recommended)**
Filename: cp047404.exe; cp047404_part1.compsig; cp047404_part2.compsig

Important Note!

Important Notes:

Deliverable Name:

HPE ProLiant XL675d Gen10 Plus System ROM - A47

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.40_02-23-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

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:

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-

core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Windows x64 - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049522.compsig; cp049522.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL270d Gen10 System ROM - U45

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE ProLiant BL460c Gen10 (I41) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049512.compsig; cp049512.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant BL460c Gen10 System ROM - I41

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049559.compsig; cp049559.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE ProLiant DL20 Gen10 (U43) Servers
Version: 2.52_09-16-2021 **(Recommended)**
Filename: cp049547.compsig; cp049547.exe

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE ProLiant DL20 Gen10 System ROM - U43

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-20-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

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 updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

Online ROM Flash Component for Windows x64 - HPE ProLiant DL325 Gen10 (A41) Servers
Version: 2.50_07-08-2021 **(Recommended)**
Filename: cp048350.compsig; cp048350.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL325 Gen10 System ROM - A41

Release Version:

2.50_07-08-2021

Last Recommended or Critical Revision:

2.50_07-08-2021

Previous Revision:

2.46_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends

leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Enhancements

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Online ROM Flash Component for Windows x64 - HPE ProLiant DL325/DL325 v2/DL345 Gen10 Plus (A43) Servers
Version: 2.50_08-09-2021 **(Recommended)**
Filename: cp048232.exe; cp048232_part1.compsig; cp048232_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL325/DL325 v2/DL345 Gen10 Plus System ROM - A43

Release Version:

2.50_08-09-2021

Last Recommended or Critical Revision:

2.50_08-09-2021

Previous Revision:

2.44_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584,

CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and

Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Windows x64 - HPE ProLiant DL360 Gen10 (U32) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049562.compsig; cp049562.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL360 Gen10 System ROM - U32

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this

option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE ProLiant DL360/DL380 Gen10 Plus (U46) Servers
Version: 1.52_09-22-2021 **(Recommended)**
Filename: cp049092.exe; cp049092_part1.compsig; cp049092_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL360/DL380 Gen10 Plus System ROM - U46

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Online ROM Flash Component for Windows x64 - HPE ProLiant DL365/DL385/DL385 v2 Gen10 Plus (A42) Servers
Version: 2.50_08-09-2021 **(Recommended)**
Filename: cp048280.exe; cp048280_part1.compsig; cp048280_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL365/DL385/DL385 v2 Gen10 Plus System ROM - A42

Release Version:

2.50_08-09-2021

Last Recommended or Critical Revision:

2.50_08-09-2021

Previous Revision:

2.44_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Windows x64 - HPE ProLiant DL380 Gen10 (U30) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049553.compsig; cp049553.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL380 Gen10 System ROM - U30

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE ProLiant DL385 Gen10 (A40) Servers
Version: 2.50_07-08-2021 **(Recommended)**
Filename: cp048353.compsig; cp048353.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL385 Gen10 System ROM - A40

Release Version:

2.50_07-08-2021

Last Recommended or Critical Revision:

2.50_07-08-2021

Previous Revision:

2.46_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Enhancements

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Online ROM Flash Component for Windows x64 - HPE ProLiant DL560 Gen10/DL580 Gen10 (U34) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049570.compsig; cp049570.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE ProLiant MicroServer Gen10 Plus (U48) Servers
Version: 2.52_09-16-2021 **(Recommended)**

Filename: cp049593.compsig; cp049593.exe

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance. None

Deliverable Name:

HPE MicroServer Gen10 Plus System ROM - U48

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

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 updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance. None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

Online ROM Flash Component for Windows x64 - HPE ProLiant ML110 Gen10 (U33) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049564.compsig; cp049564.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant ML110 Gen10 System ROM - U33

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE ProLiant ML30 Gen10 (U44) Servers
Version: 2.52_09-16-2021 **(Recommended)**
Filename: cp049306.compsig; cp049306.exe

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE ProLiant ML30 Gen10 System ROM - U44

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-20-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

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 updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

Online ROM Flash Component for Windows x64 - HPE ProLiant ML350 Gen10 (U41) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049583.compsig; cp049583.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant ML350 Gen10 System ROM - U41

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Online ROM Flash Component for Windows x64 - HPE ProLiant XL220n/XL290n Gen10 Plus 1U Node and 2U Node Configure-to-order Server (U47)
Version: 1.52_09-22-2021 **(Recommended)**
Filename: cp049055.exe; cp049055_part1.compsig; cp049055_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL220n Gen10 Plus 1U/XL290n Gen10 Plus 2U Node CTO System ROM - U47

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Online ROM Flash Component for Windows x64 - HPE ProLiant XL225n Gen10 Plus (A46) Server
Version: 2.50_07-29-2021 **(Recommended)**
Filename: cp047421.exe; cp047421_part1.compsig; cp047421_part2.compsig

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL225n Gen10 Plus System ROM - A46

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.44_05-21-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added support for the 4SFF 24G x4NVMe/SAS UBM1 Storage Controller backplane.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

- Addressed an issue that can result in Corrected Memory Error Threshold Events being logged to the Integrated Management Log (IML) in cases when they should not be logged. The system monitors corrected errors and notifies the user when action is required due to an increased risk of an Uncorrected Memory Error. Corrected Memory errors are a normal and expected occurrence and do not always indicate a higher risk of an Uncorrected Memory Error. Previous revisions of the System ROM were incorrectly logging Corrected Memory Error Threshold Events to the IML when action should not have been required, resulting in unnecessary scheduled downtime to replace DIMMs. It is recommended that the System ROM be updated to this version before replacing DIMMs due to Corrected Memory Error Threshold Events.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

- Addressed an issue that can result in Corrected Memory Error Threshold Events being logged to the Integrated Management Log (IML) in cases when they should not be logged. The system monitors corrected errors and notifies the user when action is required due to an increased risk of an

Uncorrected Memory Error. Corrected Memory errors are a normal and expected occurrence and do not always indicate a higher risk of an Uncorrected Memory Error. Previous revisions of the System ROM were incorrectly logging Corrected Memory Error Threshold Events to the IML when action should not have been required, resulting in unnecessary scheduled downtime to replace DIMMs. It is recommended that the System ROM be updated to this version before replacing DIMMs due to Corrected Memory Error Threshold Events.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added support for the 4SFF 24G x4NVMe/SAS UBM1 Storage Controller backplane.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Online ROM Flash Component for Windows x64 - HPE ProLiant XL230k Gen10 (U37) Server
Version: 2.54_09-03-2021 **(Recommended)**
Filename: cp049516.compsig; cp049516.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL230k Gen10 System ROM - U37

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Prerequisites

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

None

ROM Flash Firmware Package - HPE Apollo 2000 Gen10/HPE ProLiant XL170r/XL190r Gen10 (U38) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U38_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE Apollo 4200 Gen10 Plus/HPE ProLiant XL420 Gen10 Plus (U50) Servers
Version: 1.52_09-22-2021 **(Recommended)**
Filename: U50_1.52_09_22_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE Apollo 4200 Gen10 Plus/ProLiant XL420 Gen10 Plus System ROM - U50

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always

recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform

firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

ROM Flash Firmware Package - HPE Apollo 4200 Gen10/HPE ProLiant XL420 Gen10 (U39) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U39_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE Apollo 4510 Gen10/HPE ProLiant XL450 Gen10 (U40) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U40_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

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

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this

option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE Apollo 6500 Gen10/HPE ProLiant XL270d Gen10 (U45) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U45_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL270d Gen10 System ROM - U45

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE DL110 Gen10 Plus Telco (U56) Servers
Version: 1.52_09-22-2021 **(Recommended)**
Filename: U56_1.52_09_22_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL110 Gen10 Plus Telco System ROM - U56

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.42_05-26-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where Intel VROC SATA and sSATA Controller shows as Unknown under firmware information page in RBSU.

Addressed an issue where an error "Incorrect firmware file or no supported device" occurs when flashing the firmware of Intel E810 Ethernet Adapters.

Addressed an issue where the server hangs when launching Embedded iPXE when IPv4 certification is enrolled and Network location is set as iPXE Auto-Start-Script.

Addressed an issue where the server hangs at POST when configured with Intel® Xeon® Silver 4314 Processor and Intel® OptaneTM Persistent Memory 200 Series installed.

Addressed an issue where the server hangs when running Safe Mode boot without a DIMM installed on DIMM slot1.

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Intel VROC SATA and sSATA Controller shows as Unknown under firmware information page in RBSU.

Addressed an issue where an error "Incorrect firmware file or no supported device" occurs when flashing the firmware of Intel E810 Ethernet Adapters.

Addressed an issue where the server hangs when launching Embedded iPXE when IPv4 certification is enrolled and Network location is set as iPXE Auto-Start-Script.

Addressed an issue where the server hangs at POST when configured with Intel® Xeon® Silver 4314 Processor and Intel® OptaneTM Persistent Memory 200 Series installed.

Addressed an issue where the server hangs when running Safe Mode boot without a DIMM installed on DIMM slot1.

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If

boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

ROM Flash Firmware Package - HPE ProLiant BL460c Gen10 (I41) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: I41_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant BL460c Gen10 System ROM - I41

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this

option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE ProLiant DL160 Gen10/DL180 Gen10 (U31) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U31_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL160 Gen10/DL180 Gen10 System ROM - U31

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE ProLiant DL20 Gen10 (U43) Servers
Version: 2.52_09-16-2021 **(Recommended)**
Filename: U43_2.52_09_16_2021.fwpkg

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE ProLiant DL20 Gen10 System ROM - U43

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-20-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Fixes

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

ROM Flash Firmware Package - HPE ProLiant DL325 Gen10 (A41) Servers
Version: 2.50_07-08-2021 **(Recommended)**
Filename: A41_2.50_07_08_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL325 Gen10 System ROM - A41

Release Version:

2.50_07-08-2021

Last Recommended or Critical Revision:

2.50_07-08-2021

Previous Revision:

2.46_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Enhancements

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

ROM Flash Firmware Package - HPE ProLiant DL360 Gen10 (U32) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U32_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL360 Gen10 System ROM - U32

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE ProLiant DL380 Gen10 (U30) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U30_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL380 Gen10 System ROM - U30

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE ProLiant DL385 Gen10 (A40) Servers
Version: 2.50_07-08-2021 **(Recommended)**
Filename: A40_2.50_07_08_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL385 Gen10 System ROM - A40

Release Version:

2.50_07-08-2021

Last Recommended or Critical Revision:

2.50_07-08-2021

Previous Revision:

2.46_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in system information page.

Known Issues:

None

Enhancements

Added a new BIOS/Platform Configuration (RBSU) option to Server Security called UEFI Variable Access Firmware Control. This option, when enabled, can be used to block UEFI Variable writes, such as to the UEFI Boot Order, from the Operating System or a third-party utility. HPE recommends leaving this capability disabled unless the user specifically wants to prevent the operating system's normal operation of writing to UEFI Variables, which typically occur during OS install.

ROM Flash Firmware Package - HPE ProLiant DL560 Gen10/DL580 Gen10 (U34) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U34_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL560 Gen10/DL580 Gen10 System ROM - U34

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this

option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE ProLiant MicroServer Gen10 Plus (U48) Servers
Version: 2.52_09-16-2021 **(Recommended)**
Filename: U48_2.52_09_16_2021.fwpkg

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance. None

Deliverable Name:

HPE MicroServer Gen10 Plus System ROM - U48

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Fixes

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance. None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

ROM Flash Firmware Package - HPE ProLiant ML110 Gen10 (U33) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U33_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant ML110 Gen10 System ROM - U33

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The “Extended Memory Test” option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE ProLiant ML30 Gen10 (U44) Servers
Version: 2.52_09-16-2021 **(Recommended)**
Filename: U44_2.52_09_16_2021.fwpkg

Important Note!

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE ProLiant ML30 Gen10 System ROM - U44

Release Version:

2.52_09-16-2021

Last Recommended or Critical Revision:

2.52_09-16-2021

Previous Revision:

2.50_07-20-2021

Firmware Dependencies:

None

Enhancements/New Features:

Improved boot time by removing unneeded delay.

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Fixes

Important Notes:

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where High Precision Event Timer in Windows was not showing up in device manager.

Known Issues:

None

Enhancements

Improved boot time by removing unneeded delay.

ROM Flash Firmware Package - HPE ProLiant ML350 Gen10 (U41) Servers
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U41_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant ML350 Gen10 System ROM - U41

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

ROM Flash Firmware Package - HPE ProLiant XL220n/XL290n Gen10 Plus 1U Node and 2U Node Configure-to-order Server (U47)
Version: 1.52_09-22-2021 **(Recommended)**
Filename: U47_1.52_09_22_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL220n Gen10 Plus 1U/XL290n Gen10 Plus 2U Node CTO System ROM - U47

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

ROM Flash Firmware Package - HPE ProLiant XL225n Gen10 Plus (A46) Servers
Version: 2.50_07-29-2021 **(Optional)**
Filename: A46_2.50_07_29_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL225n Gen10 Plus System ROM - A46

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.44_05-21-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added support for the 4SFF 24G x4NVMe/SAS UBM1 Storage Controller backplane.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

- Addressed an issue that can result in Corrected Memory Error Threshold Events being logged to the Integrated Management Log (IML) in cases when they should not be logged. The system monitors corrected errors and notifies the user when action is required due to an increased risk of an Uncorrected Memory Error. Corrected Memory errors are a normal and expected occurrence and do not always indicate a higher risk of an Uncorrected Memory Error. Previous revisions of the System ROM were incorrectly logging Corrected Memory Error Threshold Events to the IML when action should not have been required, resulting in unnecessary scheduled downtime to replace DIMMs. It is recommended that the System ROM be updated to this version before replacing DIMMs due to Corrected Memory Error Threshold Events.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

- Addressed an issue that can result in Corrected Memory Error Threshold Events being logged to the Integrated Management Log (IML) in cases when they should not be logged. The system monitors corrected errors and notifies the user when action is required due to an increased risk of an Uncorrected Memory Error. Corrected Memory errors are a normal and expected occurrence and do not always indicate a higher risk of an Uncorrected Memory Error. Previous revisions of the System ROM were incorrectly logging Corrected Memory Error Threshold Events to the IML when action should not have been required, resulting in unnecessary scheduled downtime to replace DIMMs. It is recommended that the System ROM be updated to this version before replacing DIMMs due to Corrected Memory Error Threshold Events.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options:

AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added support for the 4SFF 24G x4NVMe/SAS UBM1 Storage Controller backplane.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

ROM Flash Firmware Package - HPE ProLiant XL230k Gen10 (U37) Server
Version: 2.54_09-03-2021 **(Recommended)**
Filename: U37_2.54_09_03_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant XL230k Gen10 System ROM - U37

Release Version:

2.54_09-03-2021

Last Recommended or Critical Revision:

2.54_09-03-2021

Previous Revision:

2.52_07-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled after updating the System ROM to v2.50 or later. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

See the release document U37_2.54_09_03_2021 in Download Product Binaries page from Product Summary of the firmware product.

ROM Flash Universal Firmware Package - HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL645d Gen10 Plus (A48) Servers
Version: 2.50_07-29-2021 **(Recommended)**
Filename: A48_2.50_07_29_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL645d Gen10 Plus System ROM - A48

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.44_05-21-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

ROM Flash Universal Firmware Package - HPE Apollo 6500 Gen10 Plus/HPE ProLiant XL675d Gen10 Plus (A47) Servers
Version: 2.50_07-29-2021 **(Recommended)**
Filename: A47_2.50_07_29_2021.fwpkg

Important Note!

Important Notes:

Deliverable Name:

HPE ProLiant XL675d Gen10 Plus System ROM - A47

Release Version:

2.50_07-29-2021

Last Recommended or Critical Revision:

2.50_07-29-2021

Previous Revision:

2.40_02-23-2021

Firmware Dependencies:

None

Enhancements/New Features:

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Fixes

Important Notes:

Firmware Dependencies:

None

Problems Fixed:

- This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

- Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

- Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

- Addressed an issue with hot adding a NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

- Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

- Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

- Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be

used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

- Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

- Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

ROM Flash Universal Firmware Package - HPE ProLiant DL325/DL325 v2/DL345 Gen10 Plus (A43) Servers
Version: 2.50_08-09-2021 **(Recommended)**
Filename: A43_2.50_08_09_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL325/DL325 v2/DL345 Gen10 Plus System ROM - A43

Release Version:

2.50_08-09-2021

Last Recommended or Critical Revision:

2.50_08-09-2021

Previous Revision:

2.44_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be

used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

ROM Flash Universal Firmware Package - HPE ProLiant DL360/DL380 Gen10 Plus (U46) Servers
Version: 1.52_09-22-2021 **(Recommended)**
Filename: U46_1.52_09_22_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL360/DL380 Gen10 Plus System ROM - U46

Release Version:

1.52_09-22-2021

Last Recommended or Critical Revision:

1.52_09-22-2021

Previous Revision:

1.50_08-27-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where NVMe SSDs May Be Listed As "UEFI Misc Device" in BIOS/Platform Configuration (RBSU) "One-Time Boot Menu" if Intel NVMe VROC is Enabled (Document ID: a00113593en_us).

Addressed an issue where The NVMe Storage Drives Will Not De Displayed in the Integrated Lights-Out (iLO) Pages if Intel NVMe VROC (CPU/VMD) is Enabled (Document ID: a00113587en_us).

Addressed an issue where Uncorrectable Memory Errors may be reported and logged to the Integrated Management Log (IML) with certain DIMMs installed and the RBSU "Extended Memory Test" option enabled. The "Extended Memory Test" option is disabled by default and this issue would only impact customers who had specifically configured this option to enabled. The reported Uncorrected Memory Errors were due to an issue with the impacted System ROM revisions and do NOT indicate an issue with the DIMMs themselves.

Known Issues:

None

Enhancements

Added support for updating NVMe/SATA drive firmware managed by Intel VROC via Firmware Update page in UEFI System Utilities.

Added a new BIOS/Platform Configuration (RBSU) option for PCIe HotPlug Error Control. Use this option to select PCIe (NVMe) Hot-Plug support for the platform. When Hot-Plug Surprise is selected, the platform will attempt to protect the platform from experiencing an error on a surprise removal event. This option should be selected for older Operating Systems that do not support Enhanced Downstream Port Containment (eDPC). When eDPC Firmware Control is selected, the platform firmware and OS will properly negotiate and log all hot-plug events. This option is currently not supported by all Operating Systems. When eDPC OS Control is selected hot-plug events are handled by the Operating System with no involvement by the platform. All logging of events in this mode will be limited to the Operating System only. It is important that this option be set properly based on the Operating System to ensure hot-plug events and surprise removal events are handled properly by the platform. Please consult Operating System documentation for additional details. Note it is always recommended to perform a graceful device removal from the Operating System before performing a hot-plug event.

ROM Flash Universal Firmware Package - HPE ProLiant DL365/DL385/DL385 v2 Gen10 Plus (A42) Servers
Version: 2.50_08-09-2021 **(Recommended)**
Filename: A42_2.50_08_09_2021.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL365/DL385/DL385 v2 Gen10 Plus System ROM - A42

Release Version:

2.50_08-09-2021

Last Recommended or Critical Revision:

2.50_08-09-2021

Previous Revision:

2.44_06-08-2021

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

Added new RBSU option to Omit Boot Device Event in TPM PCR[4] following EDK2. Warning: changing the setting will affect TPM measurements and can impact software functionality which utilizes the TPM PCR registers such as Microsoft BitLocker. PCR[4] is the register that records the process of attempting to boot different hardware paths like from a a hard drive or CD, and what boot devices are attempted, and the Initial Program Loader (IPL) code that is loaded and executed from the device. If boot from one device fails, measurements in PCR[4] record the attempt to boot the next device or boot path. If recording which device attempted to boot is omitted with this option (i.e. enable this option), the BIOS records the event type EV_OMIT_BOOT_DEVICE_EVENTS in PCR[4], otherwise the event is not recorded.

Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

This revision of the System ROM includes the latest revision of the Tianocore Edk2 Code which provides mitigations for BIOS advisories and security vulnerabilities documented as CVE-2019-14584, CVE-2021-28211 and CVE-2021-28210. These security vulnerabilities are documented in Tianocore Edk2 CVE details site. These issues are not unique to HPE servers.

Addressed an issue with Pensando Distributed Services Platform DSC-25 Enterprise 10/25Gb 2-port SFP28 Card missing in pre-boot System Utilities System Information Page.

Addressed an issue with hot-adding drives after removing them from Bay 1 when using the HPE SR100i Software RAID solution for systems and the UBM4 2SFF backplane. In this situation the HDD cannot be detected after re-insertion.

Addressed an issue with hot adding NVMe drives with VMware ESXi when a drive bay is empty at boot up. Drive may fail to be added.

Known Issues:

None

Enhancements

Added support for Microsoft Windows Server 2022. Windows Server 2022 adds a new security feature called Secured-core. Secured-core is only supported on AMD Gen 3 EPYC processors. Secured-core servers use a combination of hardware features, firmware enablement and Windows Server operating system capabilities to provide protection against malware and rootkit security exploits.

Added a new BIOS/Platform Configuration (RBSU) option for Microsoft Secured-core Support. Enabling this setting makes the following policy changes and configures the corresponding options: AMD I/O Virtualization Technology enabled, TPM visible, DMA remapping enabled, AMD DRTM enabled, and Secure Boot enabled. Disabling any of these features while Secured-core is enabled can prevent Secured-core from working properly.

Added a new BIOS/Platform Configuration (RBSU) option to Server Availability called IPMI Watchdog Timer. When enabled, the system will start an IPMI based watchdog timer during boot which can be used to protect against a boot hang or other unexpected system boot issue. It is the responsibility of the user to disable the IPMI watchdog timer once the operating system has booted. Failure to disable the timer can result in an unexpected server reset or shutdown.

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Added an enhancement to existing processor current monitoring in order to avoid potential overcurrent shutdowns.

Driver - Chipset **Top**

Identifiers for AMD EPYC Processors for Microsoft Windows
Version: 4.1.0.0 **(Recommended)**
Filename: cp049257.compsig; cp049257.exe

Enhancements

- Added PSHED Plug-in driver

Identifiers for Intel Xeon E-22xx Processor for Microsoft Windows
Version: 10.1.18793.8276 **(Optional)**
Filename: cp048073.compsig; cp048073.exe

Enhancements

- Added support for Windows Server 2022

Identifiers for Intel Xeon E-23xx Processor for Microsoft Windows
Version: 10.1.18793.8276 **(Optional)**
Filename: cp048223.compsig; cp048223.exe

Enhancements

Initial release.

Identifiers for Intel Xeon Scalable Processors (First and Second Generation) for Microsoft Windows
Version: 10.1.18793.8276 **(Optional)**
Filename: cp047794.compsig; cp047794.exe

Enhancements

- Removed support for Windows Server 2012 R2
- Added support for Windows Server 2022
- Shortened installation time

Identifiers for Intel Xeon Scalable Processors (Third Generation) for Microsoft Windows
Version: 10.1.18793.8276 **(Optional)**
Filename: cp048829.compsig; cp048829.exe

Enhancements

- Added support for Windows Server 2022

Driver - Lights-Out Management Top

HPE iLO Native Driver for ESXi 7.0
Version: 10.7.5 **(Recommended)**
Filename: ilo-driver_700.10.7.5.2-1OEM.700.1.0.15843807_17856914.zip

Fixes

- Fixed driver unload function to allow controller to function properly on reload and when Quickboot is enabled.

Driver - Network Top

Broadcom NetXtreme-E Driver for Windows Server 2016
Version: 218.0.32.0 **(Optional)**
Filename: cp045254.compsig; cp045254.exe

Important Note!

HPE recommends the firmware provided in *Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Fixes

- This product correct an issue where an system are freeze and reboot when system recovering after non-fatal error.
- This product correct an issue which fixes VF will not load on certain Virtual OS when Windows is host OS.
- This product correct an issue which fixes user mode RDMA blue screen of death (BSoD) caused by an IRP SystemBuffer access race condition
- This product corrects a Windows Stop Error blue screen of death (BSoD) seen when uninstalling the NDIS driver

Supported Devices and Features

This product supports the following network adapters:

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

Broadcom NetXtreme-E Driver for Windows Server 2019
Version: 218.0.32.0 (B) **(Recommended)**
Filename: cp049455.compsig; cp049455.exe

Important Note!

4PE recommends the firmware provided in *Broadcom NetXtreme-E Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus Server

Supported Devices and Features

This product supports the following network adapters:

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

Broadcom NX1 1Gb Driver for Windows Server x64 Editions
Version: 219.0.1.0 **(Recommended)**
Filename: cp048940.compsig; cp048940.exe

Important Note!

HPE recommends the firmware provided in *HPE Broadcom NX1 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.5.0 or later, for use with this driver.

Enhancements

Initial version

Supported Devices and Features

This product supports the following network adapters:

- Broadcom BCM5720 Ethernet 1Gb 2-port BASE-T LOM Adapter for HPE

HPE Blade Emulex 10/20GbE Driver for VMware vSphere 6.5
Version: 2020.03.09 **(Optional)**
Filename: cp042919.compsig; cp042919.zip

Important Note!

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

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

Fixes

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

Supported Devices and Features

This driver supports the following network adapters:

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

HPE Blade Emulex 10/20GbE Driver for VMware vSphere 6.7
Version: 2020.03.09 **(Optional)**
Filename: cp042920.compsig; cp042920.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7*, version 2019.12.01 or later, for use with this driver.

Fixes

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

Supported Devices and Features

This driver supports the following network adapters:

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

HPE Blade Emulex 10/20GbE Driver for Windows Server 2016
Version: 12.0.1344.0 **(Optional)**
Filename: cp045173.compsig; cp045173.exe

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Microsoft Windows Server 2016/2019(x64),* version 2021.09.01 or later, for use with this driver.

Fixes

This driver addresses a Windows Stop Error (BSOD) seen after Windows Event ID 67.

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: 12.0.1344.0 **(Optional)**
Filename: cp045174.compsig; cp045174.exe

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Microsoft Windows Server 2016/2019(x64),* version 2021.09.01 or later, for use with this driver.

Fixes

This driver addresses a Windows Stop Error (BSOD) seen after Windows Event ID 67.
This driver corrects an issue which results in a BSOD for Software Defined Data Center (SDDC).

Enhancements

This product now supports the HPE ProLiant BL660c Gen9 Server.

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: 12.0.1342.0-1 **(Optional)**
Filename: kmod-be2net_bl-12.0.1342.0-1.rhel7u8.x86_64.compsig; kmod-be2net_bl-12.0.1342.0-1.rhel7u8.x86_64.rpm; kmod-be2net_bl-12.0.1342.0-1.rhel7u9.x86_64.compsig; kmod-be2net_bl-12.0.1342.0-1.rhel7u9.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)*, version 2021.02.01 for use with these drivers.

Enhancements

This product now supports Red Hat Enterprise Linux 7, Updates 8 and 9.

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 8
Version: 12.0.1342.0-1 (B) **(Optional)**
Filename: kmod-be2net_bl-12.0.1342.0-1.rhel8u2.x86_64.compsig; kmod-be2net_bl-12.0.1342.0-1.rhel8u2.x86_64.rpm; kmod-be2net_bl-12.0.1342.0-1.rhel8u3.x86_64.compsig; kmod-be2net_bl-12.0.1342.0-1.rhel8u3.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)*, version 2021.09.01 or later, for use with these drivers.

Enhancements

This product now supports the HPE ProLiant BL660c Gen9 Server.

Supported Devices and Features

This driver supports the following network adapters:

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

HPE Blade Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 12
Version: 12.0.1342.0-1 **(Optional)**
Filename: be2net_bl-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.compsig; be2net_bl-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.rpm; be2net_bl-kmp-default-12.0.1342.0_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; be2net_bl-kmp-default-12.0.1342.0_k4.12.14_94.41-1.sles12sp4.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)*, version 2021.02.01 for use with these drivers.

Fixes

This product now supports SUSE Linux Enterprise Server 12 SP5.

Supported Devices and Features

This driver supports the following network adapters:

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

HPE Blade Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 15
Version: 12.0.1342.0-1 (B) **(Optional)**
Filename: be2net_bl-kmp-default-12.0.1342.0_k4.12.14_195-1.sles15sp1.x86_64.compsig; be2net_bl-kmp-default-12.0.1342.0_k4.12.14_195-1.sles15sp1.x86_64.rpm; be2net_bl-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.compsig; be2net_bl-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)*, version 2021.02.01 for use with these drivers.

Enhancements

This product now supports SUSE Linux Enterprise Server 15 SP2.

Supported Devices and Features

This driver supports the following network adapters:

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

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

Important Note!

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

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

Enhancements

Initial release.

Supported Devices and Features

This driver supports the following network adapters:

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

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

Important Note!

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

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

Enhancements

Initial release.

Supported Devices and Features

This driver supports the following network adapters:

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

HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2016
Version: 12.0.1171.0 **(Optional)**
Filename: cp039931.compsig; cp039931.exe

Important Note!

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

Enhancements

Initial release.

Supported Devices and Features

This driver supports the following network adapters:

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

HPE Blade Emulex 10/20GbE iSCSI Driver for Windows Server 2019
Version: 12.0.1171.0 (B) **(Optional)**
Filename: cp049074.compsig; cp049074.exe

Important Note!

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

Enhancements

This product now supports the HPE ProLiant BL660c Gen9 Server.

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: 12.0.1342.0-1 **(Optional)**
Filename: kmod-be2iscsi_bl-12.0.1342.0-1.rhel7u8.x86_64.compsig; kmod-be2iscsi_bl-12.0.1342.0-1.rhel7u8.x86_64.rpm; kmod-be2iscsi_bl-12.0.1342.0-1.rhel7u9.x86_64.compsig; kmod-be2iscsi_bl-12.0.1342.0-1.rhel7u9.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)*, version 2021.02.01 for use with these drivers.

Enhancements

This product now supports Red Hat Enterprise Linux 7, Updates 8 and 9.

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: 12.0.1342.0-1 (B) **(Optional)**
Filename: kmod-be2iscsi_bl-12.0.1342.0-1.rhel8u2.x86_64.compsig; kmod-be2iscsi_bl-12.0.1342.0-1.rhel8u2.x86_64.rpm; kmod-be2iscsi_bl-12.0.1342.0-1.rhel8u3.x86_64.compsig; kmod-be2iscsi_bl-12.0.1342.0-1.rhel8u3.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)*, version 2021.09.01 or later, for use with these drivers.

Enhancements

This product now supports the HPE ProLiant BL660c Gen9 Server.

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: 12.0.1342.0-1 **(Optional)**
Filename: be2iscsi_bl-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.compsig; be2iscsi_bl-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.rpm; be2iscsi_bl-kmp-default-12.0.1342.0_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; be2iscsi_bl-kmp-default-12.0.1342.0_k4.12.14_94.41-1.sles12sp4.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)*, version 2021.02.01 for use with these drivers.

Enhancements

This product now supports SUSE Linux Enterprise Server 12 SP5.

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: 12.0.1342.0-1 (B) **(Optional)**
Filename: be2iscsi_bl-kmp-default-12.0.1342.0_k4.12.14_195-1.sles15sp1.x86_64.compsig; be2iscsi_bl-kmp-default-12.0.1342.0_k4.12.14_195-1.sles15sp1.x86_64.rpm; be2iscsi_bl-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.compsig; be2iscsi_bl-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)*, version 2021.02.01 for use with these drivers.

Enhancements

This product now supports SUSE Linux Enterprise Server 15 SP2.

Supported Devices and Features

This driver supports the following network adapters:

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

HPE Blade Intel ixgbe Drivers for Red Hat Enterprise Linux 7
Version: 5.9.4-1 **(Optional)**
Filename: kmod-hp-ixgbe_bl-5.9.4-1.rhel7u8.x86_64.compsig; kmod-hp-ixgbe_bl-5.9.4-1.rhel7u8.x86_64.rpm; kmod-hp-ixgbe_bl-5.9.4-1.rhel7u9.x86_64.compsig; kmod-hp-ixgbe_bl-5.9.4-1.rhel7u9.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.2.3 or later, for use with these drivers.

Enhancements

This product now supports Red Hat Enterprise Linux 7, Updates 8 and 9.

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: 5.9.4-1 (B) **(Optional)**
Filename: kmod-hp-ixgbe_bl-5.9.4-1.rhel8u2.x86_64.compsig; kmod-hp-ixgbe_bl-5.9.4-1.rhel8u2.x86_64.rpm; kmod-hp-ixgbe_bl-5.9.4-2.rhel8u3.x86_64.compsig; kmod-hp-ixgbe_bl-5.9.4-2.rhel8u3.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.2.3 or later, for use with these drivers.

Enhancements

This product now supports the HPE ProLiant BL660c Gen9 Server.

Supported Devices and Features

These drivers support the following network adapters:

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

HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 12
Version: 5.9.4-1 **(Optional)**
Filename: hp-ixgbe_bl-kmp-default-5.9.4_k4.12.14_120-1.sles12sp5.x86_64.compsig; hp-ixgbe_bl-kmp-default-5.9.4_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-ixgbe_bl-kmp-default-5.9.4_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; hp-ixgbe_bl-kmp-default-5.9.4_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 1.2.3 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:

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

HPE Blade Intel ixgbe Drivers for SUSE Linux Enterprise Server 15
Version: 5.9.4-1 (B) **(Optional)**
Filename: hp-ixgbe_bl-kmp-default-5.9.4_k4.12.14_195-1.sles15sp1.x86_64.compsig; hp-ixgbe_bl-kmp-default-5.9.4_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-ixgbe_bl-kmp-default-5.9.4_k5.3.18_22-1.sles15sp2.x86_64.compsig; hp-ixgbe_bl-kmp-default-5.9.4_k5.3.18_22-1.sles15sp2.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.2.3 or later, for use with these drivers.

Enhancements

This product now supports SUSE Linux Enterprise Server 15 SP2.

Supported Devices and Features

These drivers support the following network adapters:

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

HPE Blade Intel ixgben Driver for VMware vSphere 6.5
Version: 2021.04.19 **(Optional)**
Filename: cp045171.compsig; cp045171.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for VMware*, version 1.2.3 or later, for use with this driver.

Fixes

This product addresses VF issues when calculating, reset PF interface, link state propagation and VLAN trunk scenarios.

Enhancements

This product now supports VMware vSphere 6.5 U3.

Supported Devices and Features

These drivers support the following network adapters:

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

HPE Blade Intel ixgben Driver for VMware vSphere 6.7
Version: 2021.09.01 **(Optional)**
Filename: cp045170.compsig; cp045170.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for VMware*, version 1.2.3 or later, for use with this driver.

Fixes

This product corrects the maximum supported number of virtual functions.
This product addresses issues with hardware VLAN offloading.
This product addresses a TX hang during bi-directional traffic.
This product addesses issues with NetQ RSS and VMDQ scenarios.
This product addesses issues with MTU settings when SRIOV is enabled in DPDK environment
This product addessses issues with several VF scenarios without PF interface.

Enhancements

This product now supports VMware vSphere 6.7 U3.

Supported Devices and Features

These drivers support the following network adapters:

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

HPE Blade Intel ixgben Driver for VMware vSphere 7.0
Version: 2021.09.01 **(Optional)**
Filename: cp045169.compsig; cp045169.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for VMware*, version 1.2.3 or later, for use with this driver.

Fixes

This product corrects the maximum supported number of virtual functions.
This product addresses issues with hardware VLAN offloading.
This product addresses a TX hang during bi-directional traffic.
This product addesses issues with NetQ RSS and VMDQ scenarios.
This product addesses issues with MTU settings when SRIOV is enabled in DPDK environment
This product addessses issues with several VF scenarios without PF interface.

Enhancements

This product now supports VMware ESXi 7.0 U3.

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: 4.9.3-1 **(Optional)**
Filename: kmod-hp-ixgbevf_bl-4.9.3-1.rhel7u8.x86_64.compsig; kmod-hp-ixgbevf_bl-4.9.3-1.rhel7u8.x86_64.rpm; kmod-hp-ixgbevf_bl-4.9.3-1.rhel7u9.x86_64.compsig; kmod-hp-ixgbevf_bl-4.9.3-1.rhel7u9.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.2.3 or later, for use with these drivers.

Fixes

This product corrects an issue seen when enabling SRIOV, where the VFs have the same, duplicated MAC address.

Enhancements

This product now supports Red Hat Enterprise Linux 7, Updates 8 and 9.

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: 4.9.3-1 (B) **(Optional)**
Filename: kmod-hp-ixgbevf_bl-4.9.3-1.rhel8u2.x86_64.compsig; kmod-hp-ixgbevf_bl-4.9.3-1.rhel8u2.x86_64.rpm; kmod-hp-ixgbevf_bl-4.9.3-2.rhel8u3.x86_64.compsig; kmod-hp-ixgbevf_bl-4.9.3-2.rhel8u3.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.2.3 or later, for use with these drivers.

Enhancements

This product now supports the HPE ProLiant BL660c Gen9 Server.

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: 4.9.3-1 **(Optional)**
Filename: hp-ixgbevf_bl-kmp-default-4.9.3_k4.12.14_120-1.sles12sp5.x86_64.compsig; hp-ixgbevf_bl-kmp-default-4.9.3_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-ixgbevf_bl-kmp-default-4.9.3_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; hp-ixgbevf_bl-kmp-default-4.9.3_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 1.2.3 or later, for use with these drivers.

Fixes

This product corrects an issue seen when enabling SRIOV, where the VFs have the same, duplicated MAC address.

Enhancements

This product now supports SUSE Linux Enterprise Server 12 SP5.

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: 4.9.3-1 (B) **(Optional)**
Filename: hp-ixgbevf_bl-kmp-default-4.9.3_k4.12.14_195-1.sles15sp1.x86_64.compsig; hp-ixgbevf_bl-kmp-default-4.9.3_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-ixgbevf_bl-kmp-default-4.9.3_k5.3.18_22-1.sles15sp2.x86_64.compsig; hp-ixgbevf_bl-kmp-default-4.9.3_k5.3.18_22-1.sles15sp2.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Linux*, version 1.2.3 or later, for use with these drivers.

Fixes

This product corrects an issue seen when enabling SRIOV, where the VFs have the same, duplicated MAC address.

Enhancements

This product now supports SUSE Linux Enterprise Server 15 SP2.

Supported Devices and Features

These drivers support the following network adapters:

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

HPE Blade Intel ixn Driver for Windows Server 2016
Version: 4.1.199.0 **(Optional)**
Filename: cp045176.compsig; cp045176.exe

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.2.3 or later, for use with this driver.

Fixes

This product is updated to maintain compatibility with updated Windows installation libraries, ixtmsg.dll, nicco5.dll, and nicinitx.dll.

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: 4.1.197.0 (B) **(Optional)**
Filename: cp049075.compsig; cp049075.exe

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.5.2 or later, for use with this driver.

Enhancements

This product now supports the HPE ProLiant BL660c Gen9 Server.

Supported Devices and Features

This component supports the following HPE Intel ixn network adapters:

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

HPE Blade Intel vxn Driver for Windows Server 2016
Version: 2.1.192.0 **(Optional)**
Filename: cp045179.compsig; cp045179.exe

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.2.3 or later, for use with this driver.

Prerequisites

This driver requires host driver version 4.1.199.0 or later.

Fixes

This product is updated to maintain compatibility with updated Windows installation libraries, vxnmsg.dll, nicco5.dll, and nicinvxn.dll.

Supported Devices and Features

This component supports the following HPE Intel ixn network adapters:

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

HPE Blade Intel vxn Driver for Windows Server 2019
Version: 2.1.191.0 (B) **(Optional)**
Filename: cp049076.compsig; cp049076.exe

Important Note!

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.5.2 or later, for use with this driver.

Prerequisites

This driver requires host driver version 4.1.197.0 or later.

Enhancements

This product now supports the HPE ProLiant BL660c Gen9 Server.

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: 2021.09.01 **(Optional)**
Filename: cp047831.compsig; cp047831.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.5.2 or later, for use with this driver.

Fixes

This product addresses a PSOD seen during device state changes without IDLE state.
This product addresses a PSOD seen during scheduling fabic login.
This product addresses a PSOD issue to enhance immediately flush in work queue and unload/quiesce mechanisms.

Enhancements

This product enhances PLOGI for the HPE XP7 Storage Array.

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: 2021.09.01 **(Optional)**
Filename: cp047629.compsig; cp047629.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.5.2 or later, for use with this driver.

Fixes

This product addresses a PSOD seen while collecting data dump.
This product addessses a PSOD seen during uplink reset with failure conditions.
This product addresses a PSOD seen during device state changes without IDLE state.
This product addresses a PSOD seen during scheduling fabic login.
This product addresses a PSOD issue to enhance immediately flush in work queue and unload/quiesce mechanisms.

Enhancements

This product enhances PLOGI for the HPE XP7 Storage Array.

Supported Devices and Features

These drivers support the following network adapters:

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

HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 7.0
Version: 2021.09.01 **(Optional)**
Filename: cp047630.compsig; cp047630.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.5.2 or later, for use with this driver.

Fixes

This product addresses a PSOD seen while collecting data dump.
This product addessses a PSOD seen during uplink reset with failure conditions.
This product addresses a PSOD seen during device state changes without IDLE state.
This product addresses a PSOD seen during scheduling fabic login.
This product addresses a PSOD issue to enhance immediately flush in work queue and unload/quiesce mechanisms.

Enhancements

This product now supports VMware ESXi 7.0 U3.
This product enhances PLOGI for the HPE XP7 Storage Array.

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: 7.14.80-5 **(Optional)**
Filename: kmod-netxtreme2_bl-7.14.80-5.rhel7u8.x86_64.compsig; kmod-netxtreme2_bl-7.14.80-5.rhel7u8.x86_64.rpm; kmod-netxtreme2_bl-7.14.80-5.rhel7u9.x86_64.compsig; kmod-netxtreme2_bl-7.14.80-5.rhel7u9.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux,* version 1.5.2 or later, for use with these drivers.

Enhancements

This product is updated to maintain compatibility with firmware version 1.5.x.

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: 7.14.80-5 **(Optional)**
Filename: kmod-netxtreme2_bl-7.14.80-5.rhel8u3.x86_64.compsig; kmod-netxtreme2_bl-7.14.80-5.rhel8u3.x86_64.rpm; kmod-netxtreme2_bl-7.14.80-5.rhel8u4.x86_64.compsig; kmod-netxtreme2_bl-7.14.80-5.rhel8u4.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux,* version 1.5.2 or later, for use with these drivers.

Enhancements

This product now supports Red Hat Enterprise Linux 8 Update 4.

This product now supports the HPE ProLiant BL660c Gen9 Server.

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 SUSE Linux Enterprise Server 12
Version: 7.14.80-5 **(Optional)**
Filename: netxtreme2_bl-kmp-default-7.14.80_k4.12.14_120-5.sles12sp5.x86_64.compsig; netxtreme2_bl-kmp-default-7.14.80_k4.12.14_120-5.sles12sp5.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux,* version 1.5.2 or later, for use with these drivers.

Enhancements

This product is updated to maintain compatibility with firmware version 1.5.x.

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 SUSE Linux Enterprise Server 15
Version: 7.14.80-5 **(Optional)**
Filename: netxtreme2_bl-kmp-default-7.14.80_k5.3.18_22-5.sles15sp2.x86_64.compsig; netxtreme2_bl-kmp-default-7.14.80_k5.3.18_22-5.sles15sp2.x86_64.rpm; netxtreme2_bl-kmp-default-7.14.80_k5.3.18_57-5.sles15sp3.x86_64.compsig; netxtreme2_bl-kmp-default-7.14.80_k5.3.18_57-5.sles15sp3.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux,* version 1.5.2 or later, for use with these drivers.

Enhancements

This product now supports SUSE Linux Enterprise Server 15 SP3.

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 Windows Server x64 Editions
Version: 7.13.206.0 **(Optional)**
Filename: cp047540.compsig; cp047540.exe

Important Note!

HP recommends the firmware provided in *HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 1.0.5.3 or later, for use with these drivers.

Fixes

This driver corrects an issue which results in a Windows Stop Error (BSOD) when an invalid vPort ID is used with NIC VMSwitch.
The driver addresses an issue where a network is intermittently disconnected when Virtual Machine Queue (VMQ) is enabled.

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

HPE Blade QLogic NX2 iSCSI Offload IO Daemon for SUSE Linux Enterprise Server 12 SP3
Version: 2.11.5.13-3 (B) **(Optional)**
Filename: iscsiuio_bl-2.11.5.13-3.sles12sp3.x86_64.compsig; iscsiuio_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 IO Daemon for SUSE Linux Enterprise Server 15 SP1
Version: 2.11.5.13-3 (B) **(Optional)**
Filename: iscsiuio_bl-2.11.5.13-3.sles15sp1.x86_64.compsig; iscsiuio_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 630FLB Adapter
- HPE FlexFabric 20Gb 2-port 630M Adapter

HPE Broadcom NetXtreme-E Driver for Windows Server 2016
Version: 218.0.32.0 **(Optional)**
Filename: cp045020.compsig; cp045020.exe

Important Note!

HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.166000 or later, for use with this driver.

Fixes

- This product correct an Wake-on-LAN (WoL) function unavailable.
- This product correct an issue which fixes VF will not load on certain Virtual OS when Windows is host OS.
- This product correct an issue which fixes user mode RDMA blue screen of death (BSoD) caused by an IRP SystemBuffer access race condition
- This product corrects a Windows Stop Error blue screen of death (BSoD) seen when uninstalling the NDIS driver.

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 Driver for Windows Server 2019
Version: 218.0.32.0 **(Optional)**
Filename: cp045021.compsig; cp045021.exe

Important Note!

HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.166000 or later, for use with this driver.

Fixes

- This product correct an issue where an system are freeze and reboot when system recovering after non-fatal error.
- This product correct an issue which fixes BSOD observed after updating the inbox driver on Windows 2019.
- This product correct an issue which fixes VF will not load on certain Virtual OS when Windows is host OS.
- This product correct an issue which fixes user mode RDMA blue screen of death (BSoD) caused by an IRP SystemBuffer access race condition
- This product corrects a Windows Stop Error blue screen of death (BSoD) seen when uninstalling the NDIS driver.

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 Drivers for Red Hat Enterprise Linux 7
Version: 1.10.2-218.0.67.0 **(Optional)**
Filename: kmod-bnxt_en-1.10.2-218.0.67.0.rhel7u8.x86_64.compsig; kmod-bnxt_en-1.10.2-218.0.67.0.rhel7u8.x86_64.rpm; kmod-bnxt_en-1.10.2-218.0.67.0.rhel7u9.x86_64.compsig; kmod-bnxt_en-1.10.2-218.0.67.0.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.138000 or later, for use with this driver.

Fixes

- This product addresses an issue where system crashed on doing driver unload load in loop when running broadcast traffic
- This product addresses an issue where bnxt_en module crashes with NULL pointer deference before ifup(bring up network interface)
- This product addresses an issue where kernel panic after PCIe AER(Advanced Error Reporting) device recovery successful
- This product addresses an issue where bnxt_en crashes with NULL pointer dereference when enabling SRIOV
- This product correct an error where ethtool -S tx_bytes and rx_bytes counter values far exceed actual values
- This product correct an error message when querying hwmon temperature on VF via sysfs

Enhancements

- This product now supports Red Hat Enterprise Linux 7 update 9
- This product now supports PAM4 speeds information in ethtool tools

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8
Version: 1.10.2-218.0.67.0 **(Optional)**
Filename: kmod-bnxt_en-1.10.2-218.0.67.0.rhel8u2.x86_64.compsig; kmod-bnxt_en-1.10.2-218.0.67.0.rhel8u2.x86_64.rpm; kmod-bnxt_en-1.10.2-218.0.67.0.rhel8u3.x86_64.compsig; kmod-bnxt_en-1.10.2-218.0.67.0.rhel8u3.x86_64.rpm; README

Important Note!

HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.166000 or later, for use with this driver.

Fixes

- This product addresses an issue where system crashed on doing driver unload load in loop when running broadcast traffic
- This product addresses an issue where bnxt_en module crashes with NULL pointer deference before ifup(bring up network interface)
- This product addresses an issue where kernel panic after PCIe AER(Advanced Error Reporting) device recovery successful
- This product addresses an issue where bnxt_en crashes with NULL pointer dereference when enabling SRIOV
- This product correct an error where ethtool -S tx_bytes and rx_bytes counter values far exceed actual values
- This product correct an error message when querying hwmon temperature on VF via sysfs

Enhancements

- This product now supports Red Hat Enterprise Linux 8 update 2 and Red Hat Enterprise Linux 8 update 3
- This product now supports PAM4 speeds information in ethtool tools

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 1.10.2-218.0.67.0 **(Optional)**
Filename: bnxt_en-kmp-default-1.10.2_k4.12.14_120-218.0.67.0.sles12sp5.x86_64.compsig; bnxt_en-kmp-default-1.10.2_k4.12.14_120-218.0.67.0.sles12sp5.x86_64.rpm; bnxt_en-kmp-default-1.10.2_k4.12.14_94.41-218.0.67.0.sles12sp4.x86_64.compsig; bnxt_en-kmp-default-1.10.2_k4.12.14_94.41-218.0.67.0.sles12sp4.x86_64.rpm; README

Important Note!

HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.166000 or later, for use with this driver.

Fixes

- This product addresses an issue where system crashed on doing driver unload load in loop when running broadcast traffic
- This product addresses an issue where bnxt_en module crashes with NULL pointer deference before ifup(bring up network interface)
- This product addresses an issue where kernel panic after PCIe AER(Advanced Error Reporting) device recovery successful
- This product addresses an issue where bnxt_en crashes with NULL pointer dereference when enabling SRIOV
- This product correct an error where ethtool -S tx_bytes and rx_bytes counter values far exceed actual values
- This product correct an error message when querying hwmon temperature on VF via sysfs

Enhancements

This product now supports PAM4 speeds information in ethtool tools

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15
Version: 1.10.2-218.0.67.0 **(Optional)**
Filename: bnxt_en-kmp-default-1.10.2_k4.12.14_195-218.0.67.0.sles15sp1.x86_64.compsig; bnxt_en-kmp-default-1.10.2_k4.12.14_195-218.0.67.0.sles15sp1.x86_64.rpm; bnxt_en-kmp-default-1.10.2_k5.3.18_22-218.0.67.0.sles15sp2.x86_64.compsig; bnxt_en-kmp-default-1.10.2_k5.3.18_22-218.0.67.0.sles15sp2.x86_64.rpm; README

Important Note!

HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.166000 or later, for use with this driver.

Fixes

- This product addresses an issue where system crashed on doing driver unload load in loop when running broadcast traffic
- This product addresses an issue where bnxt_en module crashes with NULL pointer deference before ifup(bring up network interface)
- This product addresses an issue where kernel panic after PCIe AER(Advanced Error Reporting) device recovery successful
- This product addresses an issue where bnxt_en crashes with NULL pointer dereference when enabling SRIOV
- This product correct an error where ethtool -S tx_bytes and rx_bytes counter values far exceed actual values
- This product correct an error message when querying hwmon temperature on VF via sysfs

Enhancements

- This product now supports SUSE Linux Enterprise Server 15 Service Pack 2
- This product now supports PAM4 speeds information in ethtool tools

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E Drivers for VMware vSphere 6.5
Version: 2021.04.05 **(Optional)**

Filename: cp045073.compsig; cp045073.zip

Important Note!

- This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.
- HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.166000 or later, for use with this driver.

Fixes

This product corrects an issue which Purple Screen Of Death (PSOD) while running Virtual SAN (vSAN) over Remote Direct Memory Access (RDMA) traffic due to invalid Completion Queue Element (CQEs)

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter

HPE Broadcom NetXtreme-E Drivers for VMware vSphere 6.7
Version: 2021.04.05 **(Optional)**
Filename: cp045074.compsig; cp045074.zip

Important Note!

- This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.
- HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.166000 or later, for use with this driver.

Fixes

This product corrects an issue which Purple Screen Of Death (PSOD) while running Virtual SAN (vSAN) over Remote Direct Memory Access (RDMA) traffic due to invalid Completion Queue Element (CQEs)

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter

HPE Broadcom NetXtreme-E Drivers for VMware vSphere 7.0
Version: 2021.04.05 **(Optional)**
Filename: cp045075.compsig; cp045075.zip

Important Note!

- This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from the vmware.com and the HPE vibsdepot.hpe.com webpages, plus an HPE specific CP0xxxxx.xml file.
- HPE recommends the *HPE Broadcom NetXtreme-E Firmware Version,* 218.0.166000 or later, for use with this driver.

Fixes

This product corrects an issue which Purple Screen Of Death (PSOD) while running Virtual SAN (vSAN) over Remote Direct Memory Access (RDMA) traffic due to invalid Completion Queue Element (CQEs)

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter

HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 7 Update 8
Version: 218.0.7.0 **(Optional)**
Filename: libbnxt_re-218.0.7.0-rhel7u8.x86_64.compsig; libbnxt_re-218.0.7.0-rhel7u8.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7, version 1.10.2-218.0.65.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

Fixes

This product now supports rdma-core v29(rdma user space application)

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 7 Update 9
Version: 218.0.7.0 **(Optional)**
Filename: libbnxt_re-218.0.7.0-rhel7u9.x86_64.compsig; libbnxt_re-218.0.7.0-rhel7u9.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 7, version 1.10.2-218.0.65.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 8 Update 2.
Version: 218.0.7.0 **(Optional)**
Filename: libbnxt_re-218.0.7.0-rhel8u2.x86_64.compsig; libbnxt_re-218.0.7.0-rhel8u2.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8, version 1.10.2-218.0.65.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E RoCE Library for Red Hat Enterprise Linux 8 Update 3.
Version: 218.0.7.0 **(Optional)**
Filename: libbnxt_re-218.0.7.0-rhel8u3.x86_64.compsig; libbnxt_re-218.0.7.0-rhel8u3.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for Red Hat Enterprise Linux 8, version 1.10.2-218.0.65.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 12 SP4
Version: 218.0.7.0 **(Optional)**
Filename: libbnxt_re-218.0.7.0-sles12sp4.x86_64.compsig; libbnxt_re-218.0.7.0-sles12sp4.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12, version 1.10.2-218.0.65.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

Fixes

This product now supports rdma-core v29(rdma user space application)

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 12 SP5
Version: 218.0.7.0 **(Optional)**
Filename: libbnxt_re-218.0.7.0-sles12sp5.x86_64.compsig; libbnxt_re-218.0.7.0-sles12sp5.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 12, version 1.10.2-218.0.65.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

Fixes

This product now supports rdma-core v29(rdma user space application)

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 15
Version: 216.0.88.3 **(Optional)**
Filename: libbnxt_re-216.0.88.3-sles15sp0.x86_64.compsig; libbnxt_re-216.0.88.3-sles15sp0.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15, version 1.10.1-216.0.169.4 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media.

Fixes

- This product corrects an issue which RoCE bond is not getting created automatically after system reboot.
- This product corrects an issue which errors/performance may degrades after hot plug operation is performed.

Enhancements

- This product now disables loading RoCE driver on VFs when Link Aggregation is enabled.
- This product now supports rdma-core v22.

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter

HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 15 SP1
Version: 218.0.7.0 **(Optional)**
Filename: libbnxt_re-218.0.7.0-sles15sp1.x86_64.compsig; libbnxt_re-218.0.7.0-sles15sp1.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15, version 1.10.2-218.0.65.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media..

Fixes

This product now supports rdma-core v29(rdma user space application)

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NetXtreme-E RoCE Library for SUSE Linux Enterprise Server 15 SP2
Version: 218.0.7.0 **(Optional)**
Filename: libbnxt_re-218.0.7.0-sles15sp2.x86_64.compsig; libbnxt_re-218.0.7.0-sles15sp2.x86_64.rpm; README

Prerequisites

HPE Broadcom NetXtreme-E Drivers for SUSE Linux Enterprise Server 15, version 1.10.2-218.0.65.0 or later, must be installed before installing this product.

The libibverb and rdma-core package must be installed on the target system prior to the installation of the RoCE library. If not already present, the packages can be obtained from the operating system installation media..

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 10Gb 2-port 537SFP+ Adapter
- HPE Ethernet 10Gb 2-port 537SFP+ FLR Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NX1 1Gb Driver for Windows Server x64 Editions
Version: 214.0.0.6 **(Optional)**
Filename: cp045019.compsig; cp045019.exe

Important Note!

HPE recommends the firmware provided in *HPE Broadcom NX1 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Fixes

This product correct an issue which fixes Windows driver causes NMI/RSOD during OS shutdown.

Supported Devices and Features

This driver 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 tg3 Ethernet Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 3.139b-1 **(Optional)**
Filename: kmod-tg3-3.139b-1.rhel7u8.x86_64.compsig; kmod-tg3-3.139b-1.rhel7u8.x86_64.rpm; kmod-tg3-3.139b-1.rhel7u9.x86_64.compsig; kmod-tg3-3.139b-1.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86_64,* version 2.27.0 or later, for use with these drivers.

Fixes

The products fixes an a race condition issue where driver will still try to access the PHY(physical layer) although it was already brought down when the tg3 timer fires

Enhancements

This product now supports Red Hat Enterprise Linux 7 update 9

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

HPE Broadcom tg3 Ethernet Drivers for Red Hat Enterprise Linux 8
Version: 3.139b-1 **(Optional)**
Filename: kmod-tg3-3.139b-1.rhel8u2.x86_64.compsig; kmod-tg3-3.139b-1.rhel8u2.x86_64.rpm; kmod-tg3-3.139b-1.rhel8u3.x86_64.compsig; kmod-tg3-3.139b-1.rhel8u3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86_64,* version 2.27.0 or later, for use with these drivers.

Fixes

The products fixes an a race condition issue where driver will still try to access the PHY(physical layer) although it was already brought down when the tg3 timer fires

Enhancements

This product now supports Red Hat Enterprise Linux 8 update 2 and Red Hat Enterprise Linux 8 update 3

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

HPE Broadcom tg3 Ethernet Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 3.139b-2 **(Optional)**
Filename: README; tg3-kmp-default-3.139b_k4.12.14_120-2.sles12sp5.x86_64.compsig; tg3-kmp-default-3.139b_k4.12.14_120-2.sles12sp5.x86_64.rpm; tg3-kmp-default-3.139b_k4.12.14_94.41-2.sles12sp4.x86_64.compsig; tg3-kmp-default-3.139b_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 2.27.0 or later, for use with these drivers.

Fixes

The products fixes an a race condition issue where driver will still try to access the PHY(physical layer) although it was already brought down when the tg3 timer fires

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

HPE Broadcom tg3 Ethernet Drivers for SUSE Linux Enterprise Server 15
Version: 3.139b-2 **(Optional)**
Filename: README; tg3-kmp-default-3.139b_k4.12.14_195-2.sles15sp1.x86_64.compsig; tg3-kmp-default-3.139b_k4.12.14_195-2.sles15sp1.x86_64.rpm; tg3-kmp-default-3.139b_k5.3.18_22-2.sles15sp2.x86_64.compsig; tg3-kmp-default-3.139b_k5.3.18_22-2.sles15sp2.x86_64.rpm

Important Note!

HPE recommends the firmware provided in *HPE NX1 Broadcom Online Firmware Upgrade Utility for Linux x86_64,* version 2.27.0 or later, for use with these drivers.

Fixes

The products fixes an a race condition issue where driver will still try to access the PHY(physical layer) although it was already brought down when the tg3 timer fires

Enhancements

This product now supports Suse Linux Enterprise Server 15 Service Pack 2

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

HPE Emulex 10/20 GbE Driver for VMware vSphere 6.5
Version: 2020.09.14 **(Optional)**
Filename: cp044545.compsig; cp044545.zip

Important Note!

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

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

Enhancements

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

HPE Emulex 10/20 GbE Driver for VMware vSphere 6.7
Version: 2020.09.14 **(Optional)**
Filename: cp044546.compsig; cp044546.zip

Important Note!

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

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

Enhancements

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter

- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

HPE Emulex 10/20 GbE Driver for Windows Server 2016
Version: 12.0.1195.0 (C) **(Optional)**
Filename: cp044541.compsig; cp044541.exe

Important Note!

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

Enhancements

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

HPE Emulex 10/20 GbE Driver for Windows Server 2019
Version: 12.0.1195.0 (C) **(Optional)**
Filename: cp044542.compsig; cp044542.exe

Important Note!

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

Enhancements

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2016
Version: 12.0.1171.0 (C) **(Optional)**
Filename: cp044561.compsig; cp044561.exe

Important Note!

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

Enhancements

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

HPE Emulex 10/20 GbE iSCSI Driver for Windows Server 2019
Version: 12.0.1171.0 (C) **(Optional)**
Filename: cp044562.compsig; cp044562.exe

Important Note!

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

Enhancements

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

HPE Emulex 10/20GbE Drivers for Red Hat Enterprise Linux 7 x86_64

Version: 12.0.1342.0-1 **(Optional)**
Filename: kmod-be2net-12.0.1342.0-1.rhel7u8.x86_64.compsig; kmod-be2net-12.0.1342.0-1.rhel7u8.x86_64.rpm; kmod-be2net-12.0.1342.0-1.rhel7u9.x86_64.compsig; kmod-be2net-12.0.1342.0-1.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2020.08.01 for use with these drivers.

Enhancements

This product now supports Red Hat Enterprise Linux 7 Update 8 and Red Hat Enterprise Linux 7 Update 9.

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E 10Gb Converged Network Adapter
- HPE CN1200E 10GBASE-T Dual Port Converged Network Adapter

HPE Emulex 10/20GbE Drivers for Red Hat Enterprise Linux 8
Version: 12.0.1342.0-1 **(Optional)**
Filename: kmod-be2net-12.0.1342.0-1.rhel8u2.x86_64.compsig; kmod-be2net-12.0.1342.0-1.rhel8u2.x86_64.rpm; kmod-be2net-12.0.1342.0-1.rhel8u3.x86_64.compsig; kmod-be2net-12.0.1342.0-1.rhel8u3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2020.08.01 for use with these drivers.

Enhancements

- This product now supports Red Hat Enterprise Linux 8 Update 2 and Red Hat Enterprise Linux 8 Update 3
- This product now supports elx_net_install.sh installation script to install be2net driver on Red Hat Enterprise Linux 8 Update 1 or later.

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E 10Gb Converged Network Adapter
- HPE CN1200E 10GBASE-T Dual Port Converged Network Adapter

HPE Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 12.0.1342.0-1 **(Optional)**
Filename: be2net-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.compsig; be2net-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.rpm; be2net-kmp-default-12.0.1342.0_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; be2net-kmp-default-12.0.1342.0_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 2020.08.01 for use with these drivers.

Enhancements

This product now supports SUSE Linux Enterprise Server 12 Service Pack 5

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E 10Gb Converged Network Adapter
- HPE CN1200E 10GBASE-T Dual Port Converged Network Adapter

HPE Emulex 10/20GbE Drivers for SUSE Linux Enterprise Server 15
Version: 12.0.1342.0-1 **(Optional)**
Filename: be2net-kmp-default-12.0.1342.0_k4.12.14_195-1.sles15sp1.x86_64.compsig; be2net-kmp-default-12.0.1342.0_k4.12.14_195-1.sles15sp1.x86_64.rpm; be2net-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.compsig; be2net-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.rpm; README

Important Note!

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

Enhancements

This product now supports SUSE Linux Enterprise Server 12 Service Pack 2

This product now supports elx_net_install.sh installation script to install be2net driver on SUSE Linux Enterprise Server 12 Service Pack 1 or later.

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E 10Gb Converged Network Adapter
- HPE CN1200E 10GBASE-T Dual Port Converged Network Adapter

HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.5
Version: 2020.09.14 **(Optional)**
Filename: cp044543.compsig; cp044543.zip

Important Note!

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

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

Enhancements

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.7
Version: 2020.09.14 **(Optional)**
Filename: cp044544.compsig; cp044544.zip

Important Note!

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

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

Enhancements

This product now supports the following network adapters:

- HP FlexFabric 10Gb 2-port 556FLR-T Adapter
- HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Adapter

HPE Emulex 10/20GbE iSCSI Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 12.0.1342.0-1 **(Optional)**
Filename: kmod-be2iscsi-12.0.1342.0-1.rhel7u8.x86_64.compsig; kmod-be2iscsi-12.0.1342.0-1.rhel7u8.x86_64.rpm; kmod-be2iscsi-12.0.1342.0-1.rhel7u9.x86_64.compsig; kmod-be2iscsi-12.0.1342.0-1.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2020.08.01 for use with these drivers.

Enhancements

This product now supports Red Hat Enterprise Linux 7 Update 8 and Red Hat Enterprise Linux 7 Update 9

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E 10Gb Converged Network Adapter
- HPE CN1200E 10GBASE-T Dual Port Converged Network Adapter

HPE Emulex 10/20GbE iSCSI Drivers for Red Hat Enterprise Linux 8
Version: 12.0.1342.0-1 **(Optional)**
Filename: kmod-be2iscsi-12.0.1342.0-1.rhel8u2.x86_64.compsig; kmod-be2iscsi-12.0.1342.0-1.rhel8u2.x86_64.rpm; kmod-be2iscsi-12.0.1342.0-1.rhel8u3.x86_64.compsig; kmod-be2iscsi-12.0.1342.0-1.rhel8u3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2020.08.01 for use with these drivers.

Enhancements

This product now supports Red Hat Enterprise Linux 8 Update 2 and Red Hat Enterprise Linux 8 Update 3

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E 10Gb Converged Network Adapter
- HPE CN1200E 10GBASE-T Dual Port Converged Network Adapter

HPE Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 12.0.1342.0-1 **(Optional)**
Filename: be2iscsi-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.compsig; be2iscsi-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.rpm; be2iscsi-kmp-default-12.0.1342.0_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; be2iscsi-kmp-default-12.0.1342.0_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 2020.08.01 for use with these drivers.

Enhancements

This product now supports SUSE Linux Enterprise Server 12 Service Pack 5

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter

- HPE CN1200E 10Gb Converged Network Adapter
- HPE CN1200E 10GBASE-T Dual Port Converged Network Adapter

HPE Emulex 10/20GbE iSCSI Drivers for SUSE Linux Enterprise Server 15
Version: 12.0.1342.0-1 **(Optional)**
Filename: be2iscsi-kmp-default-12.0.1342.0_k4.12.14_195-1.sles15sp1.x86_64.compsig; be2iscsi-kmp-default-12.0.1342.0_k4.12.14_195-1.sles15sp1.x86_64.rpm; be2iscsi-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.compsig; be2iscsi-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Firmware Flash for Emulex Converged Network Adapters - Linux (x64)*, version 2020.08.01 for use with these drivers.

Enhancements

This product now supports SUSE Linux Enterprise Server 15 Service Pack 1 and SUSE Linux Enterprise Server 15 Service Pack 2

Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 10Gb 2-port 556FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter
- HPE CN1200E 10Gb Converged Network Adapter
- HPE CN1200E 10GBASE-T Dual Port Converged Network Adapter

HPE Intel E1R Driver for Windows Server 2016
Version: 12.16.4.1 **(Recommended)**
Filename: cp047043.compsig; cp047043.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.5.0 or later, for use with this driver.

Enhancements

This product is updated to maintain compatibility with updated Windows installation library NicInE1R.dll and e1rmsg.dll.

Supported Devices and Features

This driver supports the following HPE Intel E1R network adapters:

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

HPE Intel E1R Driver for Windows Server 2019
Version: 12.18.12.1 **(Recommended)**
Filename: cp047044.compsig; cp047044.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.5.0 or later, for use with this driver.

Enhancements

This product is updated to maintain compatibility with updated Windows installation library NicInE1R.dll and e1rmsg.dll.

Supported Devices and Features

This driver supports the following HPE Intel E1R network adapters:

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

HPE Intel i40e Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 2.14.13-1 (C) **(Recommended)**
Filename: 635390-TA-256.pdf; kmod-hp-i40e-2.14.13-1.rhel7u8.x86_64.compsig; kmod-hp-i40e-2.14.13-1.rhel7u8.x86_64.rpm; kmod-hp-i40e-2.14.13-1.rhel7u9.x86_64.compsig; kmod-hp-i40e-2.14.13-1.rhel7u9.x86_64.rpm; README

Important Note!

- HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.
- HPE recommends i40e driver v.2.14.13(or later) suggested by Intel TA-256(Technical Advisory).

Enhancements

This product supports the following new server:

- HPE ProLiant DL360 Gen10 Plus Server
- HPE ProLiant DL380 Gen10 Plus Server

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

HPE Intel i40e Drivers for Red Hat Enterprise Linux 8
Version: 2.14.13-1 (B) **(Recommended)**
Filename: 635390-TA-256.pdf; kmod-hp-i40e-2.14.13-1.rhel8u2.x86_64.compsig; kmod-hp-i40e-2.14.13-1.rhel8u2.x86_64.rpm; kmod-hp-i40e-2.14.13-1.rhel8u3.x86_64.compsig; kmod-hp-i40e-2.14.13-1.rhel8u3.x86_64.rpm; README

Important Note!

- HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.
- HPE recommends i40e driver v.2.14.13(or later) suggested by Intel TA-256(Technical Advisory).

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus Server

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

HPE Intel i40e Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 2.14.13-1 (B) **(Recommended)**
Filename: 635390-TA-256.pdf; hp-i40e-kmp-default-2.14.13_k4.12.14_120-1.sles12sp5.x86_64.compsig; hp-i40e-kmp-default-2.14.13_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-i40e-kmp-default-2.14.13_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; hp-i40e-kmp-default-2.14.13_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; README

Important Note!

- HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.
- HPE recommends i40e driver v.2.14.13(or later) suggested by Intel TA-256(Technical Advisory).

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus Server

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

HPE Intel i40e Drivers for SUSE Linux Enterprise Server 15
Version: 2.14.13-1 (B) **(Recommended)**
Filename: 635390-TA-256.pdf; hp-i40e-kmp-default-2.14.13_k4.12.14_195-1.sles15sp1.x86_64.compsig; hp-i40e-kmp-default-2.14.13_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-i40e-kmp-default-2.14.13_k5.3.18_22-1.sles15sp2.x86_64.compsig; hp-i40e-kmp-default-2.14.13_k5.3.18_22-1.sles15sp2.x86_64.rpm; README

Important Note!

- HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.
- HPE recommends i40e driver v.2.14.13(or later) suggested by Intel TA-256(Technical Advisory).

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus Server

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

HPE Intel i40ea Driver for Windows Server 2016
Version: 1.13.104.0 **(Optional)**
Filename: cp045125.compsig; cp045125.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Fixes

This product corrects an traffic packets making cert failure seen when packets transferred to VLAN after RDMA function enabled.

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: 1.13.104.0 **(Optional)**
Filename: cp045126.compsig; cp045126.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Fixes

This product corrects an traffic packets making cert failure seen when packets transferred to VLAN after RDMA function enabled.

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 2016
Version: 1.13.104.0 **(Optional)**
Filename: cp045128.compsig; cp045128.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Fixes

This product corrects an traffic packets making cert failure seen when packets transferred to VLAN after RDMA function enabled.

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

HPE Intel i40eb Driver for Windows Server 2019
Version: 1.13.104.0 **(Optional)**
Filename: cp045129.compsig; cp045129.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Fixes

This product corrects an traffic packets making cert failure seen when packets transferred to VLAN after RDMA function enabled.

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

HPE Intel i40en Driver for VMware vSphere 6.5
Version: 2020.09.14 (B) **(Recommended)**
Filename: cp049456.compsig; cp049456.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

Enhancements

This product supports HPE ProLiant DL385 Gen10 Plus 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 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

HPE Intel i40en Driver for VMware vSphere 6.7
Version: 2021.04.05 (B) **(Recommended)**
Filename: cp049457.compsig; cp049457.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.14.0 or later, for use with this driver.

Enhancements

This product supports the following new server:

- HPE ProLiant DL360 Gen10 Plus Server
- HPE ProLiant DL380 Gen10 Plus 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 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

HPE Intel i40en Driver for VMware vSphere 7.0
Version: 2020.05.29 (B) **(Recommended)**
Filename: cp049458.compsig; cp049458.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.50 or later, for use with this driver.

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus 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 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

HPE Intel iavf Driver for Windows Server 2016
Version: 1.12.9.0 **(Optional)**
Filename: cp045011.compsig; cp045011.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Prerequisites

This driver requires host driver version 1.13.104.0 or later.

Enhancements

This product is updated to maintain compatibility with updated Windows installation library iavfmsg.dll.

Supported Devices and Features

This product supports the following HPE Intel i40ea network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

This product supports the following HPE Intel i40eb network adapters:

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

HPE Intel iavf Driver for Windows Server 2019
Version: 1.12.9.0 **(Optional)**
Filename: cp045010.compsig; cp045010.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Prerequisites

This driver requires host driver version 1.13.104.0 or later.

Enhancements

This product is updated to maintain compatibility with updated Windows installation library iavfmsg.dll.

Supported Devices and Features

This product supports the following HPE Intel i40ea network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter

This product supports the following HPE Intel i40eb network adapters:

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

HPE Intel iavf Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 4.2.7-1 **(Recommended)**

Filename: kmod-hp-iavf-4.2.7-1.rhel7u8.x86_64.compsig; kmod-hp-iavf-4.2.7-1.rhel7u8.x86_64.rpm; kmod-hp-iavf-4.2.7-1.rhel7u9.x86_64.compsig; kmod-hp-iavf-4.2.7-1.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.22.0 or later, for use with these drivers.

Fixes

- This product addresses an issue where HyperV Ping is lost after change MTU on VF interface in a VM linux
- This product addresses an issue which could lead to traffic interrupts and full traffic stop through the bond when VFs were added to bonding-alb/tlb modes

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

HPE Intel iavf Drivers for Red Hat Enterprise Linux 8
Version: 4.2.7-1 **(Recommended)**
Filename: kmod-hp-iavf-4.2.7-1.rhel8u3.x86_64.compsig; kmod-hp-iavf-4.2.7-1.rhel8u3.x86_64.rpm; kmod-hp-iavf-4.2.7-1.rhel8u4.x86_64.compsig; kmod-hp-iavf-4.2.7-1.rhel8u4.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.22.0 or later, for use with these drivers.

Fixes

- This product addresses an issue where HyperV Ping is lost after change MTU on VF interface in a VM linux
- This product addresses an issue which could lead to traffic interrupts and full traffic stop through the bond when VFs were added to bonding-alb/tlb modes

Enhancements

This product now supports Red Hat Enterprise Linux 8 update 4

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

HPE Intel iavf Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 4.2.7-1 **(Recommended)**
Filename: hp-iavf-kmp-default-4.2.7_k4.12.14_120-1.sles12sp5.x86_64.compsig; hp-iavf-kmp-default-4.2.7_k4.12.14_120-1.sles12sp5.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.22.0 or later, for use with these drivers.

Fixes

- This product addresses an issue where HyperV Ping is lost after change MTU on VF interface in a VM linux
- This product addresses an issue which could lead to traffic interrupts and full traffic stop through the bond when VFs were added to bonding-alb/tlb modes

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

HPE Intel iavf Drivers for SUSE Linux Enterprise Server 15
Version: 4.2.7-1 **(Recommended)**
Filename: hp-iavf-kmp-default-4.2.7_k5.3.18_22-1.sles15sp2.x86_64.compsig; hp-iavf-kmp-default-4.2.7_k5.3.18_22-1.sles15sp2.x86_64.rpm; hp-iavf-kmp-default-4.2.7_k5.3.18_57-1.sles15sp3.x86_64.compsig; hp-iavf-kmp-default-4.2.7_k5.3.18_57-1.sles15sp3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.22.0 or later, for use with these drivers.

Fixes

- This product addresses an issue where HyperV Ping is lost after change MTU on VF interface in a VM linux
- This product addresses an issue which could lead to traffic interrupts and full traffic stop through the bond when VFs were added to bonding-alb/tlb modes

Enhancements

This product now supports SUSE Linux Enterprise Server 15 Service Pack 3

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

HPE Intel igb Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 6.7.2-2 **(Recommended)**
Filename: kmod-hp-igb-6.7.2-2.rhel7u8.x86_64.compsig; kmod-hp-igb-6.7.2-2.rhel7u8.x86_64.rpm; kmod-hp-igb-6.7.2-2.rhel7u9.x86_64.compsig; kmod-hp-igb-6.7.2-2.rhel7u9.x86_64.rpm; README

Enhancements

This product now supports Linux Firmware upgrade utility v.1.22.5

Supported Devices and Features

These drivers support the following Intel network adapters:

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

HPE Intel igb Drivers for Red Hat Enterprise Linux 8
Version: 6.7.2-2 **(Recommended)**
Filename: kmod-hp-igb-6.7.2-2.rhel8u3.x86_64.compsig; kmod-hp-igb-6.7.2-2.rhel8u3.x86_64.rpm; kmod-hp-igb-6.7.2-2.rhel8u4.x86_64.compsig; kmod-hp-igb-6.7.2-2.rhel8u4.x86_64.rpm; README

Enhancements

- This product now supports Linux Firmware upgrade utility v.1.22.5
- This product now supports Red Hat Enterprise Linux 8 update 4

Supported Devices and Features

These drivers support the following Intel network adapters:

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

HPE Intel igb Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 6.7.2-2 **(Recommended)**
Filename: hp-igb-kmp-default-6.7.2_k4.12.14_120-2.sles12sp5.x86_64.compsig; hp-igb-kmp-default-6.7.2_k4.12.14_120-2.sles12sp5.x86_64.rpm; README

Enhancements

This product now supports Linux Firmware upgrade utility v.1.22.5

Supported Devices and Features

These drivers support the following Intel network adapters:

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

HPE Intel igb Drivers for SUSE Linux Enterprise Server 15
Version: 6.7.2-2 **(Recommended)**
Filename: hp-igb-kmp-default-6.7.2_k5.3.18_22-2.sles15sp2.x86_64.compsig; hp-igb-kmp-default-6.7.2_k5.3.18_22-2.sles15sp2.x86_64.rpm; hp-igb-kmp-default-6.7.2_k5.3.18_57-2.sles15sp3.x86_64.compsig; hp-igb-kmp-default-6.7.2_k5.3.18_57-2.sles15sp3.x86_64.rpm; README

Enhancements

- This product now supports Linux Firmware upgrade utility v.1.22.5
- This product now supports SUSE Linux Enterprise Server 15 Service Pack 3

Supported Devices and Features

These drivers support the following Intel network adapters:

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

HPE Intel igbn Driver for VMware vSphere 6.5
Version: 2021.09.04 **(Recommended)**
Filename: cp049060.compsig; cp049060.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.15.0 or later, for use with this driver.

Enhancements

This product enhances the reliability of TX/RX ring hang detection and recovery procedures.

Supported Devices and Features

These drivers support the following network adapters:

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

- HPE Ethernet 1Gb 4-port 366T Adapter

HPE Intel igbn Driver for VMware vSphere 6.7
Version: 2021.09.04 **(Recommended)**
Filename: cp047110.compsig; cp047110.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.15.0 or later, for use with this driver.

Enhancements

This product enhances the reliability of TX/RX ring hang detection and recovery procedures.

Supported Devices and Features

These drivers support the following network adapters:

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

HPE Intel igbn Driver for VMware vSphere 7.0
Version: 2021.09.04 **(Recommended)**
Filename: cp047111.compsig; cp047111.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.15.0 or later, for use with this driver.

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus Server

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 1Gb 2-port 363i Adapter
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Adapter

- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 4-port 366T Adapter

HPE Intel ixgbe Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 5.9.4-1 **(Optional)**
Filename: kmod-hp-ixgbe-5.9.4-1.rhel7u8.x86_64.compsig; kmod-hp-ixgbe-5.9.4-1.rhel7u8.x86_64.rpm; kmod-hp-ixgbe-5.9.4-1.rhel7u9.x86_64.compsig; kmod-hp-ixgbe-5.9.4-1.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.

Enhancements

- This product now supports Red Hat Enterprise Linux 7 update 9
- This product enhances reliability via adding support for new mailbox communication between PF(Physical Function) and VF(Virtual Function) and remove its potential flaws that may lead to the undefined or faulty behavior
- This product enhances compatibility where new mailbox api implementation is alo compatible with old drivers

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter

HPE Intel ixgbe Drivers for Red Hat Enterprise Linux 8
Version: 5.9.4-1 **(Optional)**
Filename: kmod-hp-ixgbe-5.9.4-1.rhel8u2.x86_64.compsig; kmod-hp-ixgbe-5.9.4-1.rhel8u2.x86_64.rpm; kmod-hp-ixgbe-5.9.4-1.rhel8u3.x86_64.compsig; kmod-hp-ixgbe-5.9.4-1.rhel8u3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.

Enhancements

- This product now supports Red Hat Enterprise Linux 8 update 2 and Red Hat Enterprise Linux 8 update 3
- This product enhances reliability via adding support for new mailbox communication between PF(Physical Function) and VF(Virtual Function) and remove its potential flaws that may lead to the undefined or faulty behavior
- This product enhances compatibility where new mailbox api implementation is alo compatible with old drivers

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter
- HPE 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: 5.9.4-1 **(Optional)**
Filename: hp-ixgbe-kmp-default-5.9.4_k4.12.14_120-1.sles12sp5.x86_64.compsig; hp-ixgbe-kmp-default-5.9.4_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-ixgbe-kmp-default-5.9.4_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; hp-ixgbe-kmp-default-5.9.4_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.

Enhancements

- This product enhances reliability via adding support for new mailbox communication between PF(Physical Function) and VF(Virtual Function) and remove its potential flaws that may lead to the undefined or faulty behavior
- This product enhances compatibility where new mailbox api implementation is alo compatible with old drivers

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter

HPE Intel ixgbe Drivers for SUSE Linux Enterprise Server 15
Version: 5.9.4-1 **(Optional)**
Filename: hp-ixgbe-kmp-default-5.9.4_k4.12.14_195-1.sles15sp1.x86_64.compsig; hp-ixgbe-kmp-default-5.9.4_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-ixgbe-kmp-default-5.9.4_k5.3.18_22-1.sles15sp2.x86_64.compsig; hp-ixgbe-kmp-default-5.9.4_k5.3.18_22-1.sles15sp2.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.

Enhancements

- This product now supports Suse Linux Enterprise Server 15 Service Pack 2
- This product enhances reliability via adding support for new mailbox communication between PF(Physical Function) and VF(Virtual Function) and remove its potential flaws that may lead to the undefined or faulty behavior
- This product enhances compatibility where new mailbox api implementation is alo compatible with old drivers

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter

HPE Intel ixgben Driver for VMware vSphere 6.5
Version: 2021.04.05 **(Optional)**
Filename: cp045249.compsig; cp045249.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.14.0 or later, for use with this driver.

Fixes

This product corrects the maximum supported number of virtual functions.

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter

HPE Intel ixgben Driver for VMware vSphere 6.7
Version: 2021.04.05 **(Optional)**
Filename: cp045250.compsig; cp045250.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.13.0 or later, for use with this driver.

Fixes

This product corrects the maximum supported number of virtual functions.

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter

HPE Intel ixgben Driver for VMware vSphere 7.0
Version: 2021.04.05 **(Optional)**
Filename: cp045248.compsig; cp045248.zip

Important Note!

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.14.0 or later, for use with this driver.

Fixes

This product corrects the maximum supported number of virtual functions.

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter

HPE Intel ixgbevf Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 4.9.3-1 **(Optional)**
Filename: kmod-hp-ixgbevf-4.9.3-1.rhel7u8.x86_64.compsig; kmod-hp-ixgbevf-4.9.3-1.rhel7u8.x86_64.rpm; kmod-hp-ixgbevf-4.9.3-1.rhel7u9.x86_64.compsig; kmod-hp-ixgbevf-4.9.3-1.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.

Enhancements

- This product now supports Red Hat Enterprise Linux 7 update 9
- This product enhances reliability via adding support for new mailbox communication between PF(Physical Function) and VF(Virtual Function) and remove its potential flaws that may lead to the undefined or faulty behavior
- This product enhances compatibility where new mailbox api implementation is alo compatible with old drivers

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter

- HPE Ethernet 10Gb 2-port 560M Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter

HPE Intel ixgbevf Drivers for Red Hat Enterprise Linux 8
Version: 4.9.3-1 **(Optional)**
Filename: kmod-hp-ixgbevf-4.9.3-1.rhel8u2.x86_64.compsig; kmod-hp-ixgbevf-4.9.3-1.rhel8u2.x86_64.rpm; kmod-hp-ixgbevf-4.9.3-1.rhel8u3.x86_64.compsig; kmod-hp-ixgbevf-4.9.3-1.rhel8u3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.

Enhancements

- This product now supports Red Hat Enterprise Linux 8 update 2 and Red Hat Enterprise Linux 8 update 3
- This product enhances reliability via adding support for new mailbox communication between PF(Physical Function) and VF(Virtual Function) and remove its potential flaws that may lead to the undefined or faulty behavior
- This product enhances compatibility where new mailbox api implementation is alo compatible with old drivers

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

HPE Intel ixgbevf Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 4.9.3-1 **(Optional)**
Filename: hp-ixgbevf-kmp-default-4.9.3_k4.12.14_120-1.sles12sp5.x86_64.compsig; hp-ixgbevf-kmp-default-4.9.3_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-ixgbevf-kmp-default-4.9.3_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; hp-ixgbevf-kmp-default-4.9.3_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.

Enhancements

- This product enhances reliability via adding support for new mailbox communication between PF(Physical Function) and VF(Virtual Function) and remove its potential flaws that may lead to the undefined or faulty behavior
- This product enhances compatibility where new mailbox api implementation is alo compatible with old drivers

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter

HPE Intel ixgbevf Drivers for SUSE Linux Enterprise Server 15
Version: 4.9.3-1 **(Optional)**
Filename: hp-ixgbevf-kmp-default-4.9.3_k4.12.14_195-1.sles15sp1.x86_64.compsig; hp-ixgbevf-kmp-default-4.9.3_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-ixgbevf-kmp-default-4.9.3_k5.3.18_22-1.sles15sp2.x86_64.compsig; hp-ixgbevf-kmp-default-4.9.3_k5.3.18_22-1.sles15sp2.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Linux x86_64*, version 1.21.0 or later, for use with these drivers.

Enhancements

- This product now supports Suse Linux Enterprise Server 15 Service Pack 2
- This product enhances reliability via adding support for new mailbox communication between PF(Physical Function) and VF(Virtual Function) and remove its potential flaws that may lead to the undefined or faulty behavior
- This product enhances compatibility where new mailbox api implementation is alo compatible with old drivers

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLB Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560M Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter

HPE Intel ixn Driver for Windows Server 2016
Version: 4.1.199.0 **(Optional)**
Filename: cp042028.compsig; cp042028.exe

Important Note!

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

Enhancements

This product contains Windows system update supported improvements.

Supported Devices and Features

This component supports the following network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

HPE Intel ixn Driver for Windows Server 2019
Version: 4.1.197.0 (B) **(Optional)**
Filename: cp046115.compsig; cp046115.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Enhancements

This product is updated to maintain compatibility with updated .cat file.

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 ixs Driver for Windows Server 2016
Version: 4.1.219.0 **(Optional)**
Filename: cp046117.compsig; cp046117.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Enhancements

This product contains Windows system update supported improvements.

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

HPE Intel ixs Driver for Windows Server 2019
Version: 4.1.219.0 **(Optional)**
Filename: cp046118.compsig; cp046118.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Enhancements

This product contains Windows system update supported improvements.

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

HPE Intel vxn Driver for Windows Server 2016
Version: 2.1.192.0 (B) **(Optional)**
Filename: cp045153.compsig; cp045153.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Prerequisites

This driver requires host driver version 4.1.199.0 or later.

Enhancements

This product now supports the following the network adapters:

- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter

Supported Devices and Features

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

This component supports the following HPE Intel ixt network adapters:

- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter

HPE Intel vxn Driver for Windows Server 2019
Version: 2.1.191.0 (B) **(Optional)**
Filename: cp046080.compsig; cp046080.exe

Important Note!

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Prerequisites

This driver requires host driver version 4.1.179.0 or later.

Enhancements

This product now supports the following the network adapters:

- HPE Ethernet 10Gb 2-port 561FLR-T Adapter

- HPE Ethernet 10Gb 2-port 561T Adapter

Supported Devices and Features

This component supports the following HPE Intel ixn network adapters:

- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter

This component supports the following HPE Intel ixt network adapters:

- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter

HPE Intel vxs Driver for Windows Server 2016
Version: 2.1.192.0 **(Optional)**
Filename: cp042037.compsig; cp042037.exe

Important Note!

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

Prerequisites

This driver requires host driver version 4.1.199.0 or later.

Enhancements

This product contains Windows system update supported improvements.

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

HPE Intel vxs Driver for Windows Server 2019
Version: 2.1.191.0 **(Optional)**
Filename: cp042038.compsig; cp042038.exe

Important Note!

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

Prerequisites

This driver requires host driver version 4.1.179.0 or later.

Enhancements

This product contains Windows system update supported improvements.

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2016
Version: 2.70.24728.0 **(Recommended)**
Filename: cp048373.compsig; cp048373.exe

Fixes

- This product correct an issue where mlx5cmd tools reporting of the OS version that a VF is running.
- This product correct an issue where incorrect report related to the firmware traces to be logged (FwTracer) feature on the VF
- This product correct an issue where prevented the package downgrade from replacing mlxdevx.dll in the system folder.
- This product correct an issue which cause TCP connection to drop

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2019
Version: 2.70.24728.0 **(Recommended)**
Filename: cp048374.compsig; cp048374.exe

Fixes

- This product correct an issue where mlx5cmd tools reporting of the OS version that a VF is running.
- This product correct an issue where incorrect report related to the firmware traces to be logged (FwTracer) feature on the VF
- This product correct an issue where prevented the package downgrade from replacing mlxdevx.dll in the system folder.
- This product correct an issue which cause TCP connection to drop

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox CX4LX and CX5 Driver for Microsoft Windows Server 2022

Version: 2.70.24728.0 **(Recommended)**
Filename: cp049405.compsig; cp049405.exe

Fixes

This product correct an issue which cause TCP connection to drop

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 100Gb 1-port 842QSFP28 Adapter
- HPE Ethernet 25Gb 2-port 640SFP28 Adapter
- HPE Ethernet 25Gb 2-port 640 FLR-SFP28 Adapter
- HPE Ethernet 10Gb 2-port 548SFP+ Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter
- HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter
- HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter

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HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 7 Update 8 (x86_64)
Version: 4.17 **(Recommended)**
Filename: kmod-kernel-mft-mlnx-4.17.0-1.rhel7u8.x86_64.compsig; kmod-kernel-mft-mlnx-4.17.0-1.rhel7u8.x86_64.rpm; mft-4.17.0-106.rhel7u8.x86_64.compsig; mft-4.17.0-106.rhel7u8.x86_64.rpm

Fixes

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

The following issues have been fixed in MFT version 4.17.

- Inconsistent flashing of the firmware while using the Intelligent Platform Management Bus/Bridge service.
- Occasional disconnections when the connected port was being activated.
- Flag "--json" did not work with features that required a user confirmation.
- mlxconfig query for the BOOT_INTERRUPT_DIS TLV showed a wrong value in the "current value" field.
- mst version returned an incorrect string: "mst, MFT_VERSION_STR built on TOOLS_BUILD_TIME + Git SHA Hash: TOOLS_GIT_SHA".
- MFT tools did not support using combined short flags without a separation between them.
- Performing a driver restart while burning the firmware resulted in firmware burning failure and occasionally device was not accessible.
- MVPD read errors occurred from the mlxfwmanager during fast reboot.

Enhancements

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

Changes and New features in MFT version 4.17:

- Enabled Anti-rollback protection to prevent old vulnerable firmware versions from being flashed to the device.
- Flint now supports the "--activate_delay_sec" flag which performs the activation on the newly burned firmware after the specified delay.
- Remote mst device now supports cable devices. The remote cables will be shown on the mst status and can be accessed via the mlxcables tool.
- Added support for the following
- Parallel firmware burning. Although DMA burning is supported in Virtual Machines as well, burning in such scenarios might be slower than on Physical Machines

- Dual Small Form Factor Pluggable(DSFP) modules in mlxlink.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86_64) and future update kernels.

HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 7 Update 9 (x86_64)
Version: 4.17 **(Recommended)**
Filename: kmod-kernel-mft-mlnx-4.17.0-1.rhel7u9.x86_64.compsig; kmod-kernel-mft-mlnx-4.17.0-1.rhel7u9.x86_64.rpm; mft-4.17.0-106.rhel7u9.x86_64.compsig; mft-4.17.0-106.rhel7u9.x86_64.rpm

Fixes

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

The following issues have been fixed in MFT version 4.17.

- Inconsistent flashing of the firmware while using the Intelligent Platform Management Bus/Bridge service.
- Occasional disconnections when the connected port was being activated.
- Flag "--json" did not work with features that required a user confirmation.
- mlxconfig query for the BOOT_INTERRUPT_DIS TLV showed a wrong value in the "current value" field.
- mst version returned an incorrect string: "mst, MFT_VERSION_STR built on TOOLS_BUILD_TIME + Git SHA Hash: TOOLS_GIT_SHA".
- MFT tools did not support using combined short flags without a separation between them.
- Performing a driver restart while burning the firmware resulted in firmware burning failure and occasionally device was not accessible.
- MVPD read errors occurred from the mlxfwmanager during fast reboot.

Enhancements

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

Changes and New features in MFT version 4.17:

- Enabled Anti-rollback protection to prevent old vulnerable firmware versions from being flashed to the device.
- Flint now supports the "--activate_delay_sec" flag which performs the activation on the newly burned firmware after the specified delay.
- Remote mst device now supports cable devices. The remote cables will be shown on the mst status and can be accessed via the mlxcables tool.
- Added support for the following
- Parallel firmware burning. Although DMA burning is supported in Virtual Machines as well, burning in such scenarios might be slower than on Physical Machines
- Dual Small Form Factor Pluggable(DSFP) modules in mlxlink.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 7 Update 9 (x86_64) supported by this binary rpm are: 3.10.0-1160.el7 - (x86_64) and future update kernels.

HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 8 Update 3 (x86_64)
Version: 4.17 **(Recommended)**

Filename: kmod-kernel-mft-mlnx-4.17.0-1.rhel8u3.x86_64.compsig; kmod-kernel-mft-mlnx-4.17.0-1.rhel8u3.x86_64.rpm; mft-4.17.0-106.rhel8u3.x86_64.compsig; mft-4.17.0-106.rhel8u3.x86_64.rpm

Fixes

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

The following issues have been fixed in MFT version 4.17.

- Inconsistent flashing of the firmware while using the Intelligent Platform Management Bus/Bridge service.
- Occasional disconnections when the connected port was being activated.
- Flag "--json" did not work with features that required a user confirmation.
- mlxconfig query for the BOOT_INTERRUPT_DIS TLV showed a wrong value in the "current value" field.
- mst version returned an incorrect string: "mst, MFT_VERSION_STR built on TOOLS_BUILD_TIME + Git SHA Hash: TOOLS_GIT_SHA".
- MFT tools did not support using combined short flags without a separation between them.
- Performing a driver restart while burning the firmware resulted in firmware burning failure and occasionally device was not accessible.
- MVPD read errors occurred from the mlxfwmanager during fast reboot.

Enhancements

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

Changes and New features in MFT version 4.17:

- Enabled Anti-rollback protection to prevent old vulnerable firmware versions from being flashed to the device.
- Flint now supports the "--activate_delay_sec" flag which performs the activation on the newly burned firmware after the specified delay.
- Remote mst device now supports cable devices. The remote cables will be shown on the mst status and can be accessed via the mlxcables tool.
- Added support for the following
- Parallel firmware burning. Although DMA burning is supported in Virtual Machines as well, burning in such scenarios might be slower than on Physical Machines
- Dual Small Form Factor Pluggable(DSFP) modules in mlxlink.

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of Red Hat Enterprise Linux 8 update 3 (x86_64) supported by this binary rpm are:
4.18.0-240.el8 - (x86_64) and future update kernels.

HPE Mellanox MFT Driver and Firmware Tools for Red Hat Enterprise Linux 8 Update 4 (x86_64)
Version: 4.17 **(Recommended)**
Filename: kmod-kernel-mft-mlnx-4.17.0-1.rhel8u4.x86_64.compsig; kmod-kernel-mft-mlnx-4.17.0-1.rhel8u4.x86_64.rpm; mft-4.17.0-106.rhel8u4.x86_64.compsig; mft-4.17.0-106.rhel8u4.x86_64.rpm

Fixes

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

The following issues have been fixed in MFT version 4.17.

- Inconsistent flashing of the firmware while using the Intelligent Platform Management Bus/Bridge service.
- Occasional disconnections when the connected port was being activated.
- Flag "--json" did not work with features that required a user confirmation.

- mlxconfig query for the BOOT_INTERRUPT_DIS TLV showed a wrong value in the "current value" field.
- mst version returned an incorrect string: "mst, MFT_VERSION_STR built on TOOLS_BUILD_TIME + Git SHA Hash: TOOLS_GIT_SHA".
- MFT tools did not support using combined short flags without a separation between them.
- Performing a driver restart while burning the firmware resulted in firmware burning failure and occasionally device was not accessible.
- MVPD read errors occurred from the mlxfwmanager during fast reboot.

Enhancements

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

Changes and New features in MFT version 4.17:

- Enabled Anti-rollback protection to prevent old vulnerable firmware versions from being flashed to the device.
- Flint now supports the "--activate_delay_sec" flag which performs the activation on the newly burned firmware after the specified delay.
- Remote mst device now supports cable devices. The remote cables will be shown on the mst status and can be accessed via the mlxcables tool.
- Added support for the following
- Parallel firmware burning. Although DMA burning is supported in Virtual Machines as well, burning in such scenarios might be slower than on Physical Machines
- Dual Small Form Factor Pluggable(DSFP) modules in mlxlink.

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of Red Hat Enterprise Linux 8 update 4 (x86_64) supported by this binary rpm are:
4.18.0-305.el8 - (x86_64) and future update kernels.

HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 12 SP4 (AMD64/EM64T)
Version: 4.17 **(Recommended)**
Filename: kernel-mft-mlnx-kmp-default-4.17.0_k4.12.14_94.41-1.sles12sp4.x86_64.compsig; kernel-mft-mlnx-kmp-default-4.17.0_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; mft-4.17.0-106.sles12sp4.x86_64.compsig; mft-4.17.0-106.sles12sp4.x86_64.rpm

Fixes

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

The following issues have been fixed in MFT version 4.17.

- Inconsistent flashing of the firmware while using the Intelligent Platform Management Bus/Bridge service.
- Occasional disconnections when the connected port was being activated.
- Flag "--json" did not work with features that required a user confirmation.
- mlxconfig query for the BOOT_INTERRUPT_DIS TLV showed a wrong value in the "current value" field.
- mst version returned an incorrect string: "mst, MFT_VERSION_STR built on TOOLS_BUILD_TIME + Git SHA Hash: TOOLS_GIT_SHA".
- MFT tools did not support using combined short flags without a separation between them.
- Performing a driver restart while burning the firmware resulted in firmware burning failure and occasionally device was not accessible.
- MVPD read errors occurred from the mlxfwmanager during fast reboot.

Enhancements

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

Changes and New features in MFT version 4.17:

- Enabled Anti-rollback protection to prevent old vulnerable firmware versions from being flashed to the device.
- Flint now supports the "--activate_delay_sec" flag which performs the activation on the newly burned firmware after the specified delay.
- Remote mst device now supports cable devices. The remote cables will be shown on the mst status and can be accessed via the mlxcables tool.
- Added support for the following
- Parallel firmware burning. Although DMA burning is supported in Virtual Machines as well, burning in such scenarios might be slower than on Physical Machines
- Dual Small Form Factor Pluggable(DSFP) modules in mlxlink.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are:
4.12.14-94.41-default and future update kernels.

HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 12 SP5 (AMD64/EM64T)
Version: 4.17 **(Recommended)**
Filename: kernel-mft-mlnx-kmp-default-4.17.0_k4.12.14_120-1.sles12sp5.x86_64.compsig; kernel-mft-mlnx-kmp-default-4.17.0_k4.12.14_120-1.sles12sp5.x86_64.rpm; mft-4.17.0-106.sles12sp5.x86_64.compsig; mft-4.17.0-106.sles12sp5.x86_64.rpm

Fixes

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

The following issues have been fixed in MFT version 4.17.

- Inconsistent flashing of the firmware while using the Intelligent Platform Management Bus/Bridge service.
- Occasional disconnections when the connected port was being activated.
- Flag "--json" did not work with features that required a user confirmation.
- mlxconfig query for the BOOT_INTERRUPT_DIS TLV showed a wrong value in the "current value" field.
- mst version returned an incorrect string: "mst, MFT_VERSION_STR built on TOOLS_BUILD_TIME + Git SHA Hash: TOOLS_GIT_SHA".
- MFT tools did not support using combined short flags without a separation between them.
- Performing a driver restart while burning the firmware resulted in firmware burning failure and occasionally device was not accessible.
- MVPD read errors occurred from the mlxfwmanager during fast reboot.

Enhancements

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

Changes and New features in MFT version 4.17:

- Enabled Anti-rollback protection to prevent old vulnerable firmware versions from being flashed to the device.

- Flint now supports the "--activate_delay_sec" flag which performs the activation on the newly burned firmware after the specified delay.
- Remote mst device now supports cable devices. The remote cables will be shown on the mst status and can be accessed via the mlxcables tool.
- Added support for the following
- Parallel firmware burning. Although DMA burning is supported in Virtual Machines as well, burning in such scenarios might be slower than on Physical Machines
- Dual Small Form Factor Pluggable(DSFP) modules in mlxlink.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are:
4.12.14-120-default and future update kernels.

HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 15 SP2 (AMD64/EM64T)
Version: 4.17 **(Recommended)**
Filename: kernel-mft-mlnx-kmp-default-4.17.0_k5.3.18_22-1.sles15sp2.x86_64.compsig; kernel-mft-mlnx-kmp-default-4.17.0_k5.3.18_22-1.sles15sp2.x86_64.rpm; mft-4.17.0-106.sles15sp2.x86_64.compsig; mft-4.17.0-106.sles15sp2.x86_64.rpm

Fixes

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

The following issues have been fixed in MFT version 4.17.

- Inconsistent flashing of the firmware while using the Intelligent Platform Management Bus/Bridge service.
- Occasional disconnections when the connected port was being activated.
- Flag "--json" did not work with features that required a user confirmation.
- mlxconfig query for the BOOT_INTERRUPT_DIS TLV showed a wrong value in the "current value" field.
- mst version returned an incorrect string: "mst, MFT_VERSION_STR built on TOOLS_BUILD_TIME + Git SHA Hash: TOOLS_GIT_SHA".
- MFT tools did not support using combined short flags without a separation between them.
- Performing a driver restart while burning the firmware resulted in firmware burning failure and occasionally device was not accessible.
- MVPD read errors occurred from the mlxfwmanager during fast reboot.

Enhancements

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

Changes and New features in MFT version 4.17:

- Enabled Anti-rollback protection to prevent old vulnerable firmware versions from being flashed to the device.
- Flint now supports the "--activate_delay_sec" flag which performs the activation on the newly burned firmware after the specified delay.
- Remote mst device now supports cable devices. The remote cables will be shown on the mst status and can be accessed via the mlxcables tool.
- Added support for the following
- Parallel firmware burning. Although DMA burning is supported in Virtual Machines as well, burning in such scenarios might be slower than on Physical Machines
- Dual Small Form Factor Pluggable(DSFP) modules in mlxlink.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 15 SP2 (AMD64/EM64T) supported by this binary rpm are:
4.12.14-195-default and future update kernels.

HPE Mellanox MFT Driver and Firmware Tools for SUSE Linux Enterprise Server 15 SP3 (AMD64/EM64T)
Version: 4.17 **(Recommended)**
Filename: kernel-mft-mlnx-kmp-default-4.17.0_k5.3.18_57-1.sles15sp3.x86_64.compsig; kernel-mft-mlnx-kmp-default-4.17.0_k5.3.18_57-1.sles15sp3.x86_64.rpm; mft-4.17.0-106.sles15sp3.x86_64.compsig; mft-4.17.0-106.sles15sp3.x86_64.rpm

Fixes

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

The following issues have been fixed in MFT version 4.17.

- Inconsistent flashing of the firmware while using the Intelligent Platform Management Bus/Bridge service.
- Occasional disconnections when the connected port was being activated.
- Flag "--json" did not work with features that required a user confirmation.
- mlxconfig query for the BOOT_INTERRUPT_DIS TLV showed a wrong value in the "current value" field.
- mst version returned an incorrect string: "mst, MFT_VERSION_STR built on TOOLS_BUILD_TIME + Git SHA Hash: TOOLS_GIT_SHA".
- MFT tools did not support using combined short flags without a separation between them.
- Performing a driver restart while burning the firmware resulted in firmware burning failure and occasionally device was not accessible.
- MVPD read errors occurred from the mlxfwmanager during fast reboot.

Enhancements

MFT prerequisite RPMs for Mellanox adapter firmware update in Secure Boot mode.

Changes and New features in MFT version 4.17:

- Enabled Anti-rollback protection to prevent old vulnerable firmware versions from being flashed to the device.
- Flint now supports the "--activate_delay_sec" flag which performs the activation on the newly burned firmware after the specified delay.
- Remote mst device now supports cable devices. The remote cables will be shown on the mst status and can be accessed via the mlxcables tool.
- Added support for the following
- Parallel firmware burning. Although DMA burning is supported in Virtual Machines as well, burning in such scenarios might be slower than on Physical Machines
- Dual Small Form Factor Pluggable(DSFP) modules in mlxlink.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 15 SP3 (AMD64/EM64T) supported by this binary rpm are:
5.3.18.57-default and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 7 Update 8 (x86_64)
Version: 5.4 **(Recommended)**

Filename: kmod-mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel7u8.x86_64.compsig; kmod-mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel7u8.x86_64.rpm; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel7u8.x86_64.compsig; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel7u8.x86_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository (http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/).

Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Fixes

The following issues have been fixed in version 5.4:

- To support scalability, function representor channels were limited to 4.However in scenarios when SF (Scalable Function) was not used, certain use cases required representors to support a large number of channels.Hence, representor channel limit to 4 was applicable only when a PCI device, such as Scalable Function support, was enabled.
- Matching on ipv4_ihl (internet header length) was supported only for outer headers.
- When using one counter for both pop/push VLAN actions, the counter value was incorrect. Hence, Spliting the counter for pop_vlan_action_counter and push_vlan_action_counter.
- Incorrect L3 decapsulation occured when the original inner frame was small and was padded to comply with minimum frame size of 64-bytes.
- dapl and libmlx4 were needed by libdat2 and libdpdk. In order to remove or update dapl and libmlx4, their dependencies had to be removed.
- In fork situation, if parent/children processes happen to have samevirtual address, then the doorbell mechanism did not work well and may led to errors in application behavior.
- An override of log_max_qp by other devices occured if the devices share the same mlx5_core module.
- A synchronization issue where closing and opening channels (which might happen on configuration changes such as changing number of channels) may caused null pointer dereference in function mlx5e_select_queue.
- Enabling tx-udp_tnl-csum-segmentation had no affect on the driver.
- Old udevd versions could get stuck renaming network devices, leaving interfaces named eth* instead of enp*.
- Flows with t commit action with ct state -trk were not be offloaded (i.e., table=0,ct_state=-trk,ip actions=ct(commit,table=1)).
- Connection tracking over VF LAG with tunnel encapsulation/decapsulation was not supported and caused traffic drop.
- OFED compilation failed when stack size was limited to 1024.
- Setting rate/burst values higher than 2,147,483,648 were rejected.
- Offloaded remote mirroring flows on tunnel device caused forwarded traffic to VF to not be decapsulated.
- Trying to set VPort match mode on VF (cat/sys/class/net/enp8s0f2/compat/devlink/vport_match_mode), leads to kernel crash.
- OVS flows were not being offloaded over socket-direct devices.
- When VXLAN was configured and illegal route was added, the system crashed with call trace.
- If any traffic was sent before the netdev went up for the first time, a division by zero caused by a modulo operation occured in ndo_select_queue, leading to a kernel panic.
- After restarting driver, the x86 host might be in grace period and might not recover on its own. As part of the fix, 5 FW_fatal recoveries are allowed within the 20-minute grace period. As a result, the grace period in the devlink health show command will appear as 0 for FW_fatal reporter.

Enhancements

MLNX OFED v5.4 contains the following changes and new features:

For ConnectX-4 Adapters:

- Updated mlx5 driver to use auxiliary bus in order to integrate different driver components into driver core and optimize module load/unload sequences.
- WJH (What Just Happened) in NICs: WJH allows for visibility of dropped packets (i.e., receiving notice of drop counters increase, seeing content of the dropped packets, debugging, and more). WJH is a service in devlink context and it is already implemented in the switch.
- Note: processing dropped packets (even for visibility purposes) may cause a degradation in performance and leaves the driver vulnerable for malicious attacks. The feature is disabled by default.
- Supported traps:
- VLAN mismatch: existing generic trap DEVLINK_TRAP_GENERIC_ID_DMAC_MISMATCH Traps received packets with wrong VLAN tag
- DMAC mismatch: new generic trap DEVLINK_TRAP_GENERIC_ID_DMAC_MISMATCH Traps received packets with wrong destination MAC
- Added support for enabling Relaxed Ordering for Kernel ULPs. Using relaxed ordering can improve performance in some setups. Since kernel ULPs are expected to support RO, it is enabled for them by default so they can benefit from it.

For ConnectX-4 Adapters and above:

- In MLNX_OFED 5.4 GA, ConnectX-4/5/6 Ethernet network interfaces are now provided with permanent names. Prior to this release, the default interface names were provided by the kernel and udevd (ethX) remained as-is. From this release onwards, interface names are generated via new udevd rules. The generated names are now predictable, and the default names are automatically renamed to the predictable names by the udevd daemon, according to udev rules files installed by OFED.

For ConnectX-5 Adapters and above:

- Support to allow OVS (OpenVSwitch) kernel to support up to 128 matches (groups) per table and 16M entries per group.
- Offload ct_state flags rpl, inv, and rel.
- For rpl, support was added for both set and not set matching offload (i.e., +rpl and -rpl).
- For inv and rel, support was added only for the not set option (i.e., -rel and -inv).
- Scalable functions (also called subfunctions):This feature enables the user to create, configure, and deploy a scalable functions (e.g., RDMA and networking applications) and to assign them to a container when a container is started via mlxdevm tool.A scalable function can also be deployed in an untrusted guest/host system from the NIC/DPU. This enables full configuration of the function and its representors from the NIC/DPU before giving the function for a container to run in a host system.
- Scalable function QoS and QoS group via mlxdevm's rate commands were added. Run "man mlxdevm port" for details.
- "Signature API" which, on supported devices, allows application-level data-integrity checks via a signature handover mechanism. Various signature types, including CRC32 and T10-DIF, can be automatically calculated and checked, stripped, or appended during the transfer at full wire speed.
- DR support for matching on RAW tunnel headers using the misc5 parameters, This feature allows matching on each bit of the header,
- inducing reserved fields.

For ConnectX-6 Dx Adapters:

- Mapping a QP (Queue Pair) to AH over DEVX API, which enables DC/UD QPs to use multiple CC algorithms in the same data center.
- Better insertion rate in software steering was supported. This includes multi-QP which skips areas in the code that may be for debug only.
- Improved rate of updating steering rules, insertion, and deletion. The feature includes definers, multi-qp approach, and better memory usage.
- Added support for ability to allow or prevent insertion of duplicate rules, so the user can choose one of the following behaviors:
- Prevent duplicate rules, so that already-existing rule and fail can be detected.

- Allow duplicate rules, to enable updating the rule's action (this will only take effect once the previous rule is deleted). By default, duplicate rules are allowed.
- Made it so that all rule's insertion occur in a defined time using defined (export) size of Htble and decreased use of dynamic allocation.

For all HCA's:

- As of version 5.4, the driver is set so that udev rules will change the names of network interfaces created from NVIDIA adapters.The udev rules are shipped to "/lib/udev/rules.d" and may be overridden by placing a file with the same name in "/etc/udev/rules.d".
- Example: /etc/udev/rules.d/82-net-setup-link.rules
- OvS-DPDK deprecated the command "ovs-appctl dpctl/dump-e2e-stats". Instead, the command has been integrated into the existing command "ovs-appctl dpctl/offload-stats-show -m" (when e2e-cache is enabled).
- OvS-DPDK ct-ct-nat offloads is now disabled by default.
- Before version 5.4, /etc/udev/rules.d/90-ib.rules was potentially automatically edited by installation scripts in case the options —umad-dev-rw or —umad-dev-na were used. From version 5.4 and above, those changes are made in /etc/udev/rules.d/91-ib-permissions.rules which (if exist) only include the settings for those command-line options.
- ibv_query_qp_data_in_order() API: This API enables an application to check if the given QP data is guaranteed to be in order, enabling poll for data instead of poll for completion.
- Added ethtool extended link state to mlx5e. ethtool can be used to get more information to help troubleshoot the state.
- Moved all Python scripts and some other common scripts out of the mlnxofa_ kernel packages. This removed the python dependency from that package when rebuilding it and avoided unnecessary errors when rebuilding them for custom kernels.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 7 Update 9 (x86_64)
Version: 5.4 **(Recommended)**
Filename: kmod-mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel7u9.x86_64.compsig; kmod-mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel7u9.x86_64.rpm; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel7u9.x86_64.compsig; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel7u9.x86_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository (http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/).

Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Fixes

The following issues have been fixed in version 5.4:

- To support scalability, function representor channels were limited to 4.However in scenarios when SF (Scalable Function) was not used, certain use cases required representors to support a large number of channels.Hence, representor channel limit to 4 was applicable only when a PCI device, such as Scalable Function support, was enabled.

- Matching on ipv4_ihl (internet header length) was supported only for outer headers.
- When using one counter for both pop/push VLAN actions, the counter value was incorrect. Hence, Spliting the counter for pop_vlan_action_counter and push_vlan_action_counter.
- Incorrect L3 decapsulation occured when the original inner frame was small and was padded to comply with minimum frame size of 64-bytes.
- dapl and libmlx4 were needed by libdat2 and libdpdk. In order to remove or update dapl and libmlx4, their dependencies had to be removed.
- In fork situation, if parent/children processes happen to have samevirtual address, then the doorbell mechanism did not work well and may led to errors in application behavior.
- An override of log_max_qp by other devices occured if the devices share the same mlx5_core module.
- A synchronization issue where closing and opening channels (which might happen on configuration changes such as changing number of channels) may caused null pointer dereference in function mlx5e_select_queue.
- Enabling tx-udp_tnl-csum-segmentation had no affect on the driver.
- Old udevd versions could get stuck renaming network devices, leaving interfaces named eth* instead of enp*.
- Flows with t commit action with ct state -trk were not be offloaded (i.e., table=0,ct_state=-trk,ip actions=ct(commit,table=1)).
- Connection tracking over VF LAG with tunnel encapsulation/decapsulation was not supported and caused traffic drop.
- OFED compilation failed when stack size was limited to 1024.
- Setting rate/burst values higher than 2,147,483,648 were rejected.
- Offloaded remote mirroring flows on tunnel device caused forwarded traffic to VF to not be decapsulated.
- Trying to set VPort match mode on VF (cat/sys/class/net/enp8s0f2/compat/devlink/vport_match_mode), leads to kernel crash.
- OVS flows were not being offloaded over socket-direct devices.
- When VXLAN was configured and illegal route was added, the system crashed with call trace.
- If any traffic was sent before the netdev went up for the first time, a division by zero caused by a modulo operation occured in ndo_select_queue, leading to a kernel panic.
- After restarting driver, the x86 host might be in grace period and might not recover on its own. As part of the fix, 5 FW_fatal recoveries are allowed within the 20-minute grace period. As a result, the grace period in the devlink health show command will appear as 0 for FW_fatal reporter.

Enhancements

MLNX OFED v5.4 contains the following changes and new features:

For ConnectX-4 Adapters:

- Updated mlx5 driver to use auxiliary bus in order to integrate different driver components into driver core and optimize module load/unload sequences.
- WJH (What Just Happened) in NICs: WJH allows for visibility of dropped packets (i.e., receiving notice of drop counters increase, seeing content of the dropped packets, debugging, and more). WJH is a service in devlink context and it is already implemented in the switch.
- Note: processing dropped packets (even for visibility purposes) may cause a degradation in performance and leaves the driver vulnerable for malicious attacks. The feature is disabled by default.
- Supported traps:
- VLAN mismatch: existing generic trap DEVLINK_TRAP_GENERIC_ID_DMAC_MISMATCH Traps received packets with wrong VLAN tag
- DMAC mismatch: new generic trap DEVLINK_TRAP_GENERIC_ID_DMAC_MISMATCH Traps received packets with wrong destination MAC
- Added support for enabling Relaxed Ordering for Kernel ULPs. Using relaxed ordering can improve performance in some setups. Since kernel ULPs are expected to support RO, it is enabled for them by default so they can benefit from it.

For ConnectX-4 Adapters and above:

- In MLNX_OFED 5.4 GA, ConnectX-4/5/6 Ethernet network interfaces are now provided with permanent names. Prior to this release, the default interface names were provided by the kernel and udevd (ethX) remained as-is. From this release onwards, interface names are generated via new udevd rules. The generated names are now predictable, and the default

names are automatically renamed to the predictable names by the udevd daemon, according to udev rules files installed by OFED.

For ConnectX-5 Adapters and above:

- Support to allow OVS (OpenVSwitch) kernel to support up to 128 matches (groups) per table and 16M entries per group.
- Offload ct_state flags rpl, inv, and rel.
- For rpl, support was added for both set and not set matching offload (i.e., +rpl and -rpl).
- For inv and rel, support was added only for the not set option (i.e., -rel and -inv).
- Scalable functions (also called subfunctions):This feature enables the user to create, configure, and deploy a scalable functions (e.g., RDMA and networking applications) and to assign them to a container when a container is started via mlxdevm tool.A scalable function can also be deployed in an untrusted guest/host system from the NIC/DPU. This enables full configuration of the function and its representors from the NIC/DPU before giving the function for a container to run in a host system.
- Scalable function QoS and QoS group via mlxdevm's rate commands were added. Run "man mlxdevm port" for details.
- "Signature API" which, on supported devices, allows application-level data-integrity checks via a signature handover mechanism. Various signature types, including CRC32 and T10-DIF, can be automatically calculated and checked, stripped, or appended during the transfer at full wire speed.
- DR support for matching on RAW tunnel headers using the misc5 parameters, This feature allows matching on each bit of the header,
- inducing reserved fields.

For ConnectX-6 Dx Adapters:

- Mapping a QP (Queue Pair) to AH over DEVX API, which enables DC/UD QPs to use multiple CC algorithms in the same data center.
- Better insertion rate in software steering was supported. This includes multi-QP which skips areas in the code that may be for debug only.
- Improved rate of updating steering rules, insertion, and deletion. The feature includes definers, multi-qp approach, and better memory usage.
- Added support for ability to allow or prevent insertion of duplicate rules, so the user can choose one of the following behaviors:
- Prevent duplicate rules, so that already-existing rule and fail can be detected.
- Allow duplicate rules, to enable updating the rule's action (this will only take effect once the previous rule is deleted). By default, duplicate rules are allowed.
- Made it so that all rule's insertion occur in a defined time using defined (export) size of Htble and decreased use of dynamic allocation.

For all HCA's:

- As of version 5.4, the driver is set so that udev rules will change the names of network interfaces created from NVIDIA adapters.The udev rules are shipped to "/lib/udev/rules.d" and may be overridden by placing a file with the same name in "/etc/udev/rules.d".
- Example: /etc/udev/rules.d/82-net-setup-link.rules
- OvS-DPDK deprecated the command "ovs-appctl dpctl/dump-e2e-stats". Instead, the command has been integrated into the existing command "ovs-appctl dpctl/offload-stats-show -m" (when e2e-cache is enabled).
- OvS-DPDK ct-ct-nat offloads is now disabled by default.
- Before version 5.4, /etc/udev/rules.d/90-ib.rules was potentially automatically edited by installation scripts in case the options —umad-dev-rw or —umad-dev-na were used. From version 5.4 and above, those changes are made in /etc/udev/rules.d/91-ib-permissions.rules which (if exist) only include the settings for those command-line options.
- ibv_query_qp_data_in_order() API: This API enables an application to check if the given QP data is guaranteed to be in order, enabling poll for data instead of poll for completion.
- Added ethtool extended link state to mlx5e. ethtool can be used to get more information to help troubleshoot the state.
- Moved all Python scripts and some other common scripts out of the mlnxofa_ kernel packages. This removed the python dependency from that package when rebuilding it and avoided unnecessary errors when rebuilding them for custom kernels.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 7 Update 9 (x86_64) supported by this binary rpm are: 3.10.0-1160.el7 - (x86_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 8 Update 3 (x86_64)
Version: 5.4 **(Recommended)**
Filename: kmod-mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel8u3.x86_64.compsig; kmod-mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel8u3.x86_64.rpm; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel8u3.x86_64.compsig; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel8u3.x86_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository (https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/).

Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Fixes

The following issues have been fixed in version 5.4:

- To support scalability, function representor channels were limited to 4.However in scenarios when SF (Scalable Function) was not used, certain use cases required representors to support a large number of channels.Hence, representor channel limit to 4 was applicable only when a PCI device, such as Scalable Function support, was enabled.
- Matching on ipv4_ihl (internet header length) was supported only for outer headers.
- When using one counter for both pop/push VLAN actions, the counter value was incorrect. Hence, Spliting the counter for pop_vlan_action_counter and push_vlan_action_counter.
- Incorrect L3 decapsulation occured when the original inner frame was small and was padded to comply with minimum frame size of 64-bytes.
- dapl and libmlx4 were needed by libdat2 and libdpdk. In order to remove or update dapl and libmlx4, their dependencies had to be removed.
- In fork situation, if parent/children processes happen to have samevirtual address, then the doorbell mechanism did not work well and may led to errors in application behavior.
- An override of log_max_qp by other devices occured if the devices share the same mlx5_core module.
- A synchronization issue where closing and opening channels (which might happen on configuration changes such as changing number of channels) may caused null pointer dereference in function mlx5e_select_queue.
- Enabling tx-udp_tnl-csum-segmentation had no affect on the driver.
- Old udevd versions could get stuck renaming network devices, leaving interfaces named eth* instead of enp*.
- Flows with t commit action with ct state -trk were not be offloaded (i.e., table=0,ct_state=-trk,ip actions=ct(commit,table=1)).
- Connection tracking over VF LAG with tunnel encapsulation/decapsulation was not supported and caused traffic drop.
- OFED compilation failed when stack size was limited to 1024.
- Setting rate/burst values higher than 2,147,483,648 were rejected.
- Offloaded remote mirroring flows on tunnel device caused forwarded traffic to VF to not be decapsulated.
- Trying to set VPort match mode on VF (cat/sys/class/net/enp8s0f2/compat/devlink/vport_match_mode), leads to kernel crash.
- OVS flows were not being offloaded over socket-direct devices.
- When VXLAN was configured and illegal route was added, the system crashed with call trace.

- If any traffic was sent before the netdev went up for the first time, a division by zero caused by a modulo operation occured in ndo_select_queue, leading to a kernel panic.
- After restarting driver, the x86 host might be in grace period and might not recover on its own. As part of the fix, 5 FW_fatal recoveries are allowed within the 20-minute grace period. As a result, the grace period in the devlink health show command will appear as 0 for FW_fatal reporter.

Enhancements

MLNX OFED v5.4 contains the following changes and new features:

For ConnectX-4 Adapters:

- Updated mlx5 driver to use auxiliary bus in order to integrate different driver components into driver core and optimize module load/unload sequences.
- WJH (What Just Happened) in NICs: WJH allows for visibility of dropped packets (i.e., receiving notice of drop counters increase, seeing content of the dropped packets, debugging, and more). WJH is a service in devlink context and it is already implemented in the switch.
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- Added support for enabling Relaxed Ordering for Kernel ULPs. Using relaxed ordering can improve performance in some setups. Since kernel ULPs are expected to support RO, it is enabled for them by default so they can benefit from it.

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- Support to allow OVS (OpenVSwitch) kernel to support up to 128 matches (groups) per table and 16M entries per group.
- Offload ct_state flags rpl, inv, and rel.
- For rpl, support was added for both set and not set matching offload (i.e., +rpl and -rpl).
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- "Signature API" which, on supported devices, allows application-level data-integrity checks via a signature handover mechanism. Various signature types, including CRC32 and T10-DIF, can be automatically calculated and checked, stripped, or appended during the transfer at full wire speed.
- DR support for matching on RAW tunnel headers using the misc5 parameters, This feature allows matching on each bit of the header,
- inducing reserved fields.

For ConnectX-6 Dx Adapters:

- Mapping a QP (Queue Pair) to AH over DEVX API, which enables DC/UD QPs to use multiple CC algorithms in the same data center.
- Better insertion rate in software steering was supported. This includes multi-QP which skips areas in the code that may be for debug only.
- Improved rate of updating steering rules, insertion, and deletion. The feature includes definers, multi-qp approach, and better memory usage.
- Added support for ability to allow or prevent insertion of duplicate rules, so the user can choose one of the following behaviors:
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- ibv_query_qp_data_in_order() API: This API enables an application to check if the given QP data is guaranteed to be in order, enabling poll for data instead of poll for completion.
- Added ethtool extended link state to mlx5e. ethtool can be used to get more information to help troubleshoot the state.
- Moved all Python scripts and some other common scripts out of the mlnxofa_ kernel packages. This removed the python dependency from that package when rebuilding it and avoided unnecessary errors when rebuilding them for custom kernels.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 8 update 3(x86_64) supported by this binary rpm are: 4.18.0-240.el8 - (x86_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for Red Hat Enterprise Linux 8 Update 4 (x86_64)
Version: 5.4 **(Recommended)**
Filename: kmod-mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel8u4.x86_64.compsig; kmod-mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel8u4.x86_64.rpm; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel8u4.x86_64.compsig; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.rhel8u4.x86_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository (https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/).

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- Trying to set VPort match mode on VF (cat/sys/class/net/enp8s0f2/compat/devlink/vport_match_mode), leads to kernel crash.
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- Scalable function QoS and QoS group via mlxdevm's rate commands were added. Run "man mlxdevm port" for details.
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For ConnectX-6 Dx Adapters:

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- Better insertion rate in software steering was supported. This includes multi-QP which skips areas in the code that may be for debug only.
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For all HCA's:

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Supported Devices and Features

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 8 update 4(x86_64) supported by this binary rpm are: 4.18.0-296.el8 - (x86_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T)
Version: 5.4 **(Recommended)**
Filename: mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.sles12sp4.x86_64.compsig; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.sles12sp4.x86_64.rpm; mlnx-ofa_kernel-kmp-default-5.4_k4.12.14_94.41-OFED.5.4.1.0.3.1.sles12sp4.x86_64.compsig; mlnx-ofa_kernel-kmp-default-5.4_k4.12.14_94.41-OFED.5.4.1.0.3.1.sles12sp4.x86_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository (http://downloads.linux.hpe.com/SDR/repo/mlnx_ofed/).

Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Fixes

The following issues have been fixed in version 5.4:

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- Matching on ipv4_ihl (internet header length) was supported only for outer headers.
- When using one counter for both pop/push VLAN actions, the counter value was incorrect. Hence, Spliting the counter for pop_vlan_action_counter and push_vlan_action_counter.
- Incorrect L3 decapsulation occured when the original inner frame was small and was padded to comply with minimum frame size of 64-bytes.
- dapl and libmlx4 were needed by libdat2 and libdpdk. In order to remove or update dapl and libmlx4, their dependencies had to be removed.
- In fork situation, if parent/children processes happen to have samevirtual address, then the doorbell mechanism did not work well and may led to errors in application behavior.
- An override of log_max_qp by other devices occured if the devices share the same mlx5_core module.
- A synchronization issue where closing and opening channels (which might happen on configuration changes such as changing number of channels) may caused null pointer dereference in function mlx5e_select_queue.
- Enabling tx-udp_tnl-csum-segmentation had no affect on the driver.
- Old udevd versions could get stuck renaming network devices, leaving interfaces named eth* instead of enp*.

- Flows with t commit action with ct state -trk were not be offloaded (i.e., table=0,ct_state=-trk,ip actions=ct(commit,table=1)).
- Connection tracking over VF LAG with tunnel encapsulation/decapsulation was not supported and caused traffic drop.
- OFED compilation failed when stack size was limited to 1024.
- Setting rate/burst values higher than 2,147,483,648 were rejected.
- Offloaded remote mirroring flows on tunnel device caused forwarded traffic to VF to not be decapsulated.
- Trying to set VPort match mode on VF (cat/sys/class/net/enp8s0f2/compat/devlink/vport_match_mode), leads to kernel crash.
- OVS flows were not being offloaded over socket-direct devices.
- When VXLAN was configured and illegal route was added, the system crashed with call trace.
- If any traffic was sent before the netdev went up for the first time, a division by zero caused by a modulo operation occured in ndo_select_queue, leading to a kernel panic.
- After restarting driver, the x86 host might be in grace period and might not recover on its own. As part of the fix, 5 FW_fatal recoveries are allowed within the 20-minute grace period. As a result, the grace period in the devlink health show command will appear as 0 for FW_fatal reporter.

Enhancements

MLNX OFED v5.4 contains the following changes and new features:

For ConnectX-4 Adapters:

- Updated mlx5 driver to use auxiliary bus in order to integrate different driver components into driver core and optimize module load/unload sequences.
- WJH (What Just Happened) in NICs: WJH allows for visibility of dropped packets (i.e., receiving notice of drop counters increase, seeing content of the dropped packets, debugging, and more). WJH is a service in devlink context and it is already implemented in the switch.
- Note: processing dropped packets (even for visibility purposes) may cause a degradation in performance and leaves the driver vulnerable for malicious attacks. The feature is disabled by default.
- Supported traps:
- VLAN mismatch: existing generic trap DEVLINK_TRAP_GENERIC_ID_DMAC_MISMATCH Traps received packets with wrong VLAN tag
- DMAC mismatch: new generic trap DEVLINK_TRAP_GENERIC_ID_DMAC_MISMATCH Traps received packets with wrong destination MAC
- Added support for enabling Relaxed Ordering for Kernel ULPs. Using relaxed ordering can improve performance in some setups. Since kernel ULPs are expected to support RO, it is enabled for them by default so they can benefit from it.

For ConnectX-4 Adapters and above:

- In MLNX_OFED 5.4 GA, ConnectX-4/5/6 Ethernet network interfaces are now provided with permanent names. Prior to this release, the default interface names were provided by the kernel and udevd (ethX) remained as-is. From this release onwards, interface names are generated via new udevd rules. The generated names are now predictable, and the default names are automatically renamed to the predictable names by the udevd daemon, according to udev rules files installed by OFED.

For ConnectX-5 Adapters and above:

- Support to allow OVS (OpenVSwitch) kernel to support up to 128 matches (groups) per table and 16M entries per group.
- Offload ct_state flags rpl, inv, and rel.
- For rpl, support was added for both set and not set matching offload (i.e., +rpl and -rpl).
- For inv and rel, support was added only for the not set option (i.e., -rel and -inv).
- Scalable functions (also called subfunctions):This feature enables the user to create, configure, and deploy a scalable functions (e.g., RDMA and networking applications) and to assign them to a container when a container is started via mlxdevm tool.A scalable function can also be deployed in an untrusted guest/host system from the NIC/DPU. This enables full configuration of the function and its representors from the NIC/DPU before giving the function for a container to run in a host system.

- Scalable function QoS and QoS group via mlxdevm's rate commands were added. Run "man mlxdevm port" for details.
- "Signature API" which, on supported devices, allows application-level data-integrity checks via a signature handover mechanism. Various signature types, including CRC32 and T10-DIF, can be automatically calculated and checked, stripped, or appended during the transfer at full wire speed.
- DR support for matching on RAW tunnel headers using the misc5 parameters, This feature allows matching on each bit of the header,
- inducing reserved fields.

For ConnectX-6 Dx Adapters:

- Mapping a QP (Queue Pair) to AH over DEVX API, which enables DC/UD QPs to use multiple CC algorithms in the same data center.
- Better insertion rate in software steering was supported. This includes multi-QP which skips areas in the code that may be for debug only.
- Improved rate of updating steering rules, insertion, and deletion. The feature includes definers, multi-qp approach, and better memory usage.
- Added support for ability to allow or prevent insertion of duplicate rules, so the user can choose one of the following behaviors:
- Prevent duplicate rules, so that already-existing rule and fail can be detected.
- Allow duplicate rules, to enable updating the rule's action (this will only take effect once the previous rule is deleted). By default, duplicate rules are allowed.
- Made it so that all rule's insertion occur in a defined time using defined (export) size of Htble and decreased use of dynamic allocation.

For all HCA's:

- As of version 5.4, the driver is set so that udev rules will change the names of network interfaces created from NVIDIA adapters.The udev rules are shipped to "/lib/udev/rules.d" and may be overridden by placing a file with the same name in "/etc/udev/rules.d".
- Example: /etc/udev/rules.d/82-net-setup-link.rules
- OvS-DPDK deprecated the command "ovs-appctl dpctl/dump-e2e-stats". Instead, the command has been integrated into the existing command "ovs-appctl dpctl/offload-stats-show -m" (when e2e-cache is enabled).
- OvS-DPDK ct-ct-nat offloads is now disabled by default.
- Before version 5.4, /etc/udev/rules.d/90-ib.rules was potentially automatically edited by installation scripts in case the options —umad-dev-rw or —umad-dev-na were used. From version 5.4 and above, those changes are made in /etc/udev/rules.d/91-ib-permissions.rules which (if exist) only include the settings for those command-line options.
- ibv_query_qp_data_in_order() API: This API enables an application to check if the given QP data is guaranteed to be in order, enabling poll for data instead of poll for completion.
- Added ethtool extended link state to mlx5e. ethtool can be used to get more information to help troubleshoot the state.
- Moved all Python scripts and some other common scripts out of the mlnxofa_ kernel packages. This removed the python dependency from that package when rebuilding it and avoided unnecessary errors when rebuilding them for custom kernels.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are:
4.12.14-94.41-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T)
Version: 5.4 **(Recommended)**
Filename: mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.sles12sp5.x86_64.compsig; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.sles12sp5.x86_64.rpm; mlnx-ofa_kernel-kmp-default-5.4_k4.12.14_120-OFED.5.4.1.0.3.1.sles12sp5.x86_64.compsig; mlnx-ofa_kernel-kmp-default-5.4_k4.12.14_120-OFED.5.4.1.0.3.1.sles12sp5.x86_64.rpm

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- Connection tracking over VF LAG with tunnel encapsulation/decapsulation was not supported and caused traffic drop.
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Supported Devices and Features

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4.12.14-120-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 15 SP2 (AMD64/EM64T)
Version: 5.4 **(Recommended)**
Filename: mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.sles15sp2.x86_64.compsig; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.sles15sp2.x86_64.rpm; mlnx-ofa_kernel-kmp-default-5.4_k5.3.18_22-OFED.5.4.1.0.3.1.sles15sp2.x86_64.compsig; mlnx-ofa_kernel-kmp-default-5.4_k5.3.18_22-OFED.5.4.1.0.3.1.sles15sp2.x86_64.rpm

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Supported Devices and Features

SUPPORTED KERNELS:

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are:
5.3.18-22-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Mellanox ConnectX-4, ConnectX-5 and ConnectX-6 Adapters for SUSE LINUX Enterprise Server 15 SP3 (AMD64/EM64T)
Version: 5.4 **(Recommended)**
Filename: mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.sles15sp3.x86_64.compsig; mlnx-ofa_kernel-5.4-OFED.5.4.1.0.3.1.sles15sp3.x86_64.rpm; mlnx-ofa_kernel-kmp-default-5.4_k5.3.18_57-OFED.5.4.1.0.3.1.sles15sp3.x86_64.compsig; mlnx-ofa_kernel-kmp-default-5.4_k5.3.18_57-OFED.5.4.1.0.3.1.sles15sp3.x86_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository (https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/).

Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Fixes

The following issues have been fixed in version 5.4:

- To support scalability, function representor channels were limited to 4.However in scenarios when SF (Scalable Function) was not used, certain use cases required representors to support a large number of channels.Hence, representor channel limit to 4 was applicable only when a PCI device, such as Scalable Function support, was enabled.
- Matching on ipv4_ihl (internet header length) was supported only for outer headers.
- When using one counter for both pop/push VLAN actions, the counter value was incorrect. Hence, Spliting the counter for pop_vlan_action_counter and push_vlan_action_counter.
- Incorrect L3 decapsulation occured when the original inner frame was small and was padded to comply with minimum frame size of 64-bytes.
- dapl and libmlx4 were needed by libdat2 and libdpdk. In order to remove or update dapl and libmlx4, their dependencies had to be removed.
- In fork situation, if parent/children processes happen to have samevirtual address, then the doorbell mechanism did not work well and may led to errors in application behavior.
- An override of log_max_qp by other devices occured if the devices share the same mlx5_core module.
- A synchronization issue where closing and opening channels (which might happen on configuration changes such as changing number of channels) may caused null pointer dereference in function mlx5e_select_queue.
- Enabling tx-udp_tnl-csum-segmentation had no affect on the driver.
- Old udevd versions could get stuck renaming network devices, leaving interfaces named eth* instead of enp*.
- Flows with t commit action with ct state -trk were not be offloaded (i.e., table=0,ct_state=-trk,ip actions=ct(commit,table=1)).
- Connection tracking over VF LAG with tunnel encapsulation/decapsulation was not supported and caused traffic drop.
- OFED compilation failed when stack size was limited to 1024.
- Setting rate/burst values higher than 2,147,483,648 were rejected.
- Offloaded remote mirroring flows on tunnel device caused forwarded traffic to VF to not be decapsulated.
- Trying to set VPort match mode on VF (cat/sys/class/net/enp8s0f2/compat/devlink/vport_match_mode), leads to kernel crash.
- OVS flows were not being offloaded over socket-direct devices.
- When VXLAN was configured and illegal route was added, the system crashed with call trace.
- If any traffic was sent before the netdev went up for the first time, a division by zero caused by a modulo operation occured in ndo_select_queue, leading to a kernel panic.

- After restarting driver, the x86 host might be in grace period and might not recover on its own. As part of the fix, 5 FW_fatal recoveries are allowed within the 20-minute grace period. As a result, the grace period in the devlink health show command will appear as 0 for FW_fatal reporter.

Enhancements

MLNX OFED v5.4 contains the following changes and new features:

For ConnectX-4 Adapters:

- Updated mlx5 driver to use auxiliary bus in order to integrate different driver components into driver core and optimize module load/unload sequences.
- WJH (What Just Happened) in NICs: WJH allows for visibility of dropped packets (i.e., receiving notice of drop counters increase, seeing content of the dropped packets, debugging, and more). WJH is a service in devlink context and it is already implemented in the switch.
- Note: processing dropped packets (even for visibility purposes) may cause a degradation in performance and leaves the driver vulnerable for malicious attacks. The feature is disabled by default.
- Supported traps:
- VLAN mismatch: existing generic trap DEVLINK_TRAP_GENERIC_ID_DMAC_MISMATCH Traps received packets with wrong VLAN tag
- DMAC mismatch: new generic trap DEVLINK_TRAP_GENERIC_ID_DMAC_MISMATCH Traps received packets with wrong destination MAC
- Added support for enabling Relaxed Ordering for Kernel ULPs. Using relaxed ordering can improve performance in some setups. Since kernel ULPs are expected to support RO, it is enabled for them by default so they can benefit from it.

For ConnectX-4 Adapters and above:

- In MLNX_OFED 5.4 GA, ConnectX-4/5/6 Ethernet network interfaces are now provided with permanent names. Prior to this release, the default interface names were provided by the kernel and udevd (ethX) remained as-is. From this release onwards, interface names are generated via new udevd rules. The generated names are now predictable, and the default names are automatically renamed to the predictable names by the udevd daemon, according to udev rules files installed by OFED.

For ConnectX-5 Adapters and above:

- Support to allow OVS (OpenVSwitch) kernel to support up to 128 matches (groups) per table and 16M entries per group.
- Offload ct_state flags rpl, inv, and rel.
- For rpl, support was added for both set and not set matching offload (i.e., +rpl and -rpl).
- For inv and rel, support was added only for the not set option (i.e., -rel and -inv).
- Scalable functions (also called subfunctions):This feature enables the user to create, configure, and deploy a scalable functions (e.g., RDMA and networking applications) and to assign them to a container when a container is started via mlxdevm tool.A scalable function can also be deployed in an untrusted guest/host system from the NIC/DPU. This enables full configuration of the function and its representors from the NIC/DPU before giving the function for a container to run in a host system.
- Scalable function QoS and QoS group via mlxdevm's rate commands were added. Run "man mlxdevm port" for details.
- "Signature API" which, on supported devices, allows application-level data-integrity checks via a signature handover mechanism. Various signature types, including CRC32 and T10-DIF, can be automatically calculated and checked, stripped, or appended during the transfer at full wire speed.
- DR support for matching on RAW tunnel headers using the misc5 parameters, This feature allows matching on each bit of the header,
- inducing reserved fields.

For ConnectX-6 Dx Adapters:

- Mapping a QP (Queue Pair) to AH over DEVX API, which enables DC/UD QPs to use multiple CC algorithms in the same data center.

- Better insertion rate in software steering was supported. This includes multi-QP which skips areas in the code that may be for debug only.
- Improved rate of updating steering rules, insertion, and deletion. The feature includes definers, multi-qp approach, and better memory usage.
- Added support for ability to allow or prevent insertion of duplicate rules, so the user can choose one of the following behaviors:
- Prevent duplicate rules, so that already-existing rule and fail can be detected.
- Allow duplicate rules, to enable updating the rule's action (this will only take effect once the previous rule is deleted). By default, duplicate rules are allowed.
- Made it so that all rule's insertion occur in a defined time using defined (export) size of Htble and decreased use of dynamic allocation.

For all HCA's:

- As of version 5.4, the driver is set so that udev rules will change the names of network interfaces created from NVIDIA adapters.The udev rules are shipped to "/lib/udev/rules.d" and may be overridden by placing a file with the same name in "/etc/udev/rules.d".
- Example: /etc/udev/rules.d/82-net-setup-link.rules
- OvS-DPDK deprecated the command "ovs-appctl dpctl/dump-e2e-stats". Instead, the command has been integrated into the existing command "ovs-appctl dpctl/offload-stats-show -m" (when e2e-cache is enabled).
- OvS-DPDK ct-ct-nat offloads is now disabled by default.
- Before version 5.4, /etc/udev/rules.d/90-ib.rules was potentially automatically edited by installation scripts in case the options —umad-dev-rw or —umad-dev-na were used. From version 5.4 and above, those changes are made in /etc/udev/rules.d/91-ib-permissions.rules which (if exist) only include the settings for those command-line options.
- ibv_query_qp_data_in_order() API: This API enables an application to check if the given QP data is guaranteed to be in order, enabling poll for data instead of poll for completion.
- Added ethtool extended link state to mlx5e. ethtool can be used to get more information to help troubleshoot the state.
- Moved all Python scripts and some other common scripts out of the mlnxofa_ kernel packages. This removed the python dependency from that package when rebuilding it and avoided unnecessary errors when rebuilding them for custom kernels.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 15 SP3 (AMD64/EM64T) supported by this binary rpm are:
5.3.18-46-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 8 (x86_64)
Version: 4.9-3.1.6.1 **(Recommended)**
Filename: kmod-mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel7u8.x86_64.compsig; kmod-mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel7u8.x86_64.rpm; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel7u8.x86_64.compsig; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel7u8.x86_64.rpm

Important Note!

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Prerequisites

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Fixes

The following issues have been fixed in version 4.9:

- IOMMU allocation failures occurred when the device was under massive load.
- "ibv_devinfo -v" command did not print some of the MEM_WINDOW capabilities, even though they were supported.

Enhancements

The following changes and new features are added in version 4.9:

- **For ConnectX-5 Adapters and above**

Added support for the following features:

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

Added support for the following features:

- Exposed rx_prio[p]_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce_adp_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce_adp_retrans_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce_slow_restart - counts the number of times RoCE slow restart was used.
  - roce_slow_restart_cnps - counts the number of times RoCE slow restart generated CNP packets roce_slow_restart_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

Added support for the following features:

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.

- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 7 Update 8 (x86_64) supported by this binary rpm are: 3.10.0-1127.el7 - (x86_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 7 Update 9 (x86_64)
Version: 4.9-3.1.6.1 **(Recommended)**
Filename: kmod-mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel7u9.x86_64.compsig; kmod-mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel7u9.x86_64.rpm; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel7u9.x86_64.compsig; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel7u9.x86_64.rpm

Important Note!

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Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Fixes

The following issues have been fixed in version 4.9:

- IOMMU allocation failures occurred when the device was under massive load.
- "ibv_devinfo -v" command did not print some of the MEM_WINDOW capabilities, even though they were supported.

Enhancements

The following changes and new features are added in version 4.9:

- **For ConnectX-5 Adapters and above**

Added support for the following features:

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.

- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

Added support for the following features:

- Exposed rx_prio[p]_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce_adp_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce_adp_retrans_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce_slow_restart - counts the number of times RoCE slow restart was used.
  - roce_slow_restart_cnps - counts the number of times RoCE slow restart generated CNP packets roce_slow_restart_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

Added support for the following features:

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
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- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of Red Hat Enterprise Linux 7 Update 9 (x86_64) supported by this binary rpm are: 3.10.0-1160.el7 - (x86_64) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for Red Hat Enterprise Linux 8 update 3 (x86_64)
Version: 4.9-3.1.6.1 **(Recommended)**
Filename: kmod-mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel8u3.x86_64.compsig; kmod-mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel8u3.x86_64.rpm; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel8u3.x86_64.compsig; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.rhel8u3.x86_64.rpm

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- "ibv_devinfo -v" command did not print some of the MEM_WINDOW capabilities, even though they were supported.

Enhancements

The following changes and new features are added in version 4.9:

- **For ConnectX-5 Adapters and above**

Added support for the following features:

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

Added support for the following features:

- Exposed rx_prio[p]_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound.

Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.

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HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T)
Version: 4.9-3.1.6.1 **(Recommended)**
Filename: mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.sles12sp4.x86_64.compsig; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.sles12sp4.x86_64.rpm; mlnx-ofa_kernel-kmp-default-4.9_k4.12.14_94.41-OFED.4.9.3.1.6.1.sles12sp4.x86_64.compsig; mlnx-ofa_kernel-kmp-default-4.9_k4.12.14_94.41-OFED.4.9.3.1.6.1.sles12sp4.x86_64.rpm

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- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 12 SP4 (AMD64/EM64T) supported by this binary rpm are:
4.12.14-94.41-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T)
Version: 4.9-3.1.6.1 **(Recommended)**
Filename: mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.sles12sp5.x86_64.compsig; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.sles12sp5.x86_64.rpm; mlnx-ofa_kernel-kmp-default-4.9_k4.12.14_120-OFED.4.9.3.1.6.1.sles12sp5.x86_64.compsig; mlnx-ofa_kernel-kmp-default-4.9_k4.12.14_120-OFED.4.9.3.1.6.1.sles12sp5.x86_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository (https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/).

Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Fixes

The following issues have been fixed in version 4.9:

- IOMMU allocation failures occurred when the device was under massive load.
- "ibv_devinfo -v" command did not print some of the MEM_WINDOW capabilities, even though they were supported.

Enhancements

The following changes and new features are added in version 4.9:

- **For ConnectX-5 Adapters and above**

Added support for the following features:

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
- The conventional TX descriptor (WQE or Work Queue Element) describes a single packet for transmission. Added driver support for the HW feature of multi-packet TX WQEs in XDP transmit flows. With this, the HW becomes capable of working with a new and improved WQE layout that describes several packets. In effect, this feature saves PCI bandwidth and transactions, and improves transmit packet rate.
- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
- Updating CT (Connection Tracking) rules using the software steering mechanism.
- Updating remote mirroring rules using the software steering mechanism.

- **For ConnectX-4 Adapters and above**

Added support for the following features:

- Exposed rx_prio[p]_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce_adp_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce_adp_retrans_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce_slow_restart - counts the number of times RoCE slow restart was used.
  - roce_slow_restart_cnps - counts the number of times RoCE slow restart generated CNP packets roce_slow_restart_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

Added support for the following features:

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

<u>Supported Devices and Features</u>

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 12 SP5 (AMD64/EM64T) supported by this binary rpm are:
4.12.14-120-default - (AMD64/EM64T) and future update kernels.

HPE Mellanox RoCE (RDMA over Converged Ethernet) Driver for SUSE LINUX Enterprise Server 15 SP2 (AMD64/EM64T)
Version: 4.9-3.1.6.1 **(Recommended)**
Filename: mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.sles15sp2.x86_64.compsig; mlnx-ofa_kernel-4.9-OFED.4.9.3.1.6.1.sles15sp2.x86_64.rpm; mlnx-ofa_kernel-kmp-default-4.9_k5.3.18_22-OFED.4.9.3.1.6.1.sles15sp2.x86_64.compsig; mlnx-ofa_kernel-kmp-default-4.9_k5.3.18_22-OFED.4.9.3.1.6.1.sles15sp2.x86_64.rpm

Important Note!

Mellanox Ethernet + RoCE Linux driver (mlnx-ofa_kernel RPMs) supports only Ethernet mode of operation for HPE Mellanox adapters. For customers requiring complete InfiniBand functionality or "InfiniBand + Ethernet" modes of operation on the same node, install MLNX-OFED drivers from "Mellanox OFED VPI Drivers and Utilities" Linux Software Delivery Repository (https://downloads.linux.hpe.com/SDR/project/mlnx_ofed/).

Prerequisites

Following packages must be installed from the respective OS distributions prior to installing the driver component:

- Python version 2.7

Fixes

The following issues have been fixed in version 4.9:

- IOMMU allocation failures occurred when the device was under massive load.
- "ibv_devinfo -v" command did not print some of the MEM_WINDOW capabilities, even though they were supported.

Enhancements

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- **For ConnectX-5 Adapters and above**

Added support for the following features:

- Option to dump configuration space via the devlink tool in order to improve debug capabilities.
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- GENEVE encapsulation/decapsulation rules offload.
- Driver support for the hardware feature of multi-packet Tx to work with a new and improved WQE layout that describes several packets instead of a single packet for XDP transmission flows. This saves PCI bandwidth and transactions, and improves transmit packet rate.
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- **For ConnectX-4 Adapters and above**

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- Exposed rx_prio[p]_discards discard counters per priority that count the number of received packets dropped due to lack of buffers on the physical port.
- Reporting TSO and CSUM offload capabilities for MPLS tagged traffic and, allowed the kernel stack to use these offloads.
- mlx5e Max Combined Channels Increased the driver's maximal combined channels value from 64 to 128 (however, note that OOB value will not cross 64). 128 is the upper bound. Lower maximal value can be seen on the host, depending on the number of cores and MSIX's configured by the firmware.
- Added the following RoCE accelerator counters:
  - roce_adp_retrans - counts the number of adaptive retransmissions for RoCE traffic.
  - roce_adp_retrans_to - counts the number of times RoCE traffic reached timeout due to adaptive retransmission.
  - roce_slow_restart - counts the number of times RoCE slow restart was used.
  - roce_slow_restart_cnps - counts the number of times RoCE slow restart generated CNP packets roce_slow_restart_trans - counts the number of times RoCE slow restart changed state to slow restart.
- User to register memory regions with a relaxed ordering access flag through experimental verbs. This can enhance performance, depending on architecture and scenario.

- **For All HCA's**

Added support for the following features:

- Output ibdev2netdev tool output was changed such that the bonding device now points at the bond instead of the slave interface.
- Monitoring and recovering from errors that occur on the RX queue, such as cookie errors and timeout.
- Improved GSO (Generic Segmentation Offload) workload performance by decreasing doorbells usage to the minimum required.
- TX CQE (Completion Queue Element) compression. Saves on outgoing PCIe bandwidth by compressing CQEs together. Disabled by default. Configurable via private flags of ethtool.
- Firmware Versions Query via Devlink :Added the option to query for running and stored firmware versions using the devlink tool.
- Firmware Flash Update via Devlink :Added the option to update the firmware image in the flash using the devlink tool. Usage: devlink dev flash file .mfa2 For further information on how to perform this update, see "Updating Firmware Using ethtool/devlink and .mfa2 File" section in MFT User Manual.
- WQE (Work Queue Element) dump, triggered by an error on Rx/Tx reporters. In addition, some dumps (not triggered by an error) can be retrieved by the user via devlink health reporters.
- GENEVE tunneled hardware offloads of TSO, CSUM and RSS.
- TCP segmentation and checksum offload support for MPLS-tagged traffic.

Supported Devices and Features

SUPPORTED KERNELS:

The kernels of SUSE LINUX Enterprise Server 15 SP2 (AMD64/EM64T) supported by this binary rpm are:
5.3.18-22-default - (AMD64/EM64T) and future update kernels.

HPE QLogic FastLinQ 10/25/50 GbE Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 8.55.14.0-2 **(Recommended)**
Filename: kmod-qlgc-fastlinq-8.55.14.0-2.rhel7u8.x86_64.compsig; kmod-qlgc-fastlinq-8.55.14.0-2.rhel7u8.x86_64.rpm; kmod-qlgc-fastlinq-8.55.14.0-2.rhel7u9.x86_64.compsig; kmod-qlgc-fastlinq-8.55.14.0-2.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE QLogic FastLinQ Firmware Package for Arrowhead adapters*, version 8.55.27 or later, for use with these drivers.

Fixes

- This product addresses an issue where the 10GbE Adapters having an DNS resolution issue on Kubernetes container-orchestration system
- This product addresses an issue where system crashes after PCIe error injection multiple times on HPE SDFlex system
- This product addresses an issue where the ethernet data rate limiting doesn't work for Virtual Functions (VFs) .
- This product addresses an issue where the system crash once there are not enough number of msix vectors as requested for Virtual Functions (VFs).

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 10/25/50 GbE Drivers for Red Hat Enterprise Linux 8
Version: 8.55.14.0-2 **(Recommended)**
Filename: kmod-qlgc-fastlinq-8.55.14.0-2.rhel8u3.x86_64.compsig; kmod-qlgc-fastlinq-8.55.14.0-2.rhel8u3.x86_64.rpm; kmod-qlgc-fastlinq-8.55.14.0-2.rhel8u4.x86_64.compsig; kmod-qlgc-fastlinq-8.55.14.0-2.rhel8u4.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE QLogic FastLinQ Firmware Package for Arrowhead adapters*, version 8.55.27 or later, for use with these drivers.

Fixes

- This product addresses an issue where the 10GbE Adapters having an DNS resolution issue on Kubernetes container-orchestration system
- This product addresses an issue where system crashes after PCIe error injection multiple times on HPE SDFlex system

Enhancements

This product now supports Red Hat Enterprise Linux 8 update 4

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 10/25/50 GbE Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 8.55.14.0-2 **(Recommended)**

Filename: qlgc-fastlinq-kmp-default-8.55.14.0_k4.12.14_120-2.sles12sp5.x86_64.compsig; qlgc-fastlinq-kmp-default-8.55.14.0_k4.12.14_120-2.sles12sp5.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE QLogic FastLinQ Firmware Package for Arrowhead adapters*, version 8.55.27 or later, for use with these drivers.

Fixes

- This product addresses an issue where the 10GbE Adapters having an DNS resolution issue on Kubernetes container-orchestration system
- This product addresses an issue where system crashes after PCIe error injection multiple times on HPE SDFlex system

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 10/25/50 GbE Drivers for SUSE Linux Enterprise Server 15
Version: 8.55.14.0-2 **(Recommended)**
Filename: qlgc-fastlinq-kmp-default-8.55.14.0_k5.3.18_22-2.sles15sp2.x86_64.compsig; qlgc-fastlinq-kmp-default-8.55.14.0_k5.3.18_22-2.sles15sp2.x86_64.rpm; qlgc-fastlinq-kmp-default-8.55.14.0_k5.3.18_57-2.sles15sp3.x86_64.compsig; qlgc-fastlinq-kmp-default-8.55.14.0_k5.3.18_57-2.sles15sp3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE QLogic FastLinQ Firmware Package for Arrowhead adapters*, version 8.55.27 or later, for use with these drivers.

Fixes

- This product addresses an issue where the 10GbE Adapters having an DNS resolution issue on Kubernetes container-orchestration system
- This product addresses an issue where system crashes after PCIe error injection multiple times on HPE SDFlex system

Enhancements

This product now supports SUSE Linux Enterprise Server 15 Service Pack 3

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 10/25/50 GbE Drivers for Windows Server x64 Editions
Version: 8.58.16.0 **(Recommended)**
Filename: cp047061.compsig; cp047061.exe

Important Note!

HPE recommends the firmware provided in *HPE QLogic FastLinQ Firmware Package for Arrowhead adapters*, version 8.55.27 or later, for use with these drivers.

Fixes

- This product correct an issue where RoCE+L2 traffic on MOS in NPAR mode
- This product correct an issue where transmitting under heavy PAUSE/Priority-based Flow Control (PFC)
- This product correct an issue where turning off VMs while VF RDMA traffic is running
- This product correct an issue where yellow bang while running VF RoCE traffic with overnight switch port.
- This product correct an issue where installing dirvers with iSCSI enumerated.

Enhancements

This product now supports Microsoft Windows Server 2022.

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 10/25/50 GbE Multifunction Driver for VMware vSphere 6.5
Version: 2021.09.04 **(Recommended)**
Filename: cp049003.compsig; cp049003.zip

Important Note!

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

HPE recommends the firmware provided in *HPE QLogic FastLinQ Firmware Package for Arrowhead adapters*, version 8.55.27 or later, for use with these drivers.

Enhancements

This product enhances that collection of Firmware debug data in different scenarios.

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 10/25/50 GbE Multifunction Driver for VMware vSphere 6.7
Version: 2021.09.04 **(Recommended)**
Filename: cp047112.compsig; cp047112.zip

Important Note!

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

HPE recommends the firmware provided in *HPE QLogic FastLinQ Firmware Package for Arrowhead adapters*, version 8.55.27 or later, for use with these drivers.

Fixes

This product corrects an issue Vmkernel logs are flooding while running the traffic.

Enhancements

This product enhances reliability via adding support for communication between firmware and drivers.

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 10/25/50 GbE Multifunction Driver for VMware vSphere 7.0
Version: 2021.09.04 **(Recommended)**
Filename: cp047113.compsig; cp047113.zip

Important Note!

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

HPE recommends the firmware provided in *HPE QLogic FastLinQ Firmware Package for Arrowhead adapters*, version 8.55.27 or later, for use with these drivers.

Fixes

This product corrects an issue Vmkernel logs are flooding while running the traffic.

Enhancements

This product enhances reliability via adding support for communication between firmware and drivers.

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 NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.5
Version: 2021.09.04 **(Recommended)**
Filename: cp047871.compsig; cp047871.zip

Important Note!

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

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.29.0 or later, for use with this driver.

Enhancements

This products enhances the mechanism that collation of data log.

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 530T Adapter
- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.7
Version: 2021.09.04 **(Recommended)**
Filename: cp047116.compsig; cp047116.zip

Important Note!

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

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.29.0 or later, for use with this driver.

Enhancements

This products enhances the mechanism that collation of data log.

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 530T Adapter
- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter

- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 7.0
Version: 2021.09.04 **(Recommended)**
Filename: cp047117.compsig; cp047117.zip

Important Note!

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

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.29.0 or later, for use with this driver.

Enhancements

- This products enhances the mechanism that collation of data log.
- This product now supports ESXi 7.0 U3.

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 530T Adapter
- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE FlexFabric 10Gb 2-port 533FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 7.14.80-6 **(Recommended)**
Filename: kmod-netxtreme2-7.14.80-6.rhel7u8.x86_64.compsig; kmod-netxtreme2-7.14.80-6.rhel7u8.x86_64.rpm; kmod-netxtreme2-7.14.80-6.rhel7u9.x86_64.compsig; kmod-netxtreme2-7.14.80-6.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64,* version 2.29.0 or later, for use with these drivers.

Fixes

This product addresses an issue where Virtual Local Area Networks(VLANs) resource accounting when linux driver creating 272 Virtual Local Area Networks(VLANs) on single Virtual Functions, then enable interface after closed.

Enhancements

- This product now supports MDI(Medium Dependent Interface)/MDIX(Medium Dependent Interface Crossover) connection status to ethtool.
- This product now supports Timestamping the unicast Precision Time Protocol (PTP) packets.

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE Ethernet 10Gb 2-port 530T Adapter
- HPE Ethernet 10Gb 2-port 533FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

HPE QLogic NX2 10/20 GbE Multifunction Drivers for Red Hat Enterprise Linux 8
Version: 7.14.80-6 **(Recommended)**
Filename: kmod-netxtreme2-7.14.80-6.rhel8u3.x86_64.compsig; kmod-netxtreme2-7.14.80-6.rhel8u3.x86_64.rpm; kmod-netxtreme2-7.14.80-6.rhel8u4.x86_64.compsig; kmod-netxtreme2-7.14.80-6.rhel8u4.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64,* version 2.29.0 or later, for use with these drivers.

Fixes

This product addresses an issue where Virtual Local Area Networks(VLANs) resource accounting when linux driver creating 272 Virtual Local Area Networks(VLANs) on single Virtual Functions, then enable interface after closed.

Enhancements

- This product now supports MDI(Medium Dependent Interface)/MDIX(Medium Dependent Interface Crossover) connection status to ethtool.
- This product now supports Timestamping the unicast Precision Time Protocol (PTP) packets.
- This product now supports Red Hat Enterprise Linux 8 update 4

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: 7.14.80-6 **(Recommended)**
Filename: netxtreme2-kmp-default-7.14.80_k4.12.14_120-6.sles12sp5.x86_64.compsig; netxtreme2-kmp-default-7.14.80_k4.12.14_120-6.sles12sp5.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64,* version 2.29.0 or later, for use with these drivers.

Fixes

This product addresses an issue where Virtual Local Area Networks(VLANs) resource accounting when linux driver creating 272 Virtual Local Area Networks(VLANs) on single Virtual Functions, then enable interface after closed.

Enhancements

- This product now supports MDI(Medium Dependent Interface)/MDIX(Medium Dependent Interface Crossover) connection status to ethtool.
- This product now supports Timestamping the unicast Precision Time Protocol (PTP) packets.

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: 7.14.80-6 **(Recommended)**
Filename: netxtreme2-kmp-default-7.14.80_k5.3.18_22-6.sles15sp2.x86_64.compsig; netxtreme2-kmp-default-7.14.80_k5.3.18_22-6.sles15sp2.x86_64.rpm; netxtreme2-kmp-default-7.14.80_k5.3.18_57-6.sles15sp3.x86_64.compsig; netxtreme2-kmp-default-7.14.80_k5.3.18_57-6.sles15sp3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64,* version 2.29.0 or later, for use with these drivers.

Fixes

This product addresses an issue where Virtual Local Area Networks(VLANs) resource accounting when linux driver creating 272 Virtual Local Area Networks(VLANs) on single Virtual Functions, then enable interface after closed.

Enhancements

- This product now supports MDI(Medium Dependent Interface)/MDIX(Medium Dependent Interface Crossover) connection status to ethtool.
- This product now supports Timestamping the unicast Precision Time Protocol (PTP) packets.
- This product now supports SUSE Linux Enterprise Server 15 Service Pack 3

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: 7.13.206.0 **(Recommended)**
Filename: cp047060.compsig; cp047060.exe

Important Note!

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.5.0 or later, for use with these drivers.

Fixes

- This product correct an issue where System crash while upgrading with NPAR SRIOV-EP mode enabled.
- This product correct an issue where BSOD in Windows NDIS driver while in WS2022 PCS Configuration.

Enhancements

This product now supports Microsoft Windows Server 2022.

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE Ethernet 10Gb 2-port 530T Adapter
- HPE Ethernet 10Gb 2-port 533FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

Intel i350 Driver for Windows Server 2016
Version: 12.16.4.1 **(Recommended)**
Filename: cp047041.compsig; cp047041.exe

Important Note!

HPE recommends the firmware provided in *Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.5.0 or later, for use with this driver.

Enhancements

This product is updated to maintain compatibility with updated Windows installation library NicInE1R.dll and e1rmsg.dll.

Supported Devices and Features

This driver supports the following HPE Intel Powerville network adapters:

- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- Intel(R) I350 Gigabit Network Connection

Intel i350 Driver for Windows Server 2019
Version: 12.18.12.1 **(Recommended)**
Filename: cp047042.compsig; cp047042.exe

Important Note!

HPE recommends the firmware provided in *Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.5.0 or later, for use with this driver.

Enhancements

This product is updated to maintain compatibility with updated Windows installation library NicInE1R.dll and e1rmsg.dll.

Supported Devices and Features

This driver supports the following HPE Intel E1R network adapters:

- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- Intel(R) I350 Gigabit Network Connection

Intel i40ea Driver for Windows Server 2016
Version: 1.13.104.0 **(Optional)**
Filename: cp045319.compsig; cp045319.exe

Important Note!

HPE recommends the firmware provided in *Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Fixes

This product corrects an traffic packets making cert failure seen when packets transferred to VLAN after RDMA function enabled.

Supported Devices and Features

This driver supports the following HPE Intel I40EA network adapters:

- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter

Intel i40ea Driver for Windows Server 2019
Version: 1.13.104.0 (B) **(Recommended)**
Filename: cp049460.compsig; cp049460.exe

Important Note!

HPE recommends the firmware provided in *Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.4.0 or later, for use with this driver.

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus Server

Supported Devices and Features

This driver supports the following HPE Intel I40EA network adapters:

- Intel X710-DA2 Ethernet 10Gb 2-port SFP+ OCP3 Adapter for HPE
- Intel X710-DA2 Ethernet 10Gb 2-port SFP+ Adapter for HPE

Intel iavf Driver for Windows Server 2016
Version: 1.12.9.0 (C) **(Recommended)**
Filename: cp048046.compsig; cp048046.exe

Important Note!

HPE recommends the firmware provided in *Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.5.0 or later, for use with this driver.

Prerequisites

This driver requires host driver version the following:

- Intel i40ea Driver version 1.16.62.0 or later.
- Intel icea Driver version 1.9.65.0 or later.

Enhancements

This product now supports the following network adapters:

- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Supported Devices and Features

This product supports the following Intel VF network adapters:

- HPE Ethernet 10Gb 2-port SFP+ OCP3 X710-DA2 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter
- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Intel iavf Driver for Windows Server 2019
Version: 1.12.9.0 (C) **(Recommended)**
Filename: cp048047.compsig; cp048047.exe

Important Note!

HPE recommends the firmware provided in *Intel Online Firmware Upgrade Utility for Windows Server x64 Editions*, version 5.2.5.0 or later, for use with this driver.

Prerequisites

This driver requires host driver version the following:

- Intel i40ea Driver version 1.16.62.0 or later.
- Intel icea Driver version 1.9.65.0 or later.

Enhancements

This product now supports the following network adapters:

- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Supported Devices and Features

This product supports the following Intel VFnetwork adapters:

- HPE Ethernet 10Gb 2-port SFP+ OCP3 X710-DA2 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter
- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Intel ice Drivers for Red Hat Enterprise Linux 7 x86_64
Version: 1.6.4-1 **(Recommended)**
Filename: kmod-ice-1.6.4-1.rhel7u8.x86_64.compsig; kmod-ice-1.6.4-1.rhel7u8.x86_64.rpm; kmod-ice-1.6.4-1.rhel7u9.x86_64.compsig; kmod-ice-1.6.4-1.rhel7u9.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *Intel Firmware Package For E810 Ethernet Adapter,* version 3.00 or later, for use with these drivers.

Enhancements

Initial release.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Intel ice Drivers for Red Hat Enterprise Linux 8
Version: 1.6.4-1 **(Recommended)**
Filename: kmod-ice-1.6.4-1.rhel8u3.x86_64.compsig; kmod-ice-1.6.4-1.rhel8u3.x86_64.rpm; kmod-ice-1.6.4-1.rhel8u4.x86_64.compsig; kmod-ice-1.6.4-1.rhel8u4.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *Intel Firmware Package For E810 Ethernet Adapter,* version 3.00 or later, for use with these drivers.

Enhancements

Initial release.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Intel ice Drivers for SUSE Linux Enterprise Server 12 x86_64
Version: 1.6.4-1 **(Recommended)**
Filename: ice-kmp-default-1.6.4_k4.12.14_120-1.sles12sp5.x86_64.compsig; ice-kmp-default-1.6.4_k4.12.14_120-1.sles12sp5.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *Intel Firmware Package For E810 Ethernet Adapter,* version 3.00 or later, for use with these drivers.

Enhancements

Initial release.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Intel ice Drivers for SUSE Linux Enterprise Server 15
Version: 1.6.4-1 **(Recommended)**
Filename: ice-kmp-default-1.6.4_k5.3.18_22-1.sles15sp2.x86_64.compsig; ice-kmp-default-1.6.4_k5.3.18_22-1.sles15sp2.x86_64.rpm; ice-kmp-default-1.6.4_k5.3.18_57-1.sles15sp3.x86_64.compsig; ice-kmp-default-1.6.4_k5.3.18_57-1.sles15sp3.x86_64.rpm; README

Important Note!

HPE recommends the firmware provided in *Intel Firmware Package For E810 Ethernet Adapter,* version 3.00 or later, for use with these drivers.

Enhancements

Initial release.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Intel icea Driver for Windows Server 2016
Version: 1.9.65.0 **(Recommended)**
Filename: cp048044.compsig; cp048044.exe

Important Note!

HPE recommends the firmware provided in *Intel Firmware Package for Columbiaville* (FWPKG), version 3.0 or later, for use with this driver.

Enhancements

This product now supports the following network adapters:

- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Supported Devices and Features

This driver supports the following HPE Intel ICEA network adapters:

- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Intel icea Driver for Windows Server 2019
Version: 1.9.65.0 **(Recommended)**
Filename: cp048045.compsig; cp048045.exe

Important Note!

HPE recommends the firmware provided in *Intel Firmware Package for Columbiaville* (FWPKG), version 3.0 or later, for use with this driver.

Enhancements

This product now supports the following network adapters:

- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Supported Devices and Features

This driver supports the following HPE Intel ICEA network adapters:

- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE
- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE

- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Linux Intel Drivers build bundle for Red Hat Enterprise Linux
Version: 1.0.4.0 **(Optional)**
Filename: hp-i40e-2.13.10-1.all.src.rpm; hp-iavf-4.0.2-1.all.src.rpm; hp-igb-6.2.5-1.all.src.rpm; hp-ixgbe-5.9.4-1.all.src.rpm; hp-ixgbevf-4.9.3-1.all.src.rpm; i40e-README; iavf-README; ice-1.2.1-1.all.src.rpm; ice-README; igb-README; irdma-1.2.21-1.all.src.rpm; irdma-README; ixgbe-README; ixgbevf-README; kmod-hp-i40e-2.13.10-1.rhel7u8.x86_64.rpm; kmod-hp-i40e-2.13.10-1.rhel7u9.x86_64.rpm; kmod-hp-i40e-2.13.10-1.rhel8u2.x86_64.rpm; kmod-hp-i40e-2.13.10-1.rhel8u3.x86_64.rpm; kmod-hp-iavf-4.0.2-1.rhel7u8.x86_64.rpm; kmod-hp-iavf-4.0.2-1.rhel7u9.x86_64.rpm; kmod-hp-iavf-4.0.2-1.rhel8u2.x86_64.rpm; kmod-hp-iavf-4.0.2-1.rhel8u3.x86_64.rpm; kmod-hp-igb-6.2.5-1.rhel7u8.x86_64.rpm; kmod-hp-igb-6.2.5-1.rhel7u9.x86_64.rpm; kmod-hp-igb-6.2.5-1.rhel8u2.x86_64.rpm; kmod-hp-igb-6.2.5-1.rhel8u3.x86_64.rpm; kmod-hp-ixgbe-5.9.4-1.rhel7u8.x86_64.rpm; kmod-hp-ixgbe-5.9.4-1.rhel7u9.x86_64.rpm; kmod-hp-ixgbe-5.9.4-1.rhel8u2.x86_64.rpm; kmod-hp-ixgbe-5.9.4-1.rhel8u3.x86_64.rpm; kmod-hp-ixgbevf-4.9.3-1.rhel7u8.x86_64.rpm; kmod-hp-ixgbevf-4.9.3-1.rhel7u9.x86_64.rpm; kmod-hp-ixgbevf-4.9.3-1.rhel8u2.x86_64.rpm; kmod-hp-ixgbevf-4.9.3-1.rhel8u3.x86_64.rpm; kmod-ice-1.2.1-1.rhel7u8.x86_64.rpm; kmod-ice-1.2.1-1.rhel7u9.x86_64.rpm; kmod-ice-1.2.1-1.rhel8u2.x86_64.rpm; kmod-ice-1.2.1-1.rhel8u3.x86_64.rpm; kmod-irdma-1.2.21-1.rhel7u8.x86_64.rpm; kmod-irdma-1.2.21-1.rhel7u9.x86_64.rpm; kmod-irdma-1.2.21-1.rhel8u2.x86_64.rpm; kmod-irdma-1.2.21-1.rhel8u3.x86_64.rpm

Enhancements

Gen10PlusSnap4

Linux Intel Drivers build bundle for Red Hat Enterprise Linux
Version: 1.0.5.0 **(Optional)**
Filename: hp-i40e-2.16.11-1.all.src.rpm; hp-iavf-4.2.7-1.all.src.rpm; hp-igb-6.7.2-2.all.src.rpm; hp-ixgbe-5.12.5-1.all.src.rpm; hp-ixgbevf-4.12.4-1.all.src.rpm; i40e-README; iavf-README; ice-1.6.4-1.all.src.rpm; ice-README; igb-README; irdma-1.6.28-1.all.src.rpm; irdma-README; ixgbe-README; ixgbevf-README; kmod-hp-i40e-2.16.11-1.rhel7u8.x86_64.rpm; kmod-hp-i40e-2.16.11-1.rhel7u9.x86_64.rpm; kmod-hp-i40e-2.16.11-1.rhel8u3.x86_64.rpm; kmod-hp-i40e-2.16.11-1.rhel8u4.x86_64.rpm; kmod-hp-iavf-4.2.7-1.rhel7u8.x86_64.rpm; kmod-hp-iavf-4.2.7-1.rhel7u9.x86_64.rpm; kmod-hp-iavf-4.2.7-1.rhel8u3.x86_64.rpm; kmod-hp-iavf-4.2.7-1.rhel8u4.x86_64.rpm; kmod-hp-igb-6.7.2-2.rhel7u8.x86_64.rpm; kmod-hp-igb-6.7.2-2.rhel7u9.x86_64.rpm; kmod-hp-igb-6.7.2-2.rhel8u3.x86_64.rpm; kmod-hp-igb-6.7.2-2.rhel8u4.x86_64.rpm; kmod-hp-ixgbe-5.12.5-1.rhel7u8.x86_64.rpm; kmod-hp-ixgbe-5.12.5-1.rhel7u9.x86_64.rpm; kmod-hp-ixgbe-5.12.5-1.rhel8u3.x86_64.rpm; kmod-hp-ixgbe-5.12.5-1.rhel8u4.x86_64.rpm; kmod-hp-ixgbevf-4.12.4-1.rhel7u8.x86_64.rpm; kmod-hp-ixgbevf-4.12.4-1.rhel7u9.x86_64.rpm; kmod-hp-ixgbevf-4.12.4-1.rhel8u3.x86_64.rpm; kmod-hp-ixgbevf-4.12.4-1.rhel8u4.x86_64.rpm; kmod-ice-1.6.4-1.rhel7u8.x86_64.rpm; kmod-ice-1.6.4-1.rhel7u9.x86_64.rpm; kmod-ice-1.6.4-1.rhel8u3.x86_64.rpm; kmod-ice-1.6.4-1.rhel8u4.x86_64.rpm; kmod-irdma-1.6.28-1.rhel7u8.x86_64.rpm; kmod-irdma-1.6.28-1.rhel7u9.x86_64.rpm; kmod-irdma-1.6.28-1.rhel8u3.x86_64.rpm; kmod-irdma-1.6.28-1.rhel8u4.x86_64.rpm

Enhancements

Gen10PlusSnap5

Linux Intel Drivers build bundle for Red Hat Enterprise Linux
Version: 1.0.4.5 **(Optional)**
Filename: hp-i40e-2.14.13-1.all.src.rpm; i40e-README; kmod-hp-i40e-2.14.13-1.rhel7u8.x86_64.rpm; kmod-hp-i40e-2.14.13-1.rhel7u9.x86_64.rpm; kmod-hp-i40e-2.14.13-1.rhel8u2.x86_64.rpm; kmod-hp-i40e-2.14.13-1.rhel8u3.x86_64.rpm

Fixes

This product corrects an issue where the driver could result in kernel instability under heavy network conditions.

Linux Intel Drivers build bundle for SUSE Linux Enterprise Server
Version: 1.0.4.0 **(Optional)**
Filename: hp-i40e-2.13.10-1.all.src.rpm; hp-i40e-kmp-default-2.13.10_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-i40e-kmp-default-2.13.10_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-i40e-kmp-default-2.13.10_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; hp-i40e-kmp-default-2.13.10_k5.3.18_22-

1.sles15sp2.x86_64.rpm; hp-iavf-4.0.2-1.all.src.rpm; hp-iavf-kmp-default-4.0.2_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-iavf-kmp-default-4.0.2_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-iavf-kmp-default-4.0.2_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; hp-iavf-kmp-default-4.0.2_k5.3.18_22-1.sles15sp2.x86_64.rpm; hp-igb-6.2.5-1.all.src.rpm; hp-igb-kmp-default-6.2.5_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-igb-kmp-default-6.2.5_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-igb-kmp-default-6.2.5_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; hp-igb-kmp-default-6.2.5_k5.3.18_22-1.sles15sp2.x86_64.rpm; hp-ixgbe-5.9.4-1.all.src.rpm; hp-ixgbe-kmp-default-5.9.4_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-ixgbe-kmp-default-5.9.4_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-ixgbe-kmp-default-5.9.4_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; hp-ixgbe-kmp-default-5.9.4_k5.3.18_22-1.sles15sp2.x86_64.rpm; hp-ixgbevf-4.9.3-1.all.src.rpm; hp-ixgbevf-kmp-default-4.9.3_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-ixgbevf-kmp-default-4.9.3_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-ixgbevf-kmp-default-4.9.3_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; hp-ixgbevf-kmp-default-4.9.3_k5.3.18_22-1.sles15sp2.x86_64.rpm; i40e-README; iavf-README; ice-1.2.1-1.all.src.rpm; ice-kmp-default-1.2.1_k4.12.14_120-1.sles12sp5.x86_64.rpm; ice-kmp-default-1.2.1_k4.12.14_195-1.sles15sp1.x86_64.rpm; ice-kmp-default-1.2.1_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; ice-kmp-default-1.2.1_k5.3.18_22-1.sles15sp2.x86_64.rpm; ice-README; igb-README; irdma-1.2.21-1.all.src.rpm; irdma-kmp-default-1.2.21_k4.12.14_120-1.sles12sp5.x86_64.rpm; irdma-kmp-default-1.2.21_k4.12.14_195-1.sles15sp1.x86_64.rpm; irdma-kmp-default-1.2.21_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; irdma-kmp-default-1.2.21_k5.3.18_22-1.sles15sp2.x86_64.rpm; irdma-README; ixgbe-README; ixgbevf-README

Enhancements

Gen10PlusSnap4

Linux Intel Drivers build bundle for SUSE Linux Enterprise Server
Version: 1.0.5.0 **(Optional)**
Filename: hp-i40e-2.16.11-1.all.src.rpm; hp-i40e-kmp-default-2.16.11_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-i40e-kmp-default-2.16.11_k5.3.18_22-1.sles15sp2.x86_64.rpm; hp-i40e-kmp-default-2.16.11_k5.3.18_57-1.sles15sp3.x86_64.rpm; hp-iavf-4.2.7-1.all.src.rpm; hp-iavf-kmp-default-4.2.7_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-iavf-kmp-default-4.2.7_k5.3.18_22-1.sles15sp2.x86_64.rpm; hp-iavf-kmp-default-4.2.7_k5.3.18_57-1.sles15sp3.x86_64.rpm; hp-igb-6.7.2-2.all.src.rpm; hp-igb-kmp-default-6.7.2_k4.12.14_120-2.sles12sp5.x86_64.rpm; hp-igb-kmp-default-6.7.2_k5.3.18_22-2.sles15sp2.x86_64.rpm; hp-igb-kmp-default-6.7.2_k5.3.18_57-2.sles15sp3.x86_64.rpm; hp-ixgbe-5.12.5-1.all.src.rpm; hp-ixgbe-kmp-default-5.12.5_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-ixgbe-kmp-default-5.12.5_k5.3.18_22-1.sles15sp2.x86_64.rpm; hp-ixgbe-kmp-default-5.12.5_k5.3.18_57-1.sles15sp3.x86_64.rpm; hp-ixgbevf-4.12.4-1.all.src.rpm; hp-ixgbevf-kmp-default-4.12.4_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-ixgbevf-kmp-default-4.12.4_k5.3.18_22-1.sles15sp2.x86_64.rpm; hp-ixgbevf-kmp-default-4.12.4_k5.3.18_57-1.sles15sp3.x86_64.rpm; i40e-README; iavf-README; ice-1.6.4-1.all.src.rpm; ice-kmp-default-1.6.4_k4.12.14_120-1.sles12sp5.x86_64.rpm; ice-kmp-default-1.6.4_k5.3.18_22-1.sles15sp2.x86_64.rpm; ice-kmp-default-1.6.4_k5.3.18_57-1.sles15sp3.x86_64.rpm; ice-README; igb-README; irdma-1.6.28-1.all.src.rpm; irdma-kmp-default-1.6.28_k4.12.14_120-1.sles12sp5.x86_64.rpm; irdma-kmp-default-1.6.28_k5.3.18_22-1.sles15sp2.x86_64.rpm; irdma-kmp-default-1.6.28_k5.3.18_57-1.sles15sp3.x86_64.rpm; irdma-README; ixgbe-README; ixgbevf-README

Enhancements

Gen10PlusSnap5

Linux Intel Drivers build bundle for SUSE Linux Enterprise Server
Version: 1.0.4.5 **(Optional)**
Filename: hp-i40e-2.14.13-1.all.src.rpm; hp-i40e-kmp-default-2.14.13_k4.12.14_120-1.sles12sp5.x86_64.rpm; hp-i40e-kmp-default-2.14.13_k4.12.14_195-1.sles15sp1.x86_64.rpm; hp-i40e-kmp-default-2.14.13_k4.12.14_94.41-1.sles12sp4.x86_64.rpm; hp-i40e-kmp-default-2.14.13_k5.3.18_22-1.sles15sp2.x86_64.rpm; i40e-README

Fixes

This product corrects an issue where the driver could result in kernel instability under heavy network conditions.

Marvell FastLinQ 10/25/50 GbE Drivers for Windows Server x64 Editions
Version: 8.58.16.0 **(Recommended)**
Filename: cp047059.compsig; cp047059.exe

Important Note!

HPE recommends the firmware provided in Marvell FastLinQ Firmware Package for Arrowhead adapters, version 8.55.14 or later, for use with these drivers.

Fixes

- This product correct an issue where RoCE+L2 traffic on MOS in NPAR mode
- This product correct an issue where transmitting under heavy PAUSE/Priority-based Flow Control (PFC)
- This product correct an issue where turning off VMs while VF RDMA traffic is running
- This product correct an issue where yellow bang while running VF RoCE traffic with overnight switch port.
- This product correct an issue where installing dirvers with iSCSI enumerated.

Enhancements

This product now supports Microsoft Windows Server 2022.

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCU OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HLCU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HQCU OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HLCU Adapter

Mellanox CX5 and CX6DX Driver for Microsoft Windows Server 2016
Version: 2.70.24728.0 **(Recommended)**
Filename: cp048225.compsig; cp048225.exe

Fixes

- This product correct an issue which mlx5cmd tools reporting of the OS version that a VF is running.
- This product correct an issue which incorrect report related to the firmware traces to be logged (FwTracer) feature on the VF
- This product correct an issue which prevented the package downgrade from replacing mlxdevx.dll in the system folder.
- This product correct an issue which cause TCP connection to drop

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623436AS-CDAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter

Mellanox CX5 and CX6DX Driver for Microsoft Windows Server 2019
Version: 2.70.24728.0 **(Recommended)**
Filename: cp048226.compsig; cp048226.exe

Fixes

- This product correct an issue which mlx5cmd tools reporting of the OS version that a VF is running.
- This product correct an issue which incorrect report related to the firmware traces to be logged (FwTracer) feature on the VF
- This product correct an issue which prevented the package downgrade from replacing mlxdevx.dll in the system folder.
- This product correct an issue which cause TCP connection to drop

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623436AS-CDAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter

Mellanox CX5 and CX6DX Driver for Microsoft Windows Server 2022
Version: 2.70.24728.0 **(Recommended)**
Filename: cp049404.compsig; cp049404.exe

Fixes

This product correct an issue which cause TCP connection to drop

Supported Devices and Features

This driver supports the following network adapters:

- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623436AS-CDAT Adapter
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter

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net-mst kernel module driver component for VMware ESXi 6.5 and 6.7
Version: 2020.11.11 (A) **(Recommended)**
Filename: cp048358.compsig; cp048358.zip

Important Note!

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

Prerequisites

NA

Enhancements

NMST version 4.12.0.105:

This version adds support for the following adapters:

- HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter (Part Number: P21930-B21)
- HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter (Part Number: P11341-B21)
- HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter (Part Number: P13188-B21)
- HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter (Part Number: P10112-B21)
- HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter (Part Number: P21927-B21)
- HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter (Part Number: P06154-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter (Part Number: P06250-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter (Part Number: P06251-B21)
- HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter (Part Number: P23664-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter (Part Number: P23665-B21)
- HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter (Part Number: P23666-B21)
- HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter (Part Number: P25960-B21)

Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035

P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453
P10180-B21	Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	MT_0000000435
P31246-B21	HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter	MT_0000000591
P31323-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter	MT_0000000592
P31348-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter	MT_0000000593
P31324-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter	MT_0000000594

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net-mst kernel module driver component for VMware ESXi 7.0
Version: 2020.11.11 (A) **(Recommended)**
Filename: cp048360.compsig; cp048360.zip

Important Note!

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

Prerequisites

NA

Fixes

NMST version 4.14.3.3

Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034

P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453
P10180-B21	Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	MT_0000000435
P31246-B21	HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter	MT_0000000591
P31323-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter	MT_0000000592
P31348-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter	MT_0000000593
P31324-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter	MT_0000000594

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nmlx4_en Driver Component for VMware 6.5
Version: 2020.11.11 **(Recommended)**
Filename: cp046261.compsig; cp046261.zip

Important Note!

Known Issues:

- ConnectX-3 Pro 10G adapter cards incorrectly report support for 40G speed when running the "esxcli network nic get" command.
- When the port is DOWN, the management interface "port type" field indicates one of the port types supported by the device, in the following order: TP, FIBER, DA, NONE. If the port supports several cable types, the first type in the list mentioned above will be printed.
- When the port is UP, the management interface port type field (nmlx_en_MgmtIFPortType) indicates which one of all possible supported types is currently connected.
- Managment 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

Enhancements

Changes and New Features in version 3.16.70.2:

- Resolved an issue that caused the network adapter traffic to stop.

- Fixed an internal multicast loopback issue that broke LACP(Link Aggregation Control Protocol) bonding protocol.

Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004

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nmlx4_en Driver Component for VMware 7.0
Version: 2020.11.11 (A) **(Recommended)**
Filename: cp047457.compsig; cp047457.zip

Important Note!

Known Issues:

- ConnectX-3 Pro 10G adapter cards incorrectly report support for 40G speed when running the "esxcli network nic get" command.
- When the port is DOWN, the management interface "port type" field indicates one of the port types supported by the device, in the following order: TP, FIBER, DA, NONE. If the port supports several cable types, the first type in the list mentioned above will be printed.
- When the port is UP, the management interface port type field (nmlx_en_MgmtIFPortType) indicates which one of all possible supported types is currently connected.
- Managment 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 3.19.70.1 follow the below link:
https://www.mellanox.com/page/products_dyn?product_family=29&mtag=vmware_driver

Fixes

No fixes are included in version 3.19.70.1:

Enhancements

Changes and New Features in version 3.19.70.1:

- Resolved an issue that caused the network adapter traffic to stop.
- Fixed an internal multicast loopback issue that broke LACP(Link Aggregation Control Protocol) bonding protocol.

Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017

764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004

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nmlx4_en driver component for VMware ESXi 6.7
Version: 2020.11.11 **(Recommended)**
Filename: cp046262.compsig; cp046262.zip

Important Note!

Known issues in version 3.17.70.1:

- ConnectX-3 Pro 10G adapter cards wrongly report support for 40G speed when running the "esxcli network nic get" command.
- When the port is DOWN, the management interface port type field (nmlx_en_MgmtIFPortType) indicates one of the port types supported by the device, in the following order: TP, FIBER, DA, NONE. If the cable supports several types, the first type in the list mentioned above will be printed.
- When the port is UP, the management interface port type field (nmlx_en_MgmtIFPortType) indicates which one of all possible supported types is currently connected.
- Management interface port type field (nmlx_en_MgmtIFPortType) reports SFP-to-RJ45 cable as FIBER.
- Management interface auto negotiation field (nmlx_en_MgmtIFAutoNegMode) is equivalent to "esxcli network nic get -n vmnicX" field "Pause Autonegotiate"

Enhancements

Changes and New features in version 3.17.70.1:

- Adapter card's PSID is now displayed in the Privstats (Private statistics).

Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004

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nmlx5_en Driver Component for VMware 6.5
Version: 2021.04.15 **(Recommended)**
Filename: cp047577.compsig; cp047577.zip

Important Note!

Known Issues in version 4.16.71.1:

- The maximum number of established active RDMA connections (QPs) is currently 5000.
- Setting ETS value to 0 may cause WQE timeout.
- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.

- ECN statistic counters accumulatorsPeriod and ecnMarkedRoce-Packets display wrong values and cannot be cleared.
- The hardware can offload only up to 256 Bytes of headers.
- The "esxcli network sriovnic vf stats" command is not supported.
- Traffic cannot be sent between PV and SR-IOV VF connected to different ports on the same HCA.
- Setting the "Allow Guest MTU Change" option in vSphere Client is currently not functional. Although guest MTU changes in SR-IOV are allowed, they do not affect the port's MTU and the guest's MTU remains the same as the PF MTU.
- Geneve options length support is limited to 56 Bytes. Received packets with options length bigger than 56 Bytes are dropped.
- Interaction with ConnectX-4/ConnectX-4 Lx older firmware versions might result in the following internal firmware errors:
  - Device health compromised
  - synd 0x1: firmware internal error
  - extSync 0x94ee
- The 'esxcli mellanox uplink link info -u <vmnic_name>' command reports the 'Auto negotiation' capability always as 'true'.
- Wake-on-LAN does not notify when invalid parameters are provided.
- Nested ESXi might not function properly.
- Device RSS fails to hash traffic to sufficient RX rings with Broadcast traffic.
- In stress condition 'Watchdog' may appear leading to link going up and down.
- VGT traffic over VXLAN interfaces is currently not supported.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Although the max_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port:
  - ConnectX-4: up to 127
  - ConnectX-5: up to 63

Fixes

The following issues have been fixed in version in 4.16.71.1:

- The "esxcli network sriovnic vf stats" command was not supported. When running this command on a vmknic, a failure message was displayed.

Enhancements

Changes and New Features in smart component version 2021.04.15:

- Added support for the following adapters:
  - HPE Ethernet 200Gb 1-Port QSFP56 MCX623105AS-VDAT Adapter (HPE Part Number: P10180-B21)

New features and changes in version 4.16.71.1:

- An event will be sent to notify the administrator if the power required by the network adapter is higher than that available on the PCIe slot.
- Support for trusting Differentiated Services Code Point (DSCP) and setting default value for RoCE traffic.
- A new counter that enables the user to query per Virtual Function counters.
- RX out-of-buffer counter to indicate any lack of software receive buffers.
- Module parameter to enforce specific RoCE version.

Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017

764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453
P10180-B21	Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	MT_0000000435
P31246-B21	HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter	MT_0000000591
P31323-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter	MT_0000000592
P31348-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter	MT_0000000593
P31324-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter	MT_0000000594

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nmlx5_en Driver Component for VMware 6.7
Version: 2021.04.15 **(Recommended)**
Filename: cp047576.compsig; cp047576.zip

Important Note!

Known Issues in version 4.17.71.1:

- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- SRI-OV is not supported while ENS is enabled.

- The maximum number of established active RDMA connections (QPs) is currently 5000.
- Enhanced Network Stack(ENS) is currently not supported in ConnectX-6 Dx adapter cards.
- Setting ETS value to 0 may cause WQE timeout.
- A PSOD may occur during vMotion over ENS VMK.
- During ENS uplink detachment from the ENS DVS, the below error message regarding the queue still being allocated or that the requested queue is not in use may appear.
- Live unload of the driver is not supported. Doing so may cause a PSOD if the max_vfs parameter is set.
- ECN statistic counters accumulatorsPeriod and ecnMarkedRoce-Packets display wrong values and cannot be cleared.
- The maximum value of RSS must be lower than the number of CPU cores.
- The hardware can offload only up to 256B of headers.
- The "esxcli network sriovnic vf stats" command is not supported. When running this command on a vmknic, a failure message is displayed.
- There is no traffic between PV and SR-IOV VF connected to different ports on the same HCA.
- Setting the "Allow Guest MTU Change" option in vSphere Client is currently not functional. Although guest MTU changes in SR-IOV are allowed, they do not affect the port's MTU and the guest's MTU remains the same as the PF MTU.
- When a guest is assigned an IB PCI passthru device or an IB VF, VMware Tools networking information for the guest may be incorrect. This affects how the guest networking information, such as interfaces and their IPs, is displayed in vCenter.
- Operations on vmnics which are in passthru mode are not supported.
- The 'esxcli mellanox uplink link info -u <vmnic_name>' command reports the 'Auto negotiation' capability always as 'true'.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Wake-on-LAN does not notify when invalid parameters are provided.
- Nested ESXi might not function properly.
- Device RSS fails to hash traffic to sufficient RX rings with Broadcast traffic.
- In stress condition 'Watchdog' may appear, leading to uplink going up and down.
- During ENS uplink detachment from the ENS DVS, the below error message regarding the queue still being allocated or that the requested queue is not in use may appear. *"Driver covers for OS issue and the messages are for information only."*
- Although the max_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port devices:
  - ConnectX-4: up to 127
  - ConnectX-5: up to 127

For further information on the release notes for ESXi 6.7 Driver Version 4.17.70.1 follow the below link:
https://www.mellanox.com/page/products_dyn?product_family=29&mtag=vmware_driver

Fixes

The following issues have been fixed in version in 4.17.71.1:

- The "esxcli network sriovnic vf stats" command was not supported.When running this command on a "vmknic", a failure message was displayed.
- IPv6 as inner packet was not supported.

Enhancements

Changes and New Features in smart component version 2021.04.15:

- Added support for the following adapters:
  - HPE Ethernet 200Gb 1-Port QSFP56 MCX623105AS-VDAT Adapter (HPE Part Number: P10180-B21)

New features and changes in version 4.17.71.1:

- Disabled the option of shutting down the link due to power limitation.
- Support for trusting Differentiated Services Code Point (DSCP) and setting default value for RoCE traffic.
- New counter that enables the user to query per Virtual Function counters.
- RX out-of-buffer counter to indicate any lack of software receive buffers.

- Module parameter to enforce specific RoCE version.

Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453
P10180-B21	Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	MT_0000000435
P31246-B21	HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter	MT_0000000591
P31323-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter	MT_0000000592
P31348-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter	MT_0000000593
P31324-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter	MT_0000000594

Version: 2021.04.21 **(Recommended)**
Filename: cp047641.compsig; cp047641.zip

Important Note!

Important: The version 4.21.71.1 supports ESXi 7.0 U2.

Known Issues in version 4.21.71.101:

- A mismatch between the uplink and the VF MTU values may result in CQE with error.
  Workaround:: Align the uplink and the VF MTU values.
- Enabling sriov_mc_isolation module parameter may result in vmknic and emulated NICs multicast and IPv6 traffic loss.
  Workaround: Unset or set the module parameter to 0.
- RDMA is not supported in the Hypervisor with ENS (Enhanced Network Stack) model 2.
- Setting the "Allow Guest MTU Change" option in vSphere Client is currently not functional. Although guest MTU changes in SR-IOV are allowed, they do not affect the port's MTU and the guest's MTU remains the same as the PF MTU.
- ECN (Explicit congestion notification) statistic counters accumulatorsPeriod and ecnMarkedRocePackets display wrong values and cannot be cleared.
- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- Card's speed remains zero after port goes down and reboot is performed.
- RoCE traffic may fail after vMotion when using namespace.
- Legacy SR-IOV is not supported with Model 1.
- When in ENS mode, changing the scheduler to HCLK, may cause traffic loss.
- The 'esxcli mellanox uplink link info -u ' command reports the 'Auto negotiation' capability always as 'true'.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Although the max_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port devices:
  - ConnectX-4 / ConnectX-5: up to 127

Fixes

Fixes included in version 4.21.71.101:

- Fixed a compatibility issue with VMware Update Manager as it wouldn't accept a bundle with metadata xml with old versioning scheme. The metadata xml now contains the new versioning scheme.

Enhancements

Changes and New Features are included in smart component version 2021.04.21:

- Added support for the following features:
  - vSan over RDMA.
  - Receive Side Scaling (RSS) for ENS model 0.
  - 200GbE link speed.
  - ConnectX-6 Lx devices.
  - Scaled support for up to 10K connections over RDMA networks
  - Data Center Bridging Capability Exchange (DCBX) protocol with hardware offload.
  - sriov_mc_isolation module parameter to isolate multicast traffic to SR-IOV interfaces. Default value is OFF.
  - ens_fallback_model to set the default fallback mode when the option to query ENS model from the OS is no supported. Default to Model 1.

New features and changes in version 4.21.71.101:

- SR-IOV InfiniBand is at GA level.

- Updated the supported_num_ports default value to 1 to lower memory constraints. Note: The user must set a value corresponding to the amount of ports installed in the system.

Supported Devices and Features

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022
868779-B21	HPE Synergy 6410C 25/50Gb Ethernet Adapter	HPE0000000006
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453
P10180-B21	Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE	MT_0000000435
P31246-B21	HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter	MT_0000000591
P31323-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter	MT_0000000592
P31348-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter	MT_0000000593
P31324-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter	MT_0000000594

VMware ESXi 6.5 and 6.7 MST Drivers Offline Bundle for Mellanox Adapters
Version: 4.12.0.105 **(Recommended)**
Filename: MLNX-NMST-ESX-6.5.0-4.12.0.105.zip

Prerequisites

NA

Enhancements

VM65/67 nmst 4.12.0.105

VMware ESXi 7.0 MST Drivers Offline Bundle for Mellanox Adapters
Version: 4.14.3.3 **(Recommended)**
Filename: Mellanox-NATIVE-NMST_4.14.3.3-1OEM.700.1.0.15525992_16211416.zip

Prerequisites

NA

Enhancements

VM70 nmst 4.14.3.3

Driver - Storage

Top

HPE Smart Array S100i SR Gen10 SW RAID Driver for Windows Server 2016 and Windows Server 2019
Version: 106.12.6.0 (B) **(Critical)**
Filename: cp048017.compsig; cp048017.exe

Fixes

Addressed an issue where the HPE Smart Array s100i Software RAID may experience potential data inconsistency during initial configuration or operation of a RAID volume configured in RAID 0/1/5/10 Fault Tolerant Modes.

This issue does not impact systems that have not enabled Smart Array s100i support.

- For additional information, reference Customer Bulletin a00097789en_us.

IMPORTANT INFORMATION:

- An array configured with a single RAID 0 logical drive is NOT affected.
- An array configured with a single RAID 1 logical drive is NOT affected.

HPE Smart Array S100i SR Gen10 SW RAID Driver for Windows Server 2022
Version: 1010.14.0.0 **(Recommended)**
Filename: cp049244.compsig; cp049244.exe

Enhancements

Initial Release

HPE Smart Storage SR100i Gen10 Plus SW RAID Driver for Windows Server 2016 and Windows Server 2019
Version: 106.124.70.1210 **(Recommended)**
Filename: cp047908.compsig; cp047908.exe

Fixes

- Correct NVMe link width information in SSA.

- Fix background surface scan may not be started for a volume configured with SSD SmartPath.

HPE Smart Storage SR100i Gen10 Plus SW RAID Driver for Windows Server 2022
Version: 1010.124.70.1210 **(Recommended)**
Filename: cp049426.compsig; cp049426.exe

Fixes

- Correct NVMe link width information in SSA.
- Fix background surface scan may not be started for a volume configured with SSD SmartPath.

Driver - Storage Controller **Top**

REMOVED - HPE MR416i-a, MR416i-p, MR216i-a, MR216i-p controller Driver for 64-bit SUSE LINUX Enterprise Server 15
Version: 07.718.02.00 **(Recommended)**
Filename: lsi-megaraid_sas-kmp-default-07.718.02.00_sles15sp3-1.x86_64.compsig; lsi-megaraid_sas-kmp-default-07.718.02.00_sles15sp3-1.x86_64.rpm

Fixes

REMOVED - Version 07.718.02.00 is NO LONGER AVAILABLE for download. Replacement version 07.716.02.00(B) is available from the Revision History tab on this web page. Addressed an issue with the Secure Boot enabled, after SLES OS installation update the megaraid_sas driver version from inbox to "lsi-megaraid_sas-kmp-default-*_sles1*sp*-1.x86_64.rpm" using the RPM file. In the next reboot Sles OS failed to boot to GUI login page.

- For additional information, reference SID8035

Enhancements

REMOVED - Version 07.718.02.00 is NO LONGER AVAILABLE for download. Replacement version 07.716.02.00(B) is available from the Revision History tab on this web page.

- Added support for DL20 Gen10 Plus Server.

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of SUSE LINUX Enterprise Server 15 (64-bit) supported by this binary rpm are:
4.12.14-23 - SUSE LINUX Enterprise Server 15 (64-bit) SP0 plus future errata.
4.12.14-195 - SUSE LINUX Enterprise Server 15 (64-bit) SP1 plus future errata.
5.3.18-22 - SUSE LINUX Enterprise Server 15 (64-bit) SP2 plus future errata.
5.3.18-57 - SUSE LINUX Enterprise Server 15 (64-bit) SP3 plus future errata.

REMOVED - HPE MR416i-p, MR416i-a, MR216i-p, MR216i-a controller Driver for 64-bit SUSE LINUX Enterprise Server 12
Version: 07.716.02.00 (B) **(Recommended)**
Filename: lsi-megaraid_sas-kmp-default-07.716.02.00_sles12sp4-1.x86_64.compsig; lsi-megaraid_sas-kmp-default-07.716.02.00_sles12sp4-1.x86_64.rpm; lsi-megaraid_sas-kmp-default-07.716.02.00_sles12sp5-1.x86_64.compsig; lsi-megaraid_sas-kmp-default-07.716.02.00_sles12sp5-1.x86_64.rpm

Fixes

REMOVED - Version 07.716.02.00(B) is NO LONGER AVAILABLE for download. Replacement version 07.716.02.00(C) is available from the Revision History tab on this web page. Addressed an issue with the Secure Boot enabled, after SLES OS installation update the megaraid_sas driver version from

inbox to "lsi-megaraid_sas-kmp-default-*_sles1*sp*-1.x86_64.rpm" using the RPM file. In the next reboot Sles OS failed to boot to GUI login page.

- For additional information, reference SID8035

Enhancements

REMOVED - Version 07.716.02.00(B) is NO LONGER AVAILABLE for download. Replacement version 07.716.02.00(C) is available from the Revision History tab on this web page.

- Added support for DL20 Gen10 Plus Server.

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of SUSE LINUX Enterprise Server 12 (64-bit) supported by this binary rpm are:
4.12.14-94.41 - SUSE LINUX Enterprise Server 12 (64-bit) SP4 plus future errata.
4.12.14-120 - SUSE LINUX Enterprise Server 12 (64-bit) SP5 plus future errata.

HPE MR416i-a, MR416i-p, MR216i-a, MR216i-p controller (64-bit) Driver for vSphere 6.7
Version: 7.716.03.00 (B) **(Recommended)**
Filename: Broadcom-lsi-mr3_7.716.03.00-1OEM.670.0.0.8169922-offline_bundle-17653784.zip

Enhancements

- Added support for DL20 Gen10 Plus Server.

HPE MR416i-a, MR416i-p, MR216i-a, MR216i-p controller (64-bit) Driver for vSphere 6.7 (Driver Component)
Version: 2021.04.01 (B) **(Recommended)**
Filename: cp049485.compsig; cp049485.zip

Important Note!

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

Enhancements

- Added support for DL20 Gen10 Plus Server.

HPE MR416i-a, MR416i-p, MR216i-a, MR216i-p controller (64-bit) Driver for vSphere 7.0
Version: 7.716.03.00 (B) **(Recommended)**
Filename: Broadcom-lsi-mr3_7.716.03.00-1OEM.700.1.0.15843807_17632848.zip

Enhancements

- Added support for DL20 Gen10 Plus Server.

HPE MR416i-a, MR416i-p, MR216i-a, MR216i-p controller (64-bit) Driver for vSphere 7.0 (Driver Component)
Version: 2021.04.01 (B) **(Recommended)**
Filename: cp049486.compsig; cp049486.zip

Important Note!

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

Enhancements

- Added support for DL20 Gen10 Plus Server.

HPE MR416i-a, MR416i-p, MR216i-a, MR216i-p controller Driver for 64-bit Red Hat Enterprise Linux 7
Version: 07.716.02.00 (B) **(Recommended)**
Filename: kmod-megaraid_sas-07.716.02.00-1.rhel7u8.x86_64.compsig; kmod-megaraid_sas-07.716.02.00-1.rhel7u8.x86_64.rpm; kmod-megaraid_sas-07.716.02.00-1.rhel7u9.x86_64.compsig; kmod-megaraid_sas-07.716.02.00-1.rhel7u9.x86_64.rpm

Enhancements

- Added support for DL20 Gen10 Plus Server.

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of Red Hat Enterprise Linux 7 (64-bit) supported by this binary rpm are:
3.10.0-1127.el7 - Red Hat Enterprise Linux 7 Update 8 (64-bit) and future errata kernels for update 8.
3.10.0-1160.el7- Red Hat Enterprise Linux 7 Update 9 (64-bit) and future errata kernels for update 9.

HPE MR416i-a, MR416i-p, MR216i-a, MR216i-p controller Driver for 64-bit Red Hat Enterprise Linux 8
Version: 07.716.02.00 (B) **(Recommended)**
Filename: kmod-megaraid_sas-07.716.02.00-1.rhel8u2.x86_64.compsig; kmod-megaraid_sas-07.716.02.00-1.rhel8u2.x86_64.rpm; kmod-megaraid_sas-07.716.02.00-1.rhel8u3.x86_64.compsig; kmod-megaraid_sas-07.716.02.00-1.rhel8u3.x86_64.rpm

Enhancements

- Added support for DL20 Gen10 Plus Server.

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of Red Hat Enterprise Linux 8 (64-bit) supported by this binary rpm are:
4.18.0-193.el8- Red Hat Enterprise Linux 8 Update 2 (64-bit) and future errata kernels for update 2.
4.18.0-240.el8- Red Hat Enterprise Linux 8 Update 3 (64-bit) and future errata kernels for update 3.

HPE MR416i-p MR416i-a MR216i-p MR216i-a 64-bit controller driver for Microsoft Windows 2019 edition.
Version: 7.716.3.0 (B) **(Recommended)**
Filename: cp049482.compsig; cp049482.exe

Enhancements

- Added support for DL20 Gen10 Plus Server.

HPE MR416i-p,MR416i-a, MR216i-p, MR216i-a 64-bit controller driver for Microsoft Windows 2016 edition.
Version: 7.716.3.0 (B) **(Recommended)**
Filename: cp049479.compsig; cp049479.exe

Enhancements

- Added support for DL20 Gen10 Plus Server.

HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for Red Hat Enterprise Linux 7 (64-bit)
Version: 2.1.12-055 **(Recommended)**
Filename: kmod-smartpqi-2.1.12-055.rhel7u8.x86_64.compsig; kmod-smartpqi-2.1.12-055.rhel7u8.x86_64.rpm; kmod-smartpqi-2.1.12-055.rhel7u9.x86_64.compsig; kmod-smartpqi-2.1.12-055.rhel7u9.x86_64.rpm

Fixes

- Fixed an issue where duplicate device nodes for Ultrium tape drive and medium changer are being created.
- Fixed an issue where the OS boot could fail during logical volume rebuild.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where request_irq failed during system hibernation.
- Fixed take a long time to come up if the system is rebooted while a hard disk(s) is being sanitized on RHEL 7.9.

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of Red Hat Enterprise Linux7 (64-bit) supported by this binary rpm are:
3.10.0-957.el7- Red Hat Enterprise Linux 7 Update 6 (64-bit) and future errata kernels for update 6.

HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for Red Hat Enterprise Linux 8 (64-bit)
Version: 2.1.12-055 **(Recommended)**
Filename: kmod-smartpqi-2.1.12-055.rhel8u3.x86_64.compsig; kmod-smartpqi-2.1.12-055.rhel8u3.x86_64.rpm; kmod-smartpqi-2.1.12-055.rhel8u4.x86_64.compsig; kmod-smartpqi-2.1.12-055.rhel8u4.x86_64.rpm

Fixes

- Fixed an issue where duplicate device nodes for Ultrium tape drive and medium changer are being created.
- Fixed an issue where the OS boot could fail during logical volume rebuild.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where request_irq failed during system hibernation.
- Fixed take a long time to come up if the system is rebooted while a hard disk(s) is being sanitized on RHEL8.3.

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of Red Hat Enterprise Linux8 (64-bit) supported by this binary rpm are:
-default- Red Hat Enterprise Linux 8 Update 0 (64-bit).

HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for SUSE LINUX Enterprise Server 12 (64-bit)
Version: 2.1.12-055 **(Recommended)**
Filename: smartpqi-kmp-default-2.1.12-055.sles12sp4.x86_64.compsig; smartpqi-kmp-default-2.1.12-055.sles12sp4.x86_64.rpm; smartpqi-kmp-default-2.1.12-055.sles12sp5.x86_64.compsig; smartpqi-kmp-default-2.1.12-055.sles12sp5.x86_64.rpm

Fixes

- Fixed an issue where duplicate device nodes for Ultrium tape drive and medium changer are being created.
- Fixed an issue where the OS boot could fail during logical volume rebuild.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where request_irq failed during system hibernation.

Supported Devices and Features

SUPPORTED KERNELS:
4.12.14-94.41.1 - SUSE LINUX Enterprise Server 12 (64-bit) SP4 plus future errata.

HPE ProLiant Gen10 and Gen10Plus Smart Array Controller (64-bit) Driver for SUSE LINUX Enterprise Server 15 (64-bit)
Version: 2.1.12-055 **(Recommended)**
Filename: smartpqi-kmp-default-2.1.12-055.sles15sp2.x86_64.compsig; smartpqi-kmp-default-2.1.12-055.sles15sp2.x86_64.rpm; smartpqi-kmp-default-2.1.12-055.sles15sp3.x86_64.compsig; smartpqi-kmp-default-2.1.12-055.sles15sp3.x86_64.rpm

Fixes

- Fixed an issue where duplicate device nodes for Ultrium tape drive and medium changer are being created.
- Fixed an issue where the OS boot could fail during logical volume rebuild.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where request_irq failed during system hibernation.
- Fixed take a long time to come up if the system is rebooted while a hard disk(s) is being sanitized on SLES15 SP2.

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

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HPE ProLiant Gen10 Smart Array and Gen10 Plus Smart RAID Controller Driver for VMware vSphere 6.7 (Bundle file)
Version: 67.4150.0.119 **(Recommended)**
Filename: Microchip-smartpqi_67.4150.0.119-1OEM.670.0.0.8169922-offline_bundle-18384766.zip

Fixes

- A PSOD issue when system is running MBT Tool
- Fixed an issue where OS boot may fail during logical volume rebuild.
- Fixed an issue where logical disks are not exposed to OS.
- Fixed an issue with log spew during device resets.
- A PSOD issue with Task Management Function handler
- Fixed an issue where vSAN logs were showing higher latency for physical disks.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where error messages were printed for ignorable errors.

HPE ProLiant Gen10 Smart Array and Gen10 Plus Smart RAID Controller Driver for VMware vSphere 6.7 (Driver Component).
Version: 2021.09.01 **(Recommended)**
Filename: cp047415.compsig; cp047415.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, plus an HPE specific CPXXXX.xml file.

Fixes

- A PSOD issue when system is running MBT Tool
- Fixed an issue where OS boot may fail during logical volume rebuild.
- Fixed an issue where logical disks are not exposed to OS.
- Fixed an issue with log spew during device resets.
- A PSOD issue with Task Management Function handler
- Fixed an issue where vSAN logs were showing higher latency for physical disks.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where error messages were printed for ignorable errors.

HPE ProLiant Gen10 Smart Array and Gen10 Plus Smart RAID Controller Driver for VMware vSphere 7.0 (Bundle file)
Version: 70.4150.0.119 **(Recommended)**
Filename: Microchip-smartpqi_70.4150.0.119-1OEM.700.1.0.15843807_18380949.zip

Fixes

- A PSOD issue when system is running MBT Tool
- Fixed an issue where OS boot may fail during logical volume rebuild.
- Fixed an issue where logical disks are not exposed to OS.
- Fixed an issue with log spew during device resets.
- A PSOD issue with Task Management Function handler
- Fixed an issue where vSAN logs were showing higher latency for physical disks.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where error messages were printed for ignorable errors.

HPE ProLiant Gen10 Smart Array and Gen10 Plus Smart RAID Controller Driver for VMware vSphere 7.0 (Driver Component).
Version: 2021.09.01 **(Recommended)**
Filename: cp047416.compsig; cp047416.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, plus an HPE specific CPXXXX.xml file.

Fixes

- A PSOD issue when system is running MBT Tool
- Fixed an issue where OS boot may fail during logical volume rebuild.
- Fixed an issue where logical disks are not exposed to OS.
- Fixed an issue with log spew during device resets.
- A PSOD issue with Task Management Function handler
- Fixed an issue where vSAN logs were showing higher latency for physical disks.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where error messages were printed for ignorable errors.

HPE ProLiant Gen10 Smart Array Controller Driver for VMware ESXi 6.5 (Bundle file)
Version: 65.4150.0.119 **(Recommended)**
Filename: VMW-ESX-6.5.0-smartpqi-65.4150.0.119-offline_bundle-18379836.zip

Fixes

- A PSOD issue when system is running MBT Tool
- Fixed an issue where OS boot may fail during logical volume rebuild.
- Fixed an issue where logical disks are not exposed to OS.
- Fixed an issue with log spew during device resets.
- A PSOD issue with Task Management Function handler
- Fixed an issue where vSAN logs were showing higher latency for physical disks.

- Fixed an issue to avoid failing IOs for devices which are offline.

HPE ProLiant Gen10 Smart Array Controller Driver for VMware vSphere 6.5 (Driver Component)
Version: 2021.09.01 **(Recommended)**
Filename: cp047414.compsig; cp047414.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, plus an HPE specific CPXXXX.xml file.

Fixes

- A PSOD issue when system is running MBT Tool
- Fixed an issue where OS boot may fail during logical volume rebuild.
- Fixed an issue where logical disks are not exposed to OS.
- Fixed an issue with log spew during device resets.
- A PSOD issue with Task Management Function handler
- Fixed an issue where vSAN logs were showing higher latency for physical disks.
- Fixed an issue to avoid failing IOs for devices which are offline.
- Fixed an issue where error messages were printed for ignorable errors.

HPE Smart Array Gen10 and Gen10Plus Controller Driver for Windows Server 2016, Windows Server 2019, and Windows Server 2022
Version: 1010.6.0.1025 **(Recommended)**
Filename: cp047413.compsig; cp047413.exe

Fixes

- A BSOD issue when running large transfer I/O traffic to SATA drives connected behind an expander.
- Fixed RAID1 incorrectly request when SmartPath is enabled.

HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2016 edition.
Version: 6.714.18.0 **(Recommended)**
Filename: cp034411.compsig; cp034411.exe

Enhancements

- Added support for the Apollo 4510 system

HPE Smart Array P824i-p MR 64-bit controller driver for Microsoft Windows 2019 edition.
Version: 6.714.18.0 **(Recommended)**
Filename: cp038009.compsig; cp038009.exe

Enhancements

Initial Microsoft Windows Server 2019 release

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.5
Version: 7.706.09.00 **(Recommended)**
Filename: Release_Notes_lsi-mr3-7.706.09.00-1OEM_6.5.txt; VMW-ESX-6.5.0-lsi_mr3-7.706.09.00-12102431.zip

Fixes

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.5 (Driver Component)
Version: 2019.12.13 **(Recommended)**
Filename: cp042803.compsig; cp042803.zip

Important Note!

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

Fixes

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.7
Version: 7.706.09.00 **(Recommended)**
Filename: Release_Notes_lsi-mr3-7.706.09.00-1OEM.txt; VMW-ESX-6.7.0-lsi_mr3-7.706.09.00-offline_bundle-12095481.zip

Fixes

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.7 (Driver Component)
Version: 2019.12.13 **(Recommended)**
Filename: cp042807.compsig; cp042807.zip

Important Note!

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

Fixes

Addressed a vSAN Fault Tolerance test failure seen in JBOD mode.

HPE Smart Array P824i-p MR controller Driver for 64-bit Red Hat Enterprise Linux 7
Version: 07.706.05.00-14 **(Recommended)**
Filename: kmod-megaraid_sas-07.706.05.00-14.rhel7u5.x86_64.compsig; kmod-megaraid_sas-07.706.05.00-14.rhel7u5.x86_64.rpm; kmod-megaraid_sas-07.706.05.00-14.rhel7u6.x86_64.compsig; kmod-megaraid_sas-07.706.05.00-14.rhel7u6.x86_64.rpm

Enhancements

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

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of Red Hat Enterprise Linux 7 (64-bit) supported by this binary rpm are:
3.10.0-693.el7 - Red Hat Enterprise Linux 7 Update 4 (64-bit) and future errata kernels for update 4.
3.10.0-862.el7- Red Hat Enterprise Linux 7 Update 5 (64-bit) and future errata kernels for update 5.

HPE Smart Array P824i-p MR controller Driver for 64-bit SUSE LINUX Enterprise Server 12
Version: 07.706.05.00-14 **(Recommended)**
Filename: lsi-megaraid_sas-kmp-default-07.706.05.00-14.sles12sp3.x86_64.compsig; lsi-megaraid_sas-kmp-default-07.706.05.00-14.sles12sp3.x86_64.rpm; lsi-megaraid_sas-kmp-default-07.706.05.00-14.sles12sp4.x86_64.compsig; lsi-megaraid_sas-kmp-default-07.706.05.00-14.sles12sp4.x86_64.rpm

Enhancements

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

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of SUSE LINUX Enterprise Server 12 (64-bit) supported by this binary rpm are:
4.4.21-69-default - SUSE LINUX Enterprise Server 12 (64-bit) SP2 plus future errata.
4.4.73-5.1 - SUSE LINUX Enterprise Server 12 (64-bit) SP3 plus future errata.

HPE Smart Array P824i-p MR controller Driver for 64-bit SUSE LINUX Enterprise Server 15
Version: 07.706.05.00-14 **(Recommended)**
Filename: lsi-megaraid_sas-kmp-default-07.706.05.00-14.sles15sp0.x86_64.compsig; lsi-megaraid_sas-kmp-default-07.706.05.00-14.sles15sp0.x86_64.rpm

Enhancements

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

Supported Devices and Features

SUPPORTED KERNELS:
The kernels of SUSE LINUX Enterprise Server 15 (64-bit) supported by this binary rpm are:
4.12.14-23 - SUSE LINUX Enterprise Server 15 (64-bit) SP0 plus future errata.

Driver - Storage Fibre Channel and Fibre Channel Over Ethernet **Top**

HPE Blade Storage mezzanine Fibre Channel Over Ethernet Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2016
Version: 12.0.1192.0 (b) **(Recommended)**
Filename: cp046759.compsig; cp046759.exe

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

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

HPE Blade Storage Mezzanine Fibre Channel Over Ethernet Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2019
Version: 12.0.1192.0 (b) **(Recommended)**
Filename: cp046758.compsig; cp046758.exe

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

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

HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2016
Version: 12.8.351.7 **(Recommended)**
Filename: cp046810.compsig; cp046810.exe

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 12.8.351.7

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:

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2019
Version: 12.8.351.7 **(Recommended)**
Filename: cp046808.compsig; cp046808.exe

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 12.8.351.7

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:

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2022
Version: 12.8.518.0 **(Recommended)**
Filename: cp047332.compsig; cp047332.exe

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Added the following support :

- Added support for Windows 2022

Updated to driver version 12.8.518.0

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:

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2016
Version: 9.4.5.20 **(Recommended)**
Filename: cp046828.compsig; cp046828.exe

Important Note!

Release Notes:
HPE QLogic Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Removed the "fwload" registry parameter.
- Fixed an unwanted behavior where Link up/down messages were not always logged in the Window System Event log.
- Fixed unwanted behavior with the reporting of Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) statistics.
- Fixed an unwanted behavior where connections to tape drives may fail to recover in the event of "SCSI Check Condition" commands or cable pulls.
- Fixed an unwanted behavior where the server may encounter a Blue Screen Of Death (BSOD) 0x0000009f message during shutdown as described in Advisory: HPE Host Bus Adapters - HPE Platforms Running a Microsoft Windows Server 2016 / 2019 Hyper-V Environment, and Configured With Certain HPE HBAs With the QLogic Storport Driver v9.4.2.20, May Experience a Bug Check 0x9F Event

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) Congestion Management algorithms.

Updated to version 9.4.5.20

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2019
Version: 9.4.5.20 **(Recommended)**
Filename: cp046829.compsig; cp046829.exe

Important Note!

Release Notes:
HPE QLogic Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Removed the "fwload" registry parameter.
- Fixed an unwanted behavior where Link up/down messages were not always logged in the Window System Event log.
- Fixed unwanted behavior with the reporting of Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) statistics.
- Fixed an unwanted behavior where connections to tape drives may fail to recover in the event of "SCSI Check Condition" commands or cable pulls.
- Fixed an unwanted behavior where the server may encounter a Blue Screen Of Death (BSOD) 0x0000009f message during shutdown as described in Advisory: HPE Host Bus Adapters - HPE Platforms Running a Microsoft Windows Server 2016 / 2019 Hyper-V Environment, and Configured With Certain HPE HBAs With the QLogic Storport Driver v9.4.2.20, May Experience a Bug Check 0x9F Event

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) Congestion Management algorithms.

Updated to version 9.4.5.20

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter

- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Storage Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2022
Version: 9.4.5.20 **(Recommended)**
Filename: cp047201.compsig; cp047201.exe

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:

- Removed the "fwload" registry parameter.
- Fixed an unwanted behavior where Link up/down messages were not always logged in the Window System Event log.
- Fixed unwanted behavior with the reporting of Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) statistics.
- Fixed an unwanted behavior where connections to tape drives may fail to recover in the event of "SCSI Check Condition" commands or cable pulls.

Enhancements

Added the following:

- Initial driver for Windows 2022
- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) Congestion Management algorithms

Updated to version 9.4.5.20

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Storage Fibre Channel Over Ethernet Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2016
Version: 12.0.1192.0 (f) **(Recommended)**
Filename: cp046770.compsig; cp046770.exe

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 CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Dual Port Converged Network Adapter

HPE Storage Fibre Channel Over Ethernet Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2019
Version: 12.0.1192.0 (g) **(Recommended)**
Filename: cp046769.compsig; cp046769.exe

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 CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Dual Port Converged Network Adapter

HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2016
Version: 12.8.351.7 **(Recommended)**
Filename: cp046791.compsig; cp046791.exe

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 12.8.351.7

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:

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 Emulex Storport Driver for Microsoft Windows Server 2019
Version: 12.8.351.7 **(Recommended)**
Filename: cp046790.compsig; cp046790.exe

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 12.8.351.7

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:

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2016
Version: 9.4.5.20 (b) **(Recommended)**
Filename: cp046782.compsig; cp046782.exe

Important Note!

Release Notes:
HPE QLogic Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Removed the "fwload" registry parameter.
- Fixed an unwanted behavior where Link up/down messages were not always logged in the Window System Event log.
- Fixed unwanted behavior with the reporting of Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) statistics.
- Fixed an unwanted behavior where connections to tape drives may fail to recover in the event of "SCSI Check Condition" commands or cable pulls.
- Fixed an unwanted behavior where the server may encounter a Blue Screen Of Death (BSOD) 0x0000009f message during shutdown as described in Advisory: HPE Host Bus Adapters - HPE Platforms Running a Microsoft Windows Server 2016 / 2019 Hyper-V Environment, and Configured With Certain HPE HBAs With the QLogic Storport Driver v9.4.2.20, May Experience a Bug Check 0x9F Event

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) Congestion Management algorithms.

Updated to version 9.4.5.20

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Storage Mezzanine Fibre Channel Adapter Kit for the x64 QLogic Storport Driver for Microsoft Windows Server 2019
Version: 9.4.5.20 (b) **(Recommended)**
Filename: cp046783.compsig; cp046783.exe

Important Note!

Release Notes:
HPE QLogic Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Removed the "fwload" registry parameter.
- Fixed an unwanted behavior where Link up/down messages were not always logged in the Window System Event log.
- Fixed unwanted behavior with the reporting of Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) statistics.
- Fixed an unwanted behavior where connections to tape drives may fail to recover in the event of "SCSI Check Condition" commands or cable pulls.
- Fixed an unwanted behavior where the server may encounter a Blue Screen Of Death (BSOD) 0x0000009f message during shutdown as described in Advisory: HPE Host Bus Adapters - HPE Platforms Running a Microsoft Windows Server 2016 / 2019 Hyper-V Environment, and Configured With Certain HPE HBAs With the QLogic Storport Driver v9.4.2.20, May Experience a Bug Check 0x9F Event

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation (USCM) Congestion Management algorithms.

Updated to version 9.4.5.20

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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Red Hat Enterprise Linux 7 Update 8 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 12.8.528.7 **(Recommended)**
Filename: kmod-elx-lpfc-12.8.528.7-1.rhel7u8.x86_64.compsig; kmod-elx-lpfc-12.8.528.7-1.rhel7u8.x86_64.rpm

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated to driver version 12.8.528.7

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 8 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 10.02.01.00.a14-k1 (b) **(Recommended)**
Filename: kmod-qlgc-qla2xxx-10.02.01.00.a14_k1-1.rhel7u8.x86_64.compsig; kmod-qlgc-qla2xxx-10.02.01.00.a14_k1-1.rhel7u8.x86_64.rpm

Important Note!

Release Notes:

HPE QLogic Adapters Release Notes

NOTE:

1. 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 to driver version 10.02.01.00.a14-k1

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 8 Server Fibre Channel over Ethernet (FCoE) Driver Kit for HPE Storage Emulex(BRCM) Converged Network Adapters and mezzanine Converged Network Adapters(CNAs)
Version: 12.0.1342.0 (b) **(Recommended)**
Filename: kmod-brcmfcoe-12.0.1342.0-1.rhel7u8.x86_64.compsig; kmod-brcmfcoe-12.0.1342.0-1.rhel7u8.x86_64.rpm

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 12.0.1342.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

- HPE CN1200E Dual Port Converged Network Adapter

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

Red Hat Enterprise Linux 7 Update 9 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 12.8.528.7 **(Recommended)**
Filename: kmod-elx-lpfc-12.8.528.7-1.rhel7u9.x86_64.compsig; kmod-elx-lpfc-12.8.528.7-1.rhel7u9.x86_64.rpm

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated to driver version 12.8.528.7

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezzaine Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 9 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 10.02.01.00.a14-k1 (b) **(Recommended)**
Filename: kmod-qlgc-qla2xxx-10.02.01.00.a14_k1-1.rhel7u9.x86_64.compsig; kmod-qlgc-qla2xxx-10.02.01.00.a14_k1-1.rhel7u9.x86_64.rpm

Important Note!

Release Notes:

HPE QLogic Adapters Release Notes

NOTE:

1. 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 to driver version 10.02.01.00.a14-k1

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 7 Update 9 Server Fibre Channel over Ethernet (FCoE) Driver Kit for HPE Storage Emulex(BRCM) Converged Network Adapters and mezzanine Converged Network Adapters(CNAs)
Version: 12.0.1342.0 (b) **(Recommended)**
Filename: kmod-brcmfcoe-12.0.1342.0-1.rhel7u9.x86_64.compsig; kmod-brcmfcoe-12.0.1342.0-1.rhel7u9.x86_64.rpm

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 12.0.1342.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

Red Hat Enterprise Linux 8 Update 3 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 12.8.528.7 **(Recommended)**
Filename: kmod-elx-lpfc-12.8.528.7-1.rhel8u3.x86_64.compsig; kmod-elx-lpfc-12.8.528.7-1.rhel8u3.x86_64.rpm

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated to driver version 12.8.528.7

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 8 Update 3 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 10.02.01.00.a14-k1 (b) **(Recommended)**
Filename: kmod-qlgc-qla2xxx-10.02.01.00.a14_k1-1.rhel8u3.x86_64.compsig; kmod-qlgc-qla2xxx-10.02.01.00.a14_k1-1.rhel8u3.x86_64.rpm

Important Note!

Release Notes:

HPE QLogic Adapters Release Notes

NOTE:

1. 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 to driver version 10.02.01.00.a14-k1

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Red Hat Enterprise Linux 8 Update 3 Server Fibre Channel over Ethernet (FCoE) Driver Kit for HPE Storage Emulex(BRCM) Converged Network Adapters and mezzanine Converged Network Adapters(CNAs)
Version: 12.0.1342.0 (b) **(Recommended)**
Filename: kmod-brcmfcoe-12.0.1342.0-1.rhel8u3.x86_64.compsig; kmod-brcmfcoe-12.0.1342.0-1.rhel8u3.x86_64.rpm

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 12.0.1342.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

Red Hat Enterprise Linux 8 Update 4 Server Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and Mezzanine Host Bus Adapters

Version: 12.8.528.7 **(Recommended)**
Filename: kmod-elx-lpfc-12.8.528.7-1.rhel8u4.x86_64.compsig; kmod-elx-lpfc-12.8.528.7-1.rhel8u4.x86_64.rpm

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Added the following support:

- Added support for RHEL 8.4

Updated to driver version 12.8.528.7

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

---

Red Hat Enterprise Linux 8 Update 4 Server Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 10.02.01.01.a2-k1 **(Recommended)**
Filename: kmod-qlgc-qla2xxx-10.02.01.01.a2_k1-4.rhel8u4.x86_64.compsig; kmod-qlgc-qla2xxx-10.02.01.01.a2_k1-4.rhel8u4.x86_64.rpm

Important Note!

Release Notes:

HPE QLogic Adapters Release Notes

NOTE:

1. 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

Added the following:-

- Initial driver for RHEL 8.4

Updated to driver version 10.02.01.01.a2-k1

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 12 Service Pack 5 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 12.8.528.7 **(Recommended)**
Filename: elx-lpfc-kmp-default-12.8.528.7_k4.12.14_120-1.sles12sp5.x86_64.compsig; elx-lpfc-kmp-default-12.8.528.7_k4.12.14_120-1.sles12sp5.x86_64.rpm

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Rewrite of same Driver version has to be performed using –reinstall option

Example: rpm –Uvh elx-lpfc-kmp-default-<version>.<OSupdate>.x86_64.rpm –reinstall

For more information please refer to the Knowledge Base
at: https://www.suse.com/support/kb/doc/?id=000019640

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 12.8.528.7

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 12 Service Pack 5 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 10.02.01.00.a14-k1 (b) **(Recommended)**
Filename: qlgc-qla2xxx-kmp-default-10.02.01.00.a14_k1_k4.12.14_120-1.sles12sp5.x86_64.compsig; qlgc-qla2xxx-kmp-default-10.02.01.00.a14_k1_k4.12.14_120-1.sles12sp5.x86_64.rpm

Important Note!

Release Notes:

HPE QLogic Adapters Release Notes

NOTE:

1. The rpm base-name for the QLogic driver has been changed to "qlgc". Upgrades from the earlier "hpqlgc" driver are supported.

2. Rewrite of same Driver version has to be performed using –force or --replacepkgs with --nodeps option

Example: rpm –Uvh kmod-qla2xxx-<version>.<OSupdate>.x86_64.rpm –force --nodeps

rpm –Uvh kmod-qla2xxx-<version>.<OSupdate>.x86_64.rpm –replacepkgs --nodeps

For more information please refer to the Knowledge Base at: https://www.suse.com/support/kb/doc/?id=000019640

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 10.02.01.00.a14-k1

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 12 service pack 5 Fibre Channel over Ethernet (FCoE) Driver Kit for HPE Storage Emulex(BRCM) Converged Network Adapters and mezzanine Converged Network Adapters(CNAs)
Version: 12.0.1342.0 (b) **(Recommended)**
Filename: brcmfcoe-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.compsig; brcmfcoe-kmp-default-12.0.1342.0_k4.12.14_120-1.sles12sp5.x86_64.rpm

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 12.0.1342.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

SUSE Linux Enterprise Server 15 Service Pack 2 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 12.8.528.7 **(Recommended)**

Filename: elx-lpfc-kmp-default-12.8.528.7_k5.3.18_22-1.sles15sp2.x86_64.compsig; elx-lpfc-kmp-default-12.8.528.7_k5.3.18_22-1.sles15sp2.x86_64.rpm

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Rewrite of same Driver version has to be performed using –reinstall option

Example: rpm –Uvh elx-lpfc-kmp-default-<version>.<OSupdate>.x86_64.rpm –reinstall

For more information please refer to the Knowledge Base
at: https://www.suse.com/support/kb/doc/?id=000019640

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 12.8.528.7

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 15 Service Pack 2 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 10.02.01.00.a14-k1 (b) **(Recommended)**
Filename: qlgc-qla2xxx-kmp-default-10.02.01.00.a14_k1_k5.3.18_22-1.sles15sp2.x86_64.compsig; qlgc-qla2xxx-kmp-default-10.02.01.00.a14_k1_k5.3.18_22-1.sles15sp2.x86_64.rpm

Important Note!

NOTE:

1. Rewrite of same Driver version has to be performed using –force or --replacepkgs with --nodeps option

Example: rpm –Uvh kmod-qla2xxx-<version>.<OSupdate>.x86_64.rpm –force --nodeps

rpm –Uvh kmod-qla2xxx-<version>.<OSupdate>.x86_64.rpm –replacepkgs --nodeps

For more information please refer to the Knowledge Base at: https://www.suse.com/support/kb/doc/?id=000019640

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 10.02.01.00.a14-k1

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 15 service pack 2 Fibre Channel over Ethernet (FCoE) Driver Kit for HPE Storage Emulex(BRCM) Converged Network Adapters and mezzanine Converged Network Adapters(CNAs)
Version: 12.0.1342.0 (b) **(Recommended)**
Filename: brcmfcoe-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.compsig; brcmfcoe-kmp-default-12.0.1342.0_k5.3.18_22-1.sles15sp2.x86_64.rpm

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 12.0.1342.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

SUSE Linux Enterprise Server 15 Service Pack 3 Fibre Channel Driver Kit for HPE Emulex Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 12.8.528.7 **(Recommended)**
Filename: elx-lpfc-kmp-default-12.8.528.7_k5.3.18_57-1.sles15sp3.x86_64.compsig; elx-lpfc-kmp-default-12.8.528.7_k5.3.18_57-1.sles15sp3.x86_64.rpm

Important Note!

Release Notes:
HPE Emulex Adapters Release Notes

Rewrite of same Driver version has to be performed using –reinstall option

Example: rpm –Uvh elx-lpfc-kmp-default-<version>.<OSupdate>.x86_64.rpm –reinstall

For more information please refer to the Knowledge Base
at: https://www.suse.com/support/kb/doc/?id=000019640

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Added the following support:

- Added support for SLES 15 SP3

Updated to driver version 12.8.528.7

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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SUSE Linux Enterprise Server 15 Service Pack 3 Fibre Channel Driver Kit for HPE QLogic Host Bus Adapters and Mezzanine Host Bus Adapters
Version: 10.02.01.00.a14-k1 (b) **(Recommended)**
Filename: qlgc-qla2xxx-kmp-default-10.02.01.00.a14_k1_k5.3.18_57-4.sles15sp3.x86_64.compsig; qlgc-qla2xxx-kmp-default-10.02.01.00.a14_k1_k5.3.18_57-4.sles15sp3.x86_64.rpm

Important Note!

NOTE:

1. Rewrite of same Driver version has to be performed using –force or --replacepkgs with --nodeps option

Example: rpm –Uvh kmod-qla2xxx-<version>.<OSupdate>.x86_64.rpm –force --nodeps

rpm –Uvh kmod-qla2xxx-<version>.<OSupdate>.x86_64.rpm –replacepkgs --nodeps

For more information please refer to the Knowledge Base at: https://www.suse.com/support/kb/doc/?id=000019640

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 10.02.01.00.a14-k1

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Driver - System **Top**

HPE Non-Volatile Memory Drivers for Microsoft Windows Server 2016
Version: 3.0.2.0 (B) **(Recommended)**
Filename: cp047945.compsig; cp047945.exe

Important Note!

This Smart Component version 3.0.2.0 contains the HPE NVM Bus Driver HpeNvmBus.sys version 3.0.2.0 and the HPE NVM Disk Driver HpeNvmDisk0101 version 3.0.2.0.

Enhancements

- Removed support for Windows Server 2012 R2

Driver - System Management **Top**

HPE CRU Native Driver for ESXi 7.0
Version: 7.0.10 **(Recommended)**
Filename: cru_driver_700.10.16_1OEM.700.0.0.14828939_signed_component_15675715.zip

Enhancements

Support for VMware ESXi 7.0

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iLO 5 Automatic Server Recovery Driver for Microsoft Windows Server 2016 and Microsoft Windows Server 2019
Version: 4.7.1.0 (B) **(Optional)**
Filename: cp047942.compsig; cp047942.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.

Enhancements

- Added support for Snap5 platforms

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iLO 5 Automatic Server Recovery Driver for Microsoft Windows Server 2022
Version: 4.7.1.0 **(Optional)**
Filename: cp047544.compsig; cp047544.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.

Enhancements

Initial release.

iLO 5 Channel Interface Driver for Microsoft Windows Server 2016 and Microsoft Windows Server 2019
Version: 4.7.1.0 (B) **(Optional)**
Filename: cp047941.compsig; cp047941.exe

Enhancements

- Added support for Snap5 platforms

iLO 5 Channel Interface Driver for Microsoft Windows Server 2022
Version: 4.7.1.0 (B) **(Recommended)**
Filename: cp049467.compsig; cp049467.exe

Fixes

- Fixes driver destination folder

iLO 5 Channel Interface Driver for Windows Server 2012 R2
Version: 4.6.0.0 **(Optional)**
Filename: cp040013.compsig; cp040013.exe

Enhancements

Add support for iLO 5 version 2.x firmware.

iLO 5 Channel Interface Driver for Windows Server 2016 and Server 2019
Version: 4.6.0.0 (C) **(Optional)**
Filename: cp041932.compsig; cp041932.exe

Enhancements

TBD

Switchtec PCIe Switch Management Driver for Microsoft Windows Server 2022
Version: 15.52.13.445 **(Recommended)**
Filename: cp049472.compsig; cp049472.exe

Enhancements

Initial release

Supported Devices and Features

Supported devices:

- Switchtec PFX 100xG4 Management EP
- Switchtec PFX 52xG4 Management EP

Switchtec PCIe Switch Management Driver for Windows Server 2016 and Server 2019
Version: 12.52.0.676 **(Recommended)**
Filename: cp046195.compsig; cp046195.exe

Enhancements

- Support for Apollo 6500 Gen10 Plus XL675d and XL645d

Supported Devices and Features

Supported devices:

- Switchtec PFX 100xG4 Management EP
- Switchtec PFX 52xG4 Management EP

Driver - Video **Top**

Matrox G200eH3 Video Controller Driver for Microsoft Windows 64-bit
Version: 9.15.1.248 **(Optional)**
Filename: cp048496.compsig; cp048496.exe

Enhancements

- Added support for Microsoft Windows Server 2022
- Added support for Edgeline platforms

Firmware - Blade Infrastructure **Top**

HPE BladeSystem c-Class Virtual Connect Firmware, Ethernet plus 8Gb 20-port and 8/16Gb 24-port FC Edition Component for Windows
Version: 4.85 **(Recommended)**
Filename: cp043332.exe

Prerequisites

The 4.85 version of HPE Virtual Connect Release Notes contains the prerequisites and can also be found in the following URL: http://www.hpe.com/info/vc/manuals

Fixes

The list of issues resolved in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL**:** http://www.hpe.com/info/vc/manuals

Enhancements

The list of enhancements in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL**:** http://www.hpe.com/info/vc/manuals

Supported Devices and Features

HPE Virtual Connect FlexFabric 10Gb/24-port Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 24-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 20-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect Flex-10/10D Module for c-Class BladeSystem

HPE Virtual Connect FlexFabric-20/40 F8 Module for HPE BladeSystem c-Class

HPE Virtual Connect 16Gb 24-port Fibre Channel Module for c-Class BladeSystem

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HPE BladeSystem c-Class Virtual Connect Firmware, Ethernet plus 8Gb 20-port and 8/16Gb 24-port FC Edition Component for Linux
Version: 4.85 **(Recommended)**
Filename: RPMS/x86_64/firmware-vceth-4.85-1.1.x86_64.rpm

Prerequisites

The 4.85 version of HPE Virtual Connect Release Notes contains the prerequisites and can be found in the following URL: http://www.hpe.com/info/vc/manuals

Fixes

The list of issues resolved in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL**:** http://www.hpe.com/info/vc/manuals

Enhancements

The list of enhancements in 4.85 version can be found in the HPE Virtual Connect Release Notes at URL**:** http://www.hpe.com/info/vc/manuals

Supported Devices and Features

HPE Virtual Connect FlexFabric 10Gb/24-port Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 24-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect 8Gb 20-port Fibre Channel Module for c-Class BladeSystem

HPE Virtual Connect Flex-10/10D Module for c-Class BladeSystem

HPE Virtual Connect FlexFabric-20/40 F8 Module for HPE BladeSystem c-Class

HPE Virtual Connect 16Gb 24-port Fibre Channel Module for c-Class BladeSystem

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Online HP 6Gb SAS BL Switch Firmware Smart Component for Linux (x86/x64)
Version: 4.3.6.0 (B) **(Optional)**
Filename: RPMS/i586/firmware-solex6gb-solex-4.3.6.0-2.1.i586.rpm

Important Note!

Note: If version 4.3.6.0 was previously installed, then it is not necessary to upgrade to version 4.3.6.0 (B).

Enhancements

- Added support for SUSE Linux Enterprise Server 15 OS

Online HPE 6Gb SAS BL Switch Firmware Smart Component for Windows (x86/x64)
Version: 4.3.6.0 (C) **(Optional)**
Filename: cp038273.exe

Enhancements

- Improved integration with Smart Update Manager

Online HPE BladeSystem c-Class Onboard Administrator Firmware Component for Linux
Version: 4.97 **(Recommended)**
Filename: RPMS/x86_64/firmware-oa-4.97-1.1.x86_64.rpm

Important Note!

Important Notes

- **Firmware Upgrade**

        - Starting OA 4.50 release, a standardized code signing and validation mechanism has been introduced to enhance the firmware image authenticity.
        - For customers using Firmware ROM image to upgrade OA:
            - For OAs with firmware version less than 3.50, first update to OA 3.50 and then continue updating to OA 4.50 or above.
        - For customers using Smart Components to upgrade OA:
            - OA firmware update mechanisms which rely on HPE Smart Components (example: EFM), will not be affected by this change. The Smart Component will automatically perform the intermediate upgrade to OA 3.50 before performing the OA 4.50 or above upgrade.
    - **EFM**
        - The OA only supports SPP ISO images that are less than 4 GB in size, whether hosted directly via the Enclosure DVD feature or an attached USB key, or mounted remotely via a specified URL. If an ISO image exceeds 4 GB, the CLI SHOW FIRMWARE MANAGEMENT command displays ISO URL Status as "Invalid URL."
        - If an SPP ISO image exceeds 4 GB, it is necessary to create a custom ISO image that excludes components unnecessary to the OA EFM blade firmware update process. At a minimum, the custom ISO must contain the firmware components for HPE ProLiant BL servers. (When using HPE SUM to create the custom ISO image, select Firmware as the Component Type, and select HPE ProLiant BL Series as the Server Type.) For information about creating a custom ISO image compatible for OA EFM functionality, see the *HPE BladeSystem Onboard Administrator User Guide*. More HPE SUM information can be found via HPE Smart Update Manager online help or at https://www.hpe.com/servers/hpsum/documentation.
    - **FIPS**
        - Onboard Administrator 4.71 is FIPS certified as referenced in the 140-2 In Process list located at http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140InProcess.pdf.
    - **IPv6**
        - When the Enable DHCPv6 or Enable SLAAC enclosure IPv6 settings are disabled on the Onboard Administrator, the respective DHCPv6 or SLAAC addresses of the iLOs in the enclosure are retained until these addresses expire automatically based on their respective configurations. A manual reset of the iLO releases these addresses immediately

Prerequisites

To access the OA web interface, you must have the OA IP address and a compatible web browser. You must access the

application through HTTPS (HTTP packets exchanged over an SSL/TLS-encrypted session).

The OA web interface requires an XSLT-enabled browser with support for JavaScript 1.3 or the equivalent.

Supported browsers include:

• Microsoft Internet Explorer 11

• Mozilla Firefox 67.0.4(64-bit)

• Google Chrome 77.0.3865.90 (Official Build) (64-bit)

Fixes

General

- Addressed an issue where running concurrent UPDATE ILO cli command from different SSH sessions cause few of the commands to end in operation failure.
- Fixed an issue in SET SERVER DVD CONNECT cli command usage in IPv6 environment.
- Addressed an issue where blade's ProductID update in System Rom RBSU is not reflected in the Onboard Administrator.

- Harnessed certificate read operation from flash to minimize certificate read failures.
- Fixed an issue in SNMP v3 protocol where EngineTime was not reset on increment of EngineBoot count.
- Addressed an issue related to blade discovery failure
- Fixed an issue in Smart Component where it fails to establish communication with Onboard Administrator using DHE ciphers.
- Addressed an issue related to ECDSA ciphers enable/disable feature.
- Added SSH cipher list to the configuration script
- Fixed an issue in Onboard Administrator GUI where IPv4 DynamicDNS could not be enabled when enclosure is configured for static IP configuration.
- Fixed help message display issues in CLI commands SET SSL_SESSION TIMEOUT and SET SECURESH.
- Addressed an issue in SNMP where EngineBoot count was incremented by two for add/delete of trap receiver.
- Fixed Online Help (OLH) pages display issue that occur when language pack is uploaded into Onboard Administrator.

Security

The following security vulnerabilities are fixed:

- Onboard Administrator's web server response is enhanced to include X-Content-Type-Options security header.
- CVE-2011-3026 - libpng: Heap buffer overflow
- CVE-2018-1000517 - BusyBox wget version contains a Buffer Overflow vulnerability
- CVE-2020-1971 - EDIPARTYNAME NULL pointer de-reference
- CVE-2020-15861 - Net-SNMP allows Escalation of Privileges
- CVE-2020-15862 - Net-SNMP provides the ability to run arbitrary commands as root.
- CVE-2019-20892 – SNMPv3 get bulk request issue

Issues and workarounds

Browsers

- OA GUI is not accessible in Chrome versions 43.0.2357.10 to 44.0.2383.The issue was caused by a "regression" in Chrome (or WebKit). Customers should use an alternative browser like Firefox or Internet Explorer or try a different version of Chrome.
- SSO-to-iLO connection from the OA using an iLO host name fails with Microsoft Internet Explorer11 on Windows 8. On a Windows 8 system with Internet Explorer 10 or Internet Explorer 11, if the OA web GUI session is loaded using a host name instead of an IP address, an attempt to open an iLO window using SSO from the OA web GUI might result in the iLO page loading in the OA web GUI window instead of the intended new window. This issue was determined to be a bug in Internet Explorer and is expected to be fixed in a future release or update for Internet Explorer. To work around this issue, either use an IP address to load the OA Web GUI, or turn off Protected Mode for the appropriate zone in Internet Explorer's settings. This issue occurs only on Internet Explorer browsers.

FIPS

Certificates smaller than 2048 bits in size are not compliant with FIPS requirements as enforced by the OA firmware starting with OA 4.20. When the OA running OA firmware version 4.40 or greater is operating in FIPS Mode ON/DEBUG and is configured with a 1024-bit LDAP certificate that was installed when running a previous version of OA firmware, FIPS Mode ON/DEBUG is considered to be operating in a degraded state due to the presence of the non-compliant certificate. While operating in this FIPS-Degraded Mode operational state, attempts to set FIPS Mode OFF from the OA GUI Network Access>FIPS tab will fail and show the error message The selected FIPS mode is already enabled. When the non-compliant certificate is removed, the FIPS-Degraded operational status is cleared, FIPS Mode can then be successfully set to OFF from the GUI interface. Note that the OA CLI command SET FIPS MODE OFF can be

successfully used to set FIPS Mode OFF even with non-compliant 1024-bit LDAP certificates installed in the OA.

IRC

Unable to open .net IRC console for Gen10 Blades, Gen9 Blades also have the same issue. The Java applet and Webstart however, loads but the virtual media mounting fails. The work around is to launch the IRC through IRC Application (HPE Lights-Out Stand Alone Remote Console) which is installed on terminal client.

EFM

To use EFM on Gen 10 Blades, please select options/filters *"Make Bootable ISO file" and "Enclosure Firmware Management"* while creating custom SPP ISO on HPE SUM 8.0.0. Please refer to HPE SUM 8.0.0 User guide for further details.

CAC

- In the CAC mode SSH, Telnet and XML Reply protocols will be disabled.
- Linked enclosure login will not work if the linked enclosure in CAC mode.
- If accurate Service account details are not provided, LDAP user login with certificate will fail.
- It is highly recommended to establish a recovery plan before getting started with CAC. If something goes wrong with the OA configuration, the OA may be recovered through the serial port or Insight Display panel and USB KEY. Both methods require physical access to the OA. However, if an LCD PIN has been configured (and forgotten) and local accounts have been disabled or CAC has been incorrectly configured then, the only way to recover is through a serial port. The two most common situations where OA recovery is needed are when LDAP has been configured incorrectly with local accounts disabled or when CAC has been configured without certificate access.

Configurable SSH Port Number

If a Standby OA is running firmware version less than 4.85 and it is updated to firmware version greater than or equal to 4.85 using synchronize firmware feature from Active OA, after the firmware update and reboot of the Standby OA, SSH port will not open in the configured port number. The work around is to reboot the Standby OA and SSH port will open in the configured port in next boot. This issue will not occur in the case where SSH port is configured to default port 22 in the Active OA.

Smart component

When OA is in FIPS ON or FIPS TOP-SECRET mode and any of the ciphers that use Diffie-Hellman (DH) keys are enabled, firmware upgrade or downgrade using OA Smart Component 4.96 or earlier versions may fail with following error:

Error: 1013: Client cannot connect with the Onboard Administrator. Verify the target address is correct and can be accessed from your system.

FIPS ON

TLS_DHE_RSA_WITH_3DES_EDE_CBC_SHA
TLS_DHE_RSA_WITH_AES_128_GCM_SHA25
TLS_DHE_RSA_WITH_AES_256_GCM_SHA384

TLS_DHE_RSA_WITH_AES_128_CBC_SHA256
TLS_DHE_RSA_WITH_AES_256_CBC_SHA256

FIPS TOP-SECRET

TLS_DHE_RSA_WITH_AES_256_GCM_SHA384

Same error may occur when OA upgrade or downgrade is performed through Smart

Update Manager (SUM) resulting in the following error message in the SUM.

Component Package D
eployment Status Log

---

cpC39063 Online HPE BladeSystem c-Class Onboard Administrator for
Windows Update returned an error View Log

When this failure occurs, the following message can be seen in the OA Smart Component log file.

Error: 1013: Client cannot connect with the Onboard Administrator.

Verify The target address is correct and can be accessed from your system.

The work-around for this problem is to disable all the ciphers that use DH key and rerun the firmware upgrade or downgrade.

Disabling ciphers can be done using the CLI command DISABLE SSL CIPHER or through the GUI. The disabled ciphers can be re-enabled once the firmware upgrade or downgrade is completed.

ILO5 Firmware Update

The UPDATE ILO command is failing to update the iLO5 firmware versions 2.10 and later on OA version 4.90 and less than 4.90. This issue is caused by the introduction of new signature in the iLO5 firmware version 2.10

. The work-around is to update the OA firmware to 4.95 and then try the UPDATE ILO command. This issue will not occur with OA versions 4.95 and later.

Enhancements

Onboard Administrator 4.97 provides support for the following enhancements:

Hardware additions

- None

Features**: additions and changes**

General

- A new feature is added to SNMP to support enable/disable options for v1/v2c protocols.
- New SNMP traps were added for emergency brake (e-brake) activated and deactivated events.
- Added support for firmware update of new NIDEC fans.
- Enhanced PowerPIC firmware update to support firmware version 1.8.
- In the Onboard Administrator GUI added support for iLO HTML5 IRC console.

Security

- A new feature is added in SSH to support enable/disable of Key Exchange (KEX) Algorithms.

Online HPE BladeSystem c-Class Onboard Administrator Firmware Component for Windows
Version: 4.97 **(Recommended)**
Filename: cp046217.exe

Important Note!

Important Notes

- **Firmware Upgrade**
  - Starting OA 4.50 release, a standardized code signing and validation mechanism has been introduced to enhance the firmware image authenticity.
  - For customers using Firmware ROM image to upgrade OA:
    - For OAs with firmware version less than 3.50, first update to OA 3.50 and then continue updating to OA 4.50 or above.
  - For customers using Smart Components to upgrade OA:
    - OA firmware update mechanisms which rely on HPE Smart Components (example: EFM), will not be affected by this change. The Smart Component will automatically perform the intermediate upgrade to OA 3.50 before performing the OA 4.50 or above upgrade.
- **EFM**
  - The OA only supports SPP ISO images that are less than 4 GB in size, whether hosted directly via the Enclosure DVD feature or an attached USB key, or mounted remotely via a specified URL. If an ISO image exceeds 4 GB, the CLI SHOW FIRMWARE MANAGEMENT command displays ISO URL Status as "Invalid URL."
  - If an SPP ISO image exceeds 4 GB, it is necessary to create a custom ISO image that excludes components unnecessary to the OA EFM blade firmware update process. At a minimum, the custom ISO must contain the firmware components for HPE ProLiant BL servers. (When using HPE SUM to create the custom ISO image, select Firmware as the Component Type, and select HPE ProLiant BL Series as the Server Type.) For information about creating a custom ISO image compatible for OA EFM functionality, see the *HPE BladeSystem Onboard Administrator User Guide*. More HPE SUM information can be found via HPE Smart Update Manager online help or at https://www.hpe.com/servers/hpsum/documentation.
- **FIPS**
  - Onboard Administrator 4.71 is FIPS certified as referenced in the 140-2 In Process list located at http://csrc.nist.gov/groups/STM/cmvp/documents/140-1/140InProcess.pdf.
- **IPv6**
  - When the Enable DHCPv6 or Enable SLAAC enclosure IPv6 settings are disabled on the Onboard Administrator, the respective DHCPv6 or SLAAC addresses of the iLOs in the enclosure are retained until these addresses expire automatically based on

their respective configurations. A manual reset of the iLO releases these addresses immediately.

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Smart component

When OA is in FIPS ON or FIPS TOP-SECRET mode and any of the ciphers that use Diffie-Hellman (DH) keys are enabled, firmware upgrade or downgrade using OA Smart Component 4.96 or earlier versions may fail with following error:

Error: 1013: Client cannot connect with the Onboard Administrator. Verify the target address is correct and can be accessed from your system.

FIPS ON

TLS_DHE_RSA_WITH_3DES_EDE_CBC_SHA
TLS_DHE_RSA_WITH_AES_128_GCM_SHA25
TLS_DHE_RSA_WITH_AES_256_GCM_SHA384
TLS_DHE_RSA_WITH_AES_128_CBC_SHA256
TLS_DHE_RSA_WITH_AES_256_CBC_SHA256

FIPS TOP-SECRET

TLS_DHE_RSA_WITH_AES_256_GCM_SHA384

Same error may occur when OA upgrade or downgrade is performed through Smart

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Component Package D
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---

cpC39063 Online HPE BladeSystem c-Class Onboard Administrator for
Windows Update returned an error View Log

When this failure occurs, the following message can be seen in the OA Smart Component log file.

Error: 1013: Client cannot connect with the Onboard Administrator.

Verify The target address is correct and can be accessed from your system.

The work-around for this problem is to disable all the ciphers that use DH key and rerun the firmware upgrade or downgrade.

Disabling ciphers can be done using the CLI command DISABLE SSL CIPHER or through the GUI. The disabled ciphers can be re-enabled once the firmware upgrade or downgrade is completed.

ILO5 Firmware Update

The UPDATE ILO command is failing to update the iLO5 firmware versions 2.10 and later on OA version 4.90 and less than 4.90. This issue is caused by the introduction of new signature in the iLO5 firmware version 2.10.

The work-around is to update the OA firmware to 4.95 and then try the UPDATE ILO command. This issue will not occur with OA versions 4.95 and later.

Enhancements

Onboard Administrator 4.97 provides support for the following enhancements:

Hardware additions

- None

Features**: additions and changes**

General

- A new feature is added to SNMP to support enable/disable options for v1/v2c protocols.
- New SNMP traps were added for emergency brake (e-brake) activated and deactivated events.
- Added support for firmware update of new NIDEC fans.
- Enhanced PowerPIC firmware update to support firmware version 1.8.
- In the Onboard Administrator GUI added support for iLO HTML5 IRC console.

Security

- A new feature is added in SSH to support enable/disable of Key Exchange (KEX) Algorithms.

Firmware - Lights-Out Management **Top**

Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5
Version: 1.48 (a) **(Optional)**
Filename: RPMS/x86_64/firmware-ilo5-1.48-1.1.x86_64.compsig; RPMS/x86_64/firmware-ilo5-1.48-1.1.x86_64.rpm

Important Note!

IPv6 network communications - Dedicated network connection only
Supported Networking Features
IPv6 Static Address Assignment
IPv6 SLAAC Address Assignment
IPv6 Static Route Assignment
IPv6 Static Default Gateway Entry
DHCPv6 Stateful Address Assignment
DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
Integrated Remote Console
OA Single Sign-On
HP-SIM Single Sign-On
Web Server
SSH Server
SNTP Client
DDNS Client
RIBCL over IPv6
SNMP
AlertMail
Remote Syslog
WinDBG Support
HPONCFG/HPLOMIG over an IPv6 connection
Scriptable Virtual Media
CLI/RIBCL Key Import over IPv6
Authentication using LDAP and Kerberos over IPv6
iLO Federation
Networking Features not supported by IPv6 in this release
IPv6 Over Shared Network Port Connections
IPMI
NETBIOS-WINS
Enterprise Secure Key Manager (ESKM) Support
Embedded Remote Support (ERS)

Prerequisites

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.2.0
- HPONCFG Linux 5.3.0
- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

Fixes

- Implemented the set server info command for all the DCi supporting options in previous versions of iLO 5 which may reset NIC settings during iLO 5 update.

Online ROM Flash Component for Linux - HPE Integrated Lights-Out 5
Version: 2.55 **(Recommended)**
Filename: RPMS/x86_64/firmware-ilo5-2.55-1.1.x86_64.rpm; RPMS/x86_64/firmware-ilo5-2.55-1.1.x86_64_part1.compsig; RPMS/x86_64/firmware-ilo5-2.55-1.1.x86_64_part2.compsig

Important Note!

IPv6 network communications - Dedicated network connection only
Supported Networking Features
IPv6 Static Address Assignment
IPv6 SLAAC Address Assignment

IPv6 Static Route Assignment
IPv6 Static Default Gateway Entry
DHCPv6 Stateful Address Assignment
DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
Integrated Remote Console
OA Single Sign-On
HP-SIM Single Sign-On
Web Server
SSH Server
SNTP Client
DDNS Client
RIBCL over IPv6
SNMP
AlertMail
Remote Syslog
WinDBG Support
HPONCFG/HPLOMIG over an IPv6 connection
Scriptable Virtual Media
CLI/RIBCL Key Import over IPv6
Authentication using LDAP and Kerberos over IPv6
iLO Federation

Networking Features not supported by IPv6 in this release

IPv6 Over Shared Network Port Connections
IPMI
NETBIOS-WINS
Enterprise Secure Key Manager (ESKM) Support
Embedded Remote Support (ERS)

Prerequisites

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 3.3.0
- HPQLOCFG v5.3 .0
- Lights-Out XML Scripting Sample bundle 5.40.0
- HPONCFG Windows 5.5.0
- HPONCFG Linux 5.6.0
- LOCFG 5.40.0 or later
- HPLOMIG 5.3.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

Fixes

- Fixed an issue where the Adapter Virtualization Mode was not persistent across reboots.
- During System boot/reboot, iLO will stall the complete storage controller discovery such that encryption status query happens after PCIeVDM interface is ready.
- Fixed an issue where none of the Controller were getting detected when Encryption was Enabled.
- Fixed intermittent issue where none of the NVME drives were getting detected in OS when iLO is reset multiple times.
- On XL270d Gen10 Servers, Incorrect capacity of PSU is displayed in iLO Power supplies field after online insertion of HPE 2200W platinum Hot-Plug power supply.
- Fixed a configuration sync issue during IPv6 initialization when SLAAC Enable/Disable settings were modified.
- Support added to increase the mapping limit of 32 to 64 physical drives to one logical drive.
- Fixed the long boot time issue when encryption is enabled on smart array controller.
- Fixed the NS204i-p unknown status issue after the windows reboot.
- Fixed the data source for HPE FlexFabric 20Gb 2-port 650FLB Adapter to report correctly when AMS is not installed.

Enhancements

- Support for HPE ProLiant ML30 Gen10 Plus and HPE ProLiant DL20 Gen10 Plus Server.

- Support import of SSL certificate which is more than 20KB via iLO REST and GUI.
- Support for PCIE bifurcated slot for Intel E810 2CQDA2 100G NIC.
- Support for 64 Character length Password similar to how other vendors provide.
- Implemented workaround for health monitoring of NVME M.2 drives as these were partially compliant to NVMe-MI spec.

Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5
Version: 1.48 (a) **(Optional)**
Filename: cp044447.compsig; cp044447.exe

Important Note!

IPv6 network communications - Dedicated network connection only
Supported Networking Features
IPv6 Static Address Assignment
IPv6 SLAAC Address Assignment
IPv6 Static Route Assignment
IPv6 Static Default Gateway Entry
DHCPv6 Stateful Address Assignment
DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
Integrated Remote Console
OA Single Sign-On
HP-SIM Single Sign-On
Web Server
SSH Server
SNTP Client
DDNS Client
RIBCL over IPv6
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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
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Enterprise Secure Key Manager (ESKM) Support
Embedded Remote Support (ERS)

Prerequisites

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.2.0
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NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

Fixes

- Implemented the set server info command for all the DCi supporting options in previous versions of iLO 5 which may reset NIC settings during iLO 5 update.

Online ROM Flash Component for Windows x64 - HPE Integrated Lights-Out 5
Version: 2.55 **(Recommended)**
Filename: cp046463.exe; cp046463_part1.compsig; cp046463_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
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Authentication using LDAP and Kerberos over IPv6
iLO Federation
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- RESTful Interface Tool (iLOREST) 3.3.0
- HPQLOCFG v5.3 .0
- Lights-Out XML Scripting Sample bundle 5.40.0
- HPONCFG Windows 5.5.0
- HPONCFG Linux 5.6.0
- LOCFG 5.40.0 or later
- HPLOMIG 5.3.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

Fixes

- Fixed an issue where the Adapter Virtualization Mode was not persistent across reboots.
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- Support for 64 Character length Password similar to how other vendors provide.
- Implemented workaround for health monitoring of NVME M.2 drives as these were partially compliant to NVMe-MI spec.

Online ROM Flash Firmware Package - HPE Integrated Lights-Out 5
Version: 1.48 (a) **(Optional)**
Filename: ilo5_148.fwpkg

Important Note!

IPv6 network communications - Dedicated network connection only

Supported Networking Features

IPv6 Static Address Assignment
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IPv6 Static Route Assignment
IPv6 Static Default Gateway Entry
DHCPv6 Stateful Address Assignment
DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
Integrated Remote Console
OA Single Sign-On
HP-SIM Single Sign-On
Web Server
SSH Server
SNTP Client
DDNS Client
RIBCL over IPv6
SNMP
AlertMail
Remote Syslog
WinDBG Support
HPONCFG/HPLOMIG over an IPv6 connection
Scriptable Virtual Media
CLI/RIBCL Key Import over IPv6
Authentication using LDAP and Kerberos over IPv6
iLO Federation

Networking Features not supported by IPv6 in this release

IPv6 Over Shared Network Port Connections
IPMI
NETBIOS-WINS
Enterprise Secure Key Manager (ESKM) Support
Embedded Remote Support (ERS)

Prerequisites

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 2.3
- HPQLOCFG v5.2
- Lights-Out XML Scripting Sample bundle 5.10.0
- HPONCFG Windows 5.2.0
- HPONCFG Linux 5.3.0

- LOCFG v5.10.0
- HPLOMIG 5.2.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

Fixes

- Implemented the set server info command for all the DCi supporting options in previous versions of iLO 5 which may reset NIC settings during iLO 5 update.

Online ROM Flash Firmware Package - HPE Integrated Lights-Out 5
Version: 2.55 **(Recommended)**
Filename: ilo5_255.fwpkg

Important Note!

IPv6 network communications - Dedicated network connection only
Supported Networking Features
IPv6 Static Address Assignment
IPv6 SLAAC Address Assignment
IPv6 Static Route Assignment
IPv6 Static Default Gateway Entry
DHCPv6 Stateful Address Assignment
DHCPv6 Stateless DNS, Domain Name, and NTP Configuration
Integrated Remote Console
OA Single Sign-On
HP-SIM Single Sign-On
Web Server
SSH Server
SNTP Client
DDNS Client
RIBCL over IPv6
SNMP
AlertMail
Remote Syslog
WinDBG Support
HPONCFG/HPLOMIG over an IPv6 connection
Scriptable Virtual Media
CLI/RIBCL Key Import over IPv6
Authentication using LDAP and Kerberos over IPv6
iLO Federation
Networking Features not supported by IPv6 in this release
IPv6 Over Shared Network Port Connections
IPMI
NETBIOS-WINS
Enterprise Secure Key Manager (ESKM) Support
Embedded Remote Support (ERS)

Prerequisites

Hewlett Packard Enterprise recommends the following or greater versions of iLO utilities for best performance:

- RESTful Interface Tool (iLOREST) 3.3.0
- HPQLOCFG v5.3 .0
- Lights-Out XML Scripting Sample bundle 5.40.0
- HPONCFG Windows 5.5.0
- HPONCFG Linux 5.6.0
- LOCFG 5.40.0 or later
- HPLOMIG 5.3.0

NOTE: Updated utilities and system libraries are required to support the iLO HighSecurity, FIPS, and CNSA security states. The HPONCFG Windows utility does not currently support the CNSA security state.

Fixes

- Fixed an issue where the Adapter Virtualization Mode was not persistent across reboots.
- During System boot/reboot, iLO will stall the complete storage controller discovery such that encryption status query happens after PCIeVDM interface is ready.
- Fixed an issue where none of the Controller were getting detected when Encryption was Enabled.
- Fixed intermittent issue where none of the NVME drives were getting detected in OS when iLO is reset multiple times.
- On XL270d Gen10 Servers, Incorrect capacity of PSU is displayed in iLO Power supplies field after online insertion of HPE 2200W platinum Hot-Plug power supply.
- Fixed a configuration sync issue during IPv6 initialization when SLAAC Enable/Disable settings were modified.
- Support added to increase the mapping limit of 32 to 64 physical drives to one logical drive.
- Fixed the long boot time issue when encryption is enabled on smart array controller.
- Fixed the NS204i-p unknown status issue after the windows reboot.
- Fixed the data source for HPE FlexFabric 20Gb 2-port 650FLB Adapter to report correctly when AMS is not installed.

Enhancements

- Support for HPE ProLiant ML30 Gen10 Plus and HPE ProLiant DL20 Gen10 Plus Server.
- Support import of SSL certificate which is more than 20KB via iLO REST and GUI.
- Support for PCIE bifurcated slot for Intel E810 2CQDA2 100G NIC.
- Support for 64 Character length Password similar to how other vendors provide.
- Implemented workaround for health monitoring of NVME M.2 drives as these were partially compliant to NVMe-MI spec.

Firmware - Network Top

Broadcom Firmware Package for BCM5741x adapters
Version: 218.0.166.0 (B) **(Recommended)**
Filename: bcm218.0.166.0.pup.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Broadcom NetXtreme-E Driver for Microsoft Windows Server, version 218.0.32.0 or later
- HPE Broadcom NetXtreme-E Drivers for VMware, version 2021.04.05 or later
- HPE Broadcom NetXtreme-E Drivers for Linux, version 1.10.2-218.0.67.0 or later

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus Server

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter
- HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter

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

Broadcom NX1 Online Firmware Upgrade Utility for Linux x86_64
Version: 2.28.3 **(Recommended)**
Filename: firmware-nic-bcm-open-2.28.3-1.1.x86_64.compsig; firmware-nic-bcm-open-2.28.3-1.1.x86_64.rpm

Important Note!

HPE recommends *HPE Broadcom tg3 Ethernet Drivers*, versions 3.139b 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 brought up before firmware can be updated.

- Follow the command line to bring up ethernet device:

  # ifup ethX or ifconfig ethX up or wicked ifup ethX

If local system doesn't configure any network interface for the adapter that are necessary then to create the network config file to bring up interface.

- For example in sles15sp1, To create ifcfg-ethX files under /etc/sysconfig/network/

Enhancements

Initial version

Supported Devices and Features

This product supports the following network adapters:

- Broadcom BCM5720 Ethernet 1Gb 2-port BASE-T LOM Adapter for HPE

Broadcom NX1 Online Firmware Upgrade Utility for VMware
Version: 1.29.3 **(Recommended)**
Filename: CP048908.compsig; CP048908.zip

Important Note!

This software package contains combo image v20.19.31 with the following firmware versions:

NIC	Boot Code Version	PXE Version	NCSI Version	UEFI Version	CCM Version
BCM 5720 1GbE 2p BASE-T LOM Adptr	1.42	21.6.0	1.5.30	21.6.28	218.0.10.0

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Enhancements

Initial version

Supported Devices and Features

This product supports the following network adapters:

- Broadcom BCM5720 Ethernet 1Gb 2-port BASE-T LOM Adapter for HPE

Broadcom NX1 Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 5.2.5.0 **(Recommended)**
Filename: cp048909.compsig; cp048909.exe

Important Note!

HPE recommends *Broadcom NX1 1Gb Driver for Windows Server x64 Editions*, version 219.0.1.0 or later, for use with this firmware.

This software package contains combo image v20.19.31 with the following firmware versions:

NIC	Boot Code Version	PXE Version	NCSI Version	UEFI Version	CCM Version
BCM 5720 1GbE 2p BASE-T LOM Adptr	1.42	21.6.0	1.5.30	21.6.28	218.0.10.0

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Enhancements

Initial version

Supported Devices and Features

This product supports the following network adapters:

- Broadcom BCM5720 Ethernet 1Gb 2-port BASE-T LOM Adapter for HPE

HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Linux (x64)
Version: 2021.10.01 **(Recommended)**
Filename: RPMS/x86_64/firmware-cna-mezz-emulex-2021.10.01-1.8.x86_64.compsig; RPMS/x86_64/firmware-cna-mezz-emulex-2021.10.01-1.8.x86_64.rpm

Important Note!

This component is only supported on RHEL7u8, RHEL7u9, RHEL8u3, SLES12SP5, SLES15SP2 OS's.

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Prerequisites

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storage/spock/

The OOB NIC driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download.

Additional requirements:

The target environment must have the libsysfs or sysfsutils package installed prior to the installation of the firmware update kit. If not already present, the libsysfs or sysfsutils package can be obtained from the operating system installation media.

Environment must have 32-bit netlink library (libnl.so) installed for component to be able to discover Emulex HBAs/CNAs
Environment must be running the syslog daemon for the flash engine to run

Note: To enable the FCoE/iSCSI protocol on devices that support it, please install the appropriate Emulex FCoE/iSCSI driver. The FCoE protocol also requires the HPE Emulex FCoE Enablement Kit be installed. The drivers and enablement kit are also available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download.

The Enablement Kit requires that the target environment have the libHBAAPI package installed from your OS installation media.

Install the FCoE Driver Kit, reboot, and then install the Enablement Kit.

Enhancements

We have separate components to update fibre channel and converged network adapters. This is a converged network adapter update component.

This component is only supported on RHEL7u8, RHEL7u9, RHEL8u3, SLES12SP5, SLES15SP2 OS's.

Updated CNA (XE100 series) firmware

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for Microsoft Windows Server 2016/2019(x64)
Version: 2021.10.01 **(Recommended)**
Filename: cp046757.compsig; cp046757.exe

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Prerequisites

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storage/spock/

The HPE supplied Emulex NIC driver must be installed prior to this firmware component being identified by SUM for deployment. The latest driver is available on the HPE.com website at http://www.hpe.com/.

The FCoE/iSCSI OOB driver and FCoE enablement kit are available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download.

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

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: CP046753.compsig; CP046753.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated CNA (XE100 series) firmware

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: CP046754.compsig; CP046754.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated CNA (XE100 series) firmware

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

HPE Blade Firmware Flash for Emulex Mezzanine Converged Network Adapters for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: CP046755.compsig; CP046755.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated CNA (XE100 series) firmware

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE FlexFabric 20Gb 2-port 650FLB Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE FlexFabric 20Gb 2-port 650M Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

HPE Blade Intel Online Firmware Upgrade Utility for Linux
Version: 1.2.3 **(Optional)**
Filename: firmware-nic-intel-bl-1.2.3-1.1.x86_64.compsig; firmware-nic-intel-bl-1.2.3-1.1.x86_64.rpm

Important Note!

HPE recommends the *HPE Blade Intel ixgbe Drivers for Linux*, versions 5.9.4 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.

Enhancements

This product now supports Red Hat Enterprise Linux 7, Updates 8 and 9.
This product now supports Red Hat Enterprise Linux 8, Updates 2 and 3.
This product now supports SUSE Linux Enterprise Server 12 SP5.
This product now supports SUSE Linux Enterprise Server 15 SP2.

Supported Devices and Features

This package supports the following network adapters:

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

HPE Blade Intel Online Firmware Upgrade Utility for VMware
Version: 1.2.3 **(Optional)**
Filename: CP045076.compsig; CP045076.zip

Important Note!

HPE recommends the *HPE Blade Intel ixgben Driver for VMware,* version 2020.12.09 or later, for use with this firmware.

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Enhancements

This product now supports VMware vSphere 7.0 U1.
This product now supports VMware vSphere 6.7 U3.
This product now supports VMware vSphere 6.5 U3.

Supported Devices and Features

This package supports the following network adapters:

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

HPE Blade Intel Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 1.0.5.2 **(Optional)**
Filename: cp047539.compsig; cp047539.exe

Important Note!

HPE recommends one of the following drivers, as appropriate for your system, for use with this firmware:

- *HPE Blade Intel ixn Driver for Windows Server 2016*, version 4.1.199.0 or later
- *HPE Blade Intel ixn Driver for Windows Server 2019*, version 4.1.197.0(B) or later

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Fixes

This product no longer supports Windows Server 2012 R2.

Supported Devices and Features

This package supports the following network adapters:

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

HPE Blade QLogic NX2 Online Firmware Upgrade Utility for Linux
Version: 1.5.2 **(Optional)**
Filename: firmware-nic-qlogic-nx2-bl-1.5.2-1.1.x86_64.compsig; firmware-nic-qlogic-nx2-bl-1.5.2-1.1.x86_64.rpm

Important Note!

HPE recommends *HPE Blade QLogic NX2 10/20GbE Multifunction Drivers for Linux*, versions 7.14.80-5 or later, for use with the firmware in this package.

Prerequisites

This package requires the appropriate driver for your network adapter be installed and all Ethernet ports brought up (*ifup ethX* or *ifconfig ethX up*) before firmware can be updated.

Fixes

This product addresses an issue where the Maximum Transmission Unit (MTU) value of iSCSI function port is displayed as 0 bytes in AHS log.

Enhancements

This product now supports Red Hat Enterprise Linux 8 Update 4.
This product now supports SuSE Linux Enterprise Server 15 SP3.

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: 1.5.2 **(Optional)**
Filename: CP047647.compsig; CP047647.zip

Important Note!

HPE recommends *HPE Blade QLogic NX2 10/20 GbE Multifunction Driver for VMware*, version 2021.09.01 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 Maximum Transmission Unit (MTU) value of iSCSI function port is displayed as 0 bytes in AHS log.

Enhancements

This product now supports VMware ESXi 7.0 U3.

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: 1.0.5.3 **(Optional)**
Filename: cp047538.compsig; cp047538.exe

Important Note!

HPE recommends *HPE Blade QLogic NX2 10/20GbE Multifunction Drivers for Windows Server x64 Editions*, version 7.13.206.0 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 issue where the Maximum Transmission Unit (MTU) value of iSCSI function port is displayed as 0 bytes in AHS log.

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 Firmware Package for BCM5741x adapters
Version: 218.0.166000 (B) **(Recommended)**
Filename: bcm218.0.166000.Optimized.pup.fwpkg

Fixes

This product addresses an issue about battery POST error caused by unnecessary protocol on Supported Devices of this product.

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 Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter

HPE Broadcom NX1 Online Firmware Upgrade Utility for Linux x86_64
Version: 2.27.6 **(Optional)**
Filename: firmware-nic-broadcom-2.27.6-1.1.x86_64.compsig; firmware-nic-broadcom-2.27.6-1.1.x86_64.rpm

Important Note!

HPE recommends *HPE Broadcom tg3 Ethernet Drivers*, versions 3.139b 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/.

Fixes

- This product addresses an issue about lack of information under AHS log.
- This product addresses an RSOD issue which appeared intermittently during POST after having a warm reboot.
- This product addresses a modification on help string of Family Firmware Version.

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: 1.28.6 **(Optional)**
Filename: CP045013.compsig; CP045013.zip

Important Note!

This software package contains combo image v20.18.31 with the following firmware versions:

NIC	Boot Code Version	PXE Version	NCSI Version	UEFI Version	CCM Version
HPE Ethernet 1Gb 2-port 330i Adapter (22BD)	2.10	21.6.0	1.5.27	21.6.12	218.0.10.0
HPE Ethernet 1Gb 4-port 331i Adapter (22BE) HPE Ethernet 1Gb 4-port 331FLR Adapter HPE Ethernet 1Gb 4-port 331T Adapter	1.46	21.6.0	1.5.27	21.6.12	218.0.10.0
HPE Ethernet 1Gb 2-port 332i Adapter (22E8) HPE Ethernet 1Gb 2-port 332T Adapter	1.40	21.6.0	1.5.27	21.6.12	218.0.10.0

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 about lack of information under AHS log.
- This product addresses an RSOD issue which appeared intermittently during POST after having a warm reboot.
- This product addresses a modification on help string of Family Firmware Version.

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: 5.2.4.0 **(Optional)**

Filename: cp045014.compsig; cp045014.exe

Important Note!

HPE recommends *HPE Broadcom NX1 1Gb Driver for Windows Server x64 Editions*, version 214.0.0.6 or later, for use with this firmware.

This software package contains combo image v20.18.31 with the following firmware versions:

NIC	Boot Code Version	PXE Version	NCSI Version	UEFI Version	CCM Version
HPE Ethernet 1Gb 2-port 330i Adapter (22BD)	2.10	21.6.0	1.5.27	21.6.12	218.0.10.0
HPE Ethernet 1Gb 4-port 331i Adapter (22BE) HPE Ethernet 1Gb 4-port 331FLR Adapter HPE Ethernet 1Gb 4-port 331T Adapter	1.46	21.6.0	1.5.27	21.6.12	218.0.10.0
HPE Ethernet 1Gb 2-port 332i Adapter (22E8) HPE Ethernet 1Gb 2-port 332T Adapter	1.40	21.6.0	1.5.27	21.6.12	218.0.10.0

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 about lack of information under AHS log.
- This product addresses an RSOD issue which appeared intermittently during POST after having a warm reboot.
- This product addresses a modification on help string of Family Firmware Version.

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 Firmware Flash for Emulex Converged Network Adapters for Linux (x64)
Version: 2021.10.01 **(Recommended)**
Filename: RPMS/x86_64/firmware-cna-emulex-2021.10.01-1.8.x86_64.compsig; RPMS/x86_64/firmware-cna-emulex-2021.10.01-1.8.x86_64.rpm

Important Note!

This component is only supported on RHEL7u8, RHEL7u9, RHEL8u3, SLES12SP5, SLES15SP2 OS's.

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0

Prerequisites

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storage/spock/

The OOB NIC driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download.

Additional requirements:

The target environment must have the libsysfs or sysfsutils package installed prior to the installation of the firmware update kit. If not already present, the libsysfs or sysfsutils package can be obtained from the operating system installation media.

Environment must have 32-bit netlink library (libnl.so) installed for component to be able to discover Emulex HBAs/CNAs
Environment must be running the syslog daemon for the flash engine to run

Note: To enable the FCoE/iSCSI protocol on devices that support it, please install the appropriate Emulex FCoE/iSCSI driver. The FCoE protocol also requires the HPE Emulex FCoE Enablement Kit be installed. The drivers and enablement kit are also available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download.

The Enablement Kit requires that the target environment have the libHBAAPI package installed from your OS installation media.

Install the FCoE Driver Kit, reboot, and then install the Enablement Kit.

Enhancements

This component is only supported on RHEL7u8, RHEL7u9, RHEL8u3, SLES12SP5, SLES15SP2 OS's.

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot BIOS
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Dual Port Converged Network Adapter

HPE Firmware Flash for Emulex Converged Network Adapters for Microsoft Windows Server 2016/2019(x64)
Version: 2021.10.01 **(Recommended)**
Filename: cp046768.compsig; cp046768.exe

Important Note!

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0

Prerequisites

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storage/spock/

The HPE supplied Emulex NIC driver must be installed prior to this firmware component being identified by SUM for deployment. The latest driver is available on the HPE.com website at http://www.hpe.com/.

The FCoE/iSCSI OOB driver and FCoE enablement kit are available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download.

Enhancements

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot BIOS
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

- HPE CN1200E Dual Port Converged Network Adapter

- HPE CN1200E-T Dual Port Converged Network Adapter

HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: CP046764.compsig; CP046764.zip

Important Note!

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Dual Port Converged Network Adapter

HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: CP046765.compsig; CP046765.zip

Important Note!

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI

HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0	12.0.1171.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Dual Port Converged Network Adapter

HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: CP046766.compsig; CP046766.zip

Important Note!

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware version:

Adapter	Speed	Universal Boot Image	Firmware	UEFI
HPE CN1200E Dual Port Converged Network Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0
HPE CN1200E-T Dual Port Adapter	20Gb	12.0.1277.0	12.0.1345.0	12.0.1269.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Dual Port Converged Network Adapter

HPE Intel Online Firmware Upgrade Utility for Linux x86_64
Version: 1.22.6 **(Recommended)**
Filename: firmware-nic-intel-1.22.6-1.1.x86_64.compsig; firmware-nic-intel-1.22.6-1.1.x86_64.rpm

Important Note!

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- HPE Intel igb Drivers for Linux, versions 6.7.2 or later
- HPE Intel ixgbe Drivers for Linux , versions 5.12.5 or later
- HPE Intel i40e Drivers for Linux, versions 2.16.11 or later

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 8 update 4 and SUSE Linux Enterprise Server 15 Service Pack 3

Supported Devices and Features

This package supports the following network adapters:

- HPE Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 1Gb 2-port 363i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 4-port 366T Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter

- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter

HPE Intel Online Firmware Upgrade Utility for VMware
Version: 3.15.5 **(Recommended)**
Filename: CP047025.compsig; CP047025.zip

Important Note!

This software package contains the following firmware versions for the below listed supported network adapters:

NIC	EEPROM/NVM Version	OROM Version	Single NVM Version
HPE Ethernet 1Gb 2-port 361i Adapter	8000106F	1.2836.0	N/A
HPE Ethernet 1Gb 2-port 361T Adapter	80001147	1.2836.0	N/A
HPE Ethernet 1Gb 2-port 363i Adapter	80000D00	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 366i Communication Board	80000EBF	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 366i Adapter	8000105E	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 366FLR Adapter	80001148	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 366T Adapter	80001146	1.2836.0	N/A
HPE Ethernet 1Gb 2-port 368i Adapter	800027FA	1.2836.0	N/A
HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter	800027F8	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 369i Adapter	800027FB	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	80000838	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 560SFP+ Adapter	80000835	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 561T Adapter	80000636	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 561FLR-T Adapter	800005B6	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 568i Adapter	800027FC	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter	800027F8	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter	800027F8	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 563i Adapter	800035C0	1.1375.0	N/A

HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	80009655	1.2836.0	10.54.7
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	8000137D	1.2836.0	10.54.4
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	800095AA	1.2836.0	10.54.7
HPE Ethernet 10Gb 2-port 562T Adapter	8000137C	1.2836.0	10.54.4

The combo image v1.2836.0 includes: Boot Agent: 1GbE - v1.5.88, 10GbE - v2.4.44, 40GbE - v1.1.18 & UEFI Drivers: 1GbE - v9.4.06, 10GbE - v7.8.13, 40GbE - v4.4.12

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.

Enhancements

This product now supports VMware ESXi 7.0 u3

Supported Devices and Features

This package supports the following network adapters:

- HPE Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 1Gb 2-port 363i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 4-port 366T Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter

HPE Intel Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 5.2.5.0 **(Recommended)**
Filename: cp047026.compsig; cp047026.exe

Important Note!

This software package contains the following firmware versions for the below listed supported network adapters:

NIC	EEPROM/NVM Version	OROM Version	Single NVM Version
HPE Ethernet 1Gb 2-port 361i Adapter	8000106F	1.2836.0	N/A
HPE Ethernet 1Gb 2-port 361T Adapter	80001147	1.2836.0	N/A
HPE Ethernet 1Gb 2-port 363i Adapter	80000D00	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 366i Communication Board	80000EBF	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 366i Adapter	8000105E	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 366FLR Adapter	80001148	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 366T Adapter	80001146	1.2836.0	N/A
HPE Ethernet 1Gb 2-port 368i Adapter	800027FA	1.2836.0	N/A
HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter	800027F8	1.2836.0	N/A
HPE Ethernet 1Gb 4-port 369i Adapter	800027FB	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	80000838	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 560SFP+ Adapter	80000835	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 561T Adapter	80000636	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 561FLR-T Adapter	800005B6	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 568i Adapter	800027FC	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter	800027F8	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter	800027F8	1.2836.0	N/A
HPE Ethernet 10Gb 2-port 563i Adapter	800035C0	1.1375.0	N/A
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	80009655	1.2836.0	10.54.7
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	8000137D	1.2836.0	10.54.4
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	800095AA	1.2836.0	10.54.7
HPE Ethernet 10Gb 2-port 562T Adapter	8000137C	1.2836.0	10.54.4

The combo image v1.2836.0 includes: Boot Agent: 1GbE - v1.5.88, 10GbE - v2.4.44, 40GbE - v1.1.18 & UEFI Drivers: 1GbE - v9.4.06, 10GbE - v7.8.13, 40GbE - v4.4.12

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 no longer supports Windows Server 2012 R2.

Supported Devices and Features

This package supports the following network adapters:

- HPE Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 1Gb 2-port 363i Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 4-port 366T Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 561FLR-T Adapter
- HPE Ethernet 10Gb 2-port 561T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter

HPE QLogic FastLinQ Firmware Package for Arrowhead adapters
Version: 8.55.27 **(Recommended)**
Filename: ql_hp_ah_mbi_8.55.27_pldm.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- HPE QLogic FastLinQ 10/25/50 GbE Drivers for Linux, version 8.55.14.0-2 or later
- HPE QLogic FastLinQ 10/25/50 GbE Drivers for Microsoft Windows Server x64 Editions, version 8.58.16.0 or later
- HPE QLogic FastLinQ 10/25/50 GbE Multifunction Drivers for VMware, version 2021.09.04 or later

Fixes

This product addresses an issue where the modification on string format of firmware update payload.

Enhancements

Initial version

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 Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

HPE QLogic NX2 Online Firmware Upgrade Utility for Linux x86_64
Version: 2.29.2 **(Recommended)**
Filename: firmware-nic-qlogic-nx2-2.29.2-1.1.x86_64.compsig; firmware-nic-qlogic-nx2-2.29.2-1.1.x86_64.rpm

Important Note!

HPE recommends *HPE QLogic NX2 10/20GbE Multifunction Drivers for Linux*, versions 7.14.80 or later, for use with the firmware in this package.

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 8 update 4 and SUSE Linux Enterprise Server 15 Service Pack 3

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE Ethernet 10Gb 2-port 530T Adapter
- HPE Ethernet 10Gb 2-port 533FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

HPE QLogic NX2 Online Firmware Upgrade Utility for VMware
Version: 1.29.3 **(Recommended)**
Filename: CP046935.compsig; CP046935.zip

Important Note!

HPE recommends HPE QLogic NX2 10/20GbE Multifunction Drivers for VMware, versions 2021.09.04 or later, for use with this firmware.

This software package contains combo image v7.18.82 with the following firmware versions:

NIC	Boot Code Version	PXE Version	UEFI Version	iSCSI Version	FCoE Version	CCM Version	L2 Version
HPE Ethernet 10Gb 2-port 530SFP+ Adapter	7.16.03	7.14.13	8.9.0	n/a	n/a	7.14.4	7.12.25

HPE Ethernet 10Gb 2-port 530T Adapter							
HPE Ethernet 10Gb 2-port 533FLR-T Adapter HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter HPE FlexFabric 10Gb 4-port 536FLR-T Adapter HPE StoreFabric CN1100R Dual Port Converged Network Adapter HPE StoreFabric CN1100R-T Converged Network Adapter	7.16.03	7.14.13	8.9.0	7.14.0	7.14.3	7.14.4	7.12.25

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Enhancements

- This products enhances the mechanism that memory usage when more than one adapters
- This product now supports VMware ESXi 7.0 u3

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE Ethernet 10Gb 2-port 530T Adapter
- HPE Ethernet 10Gb 2-port 533FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

HPE QLogic NX2 Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 5.2.5.0 **(Recommended)**
Filename: cp046936.compsig; cp046936.exe

Important Note!

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- *HPE QLogic NX2 10/20GbE Multifunction Drivers for Windows Server x64 Editions*, version 7.13.206.0 or later

This software package contains combo image v7.18.82 with the following firmware versions:

NIC	Boot Code Version	PXE Version	UEFI Version	iSCSI Version	FCoE Version	CCM Version	L2 Version
HPE Ethernet 10Gb 2-port 530SFP+	7.16.03	7.14.13	8.9.0	n/a	n/a	7.14.4	7.12.25

Adapter HPE Ethernet 10Gb 2-port 530T Adapter							
HPE Ethernet 10Gb 2-port 533FLR-T Adapter HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter HPE FlexFabric 10Gb 4-port 536FLR-T Adapter HPE StoreFabric CN1100R Dual Port Converged Network Adapter HPE StoreFabric CN1100R-T Converged Network Adapter	7.16.03	7.14.13	8.9.0	7.14.0	7.14.3	7.14.4	7.12.25

The users will only see the combo image versions in the interactive mode firmware update or while using HPESUM/SPP to update the firmware on the supported adapters.

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Enhancements

This product now supports Microsoft Windows Server 2022.

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 530SFP+ Adapter
- HPE Ethernet 10Gb 2-port 530T Adapter
- HPE Ethernet 10Gb 2-port 533FLR-T Adapter
- HPE FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HPE StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

Intel Firmware Package For E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter
Version: 3.00 **(Recommended)**
Filename: HPE_E810_2CQDA2_O_SEC_3p00_PLDMoMCTP_80008271.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Intel icea Driver for Microsoft Windows Server, version 1.9.65.0 or later
- Intel ice Drivers for Linux, version 1.6.4-1 or later
- Intel icea Driver for VMware, version 2021.09.04 or later

Fixes

This product addresses an issue where Firmware version isn't correct in AHS log when upgading Firmware.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE

Intel Firmware Package For E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter
Version: 3.00 **(Recommended)**
Filename: HPE_E810_CQDA2_3p00_PLDMoMCTP_80008256.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Intel icea Driver for Microsoft Windows Server, version 1.9.65.0 or later
- Intel ice Drivers for SUSE Linux, version 1.6.4-1 or later
- Intel icea Driver for VMware, version 2021.09.04 or later

Fixes

This product addresses an issue where Firmware version isn't correct in AHS log when upgading Firmware.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE

Intel Firmware Package For E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter
Version: 3.00 **(Recommended)**
Filename: HPE_E810_CQDA2_OCP_3p00_NCSIwPLDMoMCTP_80008234.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Intel icea Driver for Microsoft Windows Server, version 1.9.65.0 or later
- Intel ice Drivers for Linux, version 1.6.4-1 or later
- Intel icea Driver for VMware, version 2021.09.04 or later

Fixes

This product addresses an issue where Firmware version isn't correct in AHS log when upgading Firmware.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-CQDA2 Ethernet 100Gb 2-port QSFP28 OCP3 Adapter for HPE

Intel Firmware Package For E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter
Version: 3.00 **(Recommended)**
Filename: HPE_E810_XXVDA2_SD_3p00_PLDMoMCTP_80008250.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Intel icea Driver for Microsoft Windows Server, version 1.9.65.0 or later
- Intel ice Drivers for Linux, version 1.6.4-1 or later
- Intel icea Driver for VMware, version 2021.09.04 or later

Fixes

This product addresses an issue where Firmware version isn't correct in AHS log when upgading Firmware.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

Intel Firmware Package For E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter
Version: 3.00 **(Recommended)**
Filename: HPE_E810_XXVDA2_SD_OCP_3p00_NCSIwPLDMoMCTP_80008265.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Intel icea Driver for Microsoft Windows Server, version 1.9.65.0 or later
- Intel ice Drivers for Linux, version 1.6.4-1 or later
- Intel icea Driver for VMware, version 2021.09.04 or later

Fixes

This product addresses an issue where Firmware version isn't correct in AHS log when upgading Firmware.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-XXVDA2 Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE

Intel Firmware Package For E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter
Version: 3.00 **(Recommended)**
Filename: HPE_E810_XXVDA4_FH_3p00_PLDMoMCTP_80008278.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Intel icea Driver for Microsoft Windows Server, version 1.9.65.0 or later
- Intel ice Drivers for Linux, version 1.6.4-1 or later
- Intel icea Driver for VMware, version 2021.09.04 or later

Fixes

This product addresses an issue where Firmware version isn't correct in AHS log when upgading Firmware.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE

Intel Firmware Package For E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter
Version: 3.00 **(Recommended)**
Filename: HPE_E810_XXV4_OCP_3p00_NCSIwPLDMoMCTP_80008280.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Intel icea Driver for Microsoft Windows Server, version 1.9.65.0 or later
- Intel ice Drivers for Linux, version 1.6.4-1 or later
- Intel icea Driver for VMware, version 2021.09.04 or later

Fixes

This product addresses an issue where Firmware version isn't correct in AHS log when upgading Firmware.

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-XXVDA4 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

Intel Online Firmware Upgrade Utility for Linux x86_64
Version: 1.23.5 **(Recommended)**
Filename: firmware-nic-is-intel-1.23.5-1.1.x86_64.compsig; firmware-nic-is-intel-1.23.5-1.1.x86_64.rpm

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Enhancements

This product now supports Red Hat Enterprise Linux 8 update 4 and SUSE Linux Enterprise Server 15 Service Pack 3

Supported Devices and Features

This package supports the following network adapters:

- Intel(R) I350 Gigabit Network Connection (2-port)
- Intel(R) I350 Gigabit Network Connection (4-port)
- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 OCP3 Adapter

Intel Online Firmware Upgrade Utility for VMware
Version: 3.16.5 **(Recommended)**
Filename: CP047006.compsig; CP047006.zip

Important Note!

This software package contains the following firmware versions for the below listed supported network adapters:

NIC	EEPROM/NVM Version	OROM Version	NVM Version
HPE Ethernet 10Gb 2-port SFP+ OCP3 X710-DA2 Adapter	8000A4FF	1.2829.0	8.30
HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter	8000A3DE	1.2829.0	8.30
Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter	80001099	1.2839.0	N/A
Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter	80001097	1.2839.0	N/A
Intel(R) I350 Gigabit Network Connection (2-port)	8000108E	1.2839.0	N/A
Intel(R) I350 Gigabit Network Connection (4-port)	8000108F	1.2839.0	N/A

The combo image v1.2839.0 includes: Boot Agent: 1GbE - v1.5.88 & UEFI Drivers: 1GbE - v9.4.06.

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Enhancements

This product now supports VMware ESXi 7.0 u3

Supported Devices and Features

This package supports the following network adapters:

- Intel(R) I350 Gigabit Network Connection (2-port)
- Intel(R) I350 Gigabit Network Connection (4-port)
- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter

Intel Online Firmware Upgrade Utility for Windows Server x64 Editions
Version: 5.2.5.0 **(Recommended)**
Filename: cp047007.compsig; cp047007.exe

Important Note!

This software package contains the following firmware versions for the below listed supported network adapters:

NIC	EEPROM/NVM Version	OROM Version	NVM Version
HPE Ethernet 10Gb 2-port SFP+ OCP3 X710-DA2 Adapter	8000A4FF	1.2829.0	8.30
HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter	8000A3DE	1.2829.0	8.30
Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter	80001099	1.2839.0	N/A
Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter	80001097	1.2839.0	N/A
Intel(R) I350 Gigabit Network Connection (2-port)	8000108E	1.2839.0	N/A
Intel(R) I350 Gigabit Network Connection (4-port)	8000108F	1.2839.0	N/A

The combo image v1.2839.0 includes: Boot Agent: 1GbE - v1.5.88 & UEFI Drivers: 1GbE - v9.4.06.

Prerequisites

This product requires the appropriate driver for your device and operating system be installed before firmware is updated.

Enhancements

This product supports the following new server:

- HPE ProLiant DL20 Gen10 Plus Server
- HPE ProLiant ML30 Gen10 Plus Server

Supported Devices and Features

This package supports the following network adapters:

- Intel(R) I350 Gigabit Network Connection (2-port)
- Intel(R) I350 Gigabit Network Connection (4-port)
- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter

Marvell FastLinQ Firmware Package for Arrowhead adapters

Version: 8.55.14 **(Recommended)**
Filename: ql_ah_mbi_open_8.55.14_pldm.fwpkg

Important Note!

For Firmware installation, there is no OS and drivers dependency.
For Firmware compatibility during production, HPE recommends the drivers for use with the firmware Package product as below,

- Marvell FastLinQ 10/25/50 GbE Drivers for Microsoft Windows Server x64 Editions, version 8.58.16.0 or later
- HPE QLogic FastLinQ 10/25/50 GbE Drivers for Linux, version 8.55.14.0-2 or later
- HPE QLogic FastLinQ 10/25/50 GbE Multifunction Drivers for VMware, version 2021.09.04 or later

Fixes

This product contains support PLDM firmware upgrade base improvements.

Enhancements

Initial version

Supported Devices and Features

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HQCU OCP3 Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HLCU Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HQCU OCP3 Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HLCU Adapter

Mellanox Firmware Package(FWPKG) for HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter
Version: 16.31.1200 **(Recommended)**
Filename: 16_31_1200-MCX512F-ACH_Ax_Bx.pldm.fwpkg

Important Note!

Known Issues with firmware version 16.31.1200:

- Changing the default host chaining buffer size or WQE size (HOST_CHAINING_DESCRIPTORS, HOST_CHAINING_TOTAL_BUFFER_SIZE) using NVconfig might result in driver initialization failure.
- Changing the TX tap setting using the SLTP PRM register function, is currently not functional.
- Multi-APP QoS is not supported when LAG is configured.
- When Emulated PCIe Switch is enabled, and more than 8 PFs are enabled, the OS boot process might halt.
- When Emulated PCIe Switch is enabled, and the OS does resource reallocation, the OS boot process might halt.
- Unable to complete migration when virtio device is in high traffic load (20/20 MPPS) as although vDPA hardware offload solution can support higher speed than the software solution, it needs to enable QEMU auto-converge to complete migration.
- Using the Eye-Opening tool might cause degradation in the link speed or link down events.
- Sub 1sec firmware update (fast reset flow) is not supported when updating from previous releases to the current one. Doing so may cause network disconnection events.
- On systems with high PCIe latency (2us or above), lower bandwidth may be experienced.

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 16.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

No fixes included in version 16.31.1200:

Enhancements

New Features and Changes included in Version 16.31.1200:

- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No Data Management Engine (DME). This change does not affect the speed logic, only the forward error correction (FEC) logic (FEC override).

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416

Mellanox Firmware Package(FWPKG) for HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter
Version: 16.31.1200 **(Recommended)**
Filename: 16_31_1200-MCX562A-ACA_Ax_Bx.pldm.fwpkg

Important Note!

Known Issues with firmware version 16.31.1200:

- Changing the default host chaining buffer size or WQE size (HOST_CHAINING_DESCRIPTORS, HOST_CHAINING_TOTAL_BUFFER_SIZE) using NVconfig might result in driver initialization failure.
- Changing the TX tap setting using the SLTP PRM register function, is currently not functional.
- Multi-APP QoS is not supported when LAG is configured.
- When Emulated PCIe Switch is enabled, and more than 8 PFs are enabled, the OS boot process might halt.
- When Emulated PCIe Switch is enabled, and the OS does resource reallocation, the OS boot process might halt.
- Unable to complete migration when virtio device is in high traffic load (20/20 MPPS) as although vDPA hardware offload solution can support higher speed than the software solution, it needs to enable QEMU auto-converge to complete migration.
- Using the Eye-Opening tool might cause degradation in the link speed or link down events.
- Sub 1sec firmware update (fast reset flow) is not supported when updating from previous releases to the current one. Doing so may cause network disconnection events.
- On systems with high PCIe latency (2us or above), lower bandwidth may be experienced.

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 16.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

No fixes included in version 16.31.1200:

Enhancements

New Features and Changes included in Version 16.31.1200:

- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No Data Management Engine (DME). This change does not affect the speed logic, only the forward error correction (FEC) logic (FEC override).

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241

Mellanox Firmware Package(FWPKG) for HPE Ethernet 100Gb 1-port QSFP28 MCX515A-CCAT PCIe3 x16 Adapter
Version: 16.31.1014 **(Recommended)**
Filename: 16_31_1014-MCX515A-CCA_HPE_Ax.pldm.fwpkg

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 16.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- Additional Fixes included in version 16.31.1014:
- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

New features and changes included in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P31246-B21	HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter	MT_0000000

Mellanox Firmware Package(FWPKG) for HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter
Version: 22.31.1014 **(Recommended)**
Filename: 22_31_1014-MCX623106AS-CDA_Ax.pldm.fwpkg

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 22.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 22.31.1014:

- A fatal assert (0x8274) occured due to invalid inputs sent to the query_vport_state command.
- Occasionally, toggling one of the NIC's port might result in link down of the 2nd port.
- Incorrect indication of the function dependency in the SR-IOV capability in PCIe configuration space.
- A rare issue that caused the destroy DCT command to not work properly when there were packet drops on connect packets in the network .
- The rate select mechanism in QSFP modules is fixed.
- A fatal error issue eventually causing the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number was overwritten with a 32 bit number and erased the high bits during de-allocation.
- Initialized the rate table in the static configuration so it would be configured at the link-not-up scenarios.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- The TX queue got into an unresponsive state when the VF rate limiter was set.
- "ICM-cache-large-scale" steering mode was not supported with NoDNIC boot.
- Classification issues with "Passive" cables.

Enhancements

New features and changes included in version 22.31.1014:

- Set the cap to 0 for high index functions to avoid too many parallel Virtual Function(VF) NODNIC functions.
- Implemented a new Network Communications Services Interface(NC-SI) command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Phy counters are cleared x seconds after link is up. This feature can be configured and enabled via the ini fields using the NVconfig.
- Extended the Dynamic Flex Parser capabilities in order to support Real-time Transport Protocol(RTP) packets parsing.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- Increased the maximum number of MSIX per VF to 127.
- NVME traffic can run now on another vHCA than the emulation manager vHCA.
- Allows the device to be configured with more than 256 MSIX vectors per physical PCI function.
- Enabled measuring PCIe eye dynamic grading over PCIe Gen3 speed.
- Enabled hardware real time clock for virtualized environment.
- Added support for the following:
    - Matching field ipv4_ihl in create_flow_group and set_flow_table_entry commands.
    - Enabling/Disabling NIC and RDMA (port/partition) via the UEFI HII system settings.
    - A single Packet Filter(PF) per NUMA for Socket-Direct without a host management.
    - Full tunnel header matcher to VXLAN header (including VXLAN alert bit).
    - A new bit ("data_in_order") to query the Queue Pair(QP) and allow a process/library to detect when the Adaptive Routing(AR) is enabled.
    - A new flex parser to support GENEVE hardware offload and ICMP.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P25960-B21	HPE Ethernet 100Gb 2-Port QSFP56 MCX623106AS-CDAT Adapter	MT_0000000437

Mellanox Firmware Package(FWPKG) for HPE Ethernet 200Gb 1-port QSFP56 MCX623105AS-VDAT Adapter
Version: 22.31.1014 **(Recommended)**
Filename: 22_31_1014-MCX623105AS-VDA_Ax.pldm.fwpkg

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 22.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 22.31.1014:

- A fatal assert (0x8274) occured due to invalid inputs sent to the query_vport_state command.
- Occasionally, toggling one of the NIC's port might result in link down of the 2nd port.
- Incorrect indication of the function dependency in the SR-IOV capability in PCIe configuration space.

- A rare issue that caused the destroy DCT command to not work properly when there were packet drops on connect packets in the network .
- The rate select mechanism in QSFP modules is fixed.
- A fatal error issue eventually causing the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number was overwritten with a 32 bit number and erased the high bits during de-allocation.
- Initialized the rate table in the static configuration so it would be configured at the link-not-up scenarios.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- The TX queue got into an unresponsive state when the VF rate limiter was set.
- "ICM-cache-large-scale" steering mode was not supported with NoDNIC boot.
- Classification issues with "Passive" cables.

Enhancements

New features and changes included in version 22.31.1014:

- Set the cap to 0 for high index functions to avoid too many parallel Virtual Function(VF) NODNIC functions.
- Implemented a new Network Communications Services Interface(NC-SI) command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Phy counters are cleared x seconds after link is up. This feature can be configured and enabled via the ini fields using the NVconfig.
- Extended the Dynamic Flex Parser capabilities in order to support Real-time Transport Protocol(RTP) packets parsing.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- Increased the maximum number of MSIX per VF to 127.
- NVME traffic can run now on another vHCA than the emulation manager vHCA.
- Allows the device to be configured with more than 256 MSIX vectors per physical PCI function.
- Enabled measuring PCIe eye dynamic grading over PCIe Gen3 speed.
- Enabled hardware real time clock for virtualized environment.
- Added support for the following:
    - Matching field ipv4_ihl in create_flow_group and set_flow_table_entry commands.
    - Enabling/Disabling NIC and RDMA (port/partition) via the UEFI HII system settings.
    - A single Packet Filter(PF) per NUMA for Socket-Direct without a host management.
    - Full tunnel header matcher to VXLAN header (including VXLAN alert bit).
    - A new bit ("data_in_order") to query the Queue Pair(QP) and allow a process/library to detect when the Adaptive Routing(AR) is enabled.
    - A new flex parser to support GENEVE hardware offload and ICMP.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P10180-B21	HPE Ethernet 200Gb 1-port QSFP56 MCX623105AS-VDAT Adapter	MT_0000000435

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 20.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.
- Additional Fixes included in version 20.31.1014:
- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the

DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port MCX653105A-HDAT QSFP56 x16 Adapter	MT_0000000451

Mellanox Firmware Package(FWPKG) for HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 MCX653435A-HDAI OCP3 PCIe4 x16 Adapter
Version: 20.31.1014 **(Recommended)**
Filename: 20_31_1014-MCX653435A-HDA_HPE_Ax.pldm.fwpkg

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 20.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.
- Additional Fixes included in version 20.31.1014:
- Disabled the CNP counter “rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.

- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P31323-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter	MT_0000000592

Mellanox Firmware Package(FWPKG) for HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 MCX653106A-HDAT PCIe4 x16 Adapter
Version: 20.31.1014 **(Recommended)**
Filename: 20_31_1014-MCX653106A-HDA_HPE_Ax.pldm.fwpkg

Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 – Ethernet	**HDR/HDR100**	**EDR**	**FDR**	**QDR**
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	**50GbE**	**100GbE/25GbE**	**40GbE/10GbE**	**1GbE**
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 20.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.
- Additional Fixes included in version 20.31.1014:
- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P31324-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter	MT_0000000594

Mellanox Firmware Package(FWPKG) for HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 MCX653436A-HDAI OCP3 PCIe4 x16 Adapter
Version: 20.31.1014 **(Recommended)**
Filename: 20_31_1014-MCX653436A-HDA_HPE_Ax.pldm.fwpkg

Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 – Ethernet	**HDR/HDR100**	**EDR**	**FDR**	**QDR**
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	**50GbE**	**100GbE/25GbE**	**40GbE/10GbE**	**1GbE**
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 20.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.
- Additional Fixes included in version 20.31.1014:
- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.

- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P31348-B21	HPE InfiniBand HDR/Ethernet 200Gb 2-port PCIe4 x16 OCP3 QSFP56 MCX653436A-HDAI Adapter	MT_0000000593

Mellanox Firmware Package(FWPKG) for HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter
Version: 20.31.1014 **(Recommended)**
Filename: 20_31_1014-MCX653105A-ECA_HPE_Ax.pldm.fwpkg

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 20.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.

- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.
- Additional Fixes included in version 20.31.1014:
- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port MCX653105A-ECAT QSFP56 x16 Adapter	MT_0000000452

Mellanox Firmware Package(FWPKG) for HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter
Version: 20.31.1014 **(Recommended)**
Filename: 20_31_1014-MCX653106A-ECA_HPE_Ax.pldm.fwpkg

Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 – Ethernet	**HDR/HDR100**	**EDR**	**FDR**	**QDR**
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	**50GbE**	**100GbE/25GbE**	**40GbE/10GbE**	**1GbE**
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Prerequisites

FWPKG will work only if the firmware version flashed on the adapter is 20.27.1016 or later and iLO5 firmware version must be 2.30 or higher.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.
- Additional Fixes included in version 20.31.1014:
- Disabled the CNP counter “rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

- Improved PortXmitWait IB counter accuracy.

Enhancements

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port MCX653106A-ECAT QSFP56 x16 Adapter	MT_0000000453

Online Firmware Upgrade Utility (ESXi 6.5) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter
Version: 1.0.5 **(Recommended)**
Filename: CP046587.compsig; CP046587.zip

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4 firmware version 14.28.1002. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.

- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following device is updated to 14.31.1014:

- P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox Ethernet only adapters
Version: 1.0.10 **(Recommended)**
Filename: CP046583.compsig; CP046583.zip

Important Note!

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adpaters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.28.1002/16.28.1002 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Fixes included in firmware 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.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 2.42.5044 :

779799-B21 (HPE Ethernet 10G 2-port 546FLR-SFP+ Adapter)
779793-B21 (HPE Ethernet 10G 2-port 546SFP+ Adapter)

Firmware for the following devices are updated to 14.31.1200:

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

Firmware for the following devices are updated to 14.31.1200:
817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

Firmware for the following device is updated to 16.31.1014:

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

New features and changes in version 14.31.1200:

- NVconfig per Port for a Specific Finisar Module: Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override).
  Note: If the port does not go up, switch to Force mode.

New features and changes in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Added support for Enabling/Disabling NIC and RDMA (port/partition) via the UEFI HII system settings.
  Note: Values set in this option only take effect when is Ethernet mode.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX
  vectors per physical PCI functions.
  To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- Support for RDMA partitioning and RDMA counters in IB mode.
- A new bit ("data_in_order") was added to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
  Pages are returned by the driver to the kernel without issuing the MANAGE_PAGES commands to the firmare.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and
  the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on VMware ESXi 6.5
Version: 1.0.9 **(Recommended)**
Filename: CP047547.compsig; CP047547.zip

Fixes

Following issues have been fixed in firmware version 12.28.2006:

- An issue that caused the DCR to be destroyed before the retry option managed to work when the retry timeout is too big. In this case the DCR' time-to-live was increased, and the maximum retry timeout was decreased.
- Increased PHY power consumption limit to 1.5w.

- An issue that caused PortCounters.PortRcvErr / PPCNT.infiniband_counters.PortRcvErr not to report port icrc errors.

The following issues have been fixed in version 16.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1200:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 12.28.2006:

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

New Feature and Changes in Version 12.28.2006:

- Increased the maximum XRQ number to 512.

Firmware for the following devices are updated to 16.31.1200:

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

New features and changes included in version 16.31.1200:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:

        - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
        - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
        - Configure PF_NUM_PF_MSIX per physical PCI function.
    - RDMA partitioning and RDMA counters in IB mode.
    - Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
    - A new flex parser to support GENEVE hardware offload and ICMP.
    - When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
    - Enabled UID 0 to create resources with UMEM (User Memory).
    - Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
    - RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.
    - Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). **Note:** If the port does not go up, switch to Force mode.

Supported Devices and Features

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on VMware ESXi 6.5
Version: 1.0.2 **(Recommended)**
Filename: CP047568.compsig; CP047568.zip

Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 – Ethernet	**HDR/HDR100**	**EDR**	**FDR**	**QDR**
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	**50GbE**	**100GbE/25GbE**	**40GbE/10GbE**	**1GbE**
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.

Additional Fixes included in version 20.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

Firmware for the following devices are updated to 20.31.1014:

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Device Name	PSID
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (ESXi 6.5) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on VMware ESXi 6.5
Version: 1.0.7 **(Recommended)**
Filename: CP045902.compsig; CP045902.zip

Important Note!

Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:

- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
  Workaround: Reboot the server.
- Enabling/disabling cq_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.
  Workaround: Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
  Workaround: Please use the GUID value returned by the fabric/driver utilities (not 0xffffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.
- **Workaround**: Set the "do_- sense=false" parameter in the [IB_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
  Workaround: Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
  Workaround: Clear the semaphore using MFT command: 'flint -clear_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-

configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.

- DMFS should not be enabled when working with InfiniBand on MLNX_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.
  Workaround: Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.
  Workaround: Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
  Workaround: 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.
  Workaround: Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4_en_get_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

Fixes

Fixes in version 2.42.5000:

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxfwtop –d mt4103_pci_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow_steering, BMC could not receive a ping over IPV6 after running bmc_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable_static_steering_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

Fixes in version 2.42.5056:

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

Enhancements

Firmware for the following devices are updated to 2.42.5000:
764282-B21
764286-B21

Firmware for the following devices are updated to 2.42.5056:
764283-B21
764284-B21

Firmware for the following device is updated to 2.42.5700:
764285-B21

New features in firmware version 2.42.5000:

- Added support for the following features.
  - new TLV: CX3_GLOBAL_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting mstdump before driver reset.
  - A mechanism to detect DEAD_IRISC (plastic) from TPT (iron) and raise an assert.
  - A new field is added to "set port" command which notifies the firmware what is the user_mtu size.
- Improved the debug ability for command timeout cases.

New features and changes in firmware version 2.42.5700.

- Modified the mlx_cmd_get_mlx_link_status command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

Supported Devices and Features

Supported Devices:

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HPE_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HPE_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HPE_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HPE_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HPE_1390110023

Online Firmware Upgrade Utility (ESXi 6.5) for Mellanox Open Ethernet cards
Version: 1.0.5 **(Recommended)**
Filename: CP046594.compsig; CP046594.zip

Important Note!

On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.

- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices is updated to 14.31.1014:

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)

Firmware for the following devices is updated to 14.31.1200:

P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

Firmware for the following devices is updated to 16.31.1014:

P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

New features and changes included in version 14.31.1200:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). Note: If the port does not go up, switch to Force mode.

New features and changes included in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.

- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb/25Gb 2-port SFP28 MCX4621A-ACAB OCP3 Adapter (P11341-B21)	MT_0000000238
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter
Version: 1.0.5 **(Recommended)**
Filename: CP046588.compsig; CP046588.zip

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4 firmware version 14.28.1002. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following device is updated to 14.31.1014:

- P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox Ethernet only adapters
Version: 1.0.6 **(Recommended)**
Filename: CP046584.compsig; CP046584.zip

Important Note!

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adpaters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.28.1002/16.28.1002 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Fixes included in firmware 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.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 2.42.5044 :

779799-B21 (HPE Ethernet 10G 2-port 546FLR-SFP+ Adapter)
779793-B21 (HPE Ethernet 10G 2-port 546SFP+ Adapter)

Firmware for the following devices are updated to 14.31.1200:

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

Firmware for the following devices are updated to 14.31.1200:
817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

Firmware for the following device is updated to 16.31.1014:

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

New features and changes in version 14.31.1200:

- NVconfig per Port for a Specific Finisar Module: Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override).
  Note: If the port does not go up, switch to Force mode.

New features and changes in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Added support for Enabling/Disabling NIC and RDMA (port/partition) via the UEFI HII system settings.
  Note: Values set in this option only take effect when is Ethernet mode.
- Increased the maximum number of MSIX per VF to 127.

- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX
  vectors per physical PCI functions.
  To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- Support for RDMA partitioning and RDMA counters in IB mode.
- A new bit ("data_in_order") was added to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
  Pages are returned by the driver to the kernel without issuing the MANAGE_PAGES commands to the firmare.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and
  the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

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: 1.0.5 **(Recommended)**
Filename: CP047548.compsig; CP047548.zip

Fixes

Following issues have been fixed in firmware version 12.28.2006:

- An issue that caused the DCR to be destroyed before the retry option managed to work when the retry timeout is too big. In this case the DCR' time-to-live was increased, and the maximum retry timeout was decreased.
- Increased PHY power consumption limit to 1.5w.
- An issue that caused PortCounters.PortRcvErr / PPCNT.infiniband_counters.PortRcvErr not to report port icrc errors.

The following issues have been fixed in version 16.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.

- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1200:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 12.28.2006:

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

New Feature and Changes in Version 12.28.2006:

- Increased the maximum XRQ number to 512.

Firmware for the following devices are updated to 16.31.1200:

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

New features and changes included in version 16.31.1200:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.
- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed

logic, only the FEC logic (FEC override). **Note:** If the port does not go up, switch to Force mode.

Supported Devices and Features

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on VMware ESXi 6.7
Version: 1.0.2 **(Recommended)**
Filename: CP047569.compsig; CP047569.zip

Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 – Ethernet	**HDR/HDR100**	**EDR**	**FDR**	**QDR**
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	**50GbE**	**100GbE/25GbE**	**40GbE/10GbE**	**1GbE**
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.

- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.

Additional Fixes included in version 20.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

Firmware for the following devices are updated to 20.31.1014:

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Device Name	PSID
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035

P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on VMware ESXi 6.7
Version: 1.0.5 **(Recommended)**
Filename: CP045903.compsig; CP045903.zip

Important Note!

Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:

- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
  Workaround: Reboot the server.
- Enabling/disabling cq_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.
  Workaround: Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
  Workaround: Please use the GUID value returned by the fabric/driver utilities (not 0xfffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.
- **Workaround**: Set the "do_- sense=false" parameter in the [IB_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
  Workaround: Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
  Workaround: Clear the semaphore using MFT command: 'flint -clear_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.
- DMFS should not be enabled when working with InfiniBand on MLNX_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.
  Workaround: Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.
  Workaround: Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.

Workaround: 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.

- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.
  Workaround: Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4_en_get_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

Fixes

Fixes in version 2.42.5000:

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxfwtop –d mt4103_pci_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow_steering, BMC could not receive a ping over IPV6 after running bmc_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable_static_steering_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

Fixes in version 2.42.5056:

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

Enhancements

Firmware for the following devices are updated to 2.42.5000:
764282-B21
764286-B21

Firmware for the following devices are updated to 2.42.5056:
764283-B21
764284-B21

Firmware for the following device is updated to 2.42.5700:
764285-B21

New features in firmware version 2.42.5000:

- Added support for the following features.
  - new TLV: CX3_GLOBAL_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting mstdump before driver reset.
  - A mechanism to detect DEAD_IRISC (plastic) from TPT (iron) and raise an assert.
  - A new field is added to "set port" command which notifies the firmware what is the user_mtu size.
- Improved the debug ability for command timeout cases.

New features and changes in firmware version 2.42.5700.

- Modified the mlx_cmd_get_mlx_link_status command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

Supported Devices and Features

Supported Devices:

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HPE_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HPE_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HPE_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HPE_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HPE_1390110023

Online Firmware Upgrade Utility (ESXi 6.7) for Mellanox Open Ethernet cards
Version: 1.0.5 **(Recommended)**
Filename: CP046595.compsig; CP046595.zip

Important Note!

On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.

- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices is updated to 14.31.1014:

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)

Firmware for the following devices is updated to 14.31.1200:

P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

Firmware for the following devices is updated to 16.31.1014:

P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

New features and changes included in version 14.31.1200:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). Note: If the port does not go up, switch to Force mode.

New features and changes included in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.

- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb/25Gb 2-port SFP28 MCX4621A-ACAB OCP3 Adapter (P11341-B21)	MT_0000000238
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Online Firmware Upgrade Utility (ESXi 7.0) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter
Version: 1.0.2 **(Recommended)**
Filename: CP046589.compsig; CP046589.zip

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4 firmware version 14.28.1002. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following device is updated to 14.31.1014:

- P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

Online Firmware Upgrade Utility (ESXi 7.0) for HPE Mellanox Ethernet only adapters
Version: 1.0.2 **(Recommended)**
Filename: CP046592.compsig; CP046592.zip

Important Note!

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adpaters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.28.1002/16.28.1002 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Fixes included in firmware 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.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.

- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 2.42.5044 :

779799-B21 (HPE Ethernet 10G 2-port 546FLR-SFP+ Adapter)
779793-B21 (HPE Ethernet 10G 2-port 546SFP+ Adapter)

Firmware for the following devices are updated to 14.31.1200:

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

Firmware for the following devices are updated to 14.31.1200:
817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

Firmware for the following device is updated to 16.31.1014:

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

New features and changes in version 14.31.1200:

- NVconfig per Port for a Specific Finisar Module: Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override).
  Note: If the port does not go up, switch to Force mode.

New features and changes in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Added support for Enabling/Disabling NIC and RDMA (port/partition) via the UEFI HII system settings.
  Note: Values set in this option only take effect when is Ethernet mode.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX
  vectors per physical PCI functions.
  To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- Support for RDMA partitioning and RDMA counters in IB mode.
- A new bit ("data_in_order") was added to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

Pages are returned by the driver to the kernel without issuing the MANAGE_PAGES commands to the firmare.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

Online Firmware Upgrade Utility (ESXi 7.0) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on VMware ESXi 7.0
Version: 1.0.2 **(Recommended)**
Filename: CP047549.compsig; CP047549.zip

Fixes

Following issues have been fixed in firmware version 12.28.2006:

- An issue that caused the DCR to be destroyed before the retry option managed to work when the retry timeout is too big. In this case the DCR' time-to-live was increased, and the maximum retry timeout was decreased.
- Increased PHY power consumption limit to 1.5w.
- An issue that caused PortCounters.PortRcvErr / PPCNT.infiniband_counters.PortRcvErr not to report port icrc errors.

The following issues have been fixed in version 16.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1200:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 12.28.2006:

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

New Feature and Changes in Version 12.28.2006:

- Increased the maximum XRQ number to 512.

Firmware for the following devices are updated to 16.31.1200:

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

New features and changes included in version 16.31.1200:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.
- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). **Note:** If the port does not go up, switch to Force mode.

Supported Devices and Features

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (ESXi 7.0) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on VMware ESXi 7.0
Version: 1.0.2 **(Recommended)**
Filename: CP047570.compsig; CP047570.zip

Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 – Ethernet	**HDR/HDR100**	**EDR**	**FDR**	**QDR**
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	**50GbE**	**100GbE/25GbE**	**40GbE/10GbE**	**1GbE**
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.

Additional Fixes included in version 20.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

- Improved PortXmitWait IB counter accuracy.

Enhancements

Firmware for the following devices are updated to 20.31.1014:

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Device Name	PSID
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (ESXi 7.0) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on VMware ESXi 7.0
Version: 1.0.1 **(Recommended)**
Filename: CP045904.compsig; CP045904.zip

Important Note!

Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:

- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does

not come up.
Workaround: Reboot the server.

- Enabling/disabling cq_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.
  Workaround: Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
  Workaround: Please use the GUID value returned by the fabric/driver utilities (not 0xfffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.
- **Workaround**: Set the "do_- sense=false" parameter in the [IB_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
  Workaround: Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
  Workaround: Clear the semaphore using MFT command: 'flint -clear_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.
- DMFS should not be enabled when working with InfiniBand on MLNX_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.
  Workaround: Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.
  Workaround: Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
  Workaround: 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.
  Workaround: Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.

- When working with MLNX_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4_en_get_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

Fixes

Fixes in version 2.42.5000:

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxfwtop –d mt4103_pci_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow_steering, BMC could not receive a ping over IPV6 after running bmc_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable_static_steering_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

Fixes in version 2.42.5056:

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

Enhancements

Firmware for the following devices are updated to 2.42.5000:
764282-B21
764286-B21

Firmware for the following devices are updated to 2.42.5056:
764283-B21
764284-B21

Firmware for the following device is updated to 2.42.5700:
764285-B21

New features in firmware version 2.42.5000:

- Added support for the following features.
  - new TLV: CX3_GLOBAL_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting mstdump before driver reset.
  - A mechanism to detect DEAD_IRISC (plastic) from TPT (iron) and raise an assert.
  - A new field is added to "set port" command which notifies the firmware what is the user_mtu size.
- Improved the debug ability for command timeout cases.

New features and changes in firmware version 2.42.5700.

- Modified the mlx_cmd_get_mlx_link_status command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

Supported Devices and Features

Supported Devices:

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HPE_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HPE_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HPE_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HPE_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HPE_1390110023

Online Firmware Upgrade Utility (ESXi 7.0) for Mellanox Open Ethernet cards
Version: 1.0.2 **(Recommended)**
Filename: CP047609.compsig; CP047609.zip

Important Note!

On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

Fixes

The following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices is updated to 14.31.1014:

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)

Firmware for the following devices is updated to 14.31.1200:

P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

Firmware for the following devices is updated to 16.31.1014:

P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.

- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

New features and changes included in version 14.31.1200:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). Note: If the port does not go up, switch to Force mode.

New features and changes included in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb/25Gb 2-port SFP28 MCX4621A-ACAB OCP3 Adapter (P11341-B21)	MT_0000000238
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Online Firmware Upgrade Utility (Linux x86_64) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter
Version: 1.0.5 **(Recommended)**
Filename: firmware-nic-mellanox-eth-only-mft-1.0.5-1.1.x86_64.compsig; firmware-nic-mellanox-eth-only-mft-1.0.5-1.1.x86_64.rpm

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4 firmware version 14.28.1002. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following device is updated to 14.31.1014:

- P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox Ethernet only adapters
Version: 1.0.15 **(Recommended)**
Filename: firmware-nic-mellanox-ethernet-only-1.0.15-1.1.x86_64.compsig; firmware-nic-mellanox-ethernet-only-1.0.15-1.1.x86_64.rpm

Important Note!

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adpaters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.28.1002/16.28.1002 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Fixes included in firmware 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.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 2.42.5044 :

779799-B21 (HPE Ethernet 10G 2-port 546FLR-SFP+ Adapter)
779793-B21 (HPE Ethernet 10G 2-port 546SFP+ Adapter)

Firmware for the following devices are updated to 14.31.1200:

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

Firmware for the following devices are updated to 14.31.1200:
817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

Firmware for the following device is updated to 16.31.1014:

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

New features and changes in version 14.31.1200:

- NVconfig per Port for a Specific Finisar Module: Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override).
  Note: If the port does not go up, switch to Force mode.

New features and changes in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Added support for Enabling/Disabling NIC and RDMA (port/partition) via the UEFI HII system settings.
  Note: Values set in this option only take effect when is Ethernet mode.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX
  vectors per physical PCI functions.
  To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- Support for RDMA partitioning and RDMA counters in IB mode.
- A new bit ("data_in_order") was added to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
  Pages are returned by the driver to the kernel without issuing the MANAGE_PAGES commands to the firmare.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and
  the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox IB only ConnectX4 and ConnectX5 devices on Linux x86_64 platform
Version: 1.0.8 **(Recommended)**
Filename: firmware-nic-mellanox-ib-cx4-cx5-1.0.8-1.1.x86_64.compsig; firmware-nic-mellanox-ib-cx4-cx5-1.0.8-1.1.x86_64.rpm

Fixes

The following issues have been fixed in version 12.28.2006:

- An issue that caused the DCR (DC Resources) to be destroyed before the retry option managed to work when the retry timeout is too big. in this case, the DCR' time-to-live was increased, and the maximum retry timeout was decreased.
- Increased PHY power consumption limit to 1.5w.
- An issue that caused PortCounters.PortRcvErr / PPCNT.infiniband_counters.PortRcvErr not to report port icrc errors.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 12.28.2006:

843400-B21 (HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter)

Firmware for the following devices are updated to 16.31.1014:

872723-B21 (HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter)
872725-B21 (HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter)

New features and changes in version 12.28.2006:

- Increased the maximum XRQ number to 512.

New features and changes in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

Supported Devices:

HPE Part Number	Device Name	PSID
843400-B21	HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter	HPE2920111032
872723-B21	HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter	HPE0000000017
872725-B21	HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	HPE0000000008

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: 1.0.11 **(Recommended)**
Filename: firmware-hca-mellanox-vpi-connectx4-1.0.11-1.1.x86_64.compsig; firmware-hca-mellanox-vpi-connectx4-1.0.11-1.1.x86_64.rpm

Fixes

Following issues have been fixed in firmware version 12.28.2006:

- An issue that caused the DCR to be destroyed before the retry option managed to work when the retry timeout is too big. In this case the DCR' time-to-live was increased, and the maximum retry timeout was decreased.
- Increased PHY power consumption limit to 1.5w.
- An issue that caused PortCounters.PortRcvErr / PPCNT.infiniband_counters.PortRcvErr not to report port icrc errors.

The following issues have been fixed in version 16.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.

- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1200:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 12.28.2006:

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

New Feature and Changes in Version 12.28.2006:

- Increased the maximum XRQ number to 512.

Firmware for the following devices are updated to 16.31.1200:

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

New features and changes included in version 16.31.1200:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.

- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.
- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). **Note:** If the port does not go up, switch to Force mode.

Supported Devices and Features

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on Linux x86_64 platform
Version: 1.0.7 **(Recommended)**
Filename: firmware-hca-mellanox-vpi-connectx6-mft-1.0.7-1.1.x86_64.compsig; firmware-hca-mellanox-vpi-connectx6-mft-1.0.7-1.1.x86_64.rpm

Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 – Ethernet	**HDR/HDR100**	**EDR**	**FDR**	**QDR**
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	**50GbE**	**100GbE/25GbE**	**40GbE/10GbE**	**1GbE**
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.

- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.

Additional Fixes included in version 20.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

Firmware for the following devices are updated to 20.31.1014:

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Device Name	PSID

P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (Linux x86_64) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on Linux x86_64 platform
Version: 1.0.12 **(Recommended)**
Filename: firmware-hca-mellanox-vpi-eth-ib-1.0.12-1.1.x86_64.compsig; firmware-hca-mellanox-vpi-eth-ib-1.0.12-1.1.x86_64.rpm

Important Note!

Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:

- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
  Workaround: Reboot the server.
- Enabling/disabling cq_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.
  Workaround: Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
  Workaround: Please use the GUID value returned by the fabric/driver utilities (not 0xfffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.
- **Workaround**: Set the "do_- sense=false" parameter in the [IB_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
  Workaround: Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
  Workaround: Clear the semaphore using MFT command: 'flint -clear_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.
- DMFS should not be enabled when working with InfiniBand on MLNX_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.
  Workaround: Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.
  Workaround: Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.

- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
  Workaround: 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.
  Workaround: Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4_en_get_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

Fixes

Fixes in version 2.42.5000:

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxfwtop –d mt4103_pci_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow_steering, BMC could not receive a ping over IPV6 after running bmc_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable_static_steering_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

Fixes in version 2.42.5056:

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

Enhancements

Firmware for the following devices are updated to 2.42.5000:

764282-B21
764286-B21

Firmware for the following devices are updated to 2.42.5056:
764283-B21
764284-B21

Firmware for the following device is updated to 2.42.5700:
764285-B21

New features in firmware version 2.42.5000:

- Added support for the following features.
  - new TLV: CX3_GLOBAL_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting mstdump before driver reset.
  - A mechanism to detect DEAD_IRISC (plastic) from TPT (iron) and raise an assert.
  - A new field is added to "set port" command which notifies the firmware what is the user_mtu size.
- Improved the debug ability for command timeout cases.

New features and changes in firmware version 2.42.5700.

- Modified the mlx_cmd_get_mlx_link_status command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

Supported Devices and Features

Supported Devices:

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HPE_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HPE_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HPE_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HPE_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HPE_1390110023

Online Firmware Upgrade Utility (Linux x86_64) for HPE OPA adapters
Version: 1.11.0 **(Recommended)**
Filename: firmware-nic-intel-opa-hfi-1.11.0-1.1.x86_64.compsig; firmware-nic-intel-opa-hfi-1.11.0-1.1.x86_64.rpm

Prerequisites

The smart component requires Intel IFS or Basic software v10.11.0.1.2 to be installed as a prerequisite.

Fixes

Fixes included in version 1.11.0:

- **The following issue has been fixed in Unified Extensible Firmware Interafce (UEFI) ROM:** On some platforms, the hfi1 device was not showing up in BIOS/UEFI boot menus and was not available as a PXE boot device. This was caused by the platform not loading the UEFI driver for the hfi1 adapter.

Enhancements

No changes and new features in version 1.11.0

Supported Devices and Features

HP Part Number	OPA HFI Adapter Type	SSID
829334-B21	HPE 100Gb 1-Port OP101 QSFP28 x8 OPA Adapter	E7
829335-B21	HPE 100Gb 1-Port OP101 QSFP28 x16 OPA Adapter	E8
851226-B21	HPE Apollo 100Gb 1-port Intel Omni-Path Architecture 860z Mezzanine FIO Adapter	21C

Online Firmware Upgrade Utility (Linux x86_64) for Mellanox Open Ethernet cards
Version: 1.0.5 **(Recommended)**
Filename: firmware-nic-open-mellanox-eth-mft-1.0.5-1.1.x86_64.compsig; firmware-nic-open-mellanox-eth-mft-1.0.5-1.1.x86_64.rpm

Important Note!

On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.

- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices is updated to 14.31.1014:

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)

Firmware for the following devices is updated to 14.31.1200:

P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

Firmware for the following devices is updated to 16.31.1014:

P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

New features and changes included in version 14.31.1200:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). Note: If the port does not go up, switch to Force mode.

New features and changes included in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb/25Gb 2-port SFP28 MCX4621A-ACAB OCP3 Adapter (P11341-B21)	MT_0000000238
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Online Firmware Upgrade Utility (Windows x64) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter
Version: 1.0.0.5 **(Recommended)**
Filename: cp046590.compsig; cp046590.exe

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4 firmware version 14.28.1002. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following device is updated to 14.31.1014:

- P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox Ethernet only adapters
Version: 1.0.0.15 **(Recommended)**
Filename: cp046585.compsig; cp046585.exe

Important Note!

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adpaters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.28.1002/16.28.1002 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

Fixes included in firmware 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.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 2.42.5044 :

779799-B21 (HPE Ethernet 10G 2-port 546FLR-SFP+ Adapter)
779793-B21 (HPE Ethernet 10G 2-port 546SFP+ Adapter)

Firmware for the following devices are updated to 14.31.1200:

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

Firmware for the following devices are updated to 14.31.1200:
817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

Firmware for the following device is updated to 16.31.1014:

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

New features and changes in version 14.31.1200:

- NVconfig per Port for a Specific Finisar Module: Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override).
  Note: If the port does not go up, switch to Force mode.

New features and changes in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Added support for Enabling/Disabling NIC and RDMA (port/partition) via the UEFI HII system settings.
  Note: Values set in this option only take effect when is Ethernet mode.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX
  vectors per physical PCI functions.
  To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- Support for RDMA partitioning and RDMA counters in IB mode.
- A new bit ("data_in_order") was added to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
  Pages are returned by the driver to the kernel without issuing the MANAGE_PAGES commands to the firmare.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and
  the DQPN.

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
779793-B21	HPE Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HPE Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE0000000014

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox IB only ConnectX4 and ConnectX5 devices on Windows x86_64 platform
Version: 1.0.0.8 **(Recommended)**
Filename: cp047567.compsig; cp047567.exe

Fixes

The following issues have been fixed in version 12.28.2006:

- An issue that caused the DCR (DC Resources) to be destroyed before the retry option managed to work when the retry timeout is too big. in this case, the DCR' time-to-live was increased, and the maximum retry timeout was decreased.
- Increased PHY power consumption limit to 1.5w.
- An issue that caused PortCounters.PortRcvErr / PPCNT.infiniband_counters.PortRcvErr not to report port icrc errors.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 12.28.2006:

843400-B21 (HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter)

Firmware for the following devices are updated to 16.31.1014:

872723-B21 (HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter)
872725-B21 (HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter)

New features and changes in version 12.28.2006:

- Increased the maximum XRQ number to 512.

New features and changes in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.

- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

Supported Devices:

HPE Part Number	Device Name	PSID
843400-B21	HPE Apollo A10 InfiniBand EDR (100Gb) 2-port Adapter	HPE2920111032
872723-B21	HPE Apollo InfiniBand EDR 100Gb 2-port 841z Mezzanine Adapter	HPE0000000017
872725-B21	HPE InfiniBand EDR 100Gb 1-port 841QSFP28 Adapter	HPE0000000008

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on Windows x86_64 platform
Version: 1.0.0.10 **(Recommended)**
Filename: cp047546.compsig; cp047546.exe

Fixes

Following issues have been fixed in firmware version 12.28.2006:

- An issue that caused the DCR to be destroyed before the retry option managed to work when the retry timeout is too big. In this case the DCR' time-to-live was increased, and the maximum retry timeout was decreased.
- Increased PHY power consumption limit to 1.5w.
- An issue that caused PortCounters.PortRcvErr / PPCNT.infiniband_counters.PortRcvErr not to report port icrc errors.

The following issues have been fixed in version 16.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1200:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices are updated to 12.28.2006:

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

New Feature and Changes in Version 12.28.2006:

- Increased the maximum XRQ number to 512.

Firmware for the following devices are updated to 16.31.1200:

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

New features and changes included in version 16.31.1200:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.
- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). **Note:** If the port does not go up, switch to Force mode.

Supported Devices and Features

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX6 devices on Windows x86_64 platform
Version: 1.0.0.4 **(Recommended)**
Filename: cp047571.compsig; cp047571.exe

Important Note!

ConnectX-6 VPI supports having one port as InfiniBand and the other port as Ethernet according to the following matrix of combinations.

Port #2 - InfiniBand				
Port #1 – Ethernet	**HDR/HDR100**	**EDR**	**FDR**	**QDR**
50GbE	supported	not supported	not supported	supported
100GbE/25GbE	supported	not supported	not supported	supported
40GbE/10GbE	supported	not supported	not supported	supported
1GbE	supported	not supported	not supported	supported

Port #2 - Ethernet				
Port #1 - InfiniBand	**50GbE**	**100GbE/25GbE**	**40GbE/10GbE**	**1GbE**
HDR / HDR100	supported	supported	not supported	supported
EDR	supported	supported	not supported	supported
FDR	not supported	not supported	not supported	not supported
QDR/SDR	supported	supported	not supported	supported

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX6 firmware version 20.27.6008. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 20.31.1014:

- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to unresponsive state.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.
- In InfiniBand non-virtualization system, due to a corrupted steering root, traffic fails after a warm reboot.

Additional Fixes included in version 20.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.
- Improved PortXmitWait IB counter accuracy.

Enhancements

Firmware for the following devices are updated to 20.31.1014:

HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter - P06154-B21
HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter - P06250-B21
HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter - P06251-B21

New features and changes included in version 20.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- Updated the NC-SI speed reporting output to support 200GbE speed. Now when running the NC-SI command, the output presents 200GbE speed as well.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
  - Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
  - Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
  - Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

Supported Devices and Features

HPE Part Number	Device Name	PSID
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port 940QSFP56 x16 Adapter	HPE0000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port 940QSFP56 x16 Adapter	HPE0000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port 940QSFP56 x16 Adapter	HPE0000000036

Online Firmware Upgrade Utility (Windows x64) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on Windows x86_64 platform

Version: 1.0.0.12 **(Recommended)**
Filename: cp045905.compsig; cp045905.exe

Important Note!

Known Issues in firmware 2.42.5000, 2.42.5056, 2.42.5700:

- When using the Quad Small Form-factor Pluggable (QSFP) module RTXM320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
  Workaround: Reboot the server.
- Enabling/disabling cq_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the Packet Filter (PF) is passed through to a VM requires a reboot of the Hypervisor.
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.
  Workaround: Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/ driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
  Workaround: Please use the GUID value returned by the fabric/driver utilities (not 0xfffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RHEL6.3 Inbox driver causes kernel panic when SRIOV is enabled on VPI cards due to driver compatibility issue.
- **Workaround**: Set the "do_- sense=false" parameter in the [IB_TAB] i.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
  Workaround: Enable SR-IOV in the BIOS.
- Mellanox Firmware Tools (MFT) might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
  Workaround: Clear the semaphore using MFT command: 'flint -clear_semaphore'
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only)..
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool: You are trying to override configurable FW by non-configurable FW. If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y You are trying to restore default configuration, do you want to continue ? (y/n) [n] : y.
- DMFS should not be enabled when working with InfiniBand on MLNX_OFED-2.0.3
- ConnectX®-3 Pro VF device ID is presented the same as ConnectX®-3 VF device ID due to driver limitations.
  Workaround: Use the physical function device ID to identify the device.
- Virtual Product Data (VPD) read-only fields are writable.
  Workaround: Do not write to read-only fields if you wish to preserve them.
- When working in Virtual Path Identifier (VPI) mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
  Workaround: 1. Unplug the cable from the switch 2. Restart driver 3. Change the protocol via the appropriate tools.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).

- Remote Desktop Protocol (RDP) over IPv6 is currently not functional.
  Workaround: Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE)
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4_en_get_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.
- The adapter card cannot raise a 10G link vs. a 40GE capable switch port in C7000 enclosure. It can raise a 1G Link and only if the switch port allows it.
- MTUSB communication via I2C header on primary I2C bus is supported only in live-fish mode.

Fixes

Fixes in version 2.42.5000:

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxfwtop –d mt4103_pci_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow_steering, BMC could not receive a ping over IPV6 after running bmc_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable_static_steering_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

Fixes in version 2.42.5056:

- Fixed an issue that resulted in reading from invalid I/O address on handover from UEFI boot to OS boot, when a port was configured as InfiniBand on a VPI adapter device.

Enhancements

Firmware for the following devices are updated to 2.42.5000:
764282-B21
764286-B21

Firmware for the following devices are updated to 2.42.5056:
764283-B21
764284-B21

Firmware for the following device is updated to 2.42.5700:
764285-B21

New features in firmware version 2.42.5000:

- Added support for the following features.

        - new TLV: CX3_GLOBAL_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
        - User MAC configuration.
        - Automatically collecting mstdump before driver reset.
        - A mechanism to detect DEAD_IRISC (plastic) from TPT (iron) and raise an assert.
        - A new field is added to "set port" command which notifies the firmware what is the user_mtu size.
    - Improved the debug ability for command timeout cases.

New features and changes in firmware version 2.42.5700.

- Modified the mlx_cmd_get_mlx_link_status command return value to return "Link Type = Ethernet" in Ethernet adapter cards.

Supported Devices and Features

Supported Devices:

HPE Part Number	Device Name	PSID
764282-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HPE_1350110023
764283-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HPE_1360110017
764284-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HPE_1370110017
764285-B21	HPE InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HPE_1380110017
764286-B21	HPE InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HPE_1390110023

Online Firmware Upgrade Utility (Windows x64) for Mellanox Open Ethernet cards
Version: 1.0.0.5 **(Recommended)**
Filename: cp046597.compsig; cp046597.exe

Important Note!

On Adapter Firmware rewrite scenario, SUM will always discover the Mellanox Open adapter firmware smart component as applicable and select it for deployment If the server iLO5 firmware version is older than 2.30.

Prerequisites

Use iLO5 firmware version 2.30 or higher with ConnectX4/ConnectX5 firmware version 14.27.4000/16.27.2008 respectively. Thermal sensor reporting on the adapter will not be functional with older versions of iLO5 firmware.

Fixes

The following issues have been fixed in version 14.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1014:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.

- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 14.31.1200:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.

Additional Fixes included in version 14.31.1200:

- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

The following issues have been fixed in version 16.31.1014:

- TX PRBS was not changed even after reconfiguring it, all PRBS mode were enabled in test mode.
- An assert that was caused when trying to open 1024 functions on the device and the maximum number of functions was 1023.
- Occasional performance issues related to RC QPs using E2E-credits (not connected to SRQ and doing send/receive traffic) when the ROCE_ACCL tx_window was enabled.
- A fatal error occurred and eventually resulted in the HCA to get into an unresponsive state when a packet was larger than a strided receive WQE that was being scattered.
- A rare issue that caused RX pipe to hang.
- The resource number size (a 64 bit number) was overwritten with a 32 bit number and erased the high bits when de-allocating the resource number.
- CRT_DCR with index larger than 1 << 21 occasionally collided with the CRT_SW_RESERVED address.
- An issue that caused the TX queue to get into an unresponsive state when the VF rate limiter was set.

Additional Fixes included in version 16.31.1014:

- Disabled the CNP counter "rp_cnp_ignored " (triggered by OOS (out-of-sequence)) when all ports are IB.
- Fixed the TMP421 sensor temperature reporting.
- Fixed the rate select mechanism in QSFP modules.
- Fixed classification issues for "Passive" cables to be more robust.
- Initialized the rate table in the static configuration so it will be configured at the link-not-up scenarios.

Enhancements

Firmware for the following devices is updated to 14.31.1014:

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)

Firmware for the following devices is updated to 14.31.1200:

P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

Firmware for the following devices is updated to 16.31.1014:

P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCHT Adapter)

New features and changes included in version 14.31.1014:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

New features and changes included in version 14.31.1200:

- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.

- Added a new NVconfig per Port for a specific Finisar module. This new NVconfig sets the port to work in AN mode and sets the module to No DME. This change does not affect the speed logic, only the FEC logic (FEC override). Note: If the port does not go up, switch to Force mode.

New features and changes included in version 16.31.1014:

- NIC scheduling feature support has been disabled for non-privileged functions.
- Implemented a new NC-SI command get_debug_info to get mstdump via the NC-SI protocol to debug a device if the PCI link fails for any given reason.
- support for Enabling/Disabling NIC and RDMA (port/partition) was included via the UEFI HII system settings.
- Increased the maximum number of MSIX per VF to 127.
- Asymmetrical MSIX Configuration: This feature allows the device to be configured with a different number of MSIX vectors per physical PCI functions.To use this feature, please follow these steps:
- Clear NUM_PF_MSIX_VALID to disable global symmetrical MSIX configuration.
- Set PF_NUM_PF_MSIX_VALID to enable asymmetrical per Physical Function MSIX configuration.
- Configure PF_NUM_PF_MSIX per physical PCI function.
- RDMA partitioning and RDMA counters in IB mode.
- Added a new bit ("data_in_order") to query the QP and allow a process/library to detect when the AR is enabled.
- A new flex parser to support GENEVE hardware offload and ICMP.
- When the non-page-supplier-FLR funcion is initiated, the firmware triggers a page event to the page supplier to indicate that all pages should be returned for the FLR function.
- Enabled UID 0 to create resources with UMEM (User Memory).
- Receiving and sending native IB packets from/to the software (including all headers) via raw IBL2 QPs.
- RX RDMA NIC flow table on an IB port. Now the software can steer native IB packets to raw IB receive queues according to the DLID and the DQPN.

<u>Supported Devices and Features</u>

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb/25Gb 2-port SFP28 MCX4621A-ACAB OCP3 Adapter (P11341-B21)	MT_0000000238
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

Firmware - NVDIMM Top

Firmware Package - 16GB NVDIMM-N DDR4-2666
Version: 1.04 (C) **(Recommended)**
Filename: nvdimm-16gb_1.04.fwpkg

Enhancements

- Add Microsoft Windows Server 2022 support.
- Add VMWare vSphere 6.5 U3 support.

Supported Devices and Features

This package supports the following Memory Device:

- HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit

Firmware package for HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Plus Servers
Version: 02.02.00.1553 (B) **(Recommended)**
Filename: dcpmm_02.02.00.1553.fwpkg

Important Note!

This software package contains Intel Optane DC Persistent Memory Firmware version 2.2.0.1553

Fixes

This product corrects an issue that three different capacities of Intel Optane DC Persistent Memory are identifiable with three individual device GUID.

Supported Devices and Features

This package supports the following Memory Devices:

- HPE 512GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 256GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 128GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

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Firmware package for HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Servers
Version: 01.02.00.5446 **(Recommended)**
Filename: dcpmm_01.02.00.5446.fwpkg

Important Note!

This software package contains Intel Optane DC Persistent Memory Firmware version 1.2.0.5446

Enhancements

- Add VMWare ESXi 6.5 U3 support

- Add Microsoft Windows Server 2022 support

Supported Devices and Features

This package supports the following Memory Devices:

- HPE 512GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 256GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 128GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

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Online Flash Component for Linux - 16GB NVDIMM-N DDR4-2666
Version: 1.04 (C) **(Optional)**
Filename: RPMS/x86_64/firmware-nvdimm-16gb-1.04-3.1.x86_64.compsig; RPMS/x86_64/firmware-nvdimm-16gb-1.04-3.1.x86_64.rpm

Enhancements

- Add RHEL8.4 support.
- Add SLES15 SP3 support.
- Add VMWare ESXi 7.0 U3 support.
- Add VMWare vSphere 6.5 U3 support.

Supported Devices and Features

This package supports the following Memory Device:

- HPE 16GB NVDIMM Single Rank x4 DDR4-2666 Module Kit

Online Flash Component for Linux - HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Plus Servers
Version: 2.2.0.1553 (B) **(Recommended)**
Filename: RPMS/x86_64/firmware-dcpmm-2.2.0.1553-2.1.x86_64.compsig; RPMS/x86_64/firmware-dcpmm-2.2.0.1553-2.1.x86_64.rpm

Important Note!

This software package contains Intel Optane DC Persistent Memory Firmware version 2.2.0.1553

Prerequisites

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

Fixes

This product corrects an issue that three different capacities of Intel Optane DC Persistent Memory are identifiable with three individual device GUID.

Supported Devices and Features

This package supports the following Memory Devices:

- HPE 512GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 256GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 128GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

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Online Flash Component for Linux - HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Servers
Version: 1.2.0.5446 **(Recommended)**
Filename: RPMS/x86_64/firmware-dcpmm-1.2.0.5446-1.1.x86_64.compsig; RPMS/x86_64/firmware-dcpmm-1.2.0.5446-1.1.x86_64.rpm

Important Note!

This software package contains Intel Optane DC Persistent Memory Firmware version 1.2.0.5446

Prerequisites

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

Enhancements

- Add RHEL8.4 and SUSE15 SP3 support.

Supported Devices and Features

This package supports the following Memory Devices:

- HPE 512GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 256GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 128GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

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Online Flash Component for Microsoft Windows x64 - 16GB NVDIMM-N DDR4-2666
Version: 1.04 (B) **(Optional)**
Filename: cp048495.compsig; cp048495.exe

Enhancements

- Add suppport for Microsoft Windows 2022

Online Flash Component for Microsoft Windows x64 - HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Plus Servers
Version: 2.2.0.1553 (B) **(Recommended)**
Filename: cp047912.compsig; cp047912.exe

Important Note!

This software package contains Intel Optane DC Persistent Memory Firmware version 2.2.0.1553

Prerequisites

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

Fixes

This product corrects an issue that three different capacities of Intel Optane DC Persistent Memory are identifiable with three individual device GUID.

Supported Devices and Features

This package supports the following Memory Devices:

- HPE 512GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 256GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

- HPE 128GB 3200 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

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Online Flash Component for Microsoft Windows x64 - HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Servers
Version: 1.2.0.5446 **(Recommended)**
Filename: cp047627.compsig; cp047627.exe

Important Note!

This software package contains Intel Optane DC Persistent Memory Firmware version 1.2.0.5446

Prerequisites

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

Enhancements

- Add Microsoft Windows Server 2022 support

Supported Devices and Features

This package supports the following Memory Devices:

- HPE 512GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 256GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory
- HPE 128GB 2666 Persistent Memory Kit featuring Intel Optane DC Persistent Memory

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Firmware - PCIe NVMe Storage Disk Top

Online NVMe SSD Flash Component for Linux (x64) - MK000400KWDUK, VK000480KWDUE, MK000800KWDUL, VK000960KWDUF, MK001600KWDUN and VK001920KWDUH Drives
Version: HPK4 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-b45e49679c-HPK4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b45e49679c-HPK4-6.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - MO0400KEFHN, MO0800KEFHP, MO1600KEFHQ, MO2000KEFHR, MT0800KEXUU and MT1600KEXUV Drives
Version: HPK4 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-2a5b65f157-HPK4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2a5b65f157-HPK4-6.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - VS000480KWDUP, VS000960KWDUQ, MS000400KWDUR and MS000800KWDUT Drives
Version: HPK4 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-95a2e5abcb-HPK4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-95a2e5abcb-HPK4-6.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - ET000750KWJTF, EO000750KWTXC and EO000375KWJUC Drives
Version: 4ICSHPK4 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-c4355d15c4-4ICSHPK4-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-c4355d15c4-4ICSHPK4-3.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - KCD6XVUL800G, KCD6XVUL1T60, KCD6XVUL3T20, KCD6XVUL6T40, KCD6XVUL12T8, KCD6XLUL960G, KCD6XLUL1T92, KCD6XLUL3T84, KCD6XLUL7T68 and KCD6XLUL15T3 Drives
Version: GPK3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-6fc985bd3b-GPK3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6fc985bd3b-GPK3-2.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - KCM6XVUL800G, KCM6XVUL1T60, KCM6XVUL3T20, KCM6XVUL6T40, KCM6XRUL960G, KCM6XRUL1T92, KCM6XRUL3T84 and KCM6XRUL7T68 Drives
Version: GPK3 (B) **(Recommended)**

Filename: rpm/RPMS/x86_64/firmware-hdd-3815d4b024-GPK3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3815d4b024-GPK3-2.1.x86_64.rpm

Important Note!

- .Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - LO0400KEFJQ, LO0800KEFJR, LO1600KEFJT, LO2000KEFJU, LT0800KEXVA, LT1600KEXVB and LT2000KEXVC Drives
Version: HPK4 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-d64642c780-HPK4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-d64642c780-HPK4-6.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - MK000800KWWFE, MK001600KWWFF, MK003200KWWFH, MK006400KWWFK, VK000960KWWFL, VK001920KWWFN, VK003840KWWFP and VK007680KWWFQ Drives
Version: HPK3 (F) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-54addf5312-HPK3-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-54addf5312-HPK3-6.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This FW change resolves a MCTP VDM compliance issue seen by iLO version 2.30.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00111061en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - MO001600KWVNB, MO003200KWVNC, MO006400KWVND, MT001600KWSTB, MT003200KWSTC and MT006400KWSTD Drives
Version: HPK3 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-cea219e4b1-HPK3-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-cea219e4b1-HPK3-3.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - MO001600KWZQP and MO003200KWZQQ Drives
Version: HPK5 (D) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-95b6ae2e85-HPK5-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-95b6ae2e85-HPK5-4.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Optimized T-offset setting.
- Change MQES setting to 8192.
- Fixed LED Behavior misaligned specs issue.
- Fixed performance drop issue when 4+ SSD are installed.
- The Idle Power Management fix to keep the drive from entering and exiting the Lower Power Idle mode too frequently.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00112800en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - MT001600KWHAC, MT003200KWHAD and MT006400KWHAE Drives
Version: HPS1 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8e8ddc5265-HPS1-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8e8ddc5265-HPS1-6.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - MZPLJ1T6HBJR-000H3, MZPLJ3T2HBJR-000H3 and MZPLJ6T4HALA-000H3 Drives
Version: EPK75H3Q (B) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-6628fce235-EPK75H3Q-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6628fce235-EPK75H3Q-2.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Fixed False UECC issue at idle power mode.
- Old FW download Blocking (EPK70H3Q~EPK74H3Q).
- FW is changed off the option of TX data alignment for each lane.
- FW is changed to clear the interrupt after TLP Complete when PCIe config read operation.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00113342en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - MZXL5800HBHQ-000H3, MZXL51T6HBJR-000H3, MZXL53T2HBLS-000H3, MZXL56T4HALA-000H3, MZXL512THALA-000H3, MZXL5960HBHQ-000H3, MZXL51T9HBJR-000H3, MZXL53T8HBLS-000H3, MZXL57T6HALA-000H3 and MZXL515THALA-00H3 Drive Version: MPK75H5Q (C) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-e320db791d-MPK75H5Q-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-e320db791d-MPK75H5Q-3.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Fixed False UECC issue at idle power mode (12.8TB and 15.36TB only).
- Apply PCLK running PHY option, PLL clock disable can be avoided in lane 0 missing case.
- Old FW download Blocking.
- FW is changed off the option of TX data alignment for each lane.
- FW is changed to clear the interrupt after TLP Complete when PCIe config read operation.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00113342en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - VO000960KXAVL, VO001920KXAVP, VO003840KXAVQ, VO007680KXAVR, MO000800KXAVN, MO001600KXAVT, MO003200KXAVU and MO006400KXAVV Drives Version: HPK3 (B) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-035a863453-HPK3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-035a863453-HPK3-2.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This Firmware release contains various drive interoperability enhancements and code fixes accumulated since the last firmware release, as well as a change to disable MCTP over PCIe VDM function per requested of HPE, and a PHY setting change for improved compatibility with Intel Ice Lake based Gen10 Plus DL360 platform.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00115201en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - VO001000KWJSE, VO002000KWJSF, VO004000KWJSH, VT004000KWJSU, MO001600KWJSN and MO003200KWJSQ Drives
Version: 4ICDHPK1 (B) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-1656c1b14a-4ICDHPK1-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1656c1b14a-4ICDHPK1-2.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This firmware corrects the potential for a drive to become disabled and nonfunctional during certain conditions or workloads.
- After the drive is upgraded to firmware version HPK1, it cannot be downgraded to firmware version HPK0.

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - VO001920KWVMT, VO003840KWVMU, and VO007680KWVMV Drives
Version: HPK3 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-fe9c474847-HPK3-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-fe9c474847-HPK3-3.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - VO001920KWZQR and VO003840KWZQT Drives
Version: HPK5 (D) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-2af7385a1e-HPK5-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2af7385a1e-HPK5-4.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Optimized T-offset setting.
- Change MQES setting to 8192.
- Fixed LED Behavior misaligned specs issue.
- Fixed performance drop issue when 4+ SSD are installed.
- The Idle Power Management fix to keep the drive from entering and exiting the Lower Power Idle mode too frequently.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00112800en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - VO002000KWVVC, VO004000KWVUR, MO001600KWVUU, MO003200KWVUV and MO006400KWVVA Drives
Version: 4ICRHPK3 (C) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-92d876cfea-4ICRHPK3-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-92d876cfea-4ICRHPK3-3.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to 4ICRHPK3 that may result in SSD failure starting at 4,700 hours of operation, neither the SSD nor the data can be recovered, after the SSD failure occurs.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00111900en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - VO0400KEFJB, VO1200KEFJC and VO2000KEFJD Drives
Version: HPK4 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-9a826ccd8a-HPK4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-9a826ccd8a-HPK4-6.1.x86_64.rpm

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online NVMe SSD Flash Component for Linux (x64) - VS000480KXALB, VS003840KWXFQ, VS001920KWXFP and VS000960KWXFN Drives
Version: 85031G00 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-805abb7e9c-85031G00-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-805abb7e9c-85031G00-1.1.x86_64.rpm

Fixes

Fixes for various drive reliability enhancements and code fixes accumulated since the last initial release, as well as a change to disable MCTP over PCIe VDM function to satisfy certain HPE platform environments.

Online NVMe SSD Flash Component for VMware ESXi - MK000400KWDUK, VK000480KWDUE, MK000800KWDUL, VK000960KWDUF, MK001600KWDUN and VK001920KWDUH Drives
Version: HPK4 (G) **(Recommended)**
Filename: CP048486.compsig; CP048486.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - MO001600KWZQP and MO003200KWZQQ Drives
Version: HPK5 (C) **(Critical)**
Filename: CP048472.compsig; CP048472.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Optimized T-offset setting.
- Change MQES setting to 8192.
- Fixed LED Behavior misaligned specs issue.
- Fixed performance drop issue when 4+ SSD are installed.
- The Idle Power Management fix to keep the drive from entering and exiting the Lower Power Idle mode too frequently.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00112800en_us

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - MO0400KEFHN, MO0800KEFHP, MO1600KEFHQ, MO2000KEFHR, MT0800KEXUU and MT1600KEXUV Drives

Version: HPK4 (E) **(Recommended)**
Filename: CP048489.compsig; CP048489.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - MT001600KWHAC, MT003200KWHAD and MT006400KWHAE Drives
Version: HPS1 (F) **(Recommended)**
Filename: CP048488.compsig; CP048488.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - VO001920KWVMT, VO003840KWVMU, and VO007680KWVMV Drives
Version: HPK3 (B) **(Recommended)**
Filename: CP048469.compsig; CP048469.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - VO001920KWZQR and VO003840KWZQT Drives
Version: HPK5 (C) **(Critical)**
Filename: CP048473.compsig; CP048473.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Optimized T-offset setting.
- Change MQES setting to 8192.
- Fixed LED Behavior misaligned specs issue.

- Fixed performance drop issue when 4+ SSD are installed.
- The Idle Power Management fix to keep the drive from entering and exiting the Lower Power Idle mode too frequently.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00112800en_us

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - VS000480KWDUP, VS000960KWDUQ, MS000400KWDUR and MS000800KWDUT Drives
Version: HPK4 (E) **(Recommended)**
Filename: CP048484.compsig; CP048484.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - ET000750KWJTF, EO000750KWTXC and EO000375KWJUC Drives
Version: 4ICSHPK4 (B) **(Recommended)**
Filename: CP048513.compsig; CP048513.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - KCD6XVUL800G, KCD6XVUL1T60, KCD6XVUL3T20, KCD6XVUL6T40, KCD6XVUL12T8, KCD6XLUL960G, KCD6XLUL1T92, KCD6XLUL3T84, KCD6XLUL7T68 and KCD6XLUL15T3 Drives
Version: GPK3 (B) **(Recommended)**
Filename: CP049279.compsig; CP049279.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - KCM6XVUL800G, KCM6XVUL1T60, KCM6XVUL3T20, KCM6XVUL6T40, KCM6XRUL960G, KCM6XRUL1T92, KCM6XRUL3T84 and KCM6XRUL7T68 Drives
Version: GPK3 (B) **(Recommended)**
Filename: CP049284.compsig; CP049284.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - LO0400KEFJQ, LO0800KEFJR, LO1600KEFJT, LO2000KEFJU, LT0800KEXVA, LT1600KEXVB, and LT2000KEXVC Drives
Version: HPK4 (E) **(Recommended)**
Filename: CP045718.compsig; CP045718.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - MK000800KWWFE, MK001600KWWFF, MK003200KWWFH, MK006400KWWFK, VK000960KWWFL, VK001920KWWFN, VK003840KWWFP and VK007680KWWFQ Drives
Version: HPK3 (C) **(Critical)**
Filename: CP048467.compsig; CP048467.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This FW change resolves a MCTP VDM compliance issue seen by iLO version 2.30.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00111061en_us

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - MO001600KWVNB, MO003200KWVNC, MO006400KWVND, MT001600KWSTB, MT003200KWSTC and MT006400KWSTD Drives
Version: HPK3 (B) **(Recommended)**
Filename: CP048478.compsig; CP048478.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - MZPLJ1T6HBJR-000H3, MZPLJ3T2HBJR-000H3 and MZPLJ6T4HALA-000H3 Drives
Version: EPK75H3Q (B) **(Critical)**
Filename: CP048458.compsig; CP048458.zip

Fixes

- Fixed False UECC issue at idle power mode.
- Old FW download Blocking (EPK70H3Q~EPK74H3Q).
- FW is changed off the option of TX data alignment for each lane.
- FW is changed to clear the interrupt after TLP Complete when PCIe config read operation.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00113342en_us

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - MZXL5800HBHQ-000H3, MZXL51T6HBJR-000H3, MZXL53T2HBLS-000H3, MZXL56T4HALA-000H3, MZXL512THALA-000H3, MZXL5960HBHQ-000H3, MZXL51T9HBJR-000H3, MZXL53T8HBLS-000H3, MZXL57T6HALA-000H3 and MZXL515THALA-00H3 Drive
Version: MPK75H5Q (B) **(Critical)**
Filename: CP048456.compsig; CP048456.zip

Fixes

- Fixed False UECC issue at idle power mode (12.8TB and 15.36TB only).
- Apply PCLK running PHY option, PLL clock disable can be avoided in lane 0 missing case.
- Old FW download Blocking.
- FW is changed off the option of TX data alignment for each lane.
- FW is changed to clear the interrupt after TLP Complete when PCIe config read operation.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00113342en_us

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - VO000960KXAVL, VO001920KXAVP, VO003840KXAVQ, VO007680KXAVR, MO000800KXAVN, MO001600KXAVT, MO003200KXAVU and MO006400KXAVV Drives
Version: HPK3 (B) **(Critical)**
Filename: CP049302.compsig; CP049302.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This Firmware release contains various drive interoperability enhancements and code fixes accumulated since the last firmware release, as well as a change to disable MCTP over PCIe VDM function per requested of HPE, and a PHY setting change for improved compatibility with Intel Ice Lake based Gen10 Plus DL360 platform.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00115201en_us

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - VO001000KWJSE, VO002000KWJSF, VO004000KWJSH, VT004000KWJSU, MO001600KWJSN and MO003200KWJSQ Drives
Version: 4ICDHPK1 (B) **(Recommended)**
Filename: CP048471.compsig; CP048471.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This firmware corrects the potential for a drive to become disabled and nonfunctional during certain conditions or workloads.
- After the drive is upgraded to firmware version HPK1, it cannot be downgraded to firmware version HPK0.

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - VO002000KWVVC, VO004000KWVUR, MO001600KWVUU, MO003200KWVUV and MO006400KWVVA Drives
Version: 4ICRHPK3 (B) **(Critical)**
Filename: CP048511.compsig; CP048511.zip

Important Note!

- 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 4ICRHPK3 that may result in SSD failure starting at 4,700 hours of operation, neither the SSD nor the data can be recovered, after the SSD failure occurs.

- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00111900en_us

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - VO0400KEFJB, VO1200KEFJC and VO2000KEFJD Drives
Version: HPK4 (E) **(Recommended)**
Filename: CP045719.compsig; CP045719.zip

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements

- Added support for VMware 7.0 U3

Online NVMe SSD Flash Component for VMware ESXi - VS000480KXALB, VS000960KWXFN, VS001920KWXFP and VS003840KWXFQ Drives
Version: 85031G00 **(Recommended)**
Filename: CP048316.compsig; CP048316.zip

Fixes

Fixes for various drive reliability enhancements and code fixes accumulated since the last initial release, as well as a change to disable MCTP over PCIe VDM function to satisfy certain HPE platform environments.

Online NVMe SSD Flash Component for Windows (x64) - MK000400KWDUK, VK000480KWDUE, MK000800KWDUL, VK000960KWDUF, MK001600KWDUN and VK001920KWDUH Drives
Version: HPK4 (D) **(Recommended)**
Filename: cp048479.compsig; cp048479.exe; cp048479.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - MO0400KEFHN, MO0800KEFHP, MO1600KEFHQ, MO2000KEFHR, MT0800KEXUU and MT1600KEXUV Drives
Version: HPK4 (D) **(Recommended)**
Filename: cp048475.compsig; cp048475.exe; cp048475.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - MT001600KWHAC, MT003200KWHAD and MT006400KWHAE Drives
Version: HPS1 (D) **(Recommended)**
Filename: cp048480.compsig; cp048480.exe; cp048480.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - VS000480KWDUP, VS000960KWDUQ, MS000400KWDUR and MS000800KWDUT Drives
Version: HPK4 (D) **(Recommended)**
Filename: cp048487.compsig; cp048487.exe; cp048487.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - ET000750KWJTF, EO000750KWTXC and EO000375KWJUC Drives
Version: 4ICSHPK4 (B) **(Recommended)**
Filename: cp048692.compsig; cp048692.exe; cp048692.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - KCD6XVUL800G, KCD6XVUL1T60, KCD6XVUL3T20, KCD6XVUL6T40, KCD6XVUL12T8, KCD6XLUL960G, KCD6XLUL1T92, KCD6XLUL3T84, KCD6XLUL7T68 and KCD6XLUL15T3 Drives
Version: GPK3 (B) **(Recommended)**
Filename: cp049282.compsig; cp049282.exe; cp049282.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online NVMe SSD Flash Component for Windows (x64) - KCM6XVUL800G, KCM6XVUL1T60, KCM6XVUL3T20, KCM6XVUL6T40, KCM6XRUL960G, KCM6XRUL1T92, KCM6XRUL3T84 and KCM6XRUL7T68 Drives
Version: GPK3 (B) **(Recommended)**
Filename: cp049285.compsig; cp049285.exe; cp049285.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online NVMe SSD Flash Component for Windows (x64) - LO0400KEFJQ, LO0800KEFJR, LO1600KEFJT, LO2000KEFJU, LT0800KEXVA, LT1600KEXVB, and LT2000KEXVC Drives
Version: HPK4 (D) **(Recommended)**
Filename: cp048428.compsig; cp048428.exe; cp048428.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online NVMe SSD Flash Component for Windows (x64) - MK000800KWWFE, MK001600KWWFF, MK003200KWWFH, MK006400KWWFK, VK000960KWWFL, VK001920KWWFN, VK003840KWWFP and VK007680KWWFQ Drives
Version: HPK3 (C) **(Critical)**
Filename: cp048463.compsig; cp048463.exe; cp048463.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This FW change resolves a MCTP VDM compliance issue seen by iLO version 2.30.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00111061en_us

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - MO001600KWVNB, MO003200KWVNC, MO006400KWVND, MT001600KWSTB, MT003200KWSTC and MT006400KWSTD Drives
Version: HPK3 (B) **(Recommended)**
Filename: cp048684.compsig; cp048684.exe; cp048684.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - MO001600KWZQP and MO003200KWZQQ Drives
Version: HPK5 (C) **(Critical)**
Filename: cp048685.compsig; cp048685.exe; cp048685.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Optimized T-offset setting.
- Change MQES setting to 8192.
- Fixed LED Behavior misaligned specs issue.
- Fixed performance drop issue when 4+ SSD are installed.
- The Idle Power Management fix to keep the drive from entering and exiting the Lower Power Idle mode too frequently.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00112800en_us

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - MZPLJ1T6HBJR-000H3, MZPLJ3T2HBJR-000H3 and MZPLJ6T4HALA-000H3 Drives
Version: EPK75H3Q (B) **(Critical)**
Filename: cp048301.compsig; cp048301.exe; cp048301.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Fixed False UECC issue at idle power mode.
- Old FW download Blocking (EPK70H3Q~EPK74H3Q).
- FW is changed off the option of TX data alignment for each lane.
- FW is changed to clear the interrupt after TLP Complete when PCIe config read operation.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00113342en_us

Enhancements

- Added support for Microsoft Windows Server 2022.

Online NVMe SSD Flash Component for Windows (x64) - MZXL5800HBHQ-000H3, MZXL51T6HBJR-000H3, MZXL53T2HBLS-000H3, MZXL56T4HALA-000H3, MZXL512THALA-000H3, MZXL5960HBHQ-000H3, MZXL51T9HBJR-000H3, MZXL53T8HBLS-000H3, MZXL57T6HALA-000H3 and MZXL515THALA-0 Drives
Version: MPK75H5Q (B) **(Critical)**
Filename: cp048464.compsig; cp048464.exe; cp048464.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Fixed False UECC issue at idle power mode (12.8TB and 15.36TB only).
- Apply PCLK running PHY option, PLL clock disable can be avoided in lane 0 missing case.
- Old FW download Blocking.
- FW is changed off the option of TX data alignment for each lane.
- FW is changed to clear the interrupt after TLP Complete when PCIe config read operation.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00113342en_us

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - VO000960KXAVL, VO001920KXAVP, VO003840KXAVQ, VO007680KXAVR, MO000800KXAVN, MO001600KXAVT, MO003200KXAVU and MO006400KXAVV Drives
Version: HPK3 (B) **(Critical)**
Filename: cp049303.compsig; cp049303.exe; cp049303.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This Firmware release contains various drive interoperability enhancements and code fixes accumulated since the last firmware release, as well as a change to disable MCTP over PCIe VDM function per requested of HPE, and a PHY setting change for improved compatibility with Intel Ice Lake based Gen10 Plus DL360 platform.

- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00115201en_us

Enhancements

- Added support for Microsoft Windows Sever 2022.

Online NVMe SSD Flash Component for Windows (x64) - VO001000KWJSE, VO002000KWJSF, VO004000KWJSH, VT004000KWJSU, MO001600KWJSN and MO003200KWJSQ Drives
Version: 4ICDHPK1 (B) **(Critical)**
Filename: cp048438.compsig; cp048438.exe; cp048438.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This firmware corrects the potential for a drive to become disabled and nonfunctional during certain conditions or workloads.
- After the drive is upgraded to firmware version HPK1, it cannot be downgraded to firmware version HPK0.

Enhancements

- Added support for Microsoft Server Windows 2022

Online NVMe SSD Flash Component for Windows (x64) - VO001920KWVMT, VO003840KWVMU, and VO007680KWVMV Drives
Version: HPK3 (B) **(Recommended)**
Filename: cp048462.compsig; cp048462.exe; cp048462.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - VO001920KWZQR and VO003840KWZQT Drives
Version: HPK5 (C) **(Critical)**
Filename: cp048687.compsig; cp048687.exe; cp048687.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Optimized T-offset setting.
- Change MQES setting to 8192.
- Fixed LED Behavior misaligned specs issue.
- Fixed performance drop issue when 4+ SSD are installed.
- The Idle Power Management fix to keep the drive from entering and exiting the Lower Power Idle mode too frequently.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00112800en_us

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - VO002000KWVVC, VO004000KWVUR, MO001600KWVUU, MO003200KWVUV and MO006400KWVVA Drives
Version: 4ICRHPK3 (B) **(Critical)**
Filename: cp048693.compsig; cp048693.exe; cp048693.md5

Important Note!

- 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 4ICRHPK3 that may result in SSD failure starting at 4,700 hours of operation, neither the SSD nor the data can be recovered, after the SSD failure occurs.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpesc/public/docDisplay?docId=emr_na-a00111900en_us

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - VO0400KEFJB, VO1200KEFJC and VO2000KEFJD Drives
Version: HPK4 (D) **(Recommended)**
Filename: cp048476.compsig; cp048476.exe; cp048476.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online NVMe SSD Flash Component for Windows (x64) - VS000480KXALB, VS003840KWXFQ, VS001920KWXFP and VS000960KWXFN drives
Version: 85031G00 (B) **(Recommended)**
Filename: cp049054.compsig; cp049054.exe; cp049054.md5

Important Note!

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Firmware - Power Management Top

Online ROM Flash for Linux - Advanced Power Capping Microcontroller Firmware for HPE Gen10 and Gen10 Plus Servers
Version: 1.0.8 **(Optional)**
Filename: RPMS/x86_64/firmware-powerpic-gen10-1.0.8-1.1.x86_64.compsig; RPMS/x86_64/firmware-powerpic-gen10-1.0.8-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

Advanced Power Capping Microcontroller Firmware for HPE Gen10 and Gen10 Plus Servers

Release Version:

1.0.8

Last Recommended or Critical Revision:

1.0.4

Previous Revision:

1.0.7

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Fixed an issue of inaccurate temperature readings when the actual temperature exceeds 100 °C on Proliant Gen10 Plus servers.

Known Issues:

None

Prerequisites

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

Integrated Lights-Out 5 (iLO 5) Firmware version 1.40 and System ROM version 1.20 or later are required for HPE Gen10 servers.

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Fixed an issue of inaccurate temperature readings when the actual temperature exceeds 100 °C on Proliant Gen10 Plus servers.

Known Issues:

None

Online ROM Flash for Windows x64 - Advanced Power Capping Microcontroller Firmware for HPE Gen10 and Gen10 Plus Servers
Version: 1.0.8 **(Optional)**
Filename: cp049266.compsig; cp049266.exe

Important Note!

Important Notes:

None

Deliverable Name:

Advanced Power Capping Microcontroller Firmware for HPE Gen10 and Gen10 Plus Servers

Release Version:

1.0.8

Last Recommended or Critical Revision:

1.0.4

Previous Revision:

1.0.7

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Fixed an issue of inaccurate temperature readings when the actual temperature exceeds 100 °C on Proliant Gen10 Plus servers.

Known Issues:

None

Prerequisites

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

Integrated Lights-Out 5 (iLO 5) Firmware version 1.40 and System ROM version 1.20 or later are required for HPE Gen10 servers.

Enhancements

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Fixed an issue of inaccurate temperature readings when the actual temperature exceeds 100 °C on Proliant Gen10 Plus servers.

Known Issues:

None

ROM Flash Firmware Package - Advanced Power Capping Microcontroller Firmware for HPE Gen10 and Gen10 Plus Servers
Version: 1.0.8 **(Optional)**
Filename: PICGen10-1.0.8-1.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

Advanced Power Capping Microcontroller Firmware for HPE Gen10 and Gen10 Plus Servers

Release Version:

1.0.8

Last Recommended or Critical Revision:

1.0.4

Previous Revision:

1.0.7

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Fixed an issue of inaccurate temperature readings when the actual temperature exceeds 100 °C on Proliant Gen10 Plus servers.

Known Issues:

None

Prerequisites

Integrated Lights-Out 5 (iLO 5) Firmware version 1.40 and System ROM version 1.20 or later are required for HPE Gen10 servers.

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Fixed an issue of inaccurate temperature readings when the actual temperature exceeds 100 °C on Proliant Gen10 Plus servers.

Known Issues:

None

Firmware - SAS Storage Disk Top

Online HDD/SSD Flash Component for Linux (x64) - EG000300JWBHR Drive
Version: HPD5 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-2e4c61fc63-HPD5-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2e4c61fc63-HPD5-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes

would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG000300JWFVB Drive
Version: HPD3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-c5cd837c29-HPD3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-c5cd837c29-HPD3-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG000600JWEBH and EG000300JWEBF Drives
Version: HPD5 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-aa9e289524-HPD5-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aa9e289524-HPD5-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG000600JWFUV and EG001200JWFVA Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-f0c91d2fe3-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-f0c91d2fe3-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG000600JWJNP and EG001200JWJNQ Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-bdfb8e99d9-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-bdfb8e99d9-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG001800JWJNR and EG002400JWJNT Drives
Version: HPD6 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-b1c9eaf74c-HPD6-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b1c9eaf74c-HPD6-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG0600JETKA, EG0900JETKB and EG1200JETKC Drives
Version: HPD8 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-HPD8-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7505dfb5ae-HPD8-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EK0800JVYPN, EO1600JVYPP, MK0800JVYPQ and MO1600JVYPR Drives
Version: HPD7 (D) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-481c8ea9a7-HPD7-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-481c8ea9a7-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 or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to HPD7 that results in SSD failure at 40,000 hours of operation (i.e., 4 years, 205 days 16 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00097382en_us.

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EO000400JWDKP, EO000800JWDKQ, EO001600JWDKR, MO000400JWDKU, MO000800JWDKV, MO001600JWDLA and MO003200JWDLB Drives
Version: HPD2 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-5dcf26fa42-HPD2-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-5dcf26fa42-HPD2-6.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB002000JWFVN and MB004000JWFVP Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-d7af557f47-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-d7af557f47-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB004000JWFVK and MB006000JWFVL Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-f6d00bd17e-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-f6d00bd17e-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB6000JVYZD and MB4000JVYZC Drives
Version: HPD4 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-e800e8d3b9-HPD4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-e800e8d3b9-HPD4-6.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MM1000JEFRB and MM2000JEFRC Drives
Version: HPD9 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-b04257b77b-HPD9-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b04257b77b-HPD9-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MO000400JWUFT, MO000800JWUFU, MO001600JWUFV, MO003200JWUGA, MO006400JWUGB, EO000400JWUGC, EO000800JWUGD and EO001600JWUGE Drives
Version: HPD3 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-ef93133161-HPD3-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-ef93133161-HPD3-3.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes

would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VO000960JWTBK, VO001920JWTBL, VO003840JWTBN, VO007680JWTBP, MO000400JWTBQ, MO000800JWTBR, MO001600JWTBT, MO003200JWTBU, MO006400JWTCD, EO000400JWTBV, EO000800JWTCA and EO001600JWTCB Drives
Version: HPD9 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-9ad359dac1-HPD9-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-9ad359dac1-HPD9-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG000300JWSJP, EG000600JWJNH and EG001200JWJNK Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-24fe569b72-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-24fe569b72-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG001800JWFVC Drive
Version: HPD4 (B) **(Recommended)**

Filename: rpm/RPMS/x86_64/firmware-hdd-693b9a2853-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-693b9a2853-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG001800JWJNL and EG002400JWJNN Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-852266afdf-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-852266afdf-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG0300FCSPH, EG0450FCSPK, EG0600FCSPL and EG0900FCSPN Drives
Version: HPD2 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-7c1a1734f9-HPD2-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7c1a1734f9-HPD2-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG0300JEHLV, EG0600JEHMA, EG0900JEHMB and EG1200JEHMC Drives
Version: HPD5 (I) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-31f91b8622-HPD5-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-31f91b8622-HPD5-9.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG0300JFCKA, EG0600JEMCV, EG0900JFCKB and EG1200JEMDA Drives
Version: HPD6 (I) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-ac3fda26eb-HPD6-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-ac3fda26eb-HPD6-9.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG1800JEHMD Drive
Version: HPD6 (I) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8a2c06af48-HPD6-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8a2c06af48-HPD6-9.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG1800JEMDB Drive
Version: HPD5 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-0a38b25661-HPD5-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0a38b25661-HPD5-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EG1800JFHMH Drive
Version: HPD8 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-7fc5497116-HPD8-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7fc5497116-HPD8-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EH000300JWCPK, EH000600JWCPL and EH000900JWCPN Drives
Version: HPD7 (B) **(Recommended)**

Filename: rpm/RPMS/x86_64/firmware-hdd-3d97759111-HPD7-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3d97759111-HPD7-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EH000600JWCPF and EH000900JWCPH Drives
Version: HPD9 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-a05f29cef3-HPD9-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a05f29cef3-HPD9-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EH000900JWHPK and EH000600JWHPH Drives
Version: HPD7 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-c7df7ceedb-HPD7-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-c7df7ceedb-HPD7-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EH000900JWHPP, EH000600JWHPN and EH000300JWHPL Drives
Version: HPD7 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8d68452816-HPD7-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8d68452816-HPD7-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EH0300JDXBA, EH0450JDXBB and EH0600JDXBC Drives
Version: HPD5 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-1cbab97ff0-HPD5-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1cbab97ff0-HPD5-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EH0300JDYTH, EH0450JDYTK and EH0600JDYTL Drives
Version: HPD6 (I) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-b9340d29be-HPD6-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b9340d29be-HPD6-9.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes

would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EH0300JEDHC, EH0450JEDHD and EH0600JEDHE Drives
Version: HPD4 (I) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8c4a212ff9-HPD4-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8c4a212ff9-HPD4-9.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EH0600JDYTN Drive
Version: HPD7 (H) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-f3faa195ff-HPD7-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-f3faa195ff-HPD7-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Fixes a data integrity risk where stale data is mistakenly used from cache.
- Fixes a data integrity risk where stale data is returned on an unaligned overlapped write-read operation.
- Fixes a data integrity risk during a sequential read and write workload when a recovered error is encountered, which could cause incomplete data to be read.

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - EO000400PXDBQ, EO000800PXDCK, EO001600PXDCH, MO000800PXDBP, MO001600PXDCC, MO003200PXDCD, MO006400PXDCE, VO000960PXDBN, VO001920PXDBR, VO003840PXDBT, VO007680PXDBU and VO015300PXDBV Drives
Version: HPD1 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-42aff4675b-HPD1-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-42aff4675b-HPD1-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB004000JWKGU Drive
Version: HPD2 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-2c27a7a9a4-HPD2-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2c27a7a9a4-HPD2-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB004000JWWQB, MB002000JWWQA and MB001000JWWPV Drives
Version: HPD6 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-adb3ab8147-HPD6-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-adb3ab8147-HPD6-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB006000JWKGN Drive
Version: HPD2 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-a886842a99-HPD2-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a886842a99-HPD2-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB008000JWJRQ and MB006000JWJRP Drives
Version: HPD9 (B) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-faf39e0ff7-HPD9-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-faf39e0ff7-HPD9-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This firmware release provides additional protection against command timeouts.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00117258en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB008000JWRTD Drive
Version: HPD2 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8b26d1ef02-HPD2-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8b26d1ef02-HPD2-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB008000JWWQP and MB006000JWWQN Drives
Version: HPD6 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-ae6b41e855-HPD6-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-ae6b41e855-HPD6-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB010000JWAYK and MB008000JWAYH Drives
Version: HPD6 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-6ec35faf90-HPD6-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6ec35faf90-HPD6-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes

would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB010000JWZHA, MB012000JWZHB, MB014000JWZHC and MB016000JWZHE Drives
Version: HPD2 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-cf0b6cabe1-HPD2-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-cf0b6cabe1-HPD2-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB012000JWDFD Drive
Version: HPD3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-HPD3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aaf1014ede-HPD3-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB014000JWRTH, MB012000JWRTF and MB010000JWRTE Drives
Version: HPD2 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-10385ef3e6-HPD2-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-10385ef3e6-HPD2-6.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB014000JWTFD and MB012000JWTFC Drives
Version: HPD8 (B) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-4ba9615f90-HPD8-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-4ba9615f90-HPD8-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This firmware release provides additional protection against command timeouts.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00117258en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB014000JWUDB Drive
Version: HPD3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-cfd7436fcc-HPD3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-cfd7436fcc-HPD3-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB016000JWXKH Drive
Version: HPD9 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8a0371a425-HPD9-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8a0371a425-HPD9-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB016000JXLBA and MB018000JXLAU Drives
Version: HPD2 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-d550523365-HPD2-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-d550523365-HPD2-1.1.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 offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes

- VENDOR IDENTIFICATION field changed from “HP” to “HPE” and Reliability improvements.

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB1000JVYZL, MB2000JVYZN, MB3000JVYZP and MB4000JVYZQ Drives
Version: HPD3 (F) **(Recommended)**

Filename: rpm/RPMS/x86_64/firmware-hdd-b85516c7d2-HPD3-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b85516c7d2-HPD3-6.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB2000JFDSL and MB4000JFDSN Drives
Version: HPD4 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-46fc43ab26-HPD4-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-46fc43ab26-HPD4-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB2000JFEML and MB4000JFEMN Drives
Version: HPD6 (H) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-624b75c7e2-HPD6-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-624b75c7e2-HPD6-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also includes emergency power off improvements.

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB2000JFEPA and MB4000JFEPB Drives
Version: HPD5 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-HPD5-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-326de7c0f2-HPD5-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB4000JEFNC and MB6000JEFND Drives
Version: HPD9 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-af802bb412-HPD9-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-af802bb412-HPD9-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB4000JEQNL and MB6000JEQNN Drives
Version: HPDB (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-2cfaac41db-HPDB-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2cfaac41db-HPDB-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB4000JEXYA and MB6000JEXYB Drives
Version: HPD9 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-0f923833e9-HPD9-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0f923833e9-HPD9-6.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB6000JEQUV and MB8000JEQVA Drives
Version: HPDB (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-df22f7effd-HPDB-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-df22f7effd-HPDB-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB6000JVYYV Drive
Version: HPD2 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-0595c2a887-HPD2-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0595c2a887-HPD2-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB8000JFECQ Drive
Version: HPD7 (G) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-252770cdda-HPD7-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-252770cdda-HPD7-7.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MM1000JFJTH and MM002000JWCNF Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-fa46c607d6-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-fa46c607d6-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MO000400JWFWN, MO000800JWFWP, MO001600JWFWQ, MO003200JWFWR, MO000960JWFWT, MO001920JWFWU and MO003840JWFWV Drives
Version: HPD5 (E) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-b8a60fbe9a-HPD5-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b8a60fbe9a-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 or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MO000800JXBEV, MO001600JXBFP, MO003200JXBFQ, MO006400JXBFR, MO000960JXBFA, MO001920JXBFT, MO003840JXBFU, MO007680JXBGA, MO015360JXBFV, EO000400JXBEU, EO000800JXBFL and EO001600JXBFN Drives
Version: HPD1 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-24384980ec-HPD1-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-24384980ec-HPD1-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MO0200JEFNV, MO0400JEFPA, MO0800JEFPB, MO1600JEFPC, EO0200JEFPD, EO0400JEFPE and EO0800JEFPF Drives
Version: HPD3 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-71af849f3b-HPD3-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-71af849f3b-HPD3-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MO0400JFFCF, MO0800JFFCH, MO1600JFFCK and MO3200JFFCL Drives
Version: HPD9 (D) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-edf6dcd906-HPD9-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-edf6dcd906-HPD9-4.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000960JWSSQ, VK001920JWSSR, VK003840JWSST, VK007680JWSSU and VO015300JWSSV Drives
Version: HPD8 (E) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-1e51a57347-HPD8-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1e51a57347-HPD8-5.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK0400JEABD, VK0800JEABE, and VO1600JEABF Drives
Version: HPD4 (B) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8a7ecf7465-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8a7ecf7465-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- If Power On Hours exceeds 70,000hrs, PM2R will report Hardware error (04/4C/A8) after the next Power Cycle and will not accept read/write commands. This fix will update storage location reporting when the maximum number of registrations in the Work Load Log read process reaches 70,000; the last registered 70,000th storage location will be modified to be read as the next (70,001st) storage location.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00111296en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VO000480JWDAR, VO000960JWDAT, VO001920JWDAU and VO003840JWDAV Drives
Version: HPD8 (D) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-2eb810cdd7-HPD8-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2eb810cdd7-HPD8-4.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VO000800JWZJP, VO001600JWZJQ, VO003200JWZJR and VO006400JWZJT Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-a07a420ed1-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a07a420ed1-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VO000960JWZJF, VO001920JWZJH, VO003840JWZJK, VO007680JWZJL and VO015360JWZJN Drives
Version: HPD4 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-35fd24601f-HPD4-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-35fd24601f-HPD4-2.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VO000960RWUEV, VO001920RWUFA, VO003840RWUFB, VO007680RWUFC, VO000960RWUFD, VO001920RWUFE and VO003840RWUFF Drives
Version: HPD6 **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8fafc9efb2-HPD6-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8fafc9efb2-HPD6-1.1.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 offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes

- Reduced the occurrence probability of PMIC busy issue.
- Fixed the system data error at the drive power on issue.
- When the PLP operation starts, the waiting Unmap request to the 4KB not-aligned host write area is canceled to be able to complete PLP correctly.

Online HDD/SSD Flash Component for Linux (x64) - VO007680JWCNK and VO015300JWCNL Drives
Version: HPD8 (D) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-4c048aaeb0-HPD8-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-4c048aaeb0-HPD8-4.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL:https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VO0480JFDGT, VO0960JFDGU, VO1920JFDGV and VO3840JFDHA Drives
Version: HPD9 (D) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8ed8893abd-HPD9-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8ed8893abd-HPD9-4.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VO1920JEUQQ Drive
Version: HPD3 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-5d9e841607-HPD3-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-5d9e841607-HPD3-8.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for VMware ESXi - EG000300JWBHR Drive
Version: HPD5 (B) **(Recommended)**
Filename: CP048248.compsig; CP048248.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG000300JWFVB Drive
Version: HPD3 (B) **(Recommended)**
Filename: CP048245.compsig; CP048245.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG000600JWEBH and EG000300JWEBF Drives
Version: HPD5 (B) **(Recommended)**
Filename: CP049345.compsig; CP049345.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG000600JWFUV and EG001200JWFVA Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP048250.compsig; CP048250.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes

would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG000600JWJNP and EG001200JWJNQ Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP048251.compsig; CP048251.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG001800JWJNR and EG002400JWJNT Drives
Version: HPD6 (B) **(Recommended)**
Filename: CP048254.compsig; CP048254.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG0600JETKA, EG0900JETKB and EG1200JETKC Drives
Version: HPD8 (B) **(Recommended)**
Filename: CP048264.compsig; CP048264.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EH000900JWHPK and EH000600JWHPH Drives
Version: HPD7 (B) **(Recommended)**
Filename: CP049135.compsig; CP049135.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EH000900JWHPP, EH000600JWHPN and EH000300JWHPL Drives
Version: HPD7 (B) **(Recommended)**
Filename: CP049136.compsig; CP049136.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EH0600JDYTN Drive
Version: HPD7 (H) **(Critical)**
Filename: CP048294.compsig; CP048294.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Fixes a data integrity risk where stale data is mistakenly used from cache.
- Fixes a data integrity risk where stale data is returned on an unaligned overlapped write-read operation.
- Fixes a data integrity risk during a sequential read and write workload when a recovered error is encountered, which could cause incomplete data to be read.Ã‚Â

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EO000400JWDKP, EO000800JWDKQ, EO001600JWDKR, MO000400JWDKU, MO000800JWDKV, MO001600JWDLA and MO003200JWDLB Drives
Version: HPD2 (F) **(Recommended)**
Filename: CP048297.compsig; CP048297.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EO000400PXDBQ, EO000800PXDCK, EO001600PXDCH, MO000800PXDBP, MO001600PXDCC, MO003200PXDCD, MO006400PXDCE, VO000960PXDBN, VO001920PXDBR, VO003840PXDBT, VO007680PXDBU and VO015300PXDBV Drives
Version: HPD1 (B) **(Recommended)**
Filename: CP049165.compsig; CP049165.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB002000JWFVN and MB004000JWFVP Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP048318.compsig; CP048318.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB004000JWFVK and MB006000JWFVL Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP048320.compsig; CP048320.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB010000JWZHA, MB012000JWZHB, MB014000JWZHC and MB016000JWZHE Drives
Version: HPD2 (B) **(Recommended)**
Filename: CP049051.compsig; CP049051.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB012000JWDFD Drive
Version: HPD3 (B) **(Recommended)**
Filename: CP048404.compsig; CP048404.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB2000JFEML and MB4000JFEMN Drives
Version: HPD6 (I) **(Critical)**
Filename: CP048361.compsig; CP048361.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also includes emergency power off improvements.

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB4000JEQNL and MB6000JEQNN Drives
Version: HPDB (I) **(Recommended)**
Filename: CP048368.compsig; CP048368.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB6000JEQUV and MB8000JEQVA Drives
Version: HPDB (I) **(Recommended)**
Filename: CP048378.compsig; CP048378.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB6000JVYZD and MB4000JVYZC Drives
Version: HPD4 (G) **(Recommended)**
Filename: CP048380.compsig; CP048380.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MM1000JEFRB and MM2000JEFRC Drives
Version: HPD9 (B) **(Recommended)**
Filename: CP048391.compsig; CP048391.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MM1000JFJTH and MM002000JWCNF Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP048392.compsig; CP048392.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MO000400JWUFT, MO000800JWUFU, MO001600JWUFV, MO003200JWUGA, MO006400JWUGB, EO000400JWUGC, EO000800JWUGD and EO001600JWUGE Drives
Version: HPD3 (C) **(Recommended)**
Filename: CP048397.compsig; CP048397.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VO000960JWTBK, VO001920JWTBL, VO003840JWTBN, VO007680JWTBP, MO000400JWTBQ, MO000800JWTBR, MO001600JWTBT, MO003200JWTBU, MO006400JWTCD, EO000400JWTBV, EO000800JWTCA, EO001600JWTCB Drives
Version: HPD9 (B) **(Recommended)**
Filename: CP049147.compsig; CP049147.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG000300JWSJP, EG000600JWJNH and EG001200JWJNK Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP049144.compsig; CP049144.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG001800JWFVC Drive
Version: HPD4 (B) **(Recommended)**
Filename: CP048253.compsig; CP048253.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG001800JWJNL and EG002400JWJNN Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP049141.compsig; CP049141.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG0300FCSPH, EG0450FCSPK, EG0600FCSPL and EG0900FCSPN Drives
Version: HPD2 (I) **(Recommended)**
Filename: CP048255.compsig; CP048255.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG0300JEHLV, EG0600JEHMA, EG0900JEHMB, and EG1200JEHMC Drives
Version: HPD5 (J) **(Recommended)**
Filename: CP048261.compsig; CP048261.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG0300JFCKA, EG0600JEMCV, EG0900JFCKB and EG1200JEMDA Drives
Version: HPD6 (I) **(Recommended)**
Filename: CP048263.compsig; CP048263.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG1800JEHMD Drive
Version: HPD6 (J) **(Recommended)**
Filename: CP048265.compsig; CP048265.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG1800JEMDB Drive
Version: HPD5 (I) **(Recommended)**
Filename: CP048266.compsig; CP048266.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EG1800JFHMH Drive
Version: HPD8 (B) **(Recommended)**
Filename: CP048270.compsig; CP048270.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EH000300JWCPK, EH000600JWCPL and EH000900JWCPN Drives
Version: HPD7 (B) **(Recommended)**
Filename: CP048286.compsig; CP048286.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EH000600JWCPF and EH000900JWCPH Drives
Version: HPD9 (B) **(Recommended)**
Filename: CP048272.compsig; CP048272.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EH0300JDXBA, EH0450JDXBB and EH0600JDXBC Drives
Version: HPD5 (I) **(Recommended)**
Filename: CP048291.compsig; CP048291.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EH0300JDYTH, EH0450JDYTK and EH0600JDYTL Drives
Version: HPD6 (J) **(Recommended)**
Filename: CP048292.compsig; CP048292.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EH0300JEDHC, EH0450JEDHD and EH0600JEDHE Drives
Version: HPD4 (J) **(Recommended)**
Filename: CP048293.compsig; CP048293.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - EK0800JVYPN, EO1600JVYPP, MK0800JVYPQ and MO1600JVYPR Drives
Version: HPD7 (D) **(Critical)**
Filename: CP048429.compsig; CP048429.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to HPD7 that results in SSD failure at 40,000 hours of operation (i.e., 4 years, 205 days 16 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00097382en_us.

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB004000JWKGU Drive
Version: HPD2 (B) **(Recommended)**
Filename: CP048321.compsig; CP048321.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB004000JWWQB, MB002000JWWQA and MB001000JWWPV Drives
Version: HPD6 (B) **(Recommended)**
Filename: CP048431.compsig; CP048431.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB006000JWKGN Drive
Version: HPD2 (B) **(Recommended)**
Filename: CP048330.compsig; CP048330.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB008000JWJRQ and MB006000JWJRP Drives
Version: HPD9 (B) **(Critical)**
Filename: CP049132.compsig; CP049132.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes

would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This firmware release provides additional protection against command timeouts.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00117258en_us

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB008000JWRTD Drive
Version: HPD2 (B) **(Recommended)**
Filename: CP048332.compsig; CP048332.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB008000JWWQP and MB006000JWWQN Drives
Version: HPD6 (B) **(Recommended)**
Filename: CP048426.compsig; CP048426.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB010000JWAYK and MB008000JWAYH Drives
Version: HPD6 (B) **(Recommended)**
Filename: CP048334.compsig; CP048334.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB014000JWTFD and MB012000JWTFC Drives
Version: HPD8 (B) **(Critical)**
Filename: CP049120.compsig; CP049120.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This firmware release provides additional protection against command timeouts.
- For more information, refer to HPE Customer Bulletin at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00117258en_us

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB014000JWUDB Drive
Version: HPD3 (B) **(Recommended)**
Filename: CP048341.compsig; CP048341.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB016000JWXKH Drive
Version: HPD9 (B) **(Recommended)**
Filename: CP049124.compsig; CP049124.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3.

Online HDD/SSD Flash Component for VMware ESXi - MB016000JXLBA and MB018000JXLAU Drives
Version: HPD2 **(Recommended)**
Filename: CP049256.compsig; CP049256.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes

- VENDOR IDENTIFICATION field changed from “HP” to “HPE” and Reliability improvements.

Enhancements

- Added support for VMware 7.0 U3.

Online HDD/SSD Flash Component for VMware ESXi - MB1000JVYZL, MB2000JVYZN, MB3000JVYZP and MB4000JVYZQ Drives
Version: HPD3 (F) **(Recommended)**
Filename: CP048344.compsig; CP048344.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB2000JFDSL and MB4000JFDSN Drives
Version: HPD4 (I) **(Recommended)**
Filename: CP048347.compsig; CP048347.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB2000JFEPA and MB4000JFEPB Drives
Version: HPD5 (I) **(Recommended)**
Filename: CP048362.compsig; CP048362.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB4000JEFNC and MB6000JEFND Drives
Version: HPD9 (I) **(Recommended)**
Filename: CP048367.compsig; CP048367.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB4000JEXYA and MB6000JEXYB Drives
Version: HPD9 (F) **(Recommended)**
Filename: CP048369.compsig; CP048369.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB6000JVYYV Drive
Version: HPD2 (I) **(Recommended)**
Filename: CP048379.compsig; CP048379.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB8000JFECQ Drive
Version: HPD7 (H) **(Recommended)**
Filename: CP048382.compsig; CP048382.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MO000400JWFWN, MO000800JWFWP, MO001600JWFWQ, MO003200JWFWR, MO000960JWFWT, MO001920JWFWU and MO003840JWFWV Drives
Version: HPD5 (F) **(Recommended)**
Filename: CP048393.compsig; CP048393.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MO000800JXBEV, MO001600JXBFP, MO003200JXBFQ, MO006400JXBFR, MO000960JXBFA, MO001920JXBFT, MO003840JXBFU, MO007680JXBGA, MO015360JXBFV, EO000400JXBEU, EO000800JXBFL and EO001600JXBFN Drives
Version: HPD1 (B) **(Recommended)**
Filename: CP049157.compsig; CP049157.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MO0200JEFNV, MO0400JEFPA, MO0800JEFPB, MO1600JEFPC, EO0200JEFPD, EO0400JEFPE and EO0800JEFPF Drives
Version: HPD3 (I) **(Recommended)**
Filename: CP048401.compsig; CP048401.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MO0400JFFCF, MO0800JFFCH, MO1600JFFCK and MO3200JFFCL Drives
Version: HPD9 (D) **(Recommended)**
Filename: CP048439.compsig; CP048439.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes

would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000960JWSSQ, VK001920JWSSR, VK003840JWSST, VK007680JWSSU and VO015300JWSSV Drives
Version: HPD8 (E) **(Critical)**
Filename: CP048446.compsig; CP048446.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK0400JEABD, VK0800JEABE, and VO1600JEABF Drives
Version: HPD4 (B) **(Critical)**
Filename: CP049410.compsig; CP049410.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- If Power On Hours exceeds 70,000hrs, PM2R will report Hardware error (04/4C/A8) after the next Power Cycle and will not accept read/write commands. This fix will update storage location reporting when the maximum number of registrations in the Work Load Log read process reaches 70,000; the last registered 70,000th storage location will be modified to be read as the next (70,001st) storage location.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00111296en_us

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VO000480JWDAR, VO000960JWDAT, VO001920JWDAU and VO003840JWDAV Drives
Version: HPD8 (G) **(Critical)**
Filename: CP048445.compsig; CP048445.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VO000800JWZJP, VO001600JWZJQ, VO003200JWZJR and VO006400JWZJT Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP048454.compsig; CP048454.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes

would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VO000960JWZJF, VO001920JWZJH, VO003840JWZJK, VO007680JWZJL and VO015360JWZJN Drives
Version: HPD4 (B) **(Recommended)**
Filename: CP048455.compsig; CP048455.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VO000960RWUEV, VO001920RWUFA, VO003840RWUFB, VO007680RWUFC, VO000960RWUFD, VO001920RWUFE and VO003840RWUFF Drives
Version: HPD6 **(Critical)**
Filename: CP049363.compsig; CP049363.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes

- Reduced the occurrence probability of PMIC busy issue.
- Fixed the system data error at the drive power on issue.
- When the PLP operation starts, the waiting Unmap request to the 4KB not-aligned host write area is canceled to be able to complete PLP correctly.

Online HDD/SSD Flash Component for VMware ESXi - VO007680JWCNK and VO015300JWCNL Drives
Version: HPD8 (E) **(Critical)**
Filename: CP048415.compsig; CP048415.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL:https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VO0480JFDGT, VO0960JFDGU, VO1920JFDGV and VO3840JFDHA Drives
Version: HPD9 (D) **(Recommended)**
Filename: CP048437.compsig; CP048437.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VO1920JEUQQ Drive
Version: HPD3 (I) **(Recommended)**
Filename: CP048419.compsig; CP048419.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi -MB014000JWRTH, MB012000JWRTF and MB010000JWRTE Drives
Version: HPD2 (F) **(Recommended)**
Filename: CP048340.compsig; CP048340.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for Windows (x64) - EG000300JWBHR Drive
Version: HPD5 (B) **(Recommended)**
Filename: cp048436.compsig; cp048436.exe; cp048436.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG000300JWFVB Drive
Version: HPD3 (B) **(Recommended)**
Filename: cp048433.compsig; cp048433.exe; cp048433.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG000300JWSJP, EG000600JWJNH and EG001200JWJNK Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp049143.compsig; cp049143.exe; cp049143.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG000600JWEBH and EG000300JWEBF Drives
Version: HPD5 (B) **(Recommended)**
Filename: cp049346.compsig; cp049346.exe; cp049346.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG000600JWFUV and EG001200JWFVA Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp048452.compsig; cp048452.exe; cp048452.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG000600JWJNP and EG001200JWJNQ Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp048457.compsig; cp048457.exe; cp048457.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG001800JWFVC Drive
Version: HPD4 (B) **(Recommended)**
Filename: cp048459.compsig; cp048459.exe; cp048459.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG001800JWJNL and EG002400JWJNN Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp049140.compsig; cp049140.exe; cp049140.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG001800JWJNR and EG002400JWJNT Drives
Version: HPD6 (B) **(Recommended)**
Filename: cp048242.compsig; cp048242.exe; cp048242.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG0300FCSPH, EG0450FCSPK, EG0600FCSPL and EG0900FCSPN Drives
Version: HPD2 (G) **(Recommended)**
Filename: cp048481.compsig; cp048481.exe; cp048481.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG0300JEHLV, EG0600JEHMA, EG0900JEHMB and EG1200JEHMC Drives
Version: HPD5 (H) **(Recommended)**
Filename: cp048482.compsig; cp048482.exe; cp048482.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG0300JFCKA, EG0600JEMCV, EG0900JFCKB and EG1200JEMDA Drives
Version: HPD6 (G) **(Recommended)**
Filename: cp048483.compsig; cp048483.exe; cp048483.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG0600JETKA, EG0900JETKB and EG1200JETKC Drives
Version: HPD8 (B) **(Recommended)**
Filename: cp048485.compsig; cp048485.exe; cp048485.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG1800JEHMD Drive
Version: HPD6 (H) **(Recommended)**
Filename: cp048507.compsig; cp048507.exe; cp048507.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG1800JEMDB Drive
Version: HPD5 (G) **(Recommended)**
Filename: cp048508.compsig; cp048508.exe; cp048508.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - EG1800JFHMH Drive
Version: HPD8 (B) **(Recommended)**

Filename: cp048509.compsig; cp048509.exe; cp048509.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - EH000300JWCPK, EH000600JWCPL and EH000900JWCPN Drives
Version: HPD7 (B) **(Recommended)**
Filename: cp048510.compsig; cp048510.exe; cp048510.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - EH000600JWCPF and EH000900JWCPH Drives
Version: HPD9 (B) **(Recommended)**
Filename: cp048516.compsig; cp048516.exe; cp048516.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - EH000900JWHPK and EH000600JWHPH Drives
Version: HPD7 (B) **(Recommended)**
Filename: cp049134.compsig; cp049134.exe; cp049134.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added supported for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EH000900JWHPP, EH000600JWHPN and EH000300JWHPL Drives
Version: HPD7 (B) **(Recommended)**
Filename: cp049138.compsig; cp049138.exe; cp049138.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EH0300JDXBA, EH0450JDXBB and EH0600JDXBC Drives
Version: HPD5 (G) **(Recommended)**
Filename: cp048517.compsig; cp048517.exe; cp048517.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EH0300JDYTH, EH0450JDYTK and EH0600JDYTL Drives
Version: HPD6 (H) **(Recommended)**
Filename: cp048515.compsig; cp048515.exe; cp048515.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EH0300JEDHC, EH0450JEDHD and EH0600JEDHE Drives
Version: HPD4 (I) **(Recommended)**
Filename: cp048520.compsig; cp048520.exe; cp048520.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EH0600JDYTN Drive
Version: HPD7 (F) **(Critical)**
Filename: cp048553.compsig; cp048553.exe; cp048553.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Fixes a data integrity risk where stale data is mistakenly used from cache.
- Fixes a data integrity risk where stale data is returned on an unaligned overlapped write-read operation.
- Fixes a data integrity risk during a sequential read and write workload when a recovered error is encountered, which could cause incomplete data to be read.

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EK0800JVYPN, EO1600JVYPP, MK0800JVYPQ and MO1600JVYPR Drives
Version: HPD7 (D) **(Critical)**
Filename: cp048651.compsig; cp048651.exe; cp048651.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- The issue affects SSDs with an HPE firmware version prior to HPD7 that results in SSD failure at 40,000 hours of operation (i.e., 4 years, 205 days 16 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following
URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00097382en_us.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - EO000400JWDKP, EO000800JWDKQ, EO001600JWDKR, MO000400JWDKU, MO000800JWDKV, MO001600JWDLA and MO003200JWDLB Drives
Version: HPD2 (E) **(Recommended)**
Filename: cp048555.compsig; cp048555.exe; cp048555.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - EO000400PXDBQ, EO000800PXDCK, EO001600PXDCH, MO000800PXDBP, MO001600PXDCC, MO003200PXDCD, MO006400PXDCE, VO000960PXDBN, VO001920PXDBR, VO003840PXDBT, VO007680PXDBU and VO015300PXDBV Drives
Version: HPD1 (B) **(Recommended)**
Filename: cp049162.compsig; cp049162.exe; cp049162.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB002000JWFVN and MB004000JWFVP Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp048560.compsig; cp048560.exe; cp048560.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB004000JWFVK and MB006000JWFVL Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp048562.compsig; cp048562.exe; cp048562.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB004000JWKGU Drive
Version: HPD2 (B) **(Recommended)**
Filename: cp048666.compsig; cp048666.exe; cp048666.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB004000JWWQB, MB002000JWWQA and MB001000JWWPV Drives
Version: HPD6 (B) **(Recommended)**
Filename: cp048653.compsig; cp048653.exe; cp048653.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB006000JWKGN Drive
Version: HPD2 (B) **(Recommended)**
Filename: cp048677.compsig; cp048677.exe; cp048677.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB008000JWJRQ and MB006000JWJRP Drives
Version: HPD9 (B) **(Critical)**
Filename: cp049130.compsig; cp049130.exe; cp049130.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- This firmware release provides additional protection against command timeouts.
- For more information, refer to HPE Customer Bulletin at the following
URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00117258en_us

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB008000JWRTD Drive
Version: HPD2 (B) **(Recommended)**
Filename: cp048670.compsig; cp048670.exe; cp048670.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB008000JWWQP and MB006000JWWQN Drives
Version: HPD6 (B) **(Recommended)**
Filename: cp048649.compsig; cp048649.exe; cp048649.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB010000JWAYK and MB008000JWAYH Drives
Version: HPD6 (B) **(Recommended)**
Filename: cp048672.compsig; cp048672.exe; cp048672.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB010000JWZHA, MB012000JWZHB, MB014000JWZHC and MB016000JWZHE Drives
Version: HPD2 (B) **(Recommended)**
Filename: cp049052.compsig; cp049052.exe; cp049052.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.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

Enhancements

- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB012000JWDFD Drive
Version: HPD3 (B) **(Recommended)**
Filename: cp048634.compsig; cp048634.exe; cp048634.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB014000JWRTH, MB012000JWRTF and MB010000JWRTE Drives
Version: HPD2 (E) **(Recommended)**
Filename: cp048547.compsig; cp048547.exe; cp048547.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB014000JWTFD and MB012000JWTFC Drives
Version: HPD8 (B) **(Critical)**
Filename: cp049123.compsig; cp049123.exe; cp049123.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- This firmware release provides additional protection against command timeouts.
- For more information, refer to HPE Customer Bulletin at the following
URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00117258en_us

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB014000JWUDB Drive
Version: HPD3 (B) **(Recommended)**
Filename: cp048563.compsig; cp048563.exe; cp048563.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB016000JWXKH Drive
Version: HPD9 (B) **(Recommended)**
Filename: cp049126.compsig; cp049126.exe; cp049126.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB016000JXLBA and MB018000JXLAU Drives
Version: HPD2 **(Recommended)**
Filename: cp049254.compsig; cp049254.exe; cp049254.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes
- VENDOR IDENTIFICATION field changed from “HP” to “HPE” and Reliability improvements.

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB1000JVYZL, MB2000JVYZN, MB3000JVYZP and MB4000JVYZQ Drives
Version: HPD3 (E) **(Recommended)**
Filename: cp048569.compsig; cp048569.exe; cp048569.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB2000JFDSL and MB4000JFDSN Drives
Version: HPD4 (G) **(Recommended)**
Filename: cp048589.compsig; cp048589.exe; cp048589.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB2000JFEML and MB4000JFEMN Drives
Version: HPD6 (G) **(Critical)**
Filename: cp048590.compsig; cp048590.exe; cp048590.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also includes emergency power off improvements.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB2000JFEPA and MB4000JFEPB Drives
Version: HPD5 (G) **(Recommended)**
Filename: cp048591.compsig; cp048591.exe; cp048591.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB4000JEFNC and MB6000JEFND Drives
Version: HPD9 (G) **(Recommended)**
Filename: cp048607.compsig; cp048607.exe; cp048607.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB4000JEQNL and MB6000JEQNN Drives
Version: HPDB (G) **(Recommended)**
Filename: cp048608.compsig; cp048608.exe; cp048608.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB4000JEXYA and MB6000JEXYB Drives
Version: HPD9 (E) **(Recommended)**
Filename: cp048609.compsig; cp048609.exe; cp048609.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB6000JEQUV and MB8000JEQVA Drives
Version: HPDB (G) **(Recommended)**
Filename: cp048614.compsig; cp048614.exe; cp048614.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB6000JVYYV Drive
Version: HPD2 (G) **(Recommended)**
Filename: cp048615.compsig; cp048615.exe; cp048615.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB6000JVYZD and MB4000JVYZC Drives
Version: HPD4 (E) **(Recommended)**
Filename: cp048617.compsig; cp048617.exe; cp048617.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB8000JFECQ Drive
Version: HPD7 (F) **(Recommended)**
Filename: cp048619.compsig; cp048619.exe; cp048619.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MM1000JEFRB and MM2000JEFRC Drives
Version: HPD9 (B) **(Recommended)**
Filename: cp048625.compsig; cp048625.exe; cp048625.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MM1000JFJTH and MM002000JWCNF Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp048626.compsig; cp048626.exe; cp048626.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MO000400JWFWN, MO000800JWFWP, MO001600JWFWQ, MO003200JWFWR, MO000960JWFWT, MO001920JWFWU and MO003840JWFWV Drives
Version: HPD5 (E) **(Recommended)**
Filename: cp048627.compsig; cp048627.exe; cp048627.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MO000400JWUFT, MO000800JWUFU, MO001600JWUFV, MO003200JWUGA, MO006400JWUGB, EO000400JWUGC, EO000800JWUGD and EO001600JWUGE Drives
Version: HPD3 (C) **(Recommended)**
Filename: cp048628.compsig; cp048628.exe; cp048628.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MO000800JXBEV, MO001600JXBFP, MO003200JXBFQ, MO006400JXBFR, MO000960JXBFA, MO001920JXBFT, MO003840JXBFU, MO007680JXBGA, MO015360JXBFV, EO000400JXBEU, EO000800JXBFL and EO001600JXBFN Drives
Version: HPD1 (B) **(Recommended)**
Filename: cp049152.compsig; cp049152.exe; cp049152.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MO0200JEFNV, MO0400JEFPA, MO0800JEFPB, MO1600JEFPC, EO0200JEFPD, EO0400JEFPE and EO0800JEFPF Drives
Version: HPD3 (G) **(Recommended)**
Filename: cp048630.compsig; cp048630.exe; cp048630.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MO0400JFFCF, MO0800JFFCH, MO1600JFFCK and MO3200JFFCL Drives
Version: HPD9 (D) **(Recommended)**
Filename: cp048661.compsig; cp048661.exe; cp048661.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000960JWSSQ, VK001920JWSSR, VK003840JWSST, VK007680JWSSU and VO015300JWSSV Drives
Version: HPD8 (D) **(Critical)**
Filename: cp048665.compsig; cp048665.exe; cp048665.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK0400JEABD, VK0800JEABE, and VO1600JEABF Drives
Version: HPD4 (B) **(Critical)**
Filename: cp049412.compsig; cp049412.exe; cp049412.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- If Power On Hours exceeds 70,000hrs, PM2R will report Hardware error (04/4C/A8) after the next Power Cycle and will not accept read/write commands. This fix will update storage location reporting when the maximum number of registrations in the Work Load Log read process reaches 70,000; the last registered 70,000th storage location will be modified to be read as the next (70,001st) storage location.
- For more information, refer to HPE Customer Advisory at the following URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00111296en_us

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - VO000480JWDAR, VO000960JWDAT, VO001920JWDAU and VO003840JWDAV Drives
Version: HPD8 (D) **(Critical)**
Filename: cp044739.compsig; cp044739.exe; cp044739.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following

URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VO000800JWZJP, VO001600JWZJQ, VO003200JWZJR and VO006400JWZJT Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp048468.compsig; cp048468.exe; cp048468.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VO000960JWTBK, VO001920JWTBL, VO003840JWTBN, VO007680JWTBP, MO000400JWTBQ, MO000800JWTBR, MO001600JWTBT, MO003200JWTBU, MO006400JWTCD, EO000400JWTBV, EO000800JWTCA and EO001600JWTCB Drives
Version: HPD9 (B) **(Recommended)**
Filename: cp049146.compsig; cp049146.exe; cp049146.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - VO000960JWZJF, VO001920JWZJH, VO003840JWZJK, VO007680JWZJL and VO015360JWZJN Drives
Version: HPD4 (B) **(Recommended)**
Filename: cp048466.compsig; cp048466.exe; cp048466.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VO000960RWUEV, VO001920RWUFA, VO003840RWUFB, VO007680RWUFC, VO000960RWUFD, VO001920RWUFE and VO003840RWUFF Drives
Version: HPD6 **(Critical)**
Filename: cp049365.compsig; cp049365.exe; cp049365.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes
- Reduced the occurrence probability of PMIC busy issue.
- Fixed the system data error at the drive power on issue.
- When the PLP operation starts, the waiting Unmap request to the 4KB not-aligned host write area is canceled to be able to complete PLP correctly.

Online HDD/SSD Flash Component for Windows (x64) - VO007680JWCNK and VO015300JWCNL Drives
Version: HPD8 (D) **(Critical)**
Filename: cp048644.compsig; cp048644.exe; cp048644.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Fixes
- The issue affects SSDs with an HPE firmware version prior to HPD8 that results in SSD failure at 32,768 hours of operation (i.e., 3 years, 270 days 8 hours), neither the SSD nor the data can be recovered, after the SSD failure occurs.
- In addition, SSDs which were put into service at the same time will likely fail nearly simultaneously.
- For more information, refer to HPE Customer Advisory at the following
URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00092491en_us

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VO0480JFDGT, VO0960JFDGU, VO1920JFDGV and VO3840JFDHA Drives
Version: HPD9 (D) **(Recommended)**
Filename: cp048660.compsig; cp048660.exe; cp048660.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VO1920JEUQQ Drive
Version: HPD3 (G) **(Recommended)**
Filename: cp048645.compsig; cp048645.exe; cp048645.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Firmware - SATA Storage Disk Top

Online HDD/SSD Flash Component for Linux (x64) - EK000200GWEPD, EK000400GWEPE, EK000800GWEPF and EK001600GWEPH Drives
Version: HPG3 (G) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-5bf9355926-HPG3-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-5bf9355926-HPG3-7.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB001000GWCBC and MB002000GWCBD Drives
Version: HPG6 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-68b12e54d2-HPG6-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-68b12e54d2-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 configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB001000GWFWK and MB002000GWFWL Drives
Version: HPG6 (E) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-bfc4af697b-HPG6-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-bfc4af697b-HPG6-5.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB001000GWJAN, MB002000GWFWA and MB004000GWFWB Drives
Version: HPG1 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-d39e7a7e75-HPG1-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-d39e7a7e75-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 configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB002000GWFGH and MB001000GWFGF Drives
Version: HPG3 (H) **(Optional)**
Filename: rpm/RPMS/x86_64/firmware-hdd-0b575b5895-HPG3-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0b575b5895-HPG3-8.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB004000GWKGV Drive
Version: HPG1 (E) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-ca21e169e2-HPG1-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-ca21e169e2-HPG1-5.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB004000GWWQH, MB002000GWWQF and MB001000GWWQE Drives
Version: HPG3 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-12304c1aca-HPG3-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-12304c1aca-HPG3-3.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB006000GWBXQ and MB008000GWBYL Drives
Version: HPG8 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-a1fd19f9ca-HPG8-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a1fd19f9ca-HPG8-6.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB006000GWJRR and MB008000GWJRT Drives
Version: HPG4 (D) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-c993b31232-HPG4-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-c993b31232-HPG4-4.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB006000GWKGR Drive
Version: HPG1 (E) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-7f2a26e6d0-HPG1-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7f2a26e6d0-HPG1-5.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB008000GWRTC Drive
Version: HPG1 (E) **(Recommended)**

Filename: rpm/RPMS/x86_64/firmware-hdd-82894b9e0a-HPG1-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-82894b9e0a-HPG1-5.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB008000GWWQU and MB006000GWWQT Drives
Version: HPG2 (D) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-18e328f036-HPG2-4.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-18e328f036-HPG2-4.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB010000GWAYN and MB008000GWAYL Drives
Version: HPG5 (G) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-cc819d4bff-HPG5-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-cc819d4bff-HPG5-7.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- This code corrects a potential data integrity issue related to unaligned write commands.This issue was only found in supplier ongoing lab testing.

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB012000GWDFE Drive
Version: HPG3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-059b8654a6-HPG3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-059b8654a6-HPG3-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB012000GWTFE and MB014000GWTFF Drives
Version: HPG7 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-b78255e146-HPG7-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b78255e146-HPG7-3.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB014000GWRTN, MB012000GWRTL and MB010000GWRTK Drives
Version: HPG2 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-6b7ce3da0e-HPG2-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6b7ce3da0e-HPG2-6.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB014000GWUDA Drive
Version: HPG2 (E) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-41cdb1c9da-HPG2-5.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-41cdb1c9da-HPG2-5.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB016000GWXKK Drive
Version: HPG3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-e4f147cdd2-HPG3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-e4f147cdd2-HPG3-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB1000GDUNU, MB2000GDUNV, MB3000GDUPA and MB4000GDUPB Drives
Version: HPG4 (J) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-3ab4c70e64-HPG4-10.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3ab4c70e64-HPG4-10.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB1000GVYZE, MB2000GVYZF, MB3000GVYZH and MB4000GVYZK Drives
Version: HPG4 (J) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-0a7010918e-HPG4-10.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0a7010918e-HPG4-10.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB2000GCWLT, MB3000GCWLU and MB4000GCWLV Drives
Version: HPG4 (J) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-2e70ce7412-HPG4-10.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-2e70ce7412-HPG4-10.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB2000GFEMH and MB4000GFEMK Drives
Version: HPG6 (I) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-70e3962f98-HPG6-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-70e3962f98-HPG6-9.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.

- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB4000GEFNA and MB6000GEFNB Drives
Version: HPG6 (J) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-40277d55d3-HPG6-10.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-40277d55d3-HPG6-10.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB4000GEQNH and MB6000GEQNK Drives
Version: HPGB (I) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-bfc95f0628-HPGB-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-bfc95f0628-HPGB-9.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.

- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB6000GEBTP Drive
Version: HPG4 (I) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-3243fce9a0-HPG4-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3243fce9a0-HPG4-9.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB6000GEQUT and MB8000GEQUU Drives
Version: HPGB (I) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-1d7f19120b-HPGB-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1d7f19120b-HPGB-9.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was only found during supplier ongoing reliability testing.

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB6000GEXXV Drive
Version: HPG2 (J) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-a629fcea59-HPG2-10.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a629fcea59-HPG2-10.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB6000GVYYU Drive
Version: HPG2 (I) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-bdc37cb37f-HPG2-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-bdc37cb37f-HPG2-9.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB6000GVYZB and MB4000GVYZA Drives

Version: HPG4 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-0a7d4aa47f-HPG4-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-0a7d4aa47f-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 configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MB8000GFECR Drive
Version: HPG6 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-6d922fc9a8-HPG6-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6d922fc9a8-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 configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MK000240GWCEU, MK000480GWCEV, MK000960GWCFA and MK001920GWCFB Drives
Version: HPG3 (G) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-7677644a25-HPG3-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-7677644a25-HPG3-7.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MK000480GWSSC, MK000960GWSSD, MK001920GWSSE and MK003840GWSSF Drives
Version: HPG3 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-f693ccc138-HPG3-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-f693ccc138-HPG3-3.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MK000480GWXFF, MK000960GWXFH, MK001920GWXFK and MK003840GWXFL Drives
Version: HPG2 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8e1e8083c5-HPG2-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8e1e8083c5-HPG2-1.1.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 offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes

This FW release deploys an Enhanced Media Scan algorithm that addresses an issue when the host system does not provide enough idle time for drive's Foreground Media Scan to be activated, which is needed to ensure long term drive reliability. It also addresses few minor issues.

Online HDD/SSD Flash Component for Linux (x64) - MK003840GWHTE Drive
Version: HPG8 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-ac20a1e1c6-HPG8-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-ac20a1e1c6-HPG8-2.1.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)Â is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MK0960GECQK Drive
Version: HPG3 (K) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-3e34285be7-HPG3-11.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3e34285be7-HPG3-11.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Firmware fixes intermittent data corruption issue associated with unaligned sequential write operations.

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MM1000GEFQV and MM2000GEFRA Drives
Version: HPG8 (H) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-ec908c3650-HPG8-8.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-ec908c3650-HPG8-8.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MM1000GFJTE Drive
Version: HPG5 (F) **(Optional)**
Filename: rpm/RPMS/x86_64/firmware-hdd-95af9a555e-HPG5-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-95af9a555e-HPG5-6.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - MR000240GWFLU, MR000480GWFLV, VR000480GWFMD, MR000960GWFMA, VR000960GWFME, MR001920GWFMB and VR001920GWFMC Drives
Version: HPGG (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-9196d4f720-HPGG-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-9196d4f720-HPGG-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000150GWCNN, VK000240GWCNP, VK000480GWCNQ, VK000960GWCNR and VK001600GWCNT Drives
Version: HPG1 (F) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-6e3845def5-HPG1-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-6e3845def5-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 configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000240GWCFD, VK000480GWCFE, VK000960GWCFF, VK001920GWCFH and VK003840GWCFK Drives
Version: HPG3 (G) **(Recommended)**

Filename: rpm/RPMS/x86_64/firmware-hdd-f42438de3d-HPG3-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-f42438de3d-HPG3-7.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000240GWEZB, VK000480GWEZC, VK000960GWEZD, VK001920GWEZE, MK000240GWEZF, MK000480GWEZH, MK000960GWEZK and MK001920GWHRU Drives
Version: HPGG (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-3db7640485-HPGG-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-3db7640485-HPGG-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000240GWJPD, VK000480GWJPE, VK000960GWJPF, VK001920GWJPH, VK003840GWJPK, MK000240GWKVK, MK000480GWJPN, MK000960GWJPP and MK001920GWJPQ Drives
Version: HPG5 (F) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-aef2a690c9-HPG5-6.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-aef2a690c9-HPG5-6.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Fixes a rare link loss issue and adds enhancements for drive reliability.
- After HPG5 firmware is downloaded to the drive, the new HPG5 firmware will be active on the drive.
- The new drive bootloader code will be activated after the next drive power cycle.
- For more information, refer to HPE Customer Advisory at the following

URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00072768en_us

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000240GWSRQ, VK000480GWSRR, VK000960GWSRT, VK001920GWSRU and VK003840GWSRV Drives
Version: HPG4 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-db687966b4-HPG4-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-db687966b4-HPG4-3.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000240GWTSV, VK000480GWTTA, VK000960GWTTB, VK001920GWTTC, VK003840GWTTD, MK000480GWTTH, MK000960GWTTK, MK001920GWTTL and MK003840GWTTN Drives
Version: HPG6 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-c566d63ca0-HPG6-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-c566d63ca0-HPG6-3.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000240GXAWE, VK000480GXAWK, VK000960GXAWL, VK001920GXAWN, VK003840GXAWP, VK007680GXAWQ, MK000480GXAWF, MK000960GXAXB, MK001920GXAWR, MK003840GXAWT, VR000240GXBBL, MR000480GXBGH and MR000960GXBGK Drives
Version: HPG1 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-8f9bf23306-HPG1-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-8f9bf23306-HPG1-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000480GWSXF, VK000960GWSXH, VK001920GWSXK, MK000480GWUGF, MK000960GWUGH and MK001920GWUGK Drives
Version: HPG3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-9e87eecb3f-HPG3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-9e87eecb3f-HPG3-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000480GWTHA, VK000960GWTHB, VK001920GWTHC and VK003840GWTHD Drives
Version: HPG3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-492a9952f6-HPG3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-492a9952f6-HPG3-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000480GZCNE, VK000960GZCNF, VK001920GZCNH and VK003840GZCNK Drives
Version: HPG1 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-befd42bd64-HPG1-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-befd42bd64-HPG1-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK000960GXCLD, VK001920GXCGP, VK003840GXCGQ and VK007680GXCGR Drives
Version: HPG2 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-4b4177239b-HPG2-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-4b4177239b-HPG2-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK003840GWSXL Drive
Version: HPG3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-d1cf327bc4-HPG3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-d1cf327bc4-HPG3-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK007680GWSXN Drive
Version: HPG3 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-b460823f70-HPG3-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b460823f70-HPG3-2.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- 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 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK0120GFDKE, VK0240GFDKF, VK0480GFDKH, VK0960GFDKK, VK1920GFDKL and VK3840GFDKN Drives
Version: HPG1 (J) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-a2d4b5c742-HPG1-10.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-a2d4b5c742-HPG1-10.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VK0240GEPQN, VK0480GEPQP and VK0960GEPQQ Drives
Version: HPG1 (I) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-1a516522d1-HPG1-9.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-1a516522d1-HPG1-9.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - VR000150GWEPP and VR000480GWEPR Drives
Version: HPG1 (G) **(Critical)**
Filename: rpm/RPMS/x86_64/firmware-hdd-b7eb905efe-HPG1-7.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-b7eb905efe-HPG1-7.1.x86_64.rpm

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Fixes an issue which caused the drive to become non-functional.
- Fixes VPD Log D0h reported drive Sanitize times.
- Adds support for Security Log Page BBh.

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for Linux (x64) - XP0120GFJSL and XP0240GFJSN Drives
Version: HPS4 (J) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-hdd-d355375539-HPS4-10.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-hdd-d355375539-HPS4-10.1.x86_64.rpm

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for RHEL 8.4 and SLES15SP3.

Online HDD/SSD Flash Component for VMware ESXi - EK000200GWEPD, EK000400GWEPE, EK000800GWEPF and EK001600GWEPH Drives
Version: HPG3 (G) **(Recommended)**
Filename: CP048295.compsig; CP048295.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB001000GWCBC and MB002000GWCBD Drives
Version: HPG6 (F) **(Recommended)**
Filename: CP048300.compsig; CP048300.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements

- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB001000GWFWK and MB002000GWFWL Drives
Version: HPG6 (F) **(Recommended)**
Filename: CP048302.compsig; CP048302.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB001000GWJAN, MB002000GWFWA and MB004000GWFWB Drives
Version: HPG1 (F) **(Recommended)**
Filename: CP048313.compsig; CP048313.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB002000GWFGH and MB001000GWFGF Drives
Version: HPG3 (H) **(Optional)**
Filename: CP048317.compsig; CP048317.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB004000GWKGV Drive
Version: HPG1 (F) **(Recommended)**
Filename: CP048319.compsig; CP048319.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB004000GWWQH, MB002000GWWQF and MB001000GWWQE Drives
Version: HPG3 (C) **(Recommended)**
Filename: CP048430.compsig; CP048430.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB006000GWBXQ and MB008000GWBYL Drives
Version: HPG8 (F) **(Recommended)**
Filename: CP048328.compsig; CP048328.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB006000GWJRR and MB008000GWJRT Drives
Version: HPG4 (D) **(Recommended)**
Filename: CP048447.compsig; CP048447.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB006000GWKGR Drive
Version: HPG1 (F) **(Recommended)**
Filename: CP048329.compsig; CP048329.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB008000GWRTC Drive
Version: HPG1 (F) **(Recommended)**
Filename: CP048331.compsig; CP048331.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB008000GWWQU and MB006000GWWQT Drives
Version: HPG2 (D) **(Recommended)**
Filename: CP048425.compsig; CP048425.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB010000GWAYN and MB008000GWAYL Drives
Version: HPG5 (G) **(Critical)**
Filename: CP048333.compsig; CP048333.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- This code corrects a potential data integrity issue related to unaligned write commands.This issue was only found in supplier ongoing lab testing.

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB012000GWDFE Drive
Version: HPG3 (B) **(Recommended)**
Filename: CP048335.compsig; CP048335.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB012000GWTFE and MB014000GWTFF Drives
Version: HPG7 (C) **(Recommended)**
Filename: CP048336.compsig; CP048336.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB014000GWRTN, MB012000GWRTL and MB010000GWRTK Drives
Version: HPG2 (F) **(Recommended)**
Filename: CP048337.compsig; CP048337.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB014000GWUDA Drive
Version: HPG2 (F) **(Recommended)**
Filename: CP048339.compsig; CP048339.zip

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB016000GWXKK Drive
Version: HPG3 (B) **(Recommended)**
Filename: CP049128.compsig; CP049128.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB1000GDUNU, MB2000GDUNV, MB3000GDUPA and MB4000GDUPB Drives
Version: HPG4 (K) **(Recommended)**
Filename: CP048342.compsig; CP048342.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB1000GVYZE, MB2000GVYZF, MB3000GVYZH and MB4000GVYZK Drives
Version: HPG4 (I) **(Recommended)**
Filename: CP048343.compsig; CP048343.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB2000GCWLT, MB3000GCWLU and MB4000GCWLV Drives
Version: HPG4 (K) **(Recommended)**
Filename: CP048345.compsig; CP048345.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB2000GFEMH and MB4000GFEMK Drives
Version: HPG6 (I) **(Critical)**
Filename: CP048346.compsig; CP048346.zip

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.

- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

- Online firmware update fails when drives are connected behind AHCI controller.

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB4000GEFNA and MB6000GEFNB Drives
Version: HPG6 (I) **(Recommended)**
Filename: CP048365.compsig; CP048365.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB4000GEQNH and MB6000GEQNK Drives
Version: HPGB (I) **(Critical)**
Filename: CP048366.compsig; CP048366.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.
- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB6000GEBTP Drive
Version: HPG4 (I) **(Recommended)**
Filename: CP048370.compsig; CP048370.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB6000GEQUT and MB8000GEQUU Drives
Version: HPGB (I) **(Critical)**
Filename: CP048371.compsig; CP048371.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was only found during supplier ongoing reliability testing.
- Online firmware update fails when drives are connected behind AHCI controller.

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB6000GEXXV Drive
Version: HPG2 (K) **(Recommended)**
Filename: CP048403.compsig; CP048403.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB6000GVYYU Drive
Version: HPG2 (I) **(Recommended)**
Filename: CP048372.compsig; CP048372.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB6000GVYZB and MB4000GVYZA Drives
Version: HPG4 (F) **(Recommended)**
Filename: CP048377.compsig; CP048377.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MB8000GFECR Drive
Version: HPG6 (G) **(Recommended)**
Filename: CP048381.compsig; CP048381.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MK000240GWCEU, MK000480GWCEV, MK000960GWCFA and MK001920GWCFB Drives
Version: HPG3 (G) **(Recommended)**
Filename: CP048390.compsig; CP048390.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MK000480GWSSC, MK000960GWSSD, MK001920GWSSE and MK003840GWSSF Drives
Version: HPG3 (C) **(Recommended)**
Filename: CP048432.compsig; CP048432.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MK000480GWXFF, MK000960GWXFH, MK001920GWXFK and MK003840GWXFL Drives
Version: HPG2 **(Recommended)**
Filename: CP049299.compsig; CP049299.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes

This FW release deploys an Enhanced Media Scan algorithm that addresses an issue when the host system does not provide enough idle time for drive's Foreground Media Scan to be activated, which is needed to ensure long term drive reliability. It also addresses few minor issues.

Online HDD/SSD Flash Component for VMware ESXi - MK003840GWHTE Drive
Version: HPG8 (B) **(Recommended)**
Filename: CP048383.compsig; CP048383.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MK0960GECQK Drive

Version: HPG3 (L) **(Critical)**
Filename: CP048387.compsig; CP048387.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Firmware fixes intermittent data corruption issue associated with unaligned sequential write operations.

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MM1000GEFQV and MM2000GEFRA Drives
Version: HPG8 (H) **(Recommended)**
Filename: CP048388.compsig; CP048388.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MM1000GFJTE Drive
Version: HPG5 (F) **(Optional)**
Filename: CP048389.compsig; CP048389.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - MR000240GWFLU, MR000480GWFLV, VR000480GWFMD, MR000960GWFMA, VR000960GWFME, MR001920GWFMB and VR001920GWFMC Drives
Version: HPGG (B) **(Recommended)**
Filename: CP048402.compsig; CP048402.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000150GWCNN, VK000240GWCNP, VK000480GWCNQ, VK000960GWCNR and VK001600GWCNT Drives
Version: HPG1 (F) **(Recommended)**
Filename: CP048405.compsig; CP048405.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000240GWCFD, VK000480GWCFE, VK000960GWCFF, VK001920GWCFH and VK003840GWCFK Drives.
Version: HPG3 (G) **(Recommended)**
Filename: CP048407.compsig; CP048407.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000240GWEZB, VK000480GWEZC, VK000960GWEZD, VK001920GWEZE, MK000240GWEZF, MK000480GWEZH, MK000960GWEZK and MK001920GWHRU Drives
Version: HPGG (B) **(Recommended)**
Filename: CP048406.compsig; CP048406.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000240GWJPD, VK000480GWJPE, VK000960GWJPF, VK001920GWJPH, VK003840GWJPK, MK000240GWKVK, MK000480GWJPN, MK000960GWJPP and MK001920GWJPQ Drives
Version: HPG5 (F) **(Critical)**
Filename: CP048444.compsig; CP048444.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Fixes a rare link loss issue and adds enhancements for drive reliability.
- After HPG5 firmware is downloaded to the drive, the new HPG5 firmware will be active on the drive.
- The new drive bootloader code will be activated after the next drive power cycle.
- For more information, refer to HPE Customer Advisory at the following

URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00072768en_us

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000240GWSRQ, VK000480GWSRR, VK000960GWSRT, VK001920GWSRU, VK003840GWSRV Drives
Version: HPG4 (C) **(Recommended)**
Filename: CP048434.compsig; CP048434.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000240GWTSV, VK000480GWTTA, VK000960GWTTB, VK001920GWTTC, VK003840GWTTD, MK000480GWTTH, MK000960GWTTK, MK001920GWTTL and MK003840GWTTN Drives
Version: HPG6 (C) **(Recommended)**
Filename: CP048408.compsig; CP048408.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000240GXAWE, VK000480GXAWK, VK000960GXAWL, VK001920GXAWN, VK003840GXAWP, VK007680GXAWQ, MK000480GXAWF,

MK000960GXAXB,MK001920GXAWR, MK003840GXAWT, VR000240GXBBL, MR000480GXBGH and MR000960GXBGK Drives
Version: HPG1 (B) **(Recommended)**
Filename: CP049160.compsig; CP049160.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000480GWSXF, VK000960GWSXH, VK001920GWSXK, MK000480GWUGF, MK000960GWUGH and MK001920GWUGK Drives
Version: HPG3 (B) **(Recommended)**
Filename: CP048409.compsig; CP048409.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000480GWTHA, VK000960GWTHB, VK001920GWTHC and VK003840GWTHD Drives
Version: HPG3 (B) **(Recommended)**
Filename: CP049275.compsig; CP049275.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000480GZCNE, VK000960GZCNF, VK001920GZCNH and VK003840GZCNK Drives
Version: HPG1 (B) **(Recommended)**
Filename: CP049156.compsig; CP049156.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK000960GXCLD, VK001920GXCGP, VK003840GXCGQ and VK007680GXCGR Drives
Version: HPG2 (B) **(Recommended)**
Filename: CP049272.compsig; CP049272.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK003840GWSXL Drive
Version: HPG3 (B) **(Recommended)**
Filename: CP048410.compsig; CP048410.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK007680GWSXN Drive
Version: HPG3 (B) **(Recommended)**
Filename: CP048411.compsig; CP048411.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK0120GFDKE, VK0240GFDKF, VK0480GFDKH, VK0960GFDKK, VK1920GFDKL, and VK3840GFDKN Drives
Version: HPG1 (J) **(Recommended)**

Filename: CP048412.compsig; CP048412.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VK0240GEPQN, VK0480GEPQP and VK0960GEPQQ Drives
Version: HPG1 (J) **(Recommended)**
Filename: CP048413.compsig; CP048413.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - VR000150GWEPP and VR000480GWEPR Drives
Version: HPG1 (G) **(Critical)**
Filename: CP048424.compsig; CP048424.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Fixes
- Fixes a timing issue which can cause the drive to become non-functional.
- Fixes VPD Log D0h reported drive Sanitize times.
- Adds support for Security Log Page BBh.

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for VMware ESXi - XP0120GFJSL and XP0240GFJSN Drives
Version: HPS4 (J) **(Recommended)**
Filename: CP048423.compsig; CP048423.zip

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- In AHCI configuration only offline flashing is supported.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for VMware 7.0 U3

Online HDD/SSD Flash Component for Windows (x64) - EK000200GWEPD, EK000400GWEPE, EK000800GWEPF and EK001600GWEPH Drives
Version: HPG3 (F) **(Recommended)**
Filename: cp048554.compsig; cp048554.exe; cp048554.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB001000GWCBC and MB002000GWCBD Drives
Version: HPG6 (E) **(Recommended)**
Filename: cp048556.compsig; cp048556.exe; cp048556.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB001000GWFWK and MB002000GWFWL Drives
Version: HPG6 (E) **(Recommended)**
Filename: cp048557.compsig; cp048557.exe; cp048557.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB001000GWJAN, MB002000GWFWA and MB004000GWFWB Drives
Version: HPG1 (E) **(Recommended)**
Filename: cp048558.compsig; cp048558.exe; cp048558.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB002000GWFGH and MB001000GWFGF Drives
Version: HPG3 (G) **(Optional)**
Filename: cp048559.compsig; cp048559.exe; cp048559.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc...

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB004000GWKGV Drive
Version: HPG1 (E) **(Recommended)**
Filename: cp048561.compsig; cp048561.exe; cp048561.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB004000GWWQH, MB002000GWWQF and MB001000GWWQE Drives
Version: HPG3 (C) **(Recommended)**
Filename: cp048652.compsig; cp048652.exe; cp048652.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB006000GWBXQ and MB008000GWBYL Drives
Version: HPG8 (E) **(Recommended)**
Filename: cp048667.compsig; cp048667.exe; cp048667.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB006000GWJRR and MB008000GWJRT Drives
Version: HPG4 (D) **(Recommended)**
Filename: cp048470.compsig; cp048470.exe; cp048470.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB006000GWKGR Drive
Version: HPG1 (E) **(Recommended)**
Filename: cp048674.compsig; cp048674.exe; cp048674.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB008000GWRTC Drive
Version: HPG1 (E) **(Recommended)**
Filename: cp048669.compsig; cp048669.exe; cp048669.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB008000GWWQU and MB006000GWWQT Drives
Version: HPG2 (D) **(Recommended)**
Filename: cp048648.compsig; cp048648.exe; cp048648.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB010000GWAYN and MB008000GWAYL Drives
Version: HPG5 (F) **(Critical)**
Filename: cp048671.compsig; cp048671.exe; cp048671.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- This code corrects a potential data integrity issue related to unaligned write commands.This issue was only found in supplier ongoing lab testing.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB012000GWDFE Drive
Version: HPG3 (B) **(Recommended)**
Filename: cp048673.compsig; cp048673.exe; cp048673.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB012000GWTFE and MB014000GWTFF Drives
Version: HPG7 (C) **(Recommended)**
Filename: cp048543.compsig; cp048543.exe; cp048543.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB014000GWRTN, MB012000GWRTL and MB010000GWRTK Drives
Version: HPG2 (E) **(Recommended)**
Filename: cp048544.compsig; cp048544.exe; cp048544.md5

Important Note!

- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB014000GWUDA Drive
Version: HPG3 (E) **(Recommended)**
Filename: cp048545.compsig; cp048545.exe; cp048545.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB016000GWXKK Drive
Version: HPG3 (B) **(Recommended)**
Filename: cp049127.compsig; cp049127.exe; cp049127.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB1000GDUNU, MB2000GDUNV, MB3000GDUPA and MB4000GDUPB Drives
Version: HPG4 (I) **(Recommended)**
Filename: cp048564.compsig; cp048564.exe; cp048564.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB1000GVYZE, MB2000GVYZF, MB3000GVYZH and MB4000GVYZK Drives
Version: HPG4 (I) **(Recommended)**
Filename: cp048568.compsig; cp048568.exe; cp048568.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB2000GCWLT, MB3000GCWLU and MB4000GCWLV Drives
Version: HPG4 (I) **(Recommended)**
Filename: cp048574.compsig; cp048574.exe; cp048574.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB2000GFEMH and MB4000GFEMK Drives
Version: HPG6 (H) **(Critical)**
Filename: cp048588.compsig; cp048588.exe; cp048588.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.

- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB4000GEFNA and MB6000GEFNB Drives
Version: HPG6 (I) **(Recommended)**
Filename: cp048592.compsig; cp048592.exe; cp048592.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB4000GEQNH and MB6000GEQNK Drives
Version: HPGB (H) **(Critical)**
Filename: cp048593.compsig; cp048593.exe; cp048593.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was found during supplier ongoing reliability testing.

- The firmware also corrects settings preservation after a code download, and includes emergency power off improvements.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB6000GEBTP Drive
Version: HPG4 (H) **(Recommended)**
Filename: cp048610.compsig; cp048610.exe; cp048610.md5

Important Note!
- Online firmware flashing of drives attached to aÂ Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB6000GEQUT and MB8000GEQUU Drives
Version: HPGB (H) **(Critical)**
Filename: cp048611.compsig; cp048611.exe; cp048611.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Corrects a potential data integrity issue caused by an in process write retry incorrectly starting at the wrong location. This issue was only found during supplier ongoing reliability testing.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB6000GEXXV Drive
Version: HPG2 (I) **(Recommended)**
Filename: cp048633.compsig; cp048633.exe; cp048633.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB6000GVYYU Drive
Version: HPG2 (H) **(Recommended)**
Filename: cp048612.compsig; cp048612.exe; cp048612.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB6000GVYZB and MB4000GVYZA Drives
Version: HPG4 (E) **(Recommended)**
Filename: cp048613.compsig; cp048613.exe; cp048613.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MB8000GFECR Drive
Version: HPG6 (E) **(Recommended)**
Filename: cp048618.compsig; cp048618.exe; cp048618.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MK000240GWCEU, MK000480GWCEV, MK000960GWCFA and MK001920GWCFB Drives
Version: HPG3 (F) **(Recommended)**
Filename: cp048624.compsig; cp048624.exe; cp048624.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.

- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MK000480GWSSC, MK000960GWSSD, MK001920GWSSE and MK003840GWSSF Drives
Version: HPG3 (C) **(Recommended)**
Filename: cp048654.compsig; cp048654.exe; cp048654.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MK000480GWXFF, MK000960GWXFH, MK001920GWXFK and MK003840GWXFL Drives
Version: HPG2 **(Recommended)**
Filename: cp049300.compsig; cp049300.exe; cp049300.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.

Fixes

This FW release deploys an Enhanced Media Scan algorithm that addresses an issue when the host system does not provide enough idle time for drive's Foreground Media Scan to be activated, which is needed to ensure long term drive reliability. It also addresses few minor issues.

Online HDD/SSD Flash Component for Windows (x64) - MK003840GWHTE Drive
Version: HPG8 (B) **(Recommended)**
Filename: cp048620.compsig; cp048620.exe; cp048620.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MK0960GECQK Drive
Version: HPG3 (K) **(Critical)**
Filename: cp048621.compsig; cp048621.exe; cp048621.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Firmware fixes intermittent data corruption issue associated with unaligned sequential write operations.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MM1000GEFQV and MM2000GEFRA Drives
Version: HPG8 (G) **(Recommended)**
Filename: cp048622.compsig; cp048622.exe; cp048622.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MM1000GFJTE Drive
Version: HPG5 (E) **(Optional)**
Filename: cp048623.compsig; cp048623.exe; cp048623.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - MR000240GWFLU, MR000480GWFLV, VR000480GWFMD, MR000960GWFMA, VR000960GWFME, MR001920GWFMB and VR001920GWFMC Drives
Version: HPGG (B) **(Recommended)**
Filename: cp048632.compsig; cp048632.exe; cp048632.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000150GWCNN, VK000240GWCNP, VK000480GWCNQ, VK000960GWCNR and VK001600GWCNT Drives

Version: HPG1 (E) **(Recommended)**
Filename: cp048635.compsig; cp048635.exe; cp048635.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000240GWCFD, VK000480GWCFE, VK000960GWCFF, VK001920GWCFH and VK003840GWCFK Drives
Version: HPG3 (F) **(Recommended)**
Filename: cp048637.compsig; cp048637.exe; cp048637.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000240GWEZB, VK000480GWEZC, VK000960GWEZD, VK001920GWEZE, MK000240GWEZF, MK000480GWEZH, MK000960GWEZK and MK001920GWHRU Drives
Version: HPGG (B) **(Recommended)**
Filename: cp048636.compsig; cp048636.exe; cp048636.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000240GWJPD, VK000480GWJPE, VK000960GWJPF, VK001920GWJPH, VK003840GWJPK, MK000240GWKVK, MK000480GWJPN, MK000960GWJPP and MK001920GWJPQ Drives
Version: HPG5 (E) **(Critical)**
Filename: cp048664.compsig; cp048664.exe; cp048664.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes

- Fixes a rare link loss issue and adds enhancements for drive reliability.
- After HPG5 firmware is downloaded to the drive, the new HPG5 firmware will be active on the drive.
- The new drive bootloader code will be activated after the next drive power cycle.
- For more information, refer to HPE Customer Advisory at the following

URL: https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00072768en_us

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000240GWSRQ, VK000480GWSRR, VK000960GWSRT, VK001920GWSRU and VK003840GWSRV Drives
Version: HPG4 (C) **(Recommended)**
Filename: cp048657.compsig; cp048657.exe; cp048657.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000240GWTSV, VK000480GWTTA, VK000960GWTTB, VK001920GWTTC, VK003840GWTTD, MK000480GWTTH, MK000960GWTTK, MK001920GWTTL and MK003840GWTTN Drives
Version: HPG6 (C) **(Recommended)**
Filename: cp048241.compsig; cp048241.exe; cp048241.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000240GXAWE, VK000480GXAWK, VK000960GXAWL, VK001920GXAWN, VK003840GXAWP, VK007680GXAWQ, MK000480GXAWF, MK000960GXAXB, MK001920GXAWR, MK003840GXAWT, VR000240GXBBL, MR000480GXBGH and MR000960GXBGK Drives
Version: HPG1 (B) **(Recommended)**
Filename: cp049159.compsig; cp049159.exe; cp049159.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000480GWSXF, VK000960GWSXH, VK001920GWSXK, MK000480GWUGF, MK000960GWUGH and MK001920GWUGK Drives

Version: HPG3 (B) **(Recommended)**
Filename: cp048638.compsig; cp048638.exe; cp048638.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000480GWTHA, VK000960GWTHB, VK001920GWTHC and VK003840GWTHD Drives
Version: HPG3 (B) **(Recommended)**
Filename: cp049277.compsig; cp049277.exe; cp049277.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000480GZCNE, VK000960GZCNF, VK001920GZCNH and VK003840GZCNK Drives
Version: HPG1 (B) **(Recommended)**
Filename: cp049155.compsig; cp049155.exe; cp049155.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK000960GXCLD, VK001920GXCGP, VK003840GXCGQ and VK007680GXCGR Drives
Version: HPG2 (B) **(Recommended)**
Filename: cp049274.compsig; cp049274.exe; cp049274.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or Host Bus Adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Windows Server 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK003840GWSXL Drive
Version: HPG3 (B) **(Recommended)**
Filename: cp048639.compsig; cp048639.exe; cp048639.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK007680GWSXN Drive
Version: HPG3 (B) **(Recommended)**
Filename: cp048640.compsig; cp048640.exe; cp048640.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK0120GFDKE, VK0240GFDKF, VK0480GFDKH, VK0960GFDKK, VK1920GFDKL and VK3840GFDKN Drives
Version: HPG1 (H) **(Recommended)**
Filename: cp048641.compsig; cp048641.exe; cp048641.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VK0240GEPQN, VK0480GEPQP and VK0960GEPQQ Drives
Version: HPG1 (H) **(Recommended)**
Filename: cp048642.compsig; cp048642.exe; cp048642.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - VR000150GWEPP and VR000480GWEPR Drives
Version: HPG1 (F) **(Critical)**
Filename: cp048647.compsig; cp048647.exe; cp048647.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Fixes
- Fixes a timing issue which can cause the drive to become non-functional.
- Fixes VPD Log D0h reported drive Sanitize times.
- Adds support for Security Log Page BBh.

Enhancements
- Added support for Microsoft Server Windows 2022.

Online HDD/SSD Flash Component for Windows (x64) - XP0120GFJSL and XP0240GFJSN Drives
Version: HPS4 (H) **(Recommended)**
Filename: cp048646.compsig; cp048646.exe; cp048646.md5

Important Note!
- Online firmware flashing of drives attached to a Smart Array controller running in Zero Memory (ZM) mode or a ProLiant host bus adapter (HBA) is NOT supported. Only offline firmware flashing of drives is supported for these configurations.
- Online drive firmware update available for Smart Array Controllers configured in systems running supported Linux, Microsoft Windows, and VMware environments. All other OSes would require an offline update using the Service Pack for ProLiant and Smart Update Manager.
- Customers who already installed latest firmware version do not need to update to sub version like (B) (C) (D) etc..

Enhancements
- Added support for Microsoft Server Windows 2022.

Firmware - Storage Controller Top

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)
Version: 5.04 (C) **(Recommended)**
Filename: CP046571.md5; RPMS/x86_64/firmware-d3000-5.04-3.1.x86_64.compsig; RPMS/x86_64/firmware-d3000-5.04-3.1.x86_64.rpm

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D3000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

Fixes

The following fixes were incorporated in this version:

- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure for a NonStop solution.

- The smart carrier, which is the drive case for SAS drives, now authenticates in the D3610/D3710 drive enclosure.

- Added new 7-segment error codes E0 and E1 to report issues with Fan modules A and B, respectively. These new codes only apply to the D3610/D3710 and only display when running firmware 5.04.

- If the storage enclosure processor within the I/O module fails, a hard reset (power down and then power up) is executed to ensure the processor comes back online.

Please refer to the Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

Enhancements

The following enhancement has been added in this version:

- Added support of Rhel 7.8

- Added support of Rhel 8.2

- Added support of SLES15 SP2

Supported Devices and Features

The D3600 / D3700 / D3610 / D3710 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller
- Smart Array P741m Controller

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)
Version: 5.04 (C) **(Recommended)**
Filename: CP046572.compsig; CP046572.md5; CP046572.zip

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D3000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

Fixes

The following fixes were incorporated in this version:

- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure for a NonStop solution.

- The smart carrier, which is the drive case for SAS drives, now authenticates in the D3610/D3710 drive enclosure.

- Added new 7-segment error codes E0 and E1 to report issues with Fan modules A and B, respectively. These new codes only apply to the D3610/D3710 and only display when running firmware 5.04.

- If the storage enclosure processor within the I/O module fails, a hard reset (power down and then power up) is executed to ensure the processor comes back online.

Please refer to the Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

Supported Devices and Features

The D3600 / D3700 / D3610 / D3710 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P741m Controller
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for Windows (x64)
Version: 5.04 (C) **(Recommended)**
Filename: cp046570.compsig; cp046570.exe

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D3000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D3000.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D3000.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

Fixes

The following fixes were incorporated in this version:

- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure for a NonStop solution.

- The smart carrier, which is the drive case for SAS drives, now authenticates in the D3610/D3710 drive enclosure.

- Added new 7-segment error codes E0 and E1 to report issues with Fan modules A and B, respectively. These new codes only apply to the D3610/D3710 and only display when running firmware 5.04.

- If the storage enclosure processor within the I/O module fails, a hard reset (power down and then power up) is executed to ensure the processor comes back online.

Please refer to the Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

Supported Devices and Features

The D3600 / D3700 / D3610 / D3710 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller
- Smart Array P741m Controller

HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)
Version: 2.74 (J) **(Recommended)**
Filename: CP046574.md5; RPMS/x86_64/firmware-d6020-2.74-10.1.x86_64.compsig; RPMS/x86_64/firmware-d6020-2.74-10.1.x86_64.rpm

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D6020(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

Fixes

The following fixes were incorporated in this version:

- Temperature sensors logic inside gSEP model and SES database
- When an IOM is pulled the surviving IOM reports false critical temperatures

Please refer to the Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

Enhancements

The following enhancement has been added in this version:

- Added support of Rhel 7.8

- Added support of Rhel 8.2

- Added support of SLES15 SP2

Supported Devices and Features

The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P741m Controller
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller

HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)
Version: 2.74 (J) **(Recommended)**
Filename: CP046573.compsig; CP046573.md5; CP046573.zip

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D6020(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

Fixes

The following fixes were incorporated in this version:

- Temperature sensors logic inside gSEP model and SES database
- When an IOM is pulled the surviving IOM reports false critical temperatures

Please refer to the Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

Supported Devices and Features

The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241
- Smart Array P741m Controller
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller

HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for Windows (x64)
Version: 2.74 (J) **(Recommended)**
Filename: cp046575.compsig; cp046575.exe

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D6020(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D6020.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D6020.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

Fixes

The following fixes were incorporated in this version:

- Temperature sensors logic inside gSEP model and SES database
- When an IOM is pulled the surviving IOM reports false critical temperatures

Please refer to the Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

Supported Devices and Features

The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- Smart Array P841 Controller
- Smart Array P441 Controller
- Smart HBA H241

- Smart Array P741m Controller
- Smart Array P408e-p Controller
- Smart Array E208e-p Controller
- Smart Array P408e-m Controller

HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for Linux (x64)
Version: 0118 **(Recommended)**
Filename: CP049185.md5; RPMS/x86_64/firmware-d8000-0118-1.1.x86_64.compsig; RPMS/x86_64/firmware-d8000-0118-1.1.x86_64.rpm

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D8000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

Fixes

The following fixes were incorporated in this version:

- User was not able to collect ddump logs.
- Logical Fault LED remains ON even after clearing the fault using "reboot soft"
- Vendor ID showed as "DEFAULT" for D8000 expander in SSACLI enclosure detail

Please refer to the Release Notes for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

Enhancements

The following enhancement has been added in this version:

- Added support of Rhel 7.8
- Added support of Rhel 8.2
- Added support of SLES15 SP2

Supported Devices and Features

The D8000 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller

HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)
Version: 0118 **(Recommended)**
Filename: CP049184.md5; CP049184.zip; CP049184_part1.compsig; CP049184_part2.compsig

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D8000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

Fixes

The following fixes were incorporated in this version:

- User was not able to collect ddump logs.
- Logical Fault LED remains ON even after clearing the fault using "reboot soft"
- Vendor ID showed as "DEFAULT" for D8000 expander in SSACLI enclosure detail

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: 0118 **(Recommended)**
Filename: cp049183.compsig; cp049183.exe

Important Note!

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D8000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D8000.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

Prerequisites

IMPORTANT: Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

WARNING! Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

NOTE: All firmware flash progress messages are logged to %systemdrive%\CPQSYSTEM\Log\D8000.log and flash summary is logged to %systemdrive%\CPQSYSTEM\Log\cpqsetup.log.

Fixes

The following fixes were incorporated in this version:

- User was not able to collect ddump logs.
- Logical Fault LED remains ON even after clearing the fault using "reboot soft"
- Vendor ID showed as "DEFAULT" for D8000 expander in SSACLI enclosure detail

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 MR216i-a Gen10 Plus Tri Mode Controller
Version: 52.16.3-3913 (B) **(Recommended)**
Filename: HPE_MR216i-a_Gen10P_52.16.3-3913.fwpkg

Important Note!

This firmware version to be used on MR216i-a controllers.

Enhancements
- Added support for DL20 Gen10 Plus Server.

HPE MR216i-p Gen10 Plus Tri Mode Controller
Version: 52.16.3-3913 (B) **(Recommended)**
Filename: HPE_MR216i-p_Gen10P_52.16.3-3913.fwpkg

Important Note!

This firmware version to be used on MR216i-p controllers.

Enhancements
- Added support for DL20 Gen10 Plus Server.

HPE MR416i-a Gen10 Plus Tri Mode Controller
Version: 52.16.3-3913 (B) **(Recommended)**
Filename: HPE_MR416i-a_Gen10P_52.16.3-3913.fwpkg

Important Note!

This firmware version to be used on MR416i-a controllers.

Enhancements
- Added support for DL20 Gen10 Plus Server.

HPE MR416i-p Gen10 Plus Tri Mode Controller
Version: 52.16.3-3913 (B) **(Recommended)**
Filename: HPE_MR416i-p_Gen10P_52.16.3-3913.fwpkg

Important Note!

This firmware version to be used on MR416i-p controllers.

Enhancements
- Added support for DL20 Gen10 Plus Server.

HPE SR932i-p and SR416i-a Gen10 Plus Controllers
Version: 03.01.04.072 **(Recommended)**
Filename: HPE_SRXXX_Gen10P_3.01.04.072.fwpkg

Fixes
- A potential controller lockup issue during a workload to a device configured in a RAID volume which is in process of failing.
- A potential controller lockup issue when a SATA drive is being failed with IO outstanding and the drive fails to respond to Identify Device after reset.
- Drive Unique ID are the same value for all unconfigured NVMe drives.
- Displaying truncated Model and FW version for Samsung NVMe drives.
- Background surface scan may not start if all the IOs to a volume use the SSD SmartPath.
- The reported link rate for NVMe drives is incorrectly reported when the desired port width is not the same as the actual port width linked up.
- SSD Smartpath is not re-enabled after a volume transformation has completed.
- The FAULT LED on an HPE UBM carrier is not lit if the drive fails during initial discovery.
- Reduced performance when the host is submitting large sequential IO streams at high queue depth.
- WRITE and READ fails on a RAID6 volume where it could have completed successfully on certain error recovery scenarios.
- Asynchronous host notify events may not be captured if the host has not consumed a previous event with similar details.
- A potential miscompare when a RAID-1 SmartPath write request encounters an error or when SmartPath is spuriously disabled with IO outstanding to a volume comprised of SATA devices.
- The drive resource Health/State shows as Critical/Absent when the drive in the array is hot removed.
- Failed HBA drives are not shown in HII.
- An error was observed while selecting the edit SmartCache logical drive option when the SmartCache logical drive was in degraded mode.
- Migrate Logical drive is displaying an error message for RAID 1(Triple) when trying to migrate strip size for the logical drive.
- A RSOD issue when the server is booted in legacy mode with UEFI driver debug enabled.
- Correct redfish storage properties(Drive.DurableNameFormat ,Drive.Operations and Port.PortProtocol).

Enhancements
- Added SSD Wear Gauge values for NVMe devices.
- Added the ability to better detect redundant firmware image corruption of several non-executable image components.
- Added support for StorageDevice RDE Alerts.
- Added support for Drive Last Failure reason status in the HII disk information menu.
- Improved performance of large sequential writes.

Supported Devices and Features

Supported Devices - SmartRAID SR932i-p and SR416i-a

Online Firmware Flash for ESXi - HPE NS204i-p, NS204i-d, NS204i-t, NS204i-r Gen10+ Boot Controller

Version: 1.0.14.1055 **(Critical)**
Filename: CP047954.compsig; CP047954.zip

Important Note!

VMware **7.0u1 is** supported by HPE NS204i-p, NS204i-d, NS204i-t and NS204i-r Gen10+ Boot Controller

VMware 7.0 is NOT supported by HPE NS204i-p, NS204i-d, NS204i-t and NS204i-r Gen10+ Boot Controller

Fixes

Firmware may skip rebuilding chunks of data on the new drive when the drive rebuild is performed followed by a Redfish Read on servers with NS204i adapter card.

Online Firmware Flash for Linux(x64) - HPE NS204i-p, NS204i-d, NS204i-t, NS204i-r Gen10+ Boot Controller
Version: 1.0.14.1055 **(Critical)**
Filename: CP047953.md5; CP047953.scexe; deb/firmware-9041739931_1.0.14.1055-1.1_amd64.deb; rpm/RPMS/x86_64/firmware-9041739931-1.0.14.1055-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-9041739931-1.0.14.1055-1.1.x86_64.rpm

Fixes

Firmware may skip rebuilding chunks of data on the new drive when the drive rebuild is performed followed by a Redfish Read on servers with NS204i adapter card.

Online Firmware Flash for Windows - HPE NS204i-p, NS204i-d, NS204i-t, NS204i-r Gen10+ Boot Controller
Version: 1.0.14.1055 (B) **(Critical)**
Filename: cp049340.compsig; cp049340.exe; cp049340.md5

Important Note!

Please refer to SID7544 wtih the reason that why upgrade requiremnet need to be set to Critical

Fixes

Firmware may skip rebuilding chunks of data on the new drive when the drive rebuild is performed followed by a Redfish Read on servers with NS204i adapter card. Please refer to SID7544 with detail info.

Enhancements
- Added Windows2022 OS support.

Online ROM Flash Component for ESXi (x86) - HPE Smart Array P824i-p MR Gen10
Version: 24.23.0-0043 (B) **(Recommended)**
Filename: CP044443.compsig; CP044443.zip

Enhancements

Added support for VMware ESXi 7.0

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 Apollo 2000 Gen10 Plus Backplane Expander FW

Version: 1.27 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-smartarray-7b5e8400dd-1.27-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-7b5e8400dd-1.27-1.1.x86_64.rpm

Enhancements

Initial Release

Online ROM Flash Component for Linux (x64) – HPE Apollo 4200 Backplane Expander Firmware
Version: 1.79 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-smartarray-f18fdefd0b-1.79-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-f18fdefd0b-1.79-1.1.x86_64.rpm

Important Note!
- Power cycle / cold reboot is required if firmware is upgraded from version 1.03 or earlier.

Fixes

Drive may show up missing after a system reboot.

Please reference Customer Advisory a00098241en_us

Online ROM Flash Component for Linux (x64) – HPE Apollo 4200 Gen10 Plus Backplane Expander Firmware
Version: 0.39 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-smartarray-f36d4ef431-0.39-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-f36d4ef431-0.39-2.1.x86_64.rpm

Prerequisites
- Before upgrading to 0.39(B), please flash to the transition version 0.39 first by standalone update approach to activate the new PID naming.
- 0.39(B) is the minimum version for Gen10plus 4200 expander FW.
- **0.39 transition version link:** https://www.hpe.com/global/swpublishing/MTX-6a237b8f0ea248dcae938df67b

Fixes
- Modify Product ID to "A4200 Gen10P LFF" and "A4200 Gen10P SFF" to distinguish the different generation expander backplane.

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: 24.23.0-0043 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-cafee9b6e4-24.23.0_0043-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-cafee9b6e4-24.23.0_0043-2.1.x86_64.rpm

Fixes

CFI 24378: sum-8.5.1 "smartupdate upgrade" Not Installing the P824i Controller FW on RHEL7

Online ROM Flash Component for VMware ESXi - HPE 12Gb/s SAS Expander Firmware for HPE Smart Array Controllers and HPE HBA Controllers
Version: 5.10 **(Recommended)**
Filename: CP049281.compsig; CP049281.zip

Important Note!
- Power cycle / cold reboot is required if firmware is upgraded from version 1.31 or earlier.

Fixes

- Valid flag is always set to true initially so that CRC check can be performed on initstring partition and test if it is really valid.
- Move Smart Carrier Authentication to later in the boot process and move the Exception Dumper task to earlier in the process in order to support Winbond alternative Flash

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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 2000 Gen10 Plus Backplane Expander FW
Version: 1.27 **(Recommended)**
Filename: CP046386.compsig; CP046386.zip

Enhancements

Initial Release

Online ROM Flash Component for VMware ESXi - HPE Apollo 4200 Backplane Expander Firmware
Version: 1.79 (C) **(Recommended)**
Filename: CP047952.zip; CP047952_part1.compsig; CP047952_part2.compsig

Important Note!
- Power cycle / cold reboot is required if firmware is upgraded from version 1.03 or earlier.

Enhancements

Update Note with publish requirement

Online ROM Flash Component for VMware ESXi - HPE Apollo 4200 Gen10 Plus Backplane Expander Firmware
Version: 0.39 (B) **(Recommended)**
Filename: CP049505.compsig; CP049505.zip

Prerequisites
- Before upgrading to 0.39(B), please flash to the transition version 0.39 first by standalone update approach to activate the new PID naming.
- 0.39(B) is the minimum version for Gen10plus 4200 expander FW.
- **0.39 transition version link:** https://www.hpe.com/global/swpublishing/MTX-baec686eb389427aa933bbf9f0

Fixes
- Modify Product ID to "A4200 Gen10P LFF" and "A4200 Gen10P SFF" to distinguish the different generation expander backplane.

Online ROM Flash Component for VMware ESXi - HPE Apollo 45xx Gen10 Backplane Expander Firmware
Version: 1.56 (D) **(Recommended)**
Filename: CP038103.compsig; CP038103.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 (A) **(Recommended)**
Filename: CP044325.compsig; CP044325.zip

Important Note!
- When using ESXi6.0 you must be at upgrade 3 or newer. The required SmartPQI driver is not present in earlier versions of the OS

Prerequisites

When using ESXi6.0 you must be at upgrade 3 or newer. The required SmartPQI driver is not present in earlier versions of the OS

Enhancements

Added ESXi 7.0 support.

Online ROM Flash Component for VMware ESXi - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208e-p, E208i-c, E208i-a, P408i-sb, P408e-m, P204i-c, P204i-b, P816i-a and P416ie-m SR Gen10
Version: 4.11 **(Recommended)**
Filename: CP047425.compsig; CP047425.zip

Fixes
- Fixed an issue where SSD SmartPath is not enabled on logical drives created on the same array in certain scenarios.
- Fixed a problem where WRITE and READ fails with URE on a RAID6 volume where it could have completed successfully in certain error recovery scenarios.
- Fixed a problem where events were not getting logged in certain scenarios.
- Fixed an issue where a Windows memory dump process was taking longer than 30 minutes.
- Fixed a problem in Gen10 server where FAULT LED was not turning on for the drives failing during device discovery.
- Fixed a problem where the critical event "Controller memory ECC error limit exceeded" was reported in the AHS IML log after upgrading to 3.53 B0 firmware build.
- Fixed a problem where the host WRITE I/O failed on the SmartCache logical drive with UREs present on the primary logical drive.
- Fixed an issue where the controller may be non-responsive after drive failure with SSD SmartPath enabled under a high queue depth workload.
- Fixed a performance issue when the host is submitting large sequential IO streams at high queue depth.
- Fixed an issue where OS filesystem is not available after making configuration changes in HII.
- Fixed an issue where error was observed while selecting edit SmartCache Logical drive option when SmartCache logical drive is in Degraded mode.
- Fixed an issue where the serial output buffer could return an incorrect data size if the entire log has been filled and wrapped around.
- Fixed an issue where firmware version is listed as null string in the firmware information page

Enhancements
- Host Key Management (HKM) using 3rd Party Applications
- Added support for reporting failed drives in HBA mode within SSA, CLI, HII tools.

Online ROM Flash Component for Windows (x64) - HPE 12Gb/s SAS Expander Firmware for HPE Smart Array Controllers and HPE HBA Controllers
Version: 5.10 **(Recommended)**
Filename: cp049280.compsig; cp049280.exe; cp049280.md5

Important Note!
- Power cycle / cold reboot is required if firmware is upgraded from version 1.31 or earlier.

Fixes
- Valid flag is always set to true initially so that CRC check can be performed on initstring partition and test if it is really valid.
- Move Smart Carrier Authentication to later in the boot process and move the Exception Dumper task to earlier in the process in order to support Winbond alternative Flash

Enhancements
- Add Windows 2022 support

Online ROM Flash Component for Windows (x64) - HPE Apollo 2000 Gen10 Backplane Expander Firmware
Version: 1.00 (C) **(Recommended)**
Filename: cp038106.compsig; cp038106.exe; cp038106.md5

Enhancements
- Added win2022 support

Online ROM Flash Component for Windows (x64) - HPE Apollo 2000 Gen10 Plus Backplane Expander FW
Version: 1.27 (B) **(Recommended)**
Filename: cp049338.compsig; cp049338.exe; cp049338.md5

Enhancements

Added Win2022 support

Online ROM Flash Component for Windows (x64) - HPE Apollo 4200 Backplane Expander Firmware
Version: 1.79 (B) **(Recommended)**
Filename: cp049339.compsig; cp049339.exe; cp049339.md5

Important Note!
- Power cycle / cold reboot is required if firmware is upgraded from version 1.03 or earlier.

Enhancements

Added Win2022 Support

Online ROM Flash Component for Windows (x64) - HPE Apollo 4200 Gen10 Plus Backplane Expander Firmware
Version: 0.39 (B) **(Recommended)**
Filename: cp049492.compsig; cp049492.exe; cp049492.md5

Prerequisites
- Before upgrading to 0.39(B), please flash to the transition version 0.39 first by standalone update approach to activate the new PID naming.
- 0.39(B) is the minimum version for Gen10plus 4200 expander FW.
- **0.39 transition version link:** https://www.hpe.com/global/swpublishing/MTX-7c4fafc26bfd4fcda15b73bd44

Fixes
- Modify Product ID to "A4200 Gen10P LFF" and "A4200 Gen10P SFF" to distinguish the different generation expander backplane.

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, E208e-p, E208i-c, E208i-a, P408i-sb, P408e-m, P204i-c, P204i-b, P816i-a and P416ie-m SR Gen10
Version: 4.11 **(Recommended)**
Filename: cp047424.compsig; cp047424.exe; cp047424.md5

Fixes
- Fixed an issue where SSD SmartPath is not enabled on logical drives created on the same array in certain scenarios.
- Fixed a problem where WRITE and READ fails with URE on a RAID6 volume where it could have completed successfully in certain error recovery scenarios.
- Fixed a problem where events were not getting logged in certain scenarios.
- Fixed an issue where a Windows memory dump process was taking longer than 30 minutes.
- Fixed a problem in Gen10 server where FAULT LED was not turning on for the drives failing during device discovery.

- Fixed a problem where the critical event "Controller memory ECC error limit exceeded" was reported in the AHS IML log after upgrading to 3.53 B0 firmware build.
- Fixed a problem where the host WRITE I/O failed on the SmartCache logical drive with UREs present on the primary logical drive.
- Fixed an issue where the controller may be non-responsive after drive failure with SSD SmartPath enabled under a high queue depth workload.
- Fixed a performance issue when the host is submitting large sequential IO streams at high queue depth.
- Fixed an issue where OS filesystem is not available after making configuration changes in HII.
- Fixed an issue where error was observed while selecting edit SmartCache Logical drive option when SmartCache logical drive is in Degraded mode.
- Fixed an issue where the serial output buffer could return an incorrect data size if the entire log has been filled and wrapped around.
- Fixed an issue where firmware version is listed as null string in the firmware information page

Enhancements
- Added OS support for Microsoft Windows Server 2022
- Host Key Management (HKM) using 3rd Party Applications
- Added support for reporting failed drives in HBA mode within SSA, CLI, HII tools.

Online ROM Flash Component for Windows (x64) - HPE Smart Array P824i-p MR Gen10
Version: 24.23.0-0043 (A) **(Recommended)**
Filename: cp044919.compsig; cp044919.exe; cp044919.md5

Fixes

Over-temp issue was a false IML due to a >=60C threshold, modified the threshold to >65C in new version.

Please reference Customer Advisory a00101958en_us

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: 5.10 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-smartarray-1f19a4a64d-5.10-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-1f19a4a64d-5.10-1.1.x86_64.rpm

Important Note!
- Power cycle / cold reboot is required if firmware is upgraded from version 1.31 or earlier.

Fixes
- Valid flag is always set to true initially so that CRC check can be performed on initstring partition and test if it is really valid.
- Move Smart Carrier Authentication to later in the boot process and move the Exception Dumper task to earlier in the process in order to support Winbond alternative Flash

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Supplemental Update / Online ROM Flash Component for Linux (x64) - HPE Apollo 45xx Gen10 Backplane Expander Firmware
Version: 1.56 (C) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-smartarray-815b1ae26d-1.56-3.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-815b1ae26d-1.56-3.1.x86_64.rpm

Enhancements
- Added HPE Smart Array P824i-p controller support

Supplemental Update / Online ROM Flash Component for Linux (x64) - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208e-p, E208i-c, E208i-a, P408i-sb, P408e-m, P204i-c, P204i-b, P816i-a and P416ie-m SR Gen10
Version: 4.11 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-smartarray-f7c07bdbbd-4.11-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-f7c07bdbbd-4.11-1.1.x86_64.rpm

Fixes
- Fixed an issue where SSD SmartPath is not enabled on logical drives created on the same array in certain scenarios.
- Fixed a problem where WRITE and READ fails with URE on a RAID6 volume where it could have completed successfully in certain error recovery scenarios.
- Fixed a problem where events were not getting logged in certain scenarios.

- Fixed an issue where a Windows memory dump process was taking longer than 30 minutes.
- Fixed a problem in Gen10 server where FAULT LED was not turning on for the drives failing during device discovery.
- Fixed a problem where the critical event "Controller memory ECC error limit exceeded" was reported in the AHS IML log after upgrading to 3.53 B0 firmware build.
- Fixed a problem where the host WRITE I/O failed on the SmartCache logical drive with UREs present on the primary logical drive.
- Fixed an issue where the controller may be non-responsive after drive failure with SSD SmartPath enabled under a high queue depth workload.
- Fixed a performance issue when the host is submitting large sequential IO streams at high queue depth.
- Fixed an issue where OS filesystem is not available after making configuration changes in HII.
- Fixed an issue where error was observed while selecting edit SmartCache Logical drive option when SmartCache logical drive is in Degraded mode.
- Fixed an issue where the serial output buffer could return an incorrect data size if the entire log has been filled and wrapped around.
- Fixed an issue where firmware version is listed as null string in the firmware information page

Enhancements
- Host Key Management (HKM) using 3rd Party Applications
- Added support for reporting failed drives in HBA mode within SSA, CLI, HII tools.

Universal Firmware Package for HPE Gen10 Plus Boot Controller NS204i-p, NS204i-d, NS204i-t, NS204i-r
Version: 1.0.14.1060 **(Recommended)**
Filename: HPE_NS204i_Gen10P_PLDM_1060.fwpkg

Important Note!

This firmware version to be used on NS204i-p controllers.

Enhancements

- Enable PLDM T5 FWPKG for controller FW flashing directly through iLO

- IML event enhancement

Firmware - Storage Fibre Channel **Top**

HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for Linux (x64)
Version: 2021.10.01 **(Recommended)**
Filename: RPMS/x86_64/firmware-fc-emulex-2021.10.01-1.18.x86_64.compsig; RPMS/x86_64/firmware-fc-emulex-2021.10.01-1.18.x86_64.rpm

Important Note!

The target environment must have the libHBAAPI Package installed prior to the installation of the firmware as the discovery of adapters might not complete without the library. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Prerequisites

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storage/spock/

The target environment must have the libHBAAPI Package installed prior to the installation of the firmware as the discovery of adapters might not complete without the library. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Additional requirements:

Environment must be running the syslog daemon for the flash engine to run
Environment must have 32-bit netlink library (libnl.so) installed for component to be able to discover Emulex Host Bus Adapters(HBAs)

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

Version: 2021.10.01 **(Recommended)**
Filename: cp046805.compsig; cp046805.exe

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Ir
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied Emulex driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: CP046801.compsig; CP046801.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot I
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot I
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: CP046802.compsig; CP046802.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firm
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12	12.8
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12	12.8
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Ir
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: CP046803.compsig; CP046803.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Ir
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12

HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12	12.8

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Ir
HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter	16Gb	12.8.528.12
HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	12.8.528.12

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for Linux (x64)
Version: 2021.10.01 **(Recommended)**
Filename: RPMS/x86_64/firmware-fc-mezz-emulex-2021.10.01-1.14.x86_64.compsig; RPMS/x86_64/firmware-fc-mezz-emulex-2021.10.01-1.14.x86_64.rpm

Important Note!

The target environment must have the libHBAAPI Package installed prior to the installation of the firmware as the discovery of adapters might not complete without the library. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Prerequisites

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storage/spock/

The target environment must have the libHBAAPI Package installed prior to the installation of the firmware as the discovery of adapters might not complete without the library. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Additional requirements:

Environment must be running the syslog daemon for the flash engine to run
Environment must have 32-bit netlink library (libnl.so) installed for component to be able to discover Emulex Host Bus Adapters(HBAs)

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for Microsoft Windows Server 2016/2019 x64
Version: 2021.10.01 **(Recommended)**
Filename: cp046789.compsig; cp046789.exe

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied Emulex driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: CP046785.compsig; CP046785.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: CP046786.compsig; CP046786.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for Emulex Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: CP046787.compsig; CP046787.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class	16Gb	12.8.528.12	12.8.528.12	12.8.528.10	12.8.502.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters - Linux (x86_64)
Version: 2021.10.01 **(Recommended)**
Filename: RPMS/x86_64/firmware-fc-qlogic-2021.10.01-1.10.x86_64.compsig; RPMS/x86_64/firmware-fc-qlogic-2021.10.01-1.10.x86_64.rpm

Important Note!

The target environment must have the libHBAAPI Package installed prior to the installation of the firmware as the discovery of adapters might not complete without the library. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

This Firmware package contains following firmware versions:

Adapter	Spe
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G

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 target environment must have the libHBAAPI Package installed prior to the installation of the firmware as the discovery of adapters might not complete without the library. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

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.

- It is advised to provide read-write permissions on /var/tmp folder. Firmware deployment via Service Pack for ProLiant(SPP) might be unsuccessful in some cases , if read-write(rw) permissions are not enable on /tmp or /var/tmp directories.

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.75.07	9.06.02	7.04	3.64
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.75.07	9.06.02	7.04	3.64
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	1.75.07	9.06.02	7.04	3.64
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	1.75.07	9.06.02	7.04	3.64
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.05.03	09.06.02	7.11	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.05.03	09.06.02	7.11	0.0

Supported Devices and Features

This firmware supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters - Microsoft Windows Server 2016/2019/2022 (x86_64)
Version: 2021.10.01 **(Recommended)**
Filename: cp046938.compsig; cp046938.exe

Important Note!

This Firmware package contains following firmware versions:

Adapter	Spe
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G

Prerequisites

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

http://www.hpe.com/storage/spock/

The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download.

Enhancements

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.75.07	9.06.02	7.04	3.64
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.75.07	9.06.02	7.04	3.64
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	1.75.07	9.06.02	7.04	3.64
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	1.75.07	9.06.02	7.04	3.64
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.05.03	09.06.02	7.11	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.05.03	09.06.02	7.11	0.0

Supported Devices and Features

This firmware supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: CP046820.compsig; CP046820.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Spe
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Spe
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G

Supported Devices and Features

This firmware supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

---

HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: CP046821.compsig; CP046821.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Spe
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Spe

HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.75.07
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16Gb	1.75.07
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	1.75.07
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	1.75.07
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.05.03
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.05.03

Supported Devices and Features

This firmware supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: CP046822.compsig; CP046822.zip

Important Note!

This Firmware package contains following firmware versions:

Adapter	Spe
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G
HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32G
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

Enhancements

This Firmware package contains following firmware versions:

Adapter	Spe
HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter	16G
HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter	32G

HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	1.75.07
HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	02.05.03
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.05.03

Supported Devices and Features

This firmware supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Firmware Flash for QLogic Fibre Channel Mezzanine Host Bus Adapters for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: CP046778.compsig; CP046778.zip

Important Note!

Release Notes:
HPE QLogic Adapter Release Notes

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

Enhancements

Updated the Firmware/BIOS/UEFI packages for 16 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Firmware Flash for QLogic Mezzanine Fibre Channel Host Bus Adapters - Linux (x86_64)
Version: 2021.10.01 **(Recommended)**
Filename: RPMS/x86_64/firmware-fc-mezz-qlogic-2021.10.01-1.6.x86_64.compsig; RPMS/x86_64/firmware-fc-mezz-qlogic-2021.10.01-1.6.x86_64.rpm

Important Note!

The target environment must have the libHBAAPI Package installed prior to the installation of the firmware as the discovery of adapters might not complete without the library. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Prerequisites

Firmware updates may be accomplished using the inbox or Out of Box (OOB) drivers. Please consult SPOCK for a list of supported configurations available at the following link:

http://www.hpe.com/storage/spock/

The target environment must have the libHBAAPI Package installed prior to the installation of the firmware as the discovery of adapters might not complete without the library. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

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.

- It is advised to provide read-write permissions on /var/tmp folder. Firmware deployment via Service Pack for ProLiant(SPP) might be unsuccessful in some cases , if read-write(rw) permissions are not enable on /tmp or /var/tmp directories.

Enhancements

Updated the Firmware/BIOS/UEFI packages for 16 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Firmware Flash for QLogic Mezzanine Fibre Channel Host Bus Adapters - Microsoft Windows Server 2016/2019 (x86_64)
Version: 2021.10.01 **(Recommended)**
Filename: cp046780.compsig; cp046780.exe

Important Note!

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Prerequisites

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

http://www.hpe.com/storage/spock/

The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download.

Enhancements

Updated the Firmware/BIOS/UEFI packages for 16 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Firmware Flash for QLogic Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: CP046776.compsig; CP046776.zip

Important Note!

Release Notes:
HPE QLogic Adapter Release Notes

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

Enhancements

Updated the Firmware/BIOS/UEFI packages for 16 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Firmware Flash for QLogic Mezzanine Fibre Channel Host Bus Adapters for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: CP046777.compsig; CP046777.zip

Important Note!

Release Notes:
HPE QLogic Adapter Release Notes

This Firmware package contains following firmware versions:

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

Enhancements

Updated the Firmware/BIOS/UEFI packages for 16 Gb products.

Adapter	Speed	MBI	Firmware	UEFI	Boot Bios
HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem	16Gb	6.04.04	8.08.232	7.04	3.43

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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Firmware - System **Top**

Server Platform Services (SPS) Firmware
Version: 04.04.04.058 **(Recommended)**
Filename: cp048752.compsig; cp048752.zip

Fixes
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Firmware Package - Gen10 NVMe Backplane PIC Firmware
Version: 1.24 (B) **(Recommended)**
Filename: ISS_NVMe_BP_PIC_flashV1B24.fwpkg

Prerequisites

iLO 5 version 1.10 or later is required.

Fixes

Addressed an issue when deploying Gen10 NVMe Backplane PIC FWPKG component from SUM, user may see additional listing of FWPKG and Smart component if operate system is Windows or Linux

- For additional information, reference SID8029
- Please use FWPKG component to do installation

Enhancements
- Update the firmware to support git setting on ProLiant Gen10 NVMe storage backplanes.
- Add Microsoft Windows 2022 to supported OS

Firmware Package - Gen10 Plus UBM1 Backplane PIC Firmware
Version: 1.42 **(Recommended)**
Filename: UBM1_V1.42.fwpkg

Prerequisites

iLO 5 version 2.10 or later is required.

Fixes

Fixed to correct the NVMe drive functionality

Firmware Package - Gen10Plus UBM2 Backplane PIC Firmware
Version: 1.16 (B) **(Recommended)**
Filename: UBM2_V1.16.fwpkg

Prerequisites

iLO 5 version 2.10 or later is required.

Fixes
- Update device guid

Enhancements
- Add Microsoft Windows 2022 to supported OS

Firmware Package - Gen10Plus UBM3 Backplane PIC Firmware
Version: 1.22 **(Recommended)**
Filename: UBM3_V1.22.fwpkg

Prerequisites

iLO 5 version 2.10 or later is required.

Fixes
- Update device guid
- Fixed FW update causing NVME drive missing

Enhancements
- Add Microsoft Windows 2022 to supported OS

Firmware Package - Gen10Plus UBM4 Backplane PIC Firmware
Version: 1.22 **(Recommended)**
Filename: UBM4_V1.22.fwpkg

Prerequisites

iLO 5 version 2.10 or later is required.

Fixes
- Update device guid
- Fixed FW update causing NVME drive missing

Enhancements
- Add Microsoft Windows 2022 to supported OS

Innovation Engine (IE) Fimware
Version: 1.0.0.20 **(Optional)**
Filename: cp040071.compsig; cp040071.zip

Enhancements

See release doc

Online Flash Component for Linux - Gen10 NVMe Backplane PIC Firmware
Version: 1.24 (B) **(Recommended)**
Filename: RPMS/x86_64/firmware-nvmebackplane-gen10-1.24-2.1.x86_64.compsig; RPMS/x86_64/firmware-nvmebackplane-gen10-1.24-2.1.x86_64.rpm

Prerequisites

iLO 5 version 1.10 or later is required.

Fixes

Addressed an issue when deploying NVMe Backplane PIC Windows or Linux component from iLO, the flashing may fail with error message "The file signature is invalid".

- For additional information, reference SID8029 and SID8030
- Use the FWPKG components instead of using the OS based Windows and Linux component,

Enhancements

Update the firmware to support RHEL8 on ProLiant Gen10 NVMe storage backplanes.

Online Flash Component for Linux - Gen10Plus UBM1 Backplane PIC Firmware
Version: 1.42 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-2e20068436-1.42-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-2e20068436-1.42-1.1.x86_64.rpm

Prerequisites

iLO 5 version 2.30 or later is required.

Fixes

Fixed to correct the NVMe drive functionality

Online Flash Component for Linux - Gen10Plus UBM2 Backplane PIC Firmware
Version: 1.16 (B) **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-smartarray-40023de47f-1.16-2.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-smartarray-40023de47f-1.16-2.1.x86_64.rpm

Fixes
- Update device guid

Online Flash Component for Linux - Gen10Plus UBM3 Backplane PIC Firmware
Version: 1.22 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-ff3fa73ca1-1.22-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-ff3fa73ca1-1.22-1.1.x86_64.rpm

Prerequisites

iLO 5 version 1.10 or later is required.

Fixes
- Update device guid
- Fixed FW update causing NVME drive missing

Online Flash Component for Linux - Gen10Plus UBM4 Backplane PIC Firmware
Version: 1.22 **(Recommended)**
Filename: rpm/RPMS/x86_64/firmware-8586fe2547-1.22-1.1.x86_64.compsig; rpm/RPMS/x86_64/firmware-8586fe2547-1.22-1.1.x86_64.rpm

Prerequisites

iLO 5 version 1.10 or later is required.

Fixes
- Update device guid
- Fixed FW update causing NVME drive missing

Online Flash Component for VMware Esxi - Gen10Plus UBM1 Backplane PIC Firmware
Version: 1.42 **(Recommended)**
Filename: CP043712.compsig; CP043712.zip

Fixes

It is fixed to show the proper condition of PERST pin

Online Flash Component for VMware Esxi - Gen10Plus UBM2 Backplane PIC Firmware
Version: 1.16 (B) **(Recommended)**
Filename: CP049544.compsig; CP049544.zip

Fixes
- Update device guid

Online Flash Component for VMware Esxi - Gen10Plus UBM3 Backplane PIC Firmware
Version: 1.22 **(Recommended)**
Filename: CP049065.compsig; CP049065.zip

Fixes
- Update device guid
- Fixed FW update causing NVME drive missing

Online Flash Component for VMware Esxi - Gen10Plus UBM4 Backplane PIC Firmware
Version: 1.22 **(Recommended)**
Filename: CP049069.compsig; CP049069.zip

Fixes
- Update device guid
- Fixed FW update causing NVME drive missing

Online Flash Component for Windows x64 - Gen10 NVMe Backplane PIC Firmware
Version: 1.24 (B) **(Recommended)**
Filename: cp049218.compsig; cp049218.exe

Prerequisites

iLO 5 version 1.10 or later is required.

Fixes

Addressed an issue when deploying NVMe Backplane PIC Windows or Linux component from iLO, the flashing may fail with error message “The file signature is invalid”.

- For additional information, reference SID8029 and SID8030
- Use the FWPKG components instead of using the OS based Windows and Linux component,

Enhancements
- Update the firmware to support git setting on ProLiant Gen10 NVMe storage backplanes.
- Add Microsoft Windows 2022 to supported OS

Online Flash Component for Windows x64 - Gen10Plus UBM1 Backplane PIC Firmware
Version: 1.42 **(Recommended)**
Filename: cp041523.compsig; cp041523.exe; cp041523.md5

Prerequisites

iLO 5 version 2.30 or later is required.

Fixes

Fixed to correct the NVMe drive functionality

Online Flash Component for Windows x64 - Gen10Plus UBM2 Backplane PIC Firmware
Version: 1.16 (B) **(Recommended)**
Filename: cp049542.compsig; cp049542.exe; cp049542.md5

Prerequisites

iLO 5 version 2.30 or later is required.

Fixes
- Update device guid

Enhancements
- Add Microsoft Windows 2022 to supported OS

Online Flash Component for Windows x64 - Gen10Plus UBM3 Backplane PIC Firmware
Version: 1.22 **(Recommended)**
Filename: cp049063.compsig; cp049063.exe; cp049063.md5

Prerequisites

iLO 5 version 1.10 or later is required.

Fixes
- Update device guid
- Fixed FW update causing NVME drive missing

Enhancements
- Add Microsoft Windows 2022 to supported OS

Online Flash Component for Windows x64 - Gen10Plus UBM4 Backplane PIC Firmware
Version: 1.22 **(Recommended)**
Filename: cp049067.compsig; cp049067.exe; cp049067.md5

Prerequisites

iLO 5 version 1.10 or later is required.

Fixes
- Update device guid
- Fixed FW update causing NVME drive missing

Enhancements
- Add Microsoft Windows 2022 to supported OS

Online ROM Flash Component for Windows x64 - Server Platform Services (SPS) Firmware for HPE Gen10 Plus Servers
Version: 04.04.04.058 **(Optional)**
Filename: cp048754.compsig; cp048754.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Plus Server Platform Services (SPS) Firmware

Release Version:

04.04.04.058

Last Recommended or Critical Revision:

04.04.04.053

Previous Revision:

04.04.04.053

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Intel Optane Persistent Memory.

Problems Fixed:

None

Known Issues:

None

Enhancements

Important Notes:

None

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Intel Optane Persistent Memory.

Known Issues:

None

Online ROM Flash Component for Windows x64 - Server Platform Services (SPS) Firmware for HPE Gen10 Servers
Version: 04.01.04.505 **(Optional)**
Filename: cp047808.compsig; cp047808.exe

Important Note!

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE Gen10 Server Platform Services (SPS) Firmware

Release Version:

04.01.04.505

Last Recommended or Critical Revision:

04.01.04.423

Previous Revision:

04.01.04.423

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This version of the Server Platform Services (SPS) Firmware addresses an issue where not all PCIe devices will be managed properly by the system when there are more than 16 PCIe devices present in the platform. This would include PCIe devices in PCIe slots or NVMe drives. This issue would typically manifest itself as iLO Firmware not properly reporting thermals from a device when a server was in this heavily loaded configuration.

Known Issues:

None

<u>Prerequisites</u>

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).

<u>Fixes</u>

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This version of the Server Platform Services (SPS) Firmware addresses an issue where not all PCIe devices will be managed properly by the system when there are more than 16 PCIe devices present in the platform. This would include PCIe devices in PCIe slots or NVMe drives. This issue would typically manifest itself as iLO Firmware not properly reporting thermals from a device when a server was in this heavily loaded configuration.

Known Issues:

None

Online ROM Flash Component for Windows x64 - Server Platform Services (SPS) Firmware for HPE MicroServer Gen10 Plus
Version: 05.01.04.303 **(Optional)**
Filename: cp047666.compsig; cp047666.exe

Important Note!

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

Server Platform Services (SPS) Firmware for HPE ProLiant MicroServer Gen10 Plus (U48) Servers

Release Version:

05.01.04.303

Last Recommended or Critical Revision:

05.01.04.208

Previous Revision:

05.01.04.208

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

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 Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

Known Issues:

None

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Online ROM Flash Component for Windows x64 - Server Platform Services (SPS) Firmware for HPE ProLiant DL20/ML30 Gen10
Version: 05.01.04.303 **(Optional)**
Filename: cp047662.compsig; cp047662.exe

Important Note!

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE DL20ML30Gen10SPS Server Platform Services (SPS) Firmware

Release Version:

05.01.04.303

Last Recommended or Critical Revision:

05.01.04.208

Previous Revision:

05.01.04.208

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

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 Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

Known Issues:

None

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Online ROM Flash for Linux - HPE Gen10 Innovation Engine Firmware for HPE Gen10 Servers
Version: 0.2.2.3 **(Optional)**
Filename: RPMS/x86_64/firmware-iegen10-0.2.2.3-1.1.x86_64.compsig; RPMS/x86_64/firmware-iegen10-0.2.2.3-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Innovation Engine (IE) Firmware

Release Version:

0.2.2.3

Last Recommended or Critical Revision:

0.1.5.2

Previous Revision:

0.2.2.2

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Address an issue where Innovation Engine (IE) Firmware may be unresponsive and iLO Firmware may report "Update Failed" after flashing the Innovation Engine (IE) Firmware via RESTful update. The flash will have been performed successfully, but the system must be reset for IE Firmware to function properly.

Known Issues:

None

Prerequisites

System ROM V1.26 or later

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue where Innovation Engine (IE) Firmware may be unresponsive and iLO Firmware may report "Update Failed" after flashing the Innovation Engine (IE) Firmware via RESTful update. The flash will have been performed successfully, but the system must be reset for IE Firmware to function properly.

Known Issues:

None

Online ROM Flash for Linux - HPE Gen10 Plus Innovation Engine Firmware for HPE Gen10 Plus Servers
Version: 1.0.0.20 **(Recommended)**
Filename: RPMS/x86_64/firmware-iegen10plus-1.0.0.20-1.1.x86_64.compsig; RPMS/x86_64/firmware-iegen10plus-1.0.0.20-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Plus Innovation Engine Firmware for HPE Gen10 Plus Servers

Release Version:

1.0.0.20

Last Recommended or Critical Revision:

This is the initial version of the firmware.

Previous Revision:

This is the initial version of the firmware.

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version of the firmware.

Problems Fixed:

None

Known Issues:

None

Enhancements

Important Notes:

None

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version of the firmware.

Known Issues:

None

Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE Gen10 Plus Servers
Version: 04.04.04.058 **(Optional)**
Filename: RPMS/x86_64/firmware-spsgen10plus-04.04.04.058-1.1.x86_64.compsig; RPMS/x86_64/firmware-spsgen10plus-04.04.04.058-1.1.x86_64.rpm

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Plus Server Platform Services (SPS) Firmware

Release Version:

04.04.04.058

Last Recommended or Critical Revision:

04.04.04.053

Previous Revision:

04.04.04.053

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Intel Optane Persistent Memory.

Problems Fixed:

None

Known Issues:

None

Enhancements

Important Notes:

None

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Intel Optane Persistent Memory.

Known Issues:

None

Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE Gen10 Servers
Version: 04.01.04.505 **(Optional)**
Filename: RPMS/x86_64/firmware-spsgen10-04.01.04.505-1.1.x86_64.compsig; RPMS/x86_64/firmware-spsgen10-04.01.04.505-1.1.x86_64.rpm

Important Note!

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE Gen10 Server Platform Services (SPS) Firmware

Release Version:

04.01.04.505

Last Recommended or Critical Revision:

04.01.04.423

Previous Revision:

04.01.04.423

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This version of the Server Platform Services (SPS) Firmware addresses an issue where not all PCIe devices will be managed properly by the system when there are more than 16 PCIe devices present in the platform. This would include PCIe devices in PCIe slots or NVMe drives. This issue would typically manifest itself as iLO Firmware not properly reporting thermals from a device when a server was in this heavily loaded configuration.

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.

Fixes

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This version of the Server Platform Services (SPS) Firmware addresses an issue where not all PCIe devices will be managed properly by the system when there are more than 16 PCIe devices present in the platform. This would include PCIe devices in PCIe slots or NVMe drives. This issue would typically manifest itself as iLO Firmware not properly reporting thermals from a device when a server was in this heavily loaded configuration.

Known Issues:

None

Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE MicroServer Gen10 Plus
Version: 05.01.04.303 **(Optional)**
Filename: RPMS/x86_64/firmware-microservergen10plussps-05.01.04.303-1.1.x86_64.compsig; RPMS/x86_64/firmware-microservergen10plussps-05.01.04.303-1.1.x86_64.rpm

Important Note!

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

Server Platform Services (SPS) Firmware for HPE ProLiant MicroServer Gen10 Plus (U48) Servers

Release Version:

05.01.04.303

Last Recommended or Critical Revision:

05.01.04.208

Previous Revision:

05.01.04.208

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

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 Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

Known Issues:

None

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Online ROM Flash for Linux - Server Platform Services (SPS) Firmware for HPE ProLiant DL20/ML30 Gen10
Version: 05.01.04.303 **(Optional)**
Filename: RPMS/x86_64/firmware-dl20ml30gen10sps-05.01.04.303-1.1.x86_64.compsig; RPMS/x86_64/firmware-dl20ml30gen10sps-05.01.04.303-1.1.x86_64.rpm

Important Note!

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE DL20ML30Gen10SPS Server Platform Services (SPS) Firmware

Release Version:

05.01.04.303

Last Recommended or Critical Revision:

05.01.04.208

Previous Revision:

05.01.04.208

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

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 Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

Known Issues:

None

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Online ROM Flash for Windows x64 - HPE Gen10 Innovation Engine Firmware for HPE Gen10 Servers
Version: 0.2.2.3 **(Optional)**
Filename: cp049174.compsig; cp049174.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Innovation Engine (IE) Firmware

Release Version:

0.2.2.3

Last Recommended or Critical Revision:

0.1.5.2

Previous Revision:

0.2.2.2

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Address an issue where Innovation Engine (IE) Firmware may be unresponsive and iLO Firmware may report "Update Failed" after flashing the Innovation Engine (IE) Firmware via RESTful update. The flash will have been performed successfully, but the system must be reset for IE Firmware to function properly.

Known Issues:

None

Prerequisites

System ROM V1.26 or later

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

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue where Innovation Engine (IE) Firmware may be unresponsive and iLO Firmware may report "Update Failed" after flashing the Innovation Engine (IE) Firmware via RESTful update. The flash will have been performed successfully, but the system must be reset for IE Firmware to function properly.

Known Issues:

None

Online ROM Flash for Windows x64 - HPE Gen10 Plus Innovation Engine Firmware for HPE Gen10 Plus Servers
Version: 1.0.0.20 **(Recommended)**
Filename: cp040070.compsig; cp040070.exe

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Plus Innovation Engine Firmware for HPE Gen10 Plus Servers

Release Version:

1.0.0.20

Last Recommended or Critical Revision:

This is the initial version of the firmware.

Previous Revision:

This is the initial version of the firmware.

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version of the firmware.

Problems Fixed:

None

Known Issues:

None

Enhancements

Important Notes:

None

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version of the firmware.

Known Issues:

None

ROM Flash Firmware Package - HPE Gen10 Innovation Engine Firmware for HPE Gen10 Servers
Version: 0.2.2.3 **(Optional)**
Filename: IEGen10_0.2.2.3.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Innovation Engine (IE) Firmware

Release Version:

0.2.2.3

Last Recommended or Critical Revision:

0.2.0.11

Previous Revision:

0.2.2.2

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Address an issue where Innovation Engine (IE) Firmware may be unresponsive and iLO Firmware may report "Update Failed" after flashing the Innovation Engine (IE) Firmware via RESTful update. The flash will have been performed successfully, but the system must be reset for IE Firmware to function properly.

Known Issues:

None

Prerequisites

System ROM V1.26 or later

iLO 5 v1.20 or later

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue where Innovation Engine (IE) Firmware may be unresponsive and iLO Firmware may report "Update Failed" after flashing the Innovation Engine (IE) Firmware via RESTful update. The flash will have been performed successfully, but the system must be reset for IE Firmware to function properly.

Known Issues:

None

ROM Flash Firmware Package - HPE Gen10 Plus Innovation Engine Firmware for HPE Gen10 Plus Servers
Version: 1.0.0.20 **(Recommended)**
Filename: IEGen10Plus_1.0.0.20.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Plus Innovation Engine Firmware for HPE Gen10 Plus Servers

Release Version:

1.0.0.20

Last Recommended or Critical Revision:

This is the initial version of the firmware.

Previous Revision:

This is the initial version of the firmware.

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version of the firmware.

Problems Fixed:

None

Known Issues:

None

Enhancements

Important Notes:

None

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version of the firmware.

Known Issues:

None

ROM Flash Firmware Package - Server Platform Services (SPS) Firmware for HPE Gen10 Plus Servers
Version: 04.04.04.058 **(Optional)**
Filename: SPSGen10Plus_04.04.04.058.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE Gen10 Plus Server Platform Services (SPS) Firmware

Release Version:

04.04.04.058

Last Recommended or Critical Revision:

04.04.04.053

Previous Revision:

04.04.04.053

Firmware Dependencies:

None

Enhancements/New Features:

Added support for Intel Optane Persistent Memory.

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:

Added support for Intel Optane Persistent Memory.

Known Issues:

None

ROM Flash Firmware Package - Server Platform Services (SPS) Firmware for HPE Gen10 Servers
Version: 05.01.04.303 **(Optional)**
Filename: DL20ML30Gen10SPS_05.01.04.303.fwpkg

Important Note!

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE DL20ML30Gen10SPS Server Platform Services (SPS) Firmware

Release Version:

05.01.04.303

Last Recommended or Critical Revision:

05.01.04.208

Previous Revision:

05.01.04.208

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

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 Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

Known Issues:

None

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

ROM Flash Firmware Package - Server Platform Services (SPS) Firmware for HPE MicroServer Gen10 Plus
Version: 05.01.04.303 **(Optional)**
Filename: MicroserverGen10PlusSPS_05.01.04.303.fwpkg

Important Note!

Important Notes:

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

Server Platform Services (SPS) Firmware for HPE ProLiant MicroServer Gen10 Plus (U48) Servers

Release Version:

05.01.04.303

Last Recommended or Critical Revision:

05.01.04.208

Previous Revision:

05.01.04.208

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

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 Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This revision of the Server Platform Services (SPS) Firmware provides mitigations for SPS security vulnerabilities documented as CVE-2020-24509. These security vulnerabilities are documented in Intel Security Advisory INTEL-SA-00459. These issues are not unique to HPE servers.

Known Issues:

None

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

ROM Flash Firmware Package - Server Platform Services (SPS) Firmware for HPE Gen10 Servers
Version: 04.01.04.505 (B) **(Optional)**
Filename: SPSGen10_04.01.04.505.fwpkg

Important Note!

Important Notes:

Ver. 04.01.04.505(B) contains updates to the firmware packaging and is functionally equivalent to ver. 04.01.04.505. It is not necessary to upgrade with Revision B if a previous component revision was used to upgrade the firmware to version 04.01.04.505.

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Deliverable Name:

HPE Gen10 Server Platform Services (SPS) Firmware

Release Version:

04.01.04.505

Last Recommended or Critical Revision:

04.01.04.423

Previous Revision:

04.01.04.423

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

This version of the Server Platform Services (SPS) Firmware addresses an issue where not all PCIe devices will be managed properly by the system when there are more than 16 PCIe devices present in the platform. This would include PCIe devices in PCIe slots or NVMe drives. This issue would typically manifest itself as iLO Firmware not properly reporting thermals from a device when a server was in this heavily loaded configuration.

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).

Fixes

Important Notes:

Ver. 04.01.04.505(B) contains updates to the firmware packaging and is functionally equivalent to ver. 04.01.04.505. It is not necessary to upgrade with Revision B if a previous component revision was used to upgrade the firmware to version 04.01.04.505.

This version of the System ROM contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

This version of the Server Platform Services (SPS) Firmware contains updates aligned with the Intel Product Update (IPU) version IPU.2021.1 guidance.

Firmware Dependencies:

None

Problems Fixed:

This version of the Server Platform Services (SPS) Firmware addresses an issue where not all PCIe devices will be managed properly by the system when there are more than 16 PCIe devices present in the platform. This would include PCIe devices in PCIe slots or NVMe drives. This issue would typically manifest itself as iLO Firmware not properly reporting thermals from a device when a server was in this heavily loaded configuration.

Known Issues:

None

Server Platform Services (SPS) Firmware
Version: 05.01.04.303 **(Recommended)**
Filename: cp047665.compsig; cp047665.zip

Fixes
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Server Platform Services (SPS) Firmware for Intel C242 and C246 PCH based systems
Version: 05.01.04.303 **(Recommended)**
Filename: cp047661.compsig; cp047661.zip

Fixes
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Enhancements
See the release document in Download Product Binaries page from Product Summary of the firmware product.

Software - Lights-Out Management Top

HPE Lights-Out Online Configuration Utility for Linux (AMD64/EM64T)
Version: 5.6.0-0 **(Optional)**
Filename: hponcfg-5.6.0-0.x86_64.compsig; hponcfg-5.6.0-0.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

Fixed an issue where HPONCFG was not able to detect openssl library when multiple 64-bit openssl installed.

Enhancements

Updated product name to HPE Lights-Out Online Configuration Utility for Linux (AMD64/EM64T).

HPE Lights-Out Online Configuration Utility for Windows x64 Editions
Version: 5.5.0.0 (C) **(Optional)**
Filename: cp048230.compsig; cp048230.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 Microsoft Windows Server 2022.

Software - Management Top

HPE Agentless Management Bundle Smart Component on ESXi 7.0 for Gen10 and Gen10 Plus Servers
Version: 2021.10.01 **(Recommended)**
Filename: cp047520.compsig; cp047520.zip

Fixes

Agentless Management Service

- Fix excessive poll failure logging on iLO reset
- Applied fixes to net-snmp open source code for CVE-2018-18065, CVE-2018-18066, CVE-2015-5621

Enhancements

Agentless Management Service

- Added support for new cpqIdeAtaDiskCapacityHighBytes and cpqIdeAtaDiskCapacityLowBytes MIB OIDs
- Added support for hrSystemUptime MIB OID
- Added support for cpqIdeAtaDiskSSDWearStatusChange trap
- Added support for Pensando NIC devices

HPE CRU Driver Bundle Smart Component for ESXi 7.0
Version: 2020.04.01 (A) **(Recommended)**
Filename: cp044598.compsig; cp044598.zip

Enhancements

Add new supported servers

HPE Fiber Channel and Storage Enablement Bundle Smart Component for ESXi 7.0
Version: 2021.10.01 **(Recommended)**
Filename: cp047521.compsig; cp047521.zip

Enhancements

Supports VMware ESXi 7.0 U2 and ESXi 7.0 U3

HPE iLO Driver Bundle Smart Component for ESXi 7.0
Version: 2021.09.01 **(Recommended)**
Filename: cp047518.compsig; cp047518.zip

Fixes
- Fixed driver unload function to allow controller to function properly on reload and when Quickboot is enabled.

HPE Management Bundle Smart Component for ESXi 6.5 for Gen10 and Gen10 Plus Servers
Version: 2021.10.01 **(Recommended)**
Filename: cp047523.compsig; cp047523.zip

Fixes

Agentless Management Service

- Fix excessive poll failure logging on iLO reset
- Applied fixes to net-snmp open source code for CVE-2018-18065, CVE-2018-18066, CVE-2015-5621

iLO Driver

- Fixed driver unload function to allow controller to function properly on reload.

Enhancements

Agentless Management Service

- Added support for new cpqIdeAtaDiskCapacityHighBytes and cpqIdeAtaDiskCapacityLowBytes MIB OIDs
- Added support for hrSystemUptime MIB OID
- Added support for cpqIdeAtaDiskSSDWearStatusChange trap
- Added support for Pensando NIC devices

HPE Management Bundle Smart Component for ESXi 6.7 for Gen10 and Gen10 Plus Servers
Version: 2021.10.01 **(Recommended)**
Filename: cp047522.compsig; cp047522.zip

Fixes

Agentless Management Service

- Fix excessive poll failure logging on iLO reset
- Applied fixes to net-snmp open source code for CVE-2018-18065, CVE-2018-18066, CVE-2015-5621

iLO Driver

- Fixed driver unload function to allow controller to function properly on reload and when Quickboot is enabled

Enhancements

Agentless Management Service

- Added support for new cpqIdeAtaDiskCapacityHighBytes and cpqIdeAtaDiskCapacityLowBytes MIB OIDs
- Added support for hrSystemUptime MIB OID
- Added support for cpqIdeAtaDiskSSDWearStatusChange trap
- Added support for Pensando NIC devices

Smart Storage Administrator (SSA) CLI Smart Component for ESXi 7.0
Version: 2021.10.01 **(Recommended)**
Filename: cp048323.compsig; cp048323.zip

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status "Not Available".
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Software - Storage Controller Top

HPE MegaRAID Storage Administrator StorCLI for VMware6.5
Version: 2021.04.00 **(Recommended)**
Filename: cp045835.compsig; cp045835.zip

Enhancements
- Added support for the Apollo 4510 system

HPE MegaRAID Storage Administrator StorCLI for VMware6.7
Version: 2021.04.00 **(Recommended)**
Filename: cp045812.compsig; cp045812.zip

Enhancements

initial release

HPE MegaRAID Storage Administrator StorCLI for VMware6.7
Version: 2021.04 **(Recommended)**
Filename: cp045860.compsig; cp045860.zip

Enhancements
- Support for maintaining, monitoring and configuring MegaRAID Gen10+ Controllers: MR416i-a, MR416i-p, MR216i-a, MR216i-p

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HPE MegaRAID Storage Administrator StorCLI for VMware7.0
Version: 2021.04.00 **(Recommended)**
Filename: cp044633.compsig; cp044633.zip

Enhancements

initial release

HPE Smart Array SR Event Notification Service for Windows Server 64-bit Editions
Version: 1.2.1.66 **(Recommended)**
Filename: cp049025.compsig; cp049025.exe

Enhancements
- Added support for Windows 2022.

Software - Storage Fibre Channel Top

HPE QLogic Fibre Channel driver component for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: cp046817.compsig; cp046817.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Fixed an unwanted behavior where Get Port Speed Capabilities (GPSC) failures were leading to intelligent interleaved direct memory access (IIDMA) for target being set to 1GB/s. This is described in Advisory: HPE Host Bus Adapters - HPE Platforms Running VMware ESXi 6.5 / 6/7 / 7.0 and Configured With Certain HPE Host Bus Adapters May Experience Severe Performance Degradation When Connected to Brocade FOS v8.0.1 (or Prior)
- Addressed unwanted behavior with Fabric Port Identification Number (FPIN) based congestion throttling leading to poor performance.
- Fixed an unwanted behavior where stale connection IDs could be used with Fibre Channel- Non Volatile Memory Express (FC-NVMe) traffic.

- Fixed an unwanted behavior with response queue handling to avoid the problem referenced by https://kb.vmware.com/s/article/81721

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation(USCM) Congestion Management algorithm

- Implemented the vmkmgmt Application programming Interface (API) to report Non-Volatile Memory Express (NVMe) target info and send Non-Volatile Memory Express (NVMe) pass through commands

Driver version 2.1.101.0

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Fibre Channel driver component for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: cp046818.compsig; cp046818.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Fixed an unwanted behavior where Get Port Speed Capabilities (GPSC) failures were leading to intelligent interleaved direct memory access (IIDMA) for target being set to 1GB/s. This is described in Advisory: HPE Host Bus Adapters - HPE Platforms Running VMware ESXi 6.5 / 6/7 / 7.0 and Configured With Certain HPE Host Bus Adapters May Experience Severe Performance Degradation When Connected to Brocade FOS v8.0.1 (or Prior)
- Addressed unwanted behavior with Fabric Port Identification Number (FPIN) based congestion throttling leading to poor performance.
- Fixed an unwanted behavior where stale connection IDs could be used with Fibre Channel- Non Volatile Memory Express (FC-NVMe) traffic.

- Fixed an unwanted behavior with response queue handling to avoid the problem referenced by https://kb.vmware.com/s/article/81721

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation(USCM) Congestion Management algorithm

- Implemented the vmkmgmt Application programming Interface (API) to report Non-Volatile Memory Express (NVMe) target info and send Non-Volatile Memory Express (NVMe) pass through commands

Driver version 3.1.46.0

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Fibre Channel driver component for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: cp046819.compsig; cp046819.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Fixed an unwanted behavior where Get Port Speed Capabilities (GPSC) failures were leading to intelligent interleaved direct memory access (IIDMA) for target being set to 1GB/s. This is described in Advisory: HPE Host Bus Adapters - HPE Platforms Running VMware ESXi 6.5 / 6/7 / 7.0 and Configured With Certain HPE Host Bus Adapters May Experience Severe Performance Degradation When Connected to Brocade FOS v8.0.1 (or Prior)
- Addressed unwanted behavior with Fabric Port Identification Number (FPIN) based congestion throttling leading to poor performance.
- Fixed an unwanted behavior where stale connection IDs could be used with Fibre Channel- Non Volatile Memory Express (FC-NVMe) traffic.

- Fixed an unwanted behavior with response queue handling to avoid the problem referenced by https://kb.vmware.com/s/article/81721

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation(USCM) Congestion Management algorithm

- Implemented the vmkmgmt Application programming Interface (API) to report Non-Volatile Memory Express (NVMe) target info and send Non-Volatile Memory Express (NVMe) pass through commands

Driver version 4.1.34.0

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Mezzanine Fibre Channel driver component for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: cp046773.compsig; cp046773.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Fixed an unwanted behavior where Get Port Speed Capabilities (GPSC) failures were leading to intelligent interleaved direct memory access (IIDMA) for target being set to 1GB/s. This is described in Advisory: HPE Host Bus Adapters - HPE Platforms Running VMware ESXi 6.5 / 6/7 / 7.0 and Configured With Certain HPE Host Bus Adapters May Experience Severe Performance Degradation When Connected to Brocade FOS v8.0.1 (or Prior)
- Addressed unwanted behavior with Fabric Port Identification Number (FPIN) based congestion throttling leading to poor performance.
- Fixed an unwanted behavior where stale connection IDs could be used with Fibre Channel- Non Volatile Memory Express (FC-NVMe) traffic.

- Fixed an unwanted behavior with response queue handling to avoid the problem referenced by https://kb.vmware.com/s/article/81721

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation(USCM) Congestion Management algorithm

- Implemented the vmkmgmt Application programming Interface (API) to report Non-Volatile Memory Express (NVMe) target info and send Non-Volatile Memory Express (NVMe) pass through commands

Driver version 2.1.101.0

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE QLogic Mezzanine Fibre Channel driver component for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: cp046774.compsig; cp046774.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Fixed an unwanted behavior where Get Port Speed Capabilities (GPSC) failures were leading to intelligent interleaved direct memory access (IIDMA) for target being set to 1GB/s. This is described in Advisory: HPE Host Bus Adapters - HPE Platforms Running VMware ESXi 6.5 / 6/7 / 7.0 and Configured With Certain HPE Host Bus Adapters May Experience Severe Performance Degradation When Connected to Brocade FOS v8.0.1 (or Prior)
- Addressed unwanted behavior with Fabric Port Identification Number (FPIN) based congestion throttling leading to poor performance.
- Fixed an unwanted behavior where stale connection IDs could be used with Fibre Channel- Non Volatile Memory Express (FC-NVMe) traffic.

- Fixed an unwanted behavior with response queue handling to avoid the problem referenced by https://kb.vmware.com/s/article/81721

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation(USCM) Congestion Management algorithm

- Implemented the vmkmgmt Application programming Interface (API) to report Non-Volatile Memory Express (NVMe) target info and send Non-Volatile Memory Express (NVMe) pass through commands

Driver version 3.1.46.0

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE QLogic Mezzanine Fibre Channel driver component for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: cp046775.compsig; cp046775.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Fixes

Fixed the following:

- Fixed an unwanted behavior where Get Port Speed Capabilities (GPSC) failures were leading to intelligent interleaved direct memory access (IIDMA) for target being set to 1GB/s. This is described in Advisory: HPE Host Bus Adapters - HPE Platforms Running VMware ESXi 6.5 / 6/7 / 7.0 and Configured With Certain HPE Host Bus Adapters May Experience Severe Performance Degradation When Connected to Brocade FOS v8.0.1 (or Prior)

- Addressed unwanted behavior with Fabric Port Identification Number (FPIN) based congestion throttling leading to poor performance.
- Fixed an unwanted behavior where stale connection IDs could be used with Fibre Channel- Non Volatile Memory Express (FC-NVMe) traffic.

- Fixed an unwanted behavior with response queue handling to avoid the problem referenced by https://kb.vmware.com/s/article/81721

Enhancements

Added the following:

- Made improvements to the Fabric Port Identification Number (FPIN) and Universal Storage Area Network (SAN) Congestion Mitigation(USCM) Congestion Management algorithm

- Implemented the vmkmgmt Application programming Interface (API) to report Non-Volatile Memory Express (NVMe) target info and send Non-Volatile Memory Express (NVMe) pass through commands

Driver version 4.1.34.0

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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HPE Storage Emulex Fibre Channel driver component for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: cp046811.compsig; cp046811.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated to Driver version 12.8.317.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Emulex Fibre Channel driver component for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: cp046812.compsig; cp046812.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated to Driver version 12.8.528.14

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Emulex Fibre Channel driver component for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: cp046813.compsig; cp046813.zip

Important Note!

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

This component is supported only on ESXI 7.0U2

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 12.8.528.13

This component is supported only on ESXI 7.0U2

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Emulex Fibre Channel NVMe driver component for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: cp046800.compsig; cp046800.zip

Important Note!

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

This component is supported only on ESXi 7.0U2

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 12.8.528.7

This component is supported only on ESXi 7.0U2

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Storage Emulex Mezzanine Fibre Channel driver component for VMware vSphere 6.5
Version: 2021.10.01 **(Recommended)**
Filename: cp046792.compsig; cp046792.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated to Driver version 12.8.317.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Storage Emulex Mezzanine Fibre Channel driver component for VMware vSphere 6.7
Version: 2021.10.01 **(Recommended)**
Filename: cp046793.compsig; cp046793.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated to Driver version 12.8.528.14

Supported Devices and Features

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

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Storage Emulex Mezzanine Fibre Channel driver component for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: cp046794.compsig; cp046794.zip

Important Note!

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

Prerequisites

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

http://www.hpe.com/storage/spock/

Enhancements

Updated to Driver version 12.8.528.13

Supported Devices and Features

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

16Gb FC Adapter:

- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

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HPE Storage Emulex Mezzanine Fibre Channel NVMe driver component for VMware vSphere 7.0
Version: 2021.10.01 **(Recommended)**
Filename: cp046784.compsig; cp046784.zip

Important Note!

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

This component is supported only on ESXi 7.0U2

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 12.8.528.7

This component is supported only on ESXi 7.0U2

Supported Devices and Features

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

16Gb FC Adapter:

- HPE Fibre Channel 16Gb LPe1605 Mezzanine Host Bus Adapter

Software - Storage Fibre Channel HBA **Top**

Fibreutils for HPE Storage Fibre Channel Host Bus Adapters for Linux -Red Hat Enterprise Linux (RHEL)
Version: 4.1-1 (d) **(Optional)**
Filename: fibreutils-4.1-1_rhel.x86_64.compsig; fibreutils-4.1-1_rhel.x86_64.rpm

Prerequisites
- Requires the following packages to be installed: glibc libgcc libstdc++ bash perl

Enhancements

This package supports only Red Hat Enterprise Linux (RHEL) Distros

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter
- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter

- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Fibreutils for HPE Storage Fibre Channel Host Bus Adapters for Linux -SuSE Linux Enterprise Server(SLES)
Version: 4.1-1 (d) **(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:

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter
- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE Emulex Fibre Channel Enablement Kit for Host Bus Adapters and Mezzanine Host Bus Adapters for Red Hat Enterprise Linux 7 Server
Version: 12.8.526.0 **(Recommended)**
Filename: HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.rhel7.x86_64.compsig; HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.rhel7.x86_64.rpm

Important Note!

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Prerequisites

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Enhancements

Updated to version 12.8.526.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE LPe1605 16Gb Fibre Channel Mezzanine Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Fibre Channel Enablement Kit for Host Bus Adapters and Mezzanine Host Bus Adapters for Red Hat Enterprise Linux 8 Server
Version: 12.8.526.0 **(Recommended)**
Filename: HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.rhel8.x86_64.compsig; HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.rhel8.x86_64.rpm

Important Note!

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Prerequisites

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Enhancements

Added the following support:

- Added support for RHEL 8.4

Updated to version 12.8.526.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE LPe1605 16Gb Fibre Channel Mezzanine Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Fibre Channel Enablement Kit for Host Bus Adapters and Mezzanine Host Bus Adapters for SUSE Linux Enterprise Server 12
Version: 12.8.526.0 **(Recommended)**
Filename: HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.sles12sp5.x86_64.compsig; HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.sles12sp5.x86_64.rpm

Important Note!

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Rewrite of same Enablement kit version on SuSE Linux Enterprise Server 12 service pack 5 has to be performed using –force or --replacepkgs with --nodeps option

Example: rpm –Uvh HPE-CNA-FC-Emulex-Enablement-Kit-<version>.<OS>.<architecture>.rpm --force --nodeps

rpm –Uvh HPE-CNA-FC-Emulex-Enablement-Kit-<version>.<OS>.<architecture>.rpm --replacepkgs --nodeps

For more information please refer the Knowledge Base at: https://www.suse.com/support/kb/doc/?id=000019640

Prerequisites

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Enhancements

Updated to version 12.8.526.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE LPe1605 16Gb Fibre Channel Mezzanine Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Fibre Channel Enablement Kit for Host Bus Adapters and Mezzanine Host Bus Adapters for SUSE Linux Enterprise Server 15
Version: 12.8.526.0 **(Recommended)**
Filename: HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.sles15sp2.x86_64.compsig; HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.sles15sp2.x86_64.rpm; HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.sles15sp3.x86_64.compsig; HPE-CNA-FC-Emulex-Enablement-Kit-12.8.526.0-1.sles15sp3.x86_64.rpm

Important Note!

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Rewrite of same Enablement kit version on SuSE Linux Enterprise Server 15 service pack 2 and SuSE Linux Enterprise Server 15 service pack 3 has to be performed using --reinstall option

Example: rpm –Uvh HPE-CNA-FC-Emulex-Enablement-Kit-<version>.<OS>.<architecture>.rpm --reinstall

For more information please refer the Knowledge Base at: https://www.suse.com/support/kb/doc/?id=000019640

Prerequisites

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Enhancements

Added the following support:

- Added support for SLES 15 SP3

Updated to version 12.8.526.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE LPe1605 16Gb Fibre Channel Mezzanine Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Fibre Channel Smart SAN Enablement Kit for Host Bus Adapters for Microsoft Windows Server 2022 (x86_64)
Version: 1.0.0.1 **(Recommended)**
Filename: cp047508.compsig; cp047508.exe

Important Note!

The Smart SAN enablement kit will not execute when an operating system has only the inbox fibre channel driver installed. An out of box (OOB) fibre channel driver is needed to utilize Smart SAN functionality. If any OOB driver is installed, the enablement kit will pre-enable/disable Smart SAN functionality for future use. It can then be activated once a Smart SAN enabled OOB driver is installed (see Prerequisite Notes) and after a reboot has occured.

Obtain Smart SAN User Guide for 3PAR at following link: HPE Smart SAN for 3PAR 2.0 User Guide

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied fibre channel driver must be installed prior to this enablement kit component if you want to enable Smart SAN functionality. The driver is available on the HPE.com website at www.hpe.com.

HPE Storage Fibre Channel Adapter Kit for the x64 Emulex Storport Driver v12.8.518.0 cp047332.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

Added the following support :

- Added support for Windows 2022

Updated to version 1.0.0.1

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Smart SAN Enablement Kit for Linux
Version: 1.0.0.0-4 (g) **(Optional)**
Filename: hpe-emulex-smartsan-enablement-kit-1.0.0.0-4.x86_64.compsig; hpe-emulex-smartsan-enablement-kit-1.0.0.0-4.x86_64.rpm

Important Note!

The Smart SAN enablement kit will not execute when an operating system has only the inbox fibre channel driver installed. An out of box (OOB) fibre channel driver is needed to utilize Smart SAN functionality. If any OOB driver is installed, the enablement kit will pre-enable/disable Smart SAN functionality for future use. It can then be activated once a Smart SAN enabled OOB driver is installed (see Prerequisite Notes) and after a reboot has occured.

Obtain Smart SAN User Guide for 3PAR at following link: HPE Smart SAN for 3PAR 2.0 User Guide

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied fibre channel driver must be installed prior to this enablement kit component if you want to enable Smart SAN functionality. The driver is available on the HPE.com website at www.hpe.com.

Linux FC Driver Kit for HPE Emulex FC HBAs and mezz cards, version 12.8.xxx.x for RedHat 7, RedHat 8 and SUSE 12, SUSE 15.

However, if a Smart SAN enabled driver is not installed at execution time, the component will land the enablement kit files for future use after the driver has been installed.

Enhancements

Added support to SLES15SP3

Updated to version 1.0.0.0-4

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter
- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex Smart SAN Enablement Kit for Microsoft Windows Server 2016/2019 (x86_64)
Version: 1.0.0.1 (k) **(Optional)**
Filename: cp047610.compsig; cp047610.exe

Important Note!

The Smart SAN enablement kit will not execute when an operating system has only the inbox fibre channel driver installed. An out of box (OOB) fibre channel driver is needed to utilize Smart SAN functionality. If any OOB driver is installed, the enablement kit will pre-enable/disable Smart SAN functionality for future use. It can then be activated once a Smart SAN enabled OOB driver is installed (see Prerequisite Notes) and after a reboot has occured.

Obtain Smart SAN User Guide for 3PAR at following link: HPE Smart SAN for 3PAR 2.0 User Guide

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 latest Emulex FC driver 12.8.351.7 is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

However, if a Smart SAN enabled driver is not installed at execution time, the component will land the enablement kit files for future use after the driver has been installed.

Enhancements

Updated to version 1.0.0.1

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb 1Single Port Fibre Channel Host Bus Adapter
- HPE 16Gb LPe1605 Fibre Channel Host Bus Adapter for BladeSystem c-Class

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for Host Bus Adapters and Mezzanine Host Bus Adapters for Red Hat Enterprise Linux 7 Server
Version: 12.0.1339.0 (b) **(Recommended)**
Filename: HPE-CNA-FC-Broadcom-Enablement-Kit-12.0.1339.0-1.rhel7.x86_64.compsig; HPE-CNA-FC-Broadcom-Enablement-Kit-12.0.1339.0-1.rhel7.x86_64.rpm

Prerequisites

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Enhancements

Updated to version: 12.0.1339.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

- HPE CN1200E Dual Port Converged Network Adapter
- HPE CN1200E-T Dual Port Converged Network Adapter
- HPE FlexFabric 20Gb 2-port 650FLB Adapter

- HPE FlexFabric 20Gb 2-port 650M Adapter

HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for Host Bus Adapters and Mezzanine Host Bus Adapters for Red Hat Enterprise Linux 8 Server
Version: 12.0.1339.0 (b) **(Optional)**
Filename: HPE-CNA-FC-Broadcom-Enablement-Kit-12.0.1339.0-1.rhel8.x86_64.compsig; HPE-CNA-FC-Broadcom-Enablement-Kit-12.0.1339.0-1.rhel8.x86_64.rpm

Prerequisites

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Enhancements

Updated to version: 12.0.1339.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for Host Bus Adapters and Mezzanine Host Bus Adapters for SUSE Linux Enterprise Server 12
Version: 12.0.1339.0 (b) **(Recommended)**
Filename: HPE-CNA-FC-Broadcom-Enablement-Kit-12.0.1339.0-1.sles12sp5.x86_64.compsig; HPE-CNA-FC-Broadcom-Enablement-Kit-12.0.1339.0-1.sles12sp5.x86_64.rpm

Prerequisites

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Enhancements

Updated to version: 12.0.1339.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

HPE Emulex(BRCM) Fibre Channel Over Ethernet Enablement Kit for Host Bus Adapters and Mezzanine Host Bus Adapters for SUSE Linux Enterprise Server 15
Version: 12.0.1339.0 (b) **(Optional)**
Filename: HPE-CNA-FC-Broadcom-Enablement-Kit-12.0.1339.0-1.sles15sp2.x86_64.compsig; HPE-CNA-FC-Broadcom-Enablement-Kit-12.0.1339.0-1.sles15sp2.x86_64.rpm

Prerequisites

The target environment must have the libHBAAPI Package installed prior to the installation of the enablement kit. (If not already present, the libHBAAPI Package can be obtained from the operating system installation media.)

Enhancements

Updated to version: 12.0.1339.0

Supported Devices and Features

This component is supported on following Emulex Converged Network Adapters:

XE100 Series:

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

HPE NVMe Fibre Channel Enablement Kit for Emulex Host Bus Adapters for Linux Server
Version: 12.8.264.0 (b) **(Optional)**
Filename: nvmefc-connect-12.8.264.0-1.rhel7u8.noarch.compsig; nvmefc-connect-12.8.264.0-1.rhel7u8.noarch.rpm; nvmefc-connect-12.8.264.0-1.rhel7u9.noarch.compsig; nvmefc-connect-12.8.264.0-1.rhel7u9.noarch.rpm

Important Note!

This package is applicable only on the below Operating Systems

Red Hat Enterprise Linux Server 7 update 8

Red Hat Enterprise Linux Server 7 update 9

Prerequisites

To successfully deploy nvme-connect rpm on target systems based on a Linux operating system, "nvme-cli" package has to be available on the target system. This package is available as part of the OS-distro.

Enhancements

Updated to version 12.8.264.0

Supported Devices and Features

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

16Gb FC Adapter:

- HPE SN1200E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1200E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezzanine Host Bus Adapter

32Gb FC Adapter:

- HPE SN1600E 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1600E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Single port Fibre Channel Host Bus Adapter

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HPE QLogic Fibre Channel Enablement Kit for Host Bus Adapter and Mezzanine Host Bus Adapter for Linux
Version: 6.0.0.0-16 (b) **(Recommended)**
Filename: HPE-CNA-FC-hpeqlgc-Enablement-Kit-6.0.0.0-16.noarch.compsig; HPE-CNA-FC-hpeqlgc-Enablement-Kit-6.0.0.0-16.noarch.rpm

Important Note!

Release Notes:
HPE QLogic Adapters Release Notes

The Enablement Kit requires that the target environment have the libHBAAPI package installed from your OS installation media.

The Linux Enablement kit has been changed from "HP-CNA-FC-hpqlgc-Enablement-Kit" to "HPE-CNA-FC-hpeqlgc-Enablement-Kit". Upgrade from the older released Enablement kit is supported. However downgrade to earlier version "HP-CNA-FC-hpqlgc-Enablement-Kit" may not be successful and may report conflicts.

Workaround : Please uninstall the Enablement kit and install the older versions

Rewrite of same Enablement kit version on SuSE Linux Enterprise Server 12 service pack 4 and SuSE Linux Enterprise Server 12 service pack 5 has to be performed using –force or --replacepkgs with --nodeps option

Example: rpm –Uvh HPE-CNA-FC-hpeqlgc-Enablement-Kit-<version>.noarch.rpm --force --nodeps

rpm –Uvh HPE-CNA-FC-hpeqlgc-Enablement-Kit-<version>.noarch.rpm --replacepkgs --nodeps

Rewrite of same Enablement kit version on SuSE Linux Enterprise Server 15 service pack 1 and SuSE Linux Enterprise Server 15 service pack 2 has to be performed using --reinstall option

Example: rpm –Uvh HPE-CNA-FC-hpeqlgc-Enablement-Kit-<version>.noarch.rpm --force --nodeps

For more information please refer the Knowledge Base
at: https://www.suse.com/support/kb/doc/?id=000019640

Prerequisites

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

http://www.hpe.com/storage/spock/

The Enablement Kit requires that the target environment have the libHBAAPI package installed from your OS installation media.

Enhancements

Updated the kit to version 6.0.0.0-16

Supported Devices and Features

This driver supports the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

HPE QLogic Smart SAN Enablement Kit for Fibre Channel Host Bus Adapter for Microsoft Windows Server 2016/2019 (x86_64)
Version: 1.0.0.1 (j) **(Recommended)**
Filename: cp042521.compsig; cp042521.exe

Important Note!

The Smart SAN enablement kit will not execute when an operating system has only the inbox fibre channel driver installed. An out of box (OOB) fibre channel driver is needed to utilize Smart SAN functionality. If any OOB driver is installed, the enablement kit will pre-enable/disable Smart SAN functionality for future use. It can then be activated once a Smart SAN enabled OOB driver is installed (see Prerequisite Notes) and after a reboot has occured.

Obtain Smart SAN User Guide for 3PAR at following link: HPE Smart SAN for 3PAR 2.0 User Guide

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 latest Qlogic FC driver 9.4.5.20 is available on the Service Pack for ProLiant (SPP) which is available at http://www.hpe.com/servers/spp/download/

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 6 Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

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 Fibre Channel Host Bus Adapter for Microsoft Windows Server 2022 (x86_64)
Version: 1.0.0.1 **(Recommended)**
Filename: cp047511.compsig; cp047511.exe

Important Note!

The Smart SAN enablement kit will not execute when an operating system has only the inbox fibre channel driver installed. An out of box (OOB) fibre channel driver is needed to utilize Smart SAN functionality. If any

OOB driver is installed, the enablement kit will pre-enable/disable Smart SAN functionality for future use. It can then be activated once a Smart SAN enabled OOB driver is installed (see Prerequisite Notes) and after a reboot has occured.

Obtain Smart SAN User Guide for 3PAR at following link: HPE Smart SAN for 3PAR 2.0 User Guide

Prerequisites

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

http://www.hpe.com/storage/spock/

The HPE supplied fibre channel driver must be installed prior to this enablement kit component if you want to enable Smart SAN functionality. The driver is available on the HPE.com website at www.hpe.com.

- HPE Storage Fibre Channel Adapter Kit for the QLogic Storport Driver for Windows Server 2019 version 9.4.5.20, cp047201.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

Added support for the following:

- Added support for Windows 2022

Updated to version 1.0.0.1

Supported Devices and Features

This enablement kit is supported on the following HPE adapters:

16Gb Fibre Channel Host Bus Adapter:

- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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HPE QLogic Smart SAN enablement kit for Linux
Version: 3.3-3 (i) **(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!

Obtain Smart SAN User Guide for 3PAR at following link: HPE Smart SAN for 3PAR 2.0 User Guide

Prerequisites

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

The HPE supplied fibre channel driver must be installed prior to this enablement kit component if you want to enable Smart SAN functionality. The driver is available on the HPE.com website at www.hpe.com.

- Red Hat Enterprise Linux 7 Server (x86-64) FC Driver Kit for HPE Qlogic HBAs and mezzaine HBAs, version 10.02.01.00.a14-k1.

- Red Hat Enterprise Linux 8 Server FC Driver Kit for HPE QLogic HBAs and mezzaine HBAs, version 10.02.01.01.a2-k1.

- SUSE Linux Enterprise Server 12 FC Driver Kit for HPE Qlogic HBAs and mezzaine HBAs, version 10.02.01.00.a14-k1.

- SUSE Linux Enterprise Server 15 FC Driver Kit for HPE QLogic HBAsand mezzaine HBAs, version 10.02.01.00.a14-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

Updated to version 3.3-3

Supported Devices and Features

This version of the enablement kit supports the following devices:

16Gb Fibre Channel Host Bus Adapter:

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE SN1100Q 16GB Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE SN1100Q 16GB Single Port PCIe Fibre Channel Host Bus Adapter

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

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Software - System Management **Top**

Agentless Management Service (iLO 5) for Red Hat Enterprise Linux 7 Server
Version: 2.5.0 **(Optional)**
Filename: amsd-2.5.0-1675.24.rhel7.x86_64.compsig; amsd-2.5.0-1675.24.rhel7.x86_64.rpm

Prerequisites

- **amsd only supported on HPE Gen10/Gen10 Plus Servers.**

- **amsd provides information to the iLO 5 service providing SNMP support.**

- **Requirements:**

- Minimum iLO 5 Firmware Version = 1.1

- Minimum supported OS Versions = Red Hat Enterprise Linux 7.3 Errata 3.10.0.514.6.1

Fixes

Fixed the following items:

- The incorrect cpqSePciSlotWidth data may display due to data source, PCI max link, which is only for embedded devices. The fix uses the SMBIOS 9 for all the PCI devices as the priority.
- Users may see the 34464 Mbps NIC speed on the 100Gb NIC option because the data only shows the lower bits of the speed variable. The fix conducts the upper bits of the speed variable to present correct info.
- Users may see an empty entry for the SATA location due to leading space chars within SMBIOS. The fix removes the redundant space in the data.
- Provide the cpqScsi information (cpqSsci_rev.service) for the amsd reverse(agent) mode.
- Added protection to prevent the segfault under amsd reverse(agent) mode. This may happen when iLO does a reset without responses to amsd.
- Addressed the display of an IPV6 address that is shown in cpqNic when IPV6 support is disabled in the OS.
- Updated the driver vendor info in the AHS log.

Enhancements

New support added to amsd:

- Enhance the direct-attached SATA Drive Status - smart Error and failed.
- Enhance the direct-attached SATA Drive Status under hot-plug and hot-remove.
- Provide the new OID, cpqIdeAtaDiskCapacityLowBytes and cpqIdeAtaDiskCapacityHighBytes for SATA HD capacity support:
- HPE Synergy 4610C 10/25Gb Ethernet Adapter.
- HPE FC HBA/SN1700E
- HPE DSP DSC-25/100 Ent/Cld 10/25/100Gb

Agentless Management Service (iLO 5) for Red Hat Enterprise Linux 8 Server
Version: 2.5.0 **(Optional)**
Filename: amsd-2.5.0-1675.24.rhel8.x86_64.compsig; amsd-2.5.0-1675.24.rhel8.x86_64.rpm

Prerequisites

- **amsd only supported on HPE Gen10/Gen10 Plus 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:

- The incorrect cpqSePciSlotWidth data may display due to data source, PCI max link, which is only for embedded devices. The fix uses the SMBIOS 9 for all the PCI devices as the priority.
- Users may see the 34464 Mbps NIC speed on the 100Gb NIC option because the data only shows the lower bits of the speed variable. The fix conducts the upper bits of the speed variable to present correct info.
- Users may see an empty entry for the SATA location due to leading space chars within SMBIOS. The fix removes the redundant space in the data.
- Provide the cpqScsi information (cpqSsci_rev.service) for the amsd reverse(agent) mode.
- Added protection to prevent the segfault under amsd reverse(agent) mode. This may happen when iLO does a reset without responses to amsd.
- Addressed the display of an IPV6 address that is shown in cpqNic when IPV6 support is disabled in the OS.
- Updated the driver vendor info in the AHS log.

Enhancements

New support added to amsd:

- Enhance the direct-attached SATA Drive Status - smart Error and failed.
- Enhance the direct-attached SATA Drive Status under hot-plug and hot-remove.
- Provide the new OID, cpqIdeAtaDiskCapacityLowBytes and cpqIdeAtaDiskCapacityHighBytes for SATA HD capacity support:
- HPE Synergy 4610C 10/25Gb Ethernet Adapter.
- HPE FC HBA/SN1700E
- HPE DSP DSC-25/100 Ent/Cld 10/25/100Gb
- Support for Red Hat Enterprise Linux 8.4

Agentless Management Service (iLO 5) for SUSE Linux Enterprise Server 12
Version: 2.5.0 **(Optional)**
Filename: amsd-2.5.0-1675.22.sles12.x86_64.compsig; amsd-2.5.0-1675.22.sles12.x86_64.rpm

Prerequisites

- **amsd only supported on HPE Gen10/Gen10 Plus Servers.**

- **amsd provides information to the iLO 5 service providing SNMP support.**

- **Requirements:**

- Minimum iLO 5 Firmware Version = 1.1

- Minimum supported OS Versions = SUSE Linux Enterprise Server 12 SP2

Fixes

Fixed the following items:

- The incorrect cpqSePciSlotWidth data may display due to data source, PCI max link, which is only for embedded devices. The fix uses the SMBIOS 9 for all the PCI devices as the priority.
- Users may see the 34464 Mbps NIC speed on the 100Gb NIC option because the data only shows the lower bits of the speed variable. The fix conducts the upper bits of the speed variable to present correct info.
- Users may see an empty entry for the SATA location due to leading space chars within SMBIOS. The fix removes the redundant space in the data.
- Provide the cpqScsi information (cpqSsci_rev.service) for the amsd reverse(agent) mode.
- Added protection to prevent the segfault under amsd reverse(agent) mode. This may happen when iLO does a reset without responses to amsd.
- Addressed the display of an IPV6 address that is shown in cpqNic when IPV6 support is disabled in the OS.
- Updated the driver vendor info in the AHS log.

Enhancements

New support added to amsd:

- Enhance the direct-attached SATA Drive Status - smart Error and failed.
- Enhance the direct-attached SATA Drive Status under hot-plug and hot-remove.
- Provide the new OID, cpqIdeAtaDiskCapacityLowBytes and cpqIdeAtaDiskCapacityHighBytes for SATA HD capacity support:
- HPE Synergy 4610C 10/25Gb Ethernet Adapter.
- HPE FC HBA/SN1700E
- HPE DSP DSC-25/100 Ent/Cld 10/25/100Gb

Agentless Management Service (iLO 5) for SUSE Linux Enterprise Server 15
Version: 2.5.0 **(Optional)**
Filename: amsd-2.5.0-1675.22.sles15.x86_64.compsig; amsd-2.5.0-1675.22.sles15.x86_64.rpm

Prerequisites

- **amsd only supported on HPE Gen10/Gen10 Plus Servers.**

- **amsd provides information to the iLO 5 service providing SNMP support.**

- **Requirements:**

- Minimum iLO 5 Firmware Version = 1.1

- Minimum supported OS Versions = SUSE Linux Enterprise Server 15

Fixes

Fixed the following items:

- The incorrect cpqSePciSlotWidth data may display due to data source, PCI max link, which is only for embedded devices. The fix uses the SMBIOS 9 for all the PCI devices as the priority.
- Users may see the 34464 Mbps NIC speed on the 100Gb NIC option because the data only shows the lower bits of the speed variable. The fix conducts the upper bits of the speed variable to present correct info.
- Users may see an empty entry for the SATA location due to leading space chars within SMBIOS. The fix removes the redundant space in the data.
- Provide the cpqScsi information (cpqSsci_rev.service) for the amsd reverse(agent) mode.
- Added protection to prevent the segfault under amsd reverse(agent) mode. This may happen when iLO does a reset without responses to amsd.
- Addressed the display of an IPV6 address that is shown in cpqNic when IPV6 support is disabled in the OS.
- Updated the driver vendor info in the AHS log.

Enhancements

New support added to amsd:

- Enhance the direct-attached SATA Drive Status - smart Error and failed.
- Enhance the direct-attached SATA Drive Status under hot-plug and hot-remove.
- Provide the new OID, cpqIdeAtaDiskCapacityLowBytes and cpqIdeAtaDiskCapacityHighBytes for SATA HD capacity support
- HPE Synergy 4610C 10/25Gb Ethernet Adapter.
- HPE FC HBA/SN1700E
- HPE DSP DSC-25/100 Ent/Cld 10/25/100Gb
- Support for SUSE Linux Enterprise Server 15 Service Pack 3

Agentless Management Service for Microsoft Windows x64
Version: 2.50.0.0 **(Optional)**
Filename: cp047403.compsig; cp047403.exe

Important Note!

About installation and enablement of SMA service:

- During AMS installation in interactive mode, there is pop up message to selectively install SMA.
- If Yes is selected, SMA service will be installed and set to running state.
- If No is selected, SMA service will be installed but the service is not enabled.
- During AMS installation in silent mode, SMA is installed but the service is not enabled.
- To enable SMA service at a later time, go to the following folder: %ProgramFiles%\OEM\AMS\Service\ (Typically c:\Program Files\OEM\AMS\Service) and execute "EnableSma.bat /f"
- IMPORTANT: The SNMP service community name and permission must also be setup. This is not done by “EnableSma.bat”.
- To disable SMA after it has been enabled, go to the following folder: %ProgramFiles%\OEM\AMS\Service\ (Typically c:\Program Files\OEM\AMS\Service) and execute "DisableSma.bat /f"
- After installing Windows operating system, make sure all the latest Microsoft Updates are downloaded and installed (wuapp.exe can be launched to start the update process). If this is not done, a critical error may be reported in Windows Event Log, “The Agentless Management Service terminated unexpectedly.”.

AMS Control Panel Applet:

- The AMS control panel applet UI is best displayed on the system when screen resolution is 1280 x 1024 pixels or higher and text size 100%.

- Test trap generated from AMS Control Panel Applet requires iLO5 firmware version 2.10 and newer.

- When in iLO5 high security mode (e.g. FIPS mode), MD5 authentication protocol will not be shown.

Prerequisites

The *Channel Interface Driver for Windows X64* must be installed prior to this component.

Microsoft SNMP Service must be enabled, if SMA (System Management Assistant) is enabled.

Fixes
- Handled more running exceptions when AMS is querying iSCSI information.
- Fixed a crash issue when AMS is querying network information.
- Fixed incorrect bridging NIC information.

Enhancements
- Added support Intel Virtual RAID (SATA).
- Added support for new I/O cards.
- Removed hardware RAID NVMe devices in CpqSePCIeDiskEntry.
- Added support OS uptime information.
- Removed Broadcom and QLogic DLL files.
- Shorten the stop time and uninstall time.

Agentless Management Service Offline Bundle for VMware ESXi 6.5 for Gen10 and Gen10 Plus Servers
Version: gen10.11.8.0 **(Recommended)**
Filename: ams-esxi6.5-bundle-gen10.11.8.0.15-1.zip

Fixes

Agentless Management Service

- Fix excessive poll failure logging on iLO reset
- Applied fixes to net-snmp open source code for CVE-2018-18065, CVE-2018-18066, CVE-2015-5621

iLO Driver

- Fixed driver unload function to allow controller to function properly on reload.

Enhancements

Agentless Management Service

- Added support for new cpqIdeAtaDiskCapacityHighBytes and cpqIdeAtaDiskCapacityLowBytes MIB OIDs
- Added support for hrSystemUptime MIB OID
- Added support for cpqIdeAtaDiskSSDWearStatusChange trap
- Added support for Pensando NIC devices

Supported Devices and Features

VMware ESXi version support:

- VMware ESXi 6.5 U2
- VMware ESXi 6.5 U3

Agentless Management Service Offline Bundle for VMware ESXi 6.7 for Gen 10 and Gen10 Plus Servers
Version: gen10.11.8.0 **(Recommended)**
Filename: ams-esxi6.7-bundle-gen10.11.8.0.15-1.zip

Fixes

Agentless Management Service

- Fix excessive poll failure logging on iLO reset
- Applied fixes to net-snmp open source code for CVE-2018-18065, CVE-2018-18066, CVE-2015-5621

iLO Driver

- Fixed driver unload function to allow controller to function properly on reload and when Quickboot is enabled

Enhancements

Agentless Management Service

- Added support for new cpqIdeAtaDiskCapacityHighBytes and cpqIdeAtaDiskCapacityLowBytes MIB OIDs
- Added support for hrSystemUptime MIB OID
- Added support for cpqIdeAtaDiskSSDWearStatusChange trap
- Added support for Pensando NIC devices

Supported Devices and Features

VMware ESXi support:

- VMware ESXi 6.7 U2
- VMware ESXi 6.7 U3

HPE Agentless Management Bundle for ESXi 7.0 Update 1 for HPE Gen10 and Gen10 Plus Servers
Version: 701.11.8.0 **(Recommended)**
Filename: amsdComponent_701.11.8.0.15-1_18612107.zip

Fixes

Agentless Management Service

- Fix excessive poll failure logging on iLO reset
- Applied fixes to net-snmp open source code for CVE-2018-18065, CVE-2018-18066, CVE-2015-5621

Enhancements

Agentless Management Service

- Added support for new cpqIdeAtaDiskCapacityHighBytes and cpqIdeAtaDiskCapacityLowBytes MIB OIDs
- Added support for hrSystemUptime MIB OID
- Added support for cpqIdeAtaDiskSSDWearStatusChange trap
- Added support for Pensando NIC devices

HPE Fiber Channel and Storage Enablement Component for ESXi 7.0
Version: 3.8.0 **(Recommended)**
Filename: fc-enablement-component_700.3.8.0.6-1_18506758.zip

Enhancements

Supports VMware ESXi 7.0 U2 and ESXi 7.0 U3

HPE MegaRAID Storage Administrator (HPE MRSA) for Linux 64-bit
Version: 7.016.16.0 (B) **(Recommended)**
Filename: HPE_Linux_64_readme.txt; MRStorageAdministrator-007.016.016.000-00.x86_64.rpm; MRStorageAdministrator-007.016.016.000-00.x86_64_part1.compsig; MRStorageAdministrator-007.016.016.000-00.x86_64_part2.compsig

Enhancements

- Added support for DL20 Gen10 Plus Server.

HPE MegaRAID Storage Administrator (HPE MRSA) for Windows 64-bit
Version: 7.16.16.0 (B) **(Recommended)**
Filename: cp049491.exe; cp049491_part1.compsig; cp049491_part2.compsig

Enhancements
- Added support for DL20 Gen10 Plus Server.

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 Linux 64-bit
Version: 007.1616.0000.0000 (B) **(Optional)**
Filename: storcli-007.1616.0000.0000-1.x86_64.compsig; storcli-007.1616.0000.0000-1.x86_64.rpm

Enhancements
- Added support for DL20 Gen10 Plus server

HPE MegaRAID Storage Administrator StorCLI for VMware
Version: 1.25.12 **(Optional)**
Filename: vmware-esx-storcli-1.25.12.vib; VMWARE_MN_NDS_Readme.txt

Enhancements
- Added support for the Apollo 4510 system

HPE MegaRAID Storage Administrator StorCLI for VMware
Version: 007.1616.0000.0000 **(Recommended)**
Filename: BCM-vmware-storcli64_007.1616.0000.0000-01_17650073.zip

Enhancements

Supported on ESXi OS 7.0 64 bit

HPE MegaRAID Storage Administrator StorCLI for VMware
Version: 007.1616.0000.0000 **(Recommended)**
Filename: storcli-esxi6.7-bundle-007.1616.0000.0000.zip

Enhancements
- This version of StorCLI supports maintaining, troubleshooting, and configuration functions for the MegaRAID® Gen10+ controller products: MR416i-a, MR416i-p, MR216i-a, MR216i-p

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HPE MegaRAID Storage Administrator StorCLI for VMware
Version: 1.25.16 **(Recommended)**
Filename: storcli-esxi6.7-bundle-1.25.16.zip

Enhancements

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

HPE MegaRAID Storage Administrator StorCLI for VMware
Version: 1.25.16 **(Recommended)**
Filename: storcli-esxi6.5-bundle-1.25.16.zip

Enhancements

Initial release

HPE MegaRAID Storage Administrator StorCLI for VMware
Version: 007.1616.0000.0000 (B) **(Recommended)**
Filename: storcli-esxi6.7-bundle-007.1616.0000.0000.zip

Enhancements
- Added support for DL20 Gen10 Plus server

HPE MegaRAID Storage Administrator StorCLI for VMware
Version: 007.1616.0000.0000 (B) **(Recommended)**
Filename: BCM-vmware-storcli64_007.1616.0000.0000-01_17650073.zip

Enhancements
- Added support for DL20 Gen10 Plus server

HPE MegaRAID Storage Administrator StorCLI for Windows 64-bit
Version: 1.25.12.0 **(Optional)**
Filename: cp036918.compsig; cp036918.exe

Enhancements
- Added support for the Apollo 4510 system

HPE MegaRAID Storage Administrator StorCLI for Windows 64-bit
Version: 7.16.16.0 **(Recommended)**
Filename: cp048819.compsig; cp048819.exe

Enhancements
- Added support for DL20 Gen10 Plus Server.

HPE Utilities Offline Bundle for ESXi 6.5
Version: 10.8.0 **(Recommended)**
Filename: HPE-Utility-Component_10.8.0.650-26.zip

Important Note!

Refer to the HPE VMware Utilities Guide for VMware vSphere 6.5 which is located at www.hpe.com/info/vmware/proliant-docs.

Fixes

hpessacli

- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements

hpessacli

- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

HPE Utilities Offline Bundle for ESXi 6.7
Version: 10.8.0 **(Recommended)**
Filename: HPE-Utility-Component_10.8.0.670-26.zip

Important Note!

Refer to the HPE VMware Utilities Guide for VMware vSphere 6.7 U1 for April 2019 which is located at www.hpe.com/info/vmware/proliant-docs.

Fixes

hpessacli

- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status "Not Available".
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements

hpessacli

- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

HPE Utilities Offline Component for ESXi 7.0
Version: 10.8.0 **(Recommended)**
Filename: HPE-Utility-Component_10.8.0.700-22_18497760.zip

Important Note!

Refer to the HPE VMware Utilities Guide for VMware vSphere/ESXi which is located at www.hpe.com/info/vmware/proliant-docs.

Fixes

Includes an updated the Smart Storage Administrator CLI and CONREP

Integrated Smart Update Tools for VMware ESXi 6.5
Version: 2.9.0.0 **(Recommended)**
Filename: sut-esxi6.5-offline-bundle-2.9.0.0-19.zip

Important Note!

Integrated Smart Update Tools for ESXi provides support for firmware and driver updates via iLO Repository

Fixes

See the iSUT Release Notes for information about the issues resolved in this release

Enhancements

See the iSUT Release Notes for information about the issues resolved in this release

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Integrated Smart Update Tools for VMware ESXi 6.7
Version: 2.9.0.0 **(Recommended)**
Filename: sut-esxi6.7-offline-bundle-2.9.0.0-21.zip

Important Note!

Integrated Smart Update Tools for ESXi provides support for firmware and driver updates via iLO Repository

Fixes

See the iSUT Release Notes for information about the issues resolved in this release

Enhancements

See the iSUT Release Notes for information about the issues resolved in this release

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Integrated Smart Update Tools for VMware ESXi 7.0
Version: 701.2.9.0 **(Recommended)**
Filename: sutComponent_701.2.9.0.21-0-signed_component-18608822.zip

Important Note!

Integrated Smart Update Tools for ESXi 7.0 provides support for firmware and driver updates via iLO Repository

Fixes

See the iSUT Release Notes for information about the issues resolved in this release

Enhancements

See the iSUT Release Notes for information about the enhancements in this release.

NVMe Drive Eject NMI Fix for Intel Xeon Processor Scalable Family for Microsoft Windows 64-bit
Version: 1.1.0.0 (D) **(Optional)**
Filename: cp047948.compsig; cp047948.exe

Enhancements
- Removed support for Windows Server 2012 R2
- Added support for Windows Server 2022

Smart Storage Administrator (SSA) CLI for Linux 64-bit
Version: 5.20.8.0 **(Recommended)**
Filename: ssacli-5.20-8.0.x86_64.compsig; ssacli-5.20-8.0.x86_64.rpm; ssacli-5.20-8.0.x86_64.txt

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator (SSA) CLI for VMware 6.5
Version: 5.20.8.0 **(Recommended)**
Filename: MIS_bootbank_ssacli-5.20.8.0-6.5.0.4240417.oem.vib

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added initial passive SED support.

- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator (SSA) CLI for VMware 6.7
Version: 5.20.8.0 **(Recommended)**
Filename: MIS_bootbank_ssacli-5.20.8.0-6.7.0.7535516.oem.vib

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator (SSA) CLI for VMware 7.0
Version: 5.20.8.0 **(Recommended)**
Filename: ssacli-component_5.20.8.0-7.0.0_18528106.zip

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator (SSA) CLI for VMware 7.0
Version: 5.20.8.0 **(Recommended)**
Filename: hpessacli-component_5.20.8.0-7.0.0_18545638.zip

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator (SSA) CLI for Windows 64-bit
Version: 5.20.8.0 **(Recommended)**
Filename: cp047063.compsig; cp047063.exe

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added support for Windows Server 2022 for HPE ProLiant Gen10 and Gen10 Plus platforms only.
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator (SSA) for Linux 64-bit
Version: 5.20.8.0 **(Recommended)**
Filename: ssa-5.20-8.0.x86_64.compsig; ssa-5.20-8.0.x86_64.rpm; ssa-5.20-8.0.x86_64.txt

Prerequisites

The Smart Storage Administrator for Linux requires the System Management Homepage software to be installed on the server. If the System Management Homepage software is not already installed on your server, please download it from HPE.com and install it before installing the Smart Storage Administrator for Linux.

IMPORTANT UPDATE: SSA (GUI) for Linux can now be run without requiring the System Management Homepage. SSA now supports a Local Application Mode for Linux. The System Management Homepage is still supported, but no longer required to run the SSA GUI.

To invoke, enter the following at the command prompt:

ssa -local

The command will start SSA in a new Firefox browser window. When the browser window is closed, SSA will automatically stop. This is only valid for the loopback interface, and not visible to external network connections.

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator (SSA) for Windows 64-bit
Version: 5.20.8.0 **(Recommended)**
Filename: cp047062.compsig; cp047062.exe

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.
- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added support for Windows Server 2022 for HPE ProLiant Gen10 and Gen10 Plus platforms only.
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator Diagnostic Utility (SSADU) CLI for Linux 64-bit
Version: 5.20.8.0 **(Recommended)**
Filename: ssaducli-5.20-8.0.x86_64.compsig; ssaducli-5.20-8.0.x86_64.rpm; ssaducli-5.20-8.0.x86_64.txt

Fixes
- Fixed an issue where the "Turn off" LED operation momentarily turns on all Identify LED.

- Fixed an issue where an NVME drive was failed after flashing drive firmware.
- Fixed an issue where an operation failure message was observed while deleting a volume with status “Not Available”.
- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.

Smart Storage Administrator Diagnostic Utility (SSADU) CLI for Windows 64-bit
Version: 5.20.8.0 **(Recommended)**
Filename: cp047064.compsig; cp047064.exe

Important Note!

This stand alone version of the Smart Storage Administrator's Diagnostic feature is available only in CLI form. For the GUI version of Diagnostic reports, please use Smart Storage Administrator (SSA).

Fixes
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- Fixed an issue that SSAScripting reported incorrect size for some drives greater than 1TB. This did not affect SSACLI.

Enhancements
- Added support for Windows Server 2022 for HPE ProLiant Gen10 and Gen10 Plus platforms only.
- Added initial passive SED support.
- Added new "unchanged" Drive Write Cache (DWC) policy to the applications.
- Added support for discovering and reporting failed drives that are not part of a RAID volume.