

This document does not apply to HPE Superdome servers. For information on HPE Superdome, see the following links:

[HPE Integrity Superdome X](#)
[HPE Superdome Flex](#)

Information on HPE Synergy supported VMware ESXi OS releases, HPE ESXi Custom Images and HPE Synergy Custom SPPs is available at:

[VMware OS Support Tool for HPE Synergy](#)

Information on HPE Synergy Software Releases is available at:

[HPE Synergy Software Releases - Overview](#)

Gen11 Patch Bundle 2023.04.00.05 Release Notes for VMware ESXi 8.0 U1

[BIOS \(Login Required\) - System ROM](#)

[Driver - Lights-Out Management](#)

[Driver - Network](#)

[Firmware - Network](#)

[Firmware - Storage Controller](#)

[Firmware - Storage Fibre Channel](#)

[Software - Management](#)

[Software - Storage Controller](#)

[Software - Storage Fibre Channel](#)

[Software - System Management](#)

BIOS (Login Required) - System ROM

[Top](#)

ROM Flash Firmware Package - HPE ProLiant DL110 Gen11 (U62) Servers

Version: 1.44_07-31-2023 (**Recommended**)

Filename: U62_1.44_07_31_2023.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE DL110 Gen11 System ROM - U62

Release Version:

1.44_07-31-2023

Last Recommended or Critical Revision:

1.44_07-31-2023

Previous Revision:

1.40_06-29-2023

Firmware Dependencies:

None

Enhancements/New Features:

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intel's performance tuning recommendation.

Problems Fixed:

Address an issue with 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: Under a complex microarchitectural conditions, a hold time violation in the uncore may affect the traffic flowing from the Intel Ultra Path Interconnect (UPI) back to a Caching Home Agent (CHA) causing a CHA Table of Requests (TOR) timeout (TO) machine check exception (MCE) to occur. Due to this erratum, the system may hang. This version of the System ROM will update internal code in all installed processors when the system boots. This code internal to the processors will not be downgraded if the System ROM is downgraded. It is not supported to have processors installed with different versions of this internal code.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue with 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intels description of the issue: Under a complex microarchitectural conditions, a hold time violation in the uncore may affect the traffic flowing from the Intel Ultra Path Interconnect (UPI) back to a Caching Home Agent (CHA) causing a CHA Table of Requests (TOR) timeout (TO) machine check exception (MCE) to occur. Due to this erratum, the system may hang. This version of the System ROM will update internal code in all installed processors when the system boots. This code internal to the processors will not be downgraded if the System ROM is downgraded. It is not supported to have processors installed with different versions of this internal code.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Enhancements

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intels performance tuning recommendation.

ROM Flash Firmware Package - HPE ProLiant DL320/ML110 Gen11 (U63) Servers

Version: 1.44_07-31-2023 **(Critical)**

Filename: U63_1.44_07_31_2023.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL320 Gen11/ML110 Gen11 Servers System ROM - U63

Release Version:

1.44_07-31-2023

Last Recommended or Critical Revision:

1.44_07-31-2023

Previous Revision:

1.40_06-29-2023

Firmware Dependencies:

None

Enhancements/New Features:

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intels performance tuning recommendation.

Problems Fixed:

Address an issue with certain 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: "Under complex microarchitectural conditions, the processor may experience a Caching Home Agent Table of Requests (TOR) timeout machine check exception." This version of the System ROM will update internal processor firmware during boot. This internal processor firmware cannot be downgraded even if the System ROM is downgraded. Using processors with different versions of internal processor firmware is not supported.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue with certain 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: "Under complex microarchitectural conditions, the processor may experience a Caching Home Agent Table of Requests (TOR) timeout machine check exception." This version of the System ROM will update internal processor firmware during boot. This internal processor firmware cannot be downgraded even if the System ROM is downgraded. Using processors with different versions of internal processor firmware is not supported.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Enhancements

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intels performance tuning recommendation.

ROM Flash Firmware Package - HPE Alletra 4110/Alletra 4120/ProLiant DL380a Gen11 (U58) Servers
Version: 1.44_07-31-2023 **(Critical)**
Filename: U58_1.44_07_31_2023.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE Alletra 4110/Alletra 4120/ProLiant DL380a Gen11 System ROM - U58

Release Version:

1.44_07-31-2023

Last Recommended or Critical Revision:

1.44_07-31-2023

Previous Revision:

1.40_06-29-2023

Firmware Dependencies:

None

Enhancements/New Features:

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intels performance tuning recommendation.

Problems Fixed:

Address an issue with certain 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: "Under complex microarchitectural conditions, the processor may experience a Caching Home Agent Table of Requests (TOR) timeout machine check exception." This version of the System ROM will update internal processor firmware during boot. This internal processor firmware cannot be downgraded even if the System ROM is downgraded. Using processors with different versions of internal processor firmware is not supported.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue with certain 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: "Under complex microarchitectural conditions, the processor may experience a Caching Home Agent Table of Requests (TOR) timeout machine check exception." This version of the System ROM will update internal processor firmware during boot. This internal processor firmware cannot be downgraded even if the System ROM is downgraded. Using processors with different versions of internal processor firmware is not supported.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Enhancements

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intels performance tuning recommendation.

ROM Flash Firmware Package - HPE ProLiant DL560 Gen11 (U59) Servers

Version: 1.44_07-31-2023 **(Critical)**

Filename: U59_1.44_07_31_2023.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL560 Gen11 System ROM - U59

Release Version:

1.44_07-31-2023

Last Recommended or Critical Revision:

1.44_07-31-2023

Previous Revision:

1.40_06-29-2023

Firmware Dependencies:

None

Enhancements/New Features:

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intels performance tuning recommendation.

Problems Fixed:

Address an issue with certain 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: "Under complex microarchitectural conditions, the processor may experience a Caching Home Agent Table of Requests (TOR) timeout machine check exception." This version of the System ROM will update internal processor firmware during boot. This internal processor firmware cannot be downgraded even if the System ROM is downgraded. Using processors with different versions of internal processor firmware is not supported.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Fixes**Important Notes:**

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue with certain 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: "Under complex microarchitectural conditions, the processor may experience a Caching Home Agent Table of Requests (TOR) timeout machine check exception." This version of the System ROM will update internal processor firmware during boot. This internal processor firmware cannot be downgraded even if the System ROM is downgraded. Using processors with different versions of internal processor firmware is not supported.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Enhancements

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intel's performance tuning recommendation.

ROM Flash Firmware Package - HPE ProLiant ML350/DL360/DL380 Gen11 (U54) Servers

Version: 1.44_07-31-2023 **(Critical)**

Filename: U54_1.44_07_31_2023.fwpkg

Important Note!**Important Notes:**

None

Deliverable Name:

HPE ProLiant DL380 Gen11/ML350 Gen11/DL360 Gen11 System ROM - U54

Release Version:

1.44_07-31-2023

Last Recommended or Critical Revision:

1.44_07-31-2023

Previous Revision:

1.40_06-29-2023

Firmware Dependencies:

None

Enhancements/New Features:

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intel's performance tuning recommendation.

Problems Fixed:

Address an issue with certain 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: "Under complex microarchitectural conditions, the processor may experience a Caching Home Agent Table of Requests (TOR) timeout machine check exception." This version of the System ROM will update internal processor firmware during boot. This internal processor firmware cannot be downgraded even if the System ROM is downgraded. Using processors with different versions of internal processor firmware is not supported.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue with certain 4th Generation Intel Xeon Processors that can result in an unexpected reset with a machine check error logged to the Integrated Management Log (IML). This issue is not unique to HPE systems. The following is Intel's description of the issue: "Under complex microarchitectural conditions, the processor may experience a Caching Home Agent Table of Requests (TOR) timeout machine check exception." This version of the System ROM will update internal processor firmware during boot. This internal processor firmware cannot be downgraded even if the System ROM is downgraded. Using processors with different versions of internal processor firmware is not supported.

Addressed an issue where the speed of Kioxia EDSFF drive might be downgraded from PCIe Generation 5 to Generation 4.

Known Issues:

None

Enhancements

Set the value of the Snoop Response Hold Off for IOAT Stack setting to 7 when the vRAN Workload Profile has been selected. This aligns with Intel's performance tuning recommendation.

ROM Flash Universal Firmware Package - HPE ProLiant DL325/DL345 Gen11 (A56) Servers
Version: 1.42_08-16-2023 (**Recommended**)
Filename: A56_1.42_08_16_2023.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL325 Gen11/DL345 Gen11 System ROM - A56

Release Version:

1.42_08-16-2023

Last Recommended or Critical Revision:

1.42_08-16-2023

Previous Revision:

1.40_07-12-2023

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Address an issue that can result in a Red Screen of Death (RSOD) and hang during system boot or a hang during system boot without an RSOD. This issue can occur on systems utilizing the v1.32 or v1.40 System ROM revision and iLO Firmware revision v1.50. The v1.32 System ROM added a boot-time reduction capability (which also required iLO Firmware revision v1.50) which resulted in the boot-time RSOD and/or hang. This capability has been removed in this revision of the System ROM.

Addressed an issue where one-time boot did not work properly after setting one-time boot device from iLO web or via Redfish.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue that can result in a Red Screen of Death (RSOD) and hang during system boot or a hang during system boot without an RSOD. This issue can occur on systems utilizing the v1.32 or v1.40 System ROM revision and iLO Firmware revision v1.50. The v1.32 System ROM added a boot-time reduction capability (which also required iLO Firmware revision v1.50) which resulted in the boot-time RSOD and/or hang. This capability has been removed in this revision of the System ROM.

Addressed an issue where one-time boot did not work properly after setting one-time boot device from iLO web or via Redfish.

Known Issues:

None

ROM Flash Universal Firmware Package - HPE ProLiant DL365/DL385 Gen11 (A55) Servers

Version: 1.42_08-16-2023 **(Recommended)**

Filename: A55_1.42_08_16_2023.fwpkg

Important Note!

Important Notes:

None

Deliverable Name:

HPE ProLiant DL385 Gen11/DL365 Gen11 System ROM - A55

Release Version:

1.42_08-16-2023

Last Recommended or Critical Revision:

1.42_08-16-2023

Previous Revision:

1.40_07-12-2023

Firmware Dependencies:

None

Enhancements/New Features:

None

Problems Fixed:

Address an issue that can result in a Red Screen of Death (RSOD) and hang during system boot or a hang during system boot without an RSOD. This issue can occur on systems utilizing the v1.32 or v1.40 System ROM revision and iLO Firmware revision v1.50. The v1.32 System ROM added a boot-time reduction capability (which also required iLO Firmware revision v1.50) which resulted in the boot-time RSOD and/or hang. This capability has been removed in this revision of the System ROM.

Addressed an issue where one-time boot did not work properly after setting one-time boot device from iLO web or via Redfish.

Known Issues:

None

Fixes

Important Notes:

None

Firmware Dependencies:

None

Problems Fixed:

Address an issue that can result in a Red Screen of Death (RSOD) and hang during system boot or a hang during system boot without an RSOD. This issue can occur on systems utilizing the v1.32 or v1.40 System ROM revision and iLO Firmware revision v1.50. The v1.32 System ROM added a boot-time reduction capability (which also required iLO Firmware revision v1.50) which resulted in the boot-time RSOD and/or hang. This capability has been removed in this revision of the System ROM.

Addressed an issue where one-time boot did not work properly after setting one-time boot device from iLO web or via Redfish.

Known Issues:

None

Driver - Lights-Out Management [Top](#)

HPE iLO Native Driver for ESXi 7.0

Version: 10.8.1 (**Recommended**)

Filename: ilo-driver_700.10.8.1.6-1OEM.700.1.0.15843807_22315884.zip

Enhancements

- Added support for vSphere 8.0U2.

Driver - Network [Top](#)

HPE Broadcom NetXtreme-E Drivers for VMware vSphere 8.0

Version: 2023.09.00 (**Recommended**)

Filename: cp057075.compsig; cp057075.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*, 226.1.107000 or later, for use with this driver.

Fixes

- This product corrects an issue PSOD seen with iperf traffic, when rx-ring size less than 256 bytes.
- This product corrects an issue Packet drops in ENS mode for tunnel traffic due to checksum issues.
- This product corrects an issue VXLAN tunnel port configuration failure during driver reload
- This product corrects an issue BFD (Bidirectional Forwarding Detection) control failures in NSX environment.
- This product corrects an issue ENS driver invokes driver APIs with spinlock, causing system crash.
- This product corrects an issue No VLAN strip issue, when VSAN configs is invoking VLAN stripping enable followed by disable before the driver sends first time config to firmware.

Enhancements

This product enhances driver logging as more generic and appropriate.

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

- HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter
- Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
- Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE

HPE Intel igbn Driver for VMware vSphere 8.0
Version: 2023.09.00 (**Recommended**)
Filename: cp056804.compsig; cp056804.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 3.21.0 or later, for use with this driver.

Fixes

This product fix an issue that TCP traffic on VMs might be interrupted if PF undergoes a reset.

Supported Devices and Features

These drivers support the following network adapters:

- HPE Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 1Gb 2-port 363i Adapter
- HPE Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 4-port 366T Adapter
- HPE Ethernet 1Gb 4-port 366i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter for HPE
- Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE
- Intel(R) I350 Gigabit Network Connection

Intel icen Driver for VMware vSphere 8.0
Version: 2023.09.00 (**Recommended**)
Filename: cp056803.compsig; cp056803.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 *Intel Firmware Package For E810 Ethernet Adapter*, version 4.20 or later, for use with this driver.

Fixes

This product fix an issue that TCP traffic on VMs might be interrupted if PF undergoes a reset.

Enhancements

This product enhanced the compatibility with firmware of CVL4.2.

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
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Firmware - Network

[Top](#)

Broadcom Firmware Package for BCM5741x adapters

Version: 226.1.107.0 **(Recommended)**

Filename: bcm226.1.107.0.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 226.0.108.0 or later
- HPE Broadcom NetXtreme-E Drivers for Linux, version 1.10.2-226.0.139.0 or later
- HPE Broadcom NetXtreme-E Drivers for VMware, version 2023.09.00 or later

Fixes

- This product addressed device lost symptom after continuously ungraceful restart on BCM57414 OCP3 adapter.
- This product addressed some RDE pattern format for some LLDP properties.
- This product addressed the NC-SI passthrough with BMC when device is under idle mode.
- This product addressed new mechanism for loading factory default.

Enhancements

- This product enhanced the device self-diagnostic matrix and MAC verification.
- This product enhanced the link-speed calculation for internal variable.

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 Firmware Package for BCM5750x adapters

Version: 226.1.107.0 **(Recommended)**

Filename: bcm226.1.107.0_Thor.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 226.0.108.0 or later
- HPE Broadcom NetXtreme-E Drivers for Linux, version 1.10.2-226.0.139.0 or later
- HPE Broadcom NetXtreme-E Drivers for VMware, version 2023.09.00 or later

Fixes

- This product addressed some RDE pattern format for some LLDP properties.
- This product addressed the NC-SI passthrough with BMC when device is under idle mode.
- This product addressed new mechanism for loading factory default.

Enhancements

- This product enhanced the device self-diagnostic matrix and MAC verification.
- This product enhanced the link-speed calculation for internal variable.

Supported Devices and Features

This product supports the following network adapters:

- Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 Adapter for HPE
 - Broadcom BCM57504 Ethernet 10/25Gb 4-port SFP28 OCP3 Adapter for HPE
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Important Note!

This software package contains combo image v20.26.42 with the following firmware versions:

| NIC | Boot Code Version | PXE Version | NCSI Version | UEFI Version |
|------------------------------------|--------------------------|--------------------|---------------------|---------------------|
| BCM 5719 1GbE 4p BASE-T Adptr | 1.46 | 21.6.2 | 1.5.49 | 21.6.58 |
| BCM 5719 1GbE 4p BASE-T OCP3 Adptr | 1.46 | 21.6.2 | 1.5.49 | 21.6.58 |
| BCM 5719 1GbE 4p BASE-T LOM Adptr | 1.46 | 21.6.2 | 1.5.49 | 21.6.58 |
| BCM 5720 1GbE 2p BASE-T LOM Adptr | 1.42 | 21.6.2 | 1.5.49 | 21.6.58 |

Prerequisites

This product requires the appropriate driver for your device and operating system to be installed before the firmware is updated.

Fixes

This product addresses an issue where the FAN behavior with installed BCM 5719 1Gb 4p BASE-T OCP Adptr.

Supported Devices and Features

This product supports the following network adapters:

- Broadcom BCM5720 Ethernet 1Gb 2-port BASE-T LOM Adapter for HPE
- Broadcom BCM5719 Ethernet 1Gb 4-port Base-T Adapter for HPE
- Broadcom BCM5719 Ethernet 1Gb 4-port Base-T OCP3 Adapter for HPE
- Broadcom BCM5719 Ethernet 1Gb 4-port Base-T LOM Adapter for HPE

Intel Firmware Package For E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter
Version: 4.20 **(Recommended)**
Filename: HPE_E810_2CQDA2_O_SEC_4p20_PLDMoMCTP_80017784.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 1.12.164.0 or later
- Intel ice Drivers for Linux, version 1.11.14-1 or later
- Intel icen Driver for VMware, version 2023.09.00 or later

This FW version does not support Port.Reset RDE metrics. This product will be enhance to improve the functions in the future release

Fixes

This product addresses an issue where InterfaceEnabled property is read only and it can't patch this property

Enhancements

This product now supports ResetToDefault property(RDE Port Schema).

Supported Devices and Features

This product supports the following network adapters:

- Intel E810-2CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter for HPE
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Intel Firmware Package For E810-CQDA2 Ethernet 100Gb 2-port QSFP28 Adapter
Version: 4.20 (**Recommended**)
Filename: HPE_E810_CQDA2_4p20_PLDMoMCTP_80017785.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 ica Driver for Microsoft Windows Server, version 1.12.164.0 or later
- Intel ice Drivers for Linux, version 1.11.14-1 or later
- Intel icen Driver for VMware, version 2023.09.00 or later

This FW version does not support Port.Reset RDE metrics. This product will be enhance to improve the functions in the future release

Fixes

This product addresses an issue where InterfaceEnabled property is read only and it can't patch this property

Enhancements

This product now supports ResetToDefault property(RDE Port Schema).

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: 4.20 (**Recommended**)
Filename: HPE_E810_CQDA2_OCP_4p20_NCSIwPLDMoMCTP_80017783.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 ica Driver for Microsoft Windows Server, version 1.12.164.0 or later
- Intel ice Drivers for Linux, version 1.11.14-1 or later
- Intel icen Driver for VMware, version 2023.09.00 or later

This FW version does not support Port.Reset RDE metrics. This product will be enhance to improve the functions in the future release

Fixes

This product addresses an issue where InterfaceEnabled property is read only and it can't patch this property

Enhancements

This product now supports ResetToDefault property(RDE Port Schema).

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: 4.20 (**Recommended**)
Filename: HPE_E810_XXVDA2_SD_4p20_PLDMoMCTP_8001778C.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 ica Driver for Microsoft Windows Server, version 1.12.164.0 or later
- Intel ice Drivers for Linux, version 1.11.14-1 or later
- Intel icen Driver for VMware, version 2023.09.00 or later

This FW version does not support Port.Reset RDE metrics. This product will be enhance to improve the functions in the future release

Fixes

This product addresses an issue where InterfaceEnabled property is read only and it can't patch this property

Enhancements

This product now supports ResetToDefault property(RDE Port Schema).

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: 4.20 **(Recommended)**

Filename: HPE_E810_XXVDA2_SD_OCP_4p20_NCSIwPLDMoMCTP_80017787.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 ica Driver for Microsoft Windows Server, version 1.12.164.0 or later
- Intel ice Drivers for Linux, version 1.11.14-1 or later
- Intel icen Driver for VMware, version 2023.09.00 or later

This FW version does not support Port.Reset RDE metrics. This product will be enhance to improve the functions in the future release

Fixes

This product addresses an issue where InterfaceEnabled property is read only and it can't patch this property

Enhancements

This product now supports ResetToDefault property(RDE Port Schema).

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: 4.20 **(Recommended)**

Filename: HPE_E810_XXVDA4_FH_4p20_PLDMoMCTP_80017789.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 ica Driver for Microsoft Windows Server, version 1.12.164.0 or later
- Intel ice Drivers for Linux, version 1.11.14-1 or later
- Intel icen Driver for VMware, version 2023.09.00 or later

This FW version does not support Port.Reset RDE metrics. This product will be enhance to improve the functions in the future release

Fixes

This product addresses an issue where InterfaceEnabled property is read only and it can't patch this property

Enhancements

This product now supports ResetToDefault property(RDE Port Schema).

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: 4.20 (**Recommended**)
Filename: HPE_E810_XXV4_OCP_4p20_NCSIwPLDMoMCTP_80017788.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 1.12.164.0 or later
- Intel ice Drivers for Linux, version 1.11.14-1 or later
- Intel icen Driver for VMware, version 2023.09.00 or later

This FW version does not support Port.Reset RDE metrics. This product will be enhance to improve the functions in the future release

Fixes

This product addresses an issue where InterfaceEnabled property is read only and it can't patch this property

Enhancements

This product now supports ResetToDefault property(RDE Port Schema).

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 VMware
Version: 3.21.0 (**Recommended**)
Filename: CP056800.compsig; CP056800.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 | 8000DD4F | 1.3353.0 | 9.20 |
| HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter | 8000DD5C | 1.3353.0 | 9.20 |
| Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter | 80001099 | 1.3353.0 | N/A |
| Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter | 80001199 | 1.3353.0 | N/A |

| | | | |
|---|----------|----------|-----|
| Intel(R) I350 Gigabit Network Connection (2-port) | 8000119C | 1.3353.0 | N/A |
| Intel(R) I350 Gigabit Network Connection (4-port) | 8000119D | 1.3353.0 | N/A |

The combo image v1.3353.0 includes: Boot Agent: 1GbE - v1.5.89, 10GbE - v2.4.45, 40GbE - v1.1.42 & UEFI Drivers: 1GbE - v9.8.24, 10GbE - v8.2.06, 40GbE - v4.9.49

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 8.0.

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

Mellanox Firmware Package (FWPKG) - Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE

Version: 26.37.1700 (**Recommended**)

Filename: 26_37_1700-MCX631102AS-ADA_Ax.pldm.fwpkg

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A list of known issues with this release is available

at: <https://docs.nvidia.com/networking/display/ConnectX6LxFirmwarev26371014/Known+Issues>

Note: The firmware version xx.37.1014 is generic firmware distributed by NVIDIA and is not published by HPE. HPE does not recommend customers to use the version xx.37.1014, however the list of 'Known issues' remain the same between the versions xx.37.1700 and xx.37.1014.

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 26.37.1700:

- An issue that prevented the adapter card from handling WoL packets when the host powered up directly into the standby mode.
- CNP received, handled, and ignored counters in the hardware counters could not work after moving to Programmable Congestion Control mode.

Enhancements

New features and changes included in version 26.37.1700:

- Modified the RDE behavior to return an error if the chassis ID subtype is AgentId, or Port ID subtype is ChassisComp.
- Enabled VF LAG hash mode. The LAG_RESOURCE_ALLOCATION mlxconfig field is now modifiable.
- A new capability enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVMI.
- Added a flow rule that enables offloading of multicast traffic by broadcasting it to multi-Flow-Table in FDB.

- Enables a smooth and statically switch between PCC algorithms. In addition, the user can now switch between PCC algorithms while running traffic.
- Added support for 32 actions in the header modify pattern using bulk allocation.

Supported Devices and Features

| HPE Part Number | Mellanox Ethernet Only Adapters | PSID |
|-----------------|---|---------------|
| P42044-B21 | Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE | MT_0000000575 |

Mellanox Firmware Package (FWPKG) - Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE
 Version: 26.37.1700 (**Recommended**)
 Filename: 26_37_1700-MCX631432AS-ADA_Ax.pldm.fwpkg

Important Note!

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A list of known issues with this release is available at: <https://docs.nvidia.com/networking/display/ConnectX6LxFirmwarev26371014/Known+Issues>

Note: The firmware version xx.37.1014 is generic firmware distributed by NVIDIA and is not published by HPE. HPE does not recommend customers to use the version xx.37.1014, however the list of 'Known issues' remain the same between the versions xx.37.1700 and xx.37.1014.

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 26.37.1700:

- An issue that prevented the adapter card from handling WoL packets when the host powered up directly into the standby mode.
- CNP received, handled, and ignored counters in the hardware counters could not work after moving to Programmable Congestion Control mode.

Enhancements

New features and changes included in version 26.37.1700:

- Modified the RDE behavior to return an error if the chassis ID subtype is AgentId, or Port ID subtype is ChassisComp.
- Enabled VF LAG hash mode. The LAG_RESOURCE_ALLOCATION mlxconfig field is now modifiable.
- A new capability enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVMi.
- Added a flow rule that enables offloading of multicast traffic by broadcasting it to multi-Flow-Table in FDB.
- Enables a smooth and statically switch between PCC algorithms. In addition, the user can now switch between PCC algorithms while running traffic.
- Added support for 32 actions in the header modify pattern using bulk allocation.

Supported Devices and Features

| HPE Part Number | Mellanox Ethernet Only Adapters | PSID |
|-----------------|--|---------------|
| P42041-B21 | Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE | MT_0000000551 |

Mellanox Firmware Package (FWPKG) for HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter : HPE part numbers P31246-B21 and P31246-H21
 Version: 16.35.3006 (**Recommended**)

Important Note!

For PLDM enabled VPI (Virtual Protocol Interconnect) adapters supporting both InfiniBand mode and Ethernet modes, every firmware version is made available in two different formats at HPE.com:

1. HPE signed PLDM Firmware Package (.FWPKG filename extension) updatable via iLO.
2. Firmware binary (.bin filename extension) updatable via mstflint utility from the Operating System.

Choose the appropriate firmware file format based on your preference and what suits your environment.

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A list of known issues with this release is available at: <https://docs.nvidia.com/networking/display/ConnectX5Firmwarev16353006LTS/Known+Issues>

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 16.35.3006:

- o Packet loss that occurred when restarting the transmit.
- o An issue that prevented RoCE malformed packets (UDP packet with dest_port equal to RoCE well known udp_dport (0x4791)) from being counted on the vport_counter when the function disables RoCE (through MODIFY_NIC_VPORT_CONTEXT command).
- o A memory leakage that occurred when closing connected QPs (Type RC/UC/XRC/DC).
- o Added a missing VLAN strip.

Enhancements

Important : Security Hardening Enhancements - This release contains important reliability improvements and security hardening enhancements. HPE recommends upgrading your device firmware to this version to improve the firmware security and reliability of your device.

New features and changes included in version 16.35.3006:

- o Enabled ACS for single port cards.
- o Added vPort counters after creating the LAG demux table to count kernel packets reaching all the PFs participating in the LAG.

Supported Devices and Features

This software package contains the following firmware versions:

| Mellanox Ethernet Only Adapters | Firmware Version | PSID |
|--|-------------------------|---------------|
| HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter(P31246-B21 and P31246-H21) | 16.35.3006 | MT_0000000591 |

Mellanox Firmware Package (FWPKG) for HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter : HPE part numbers P23664-B21 and P23664-H21

Version: 20.37.1700 (**Recommended**)

Filename: 20_37_1700-MCX653105A-HDA_HPE_Ax.pldm.fwpkg

Important Note!

For PLDM enabled VPI (Virtual Protocol Interconnect) adapters supporting both InfiniBand mode and Ethernet modes, every firmware version is made available in two different formats at HPE.com:

1. HPE signed PLDM Firmware Package (.FWPKG filename extension) updatable via iLO.
2. Firmware binary (.bin filename extension) updatable via mstflint utility from the Operating System.

Choose the appropriate firmware file format based on your preference and what suits your environment.

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A list of known issues with this release is available at: <https://docs.nvidia.com/networking/display/ConnectX6Firmwarev20371014/Known+Issues>

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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

No fixes in this version.

Enhancements

Security Hardening Enhancements: This release contains important reliability improvements and security hardening enhancements. HPE recommends upgrading your device's firmware to this release to improve the firmware security and reliability of your device.

New features and changes included in version 20.37.1700:

- A new capability enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVMi.
- Updated the link maintenance flow to avoid high uncorrectable error rate.

Supported Devices and Features

This software package contains the following firmware versions:

| Mellanox InfiniBand Adapter | Firmware Version | PSID |
|---|-------------------------|---------------|
| HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter (P23664-B21 and P23664-H21) | 20.37.1700 | MT_0000000451 |

Mellanox Firmware Package (FWPKG) for HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter : HPE part numbers P31323-B21 and P31323-H21
 Version: 20.37.1700 **(Recommended)**
 Filename: 20_37_1700-MCX653435A-HDA_HPE_Ax.pldm.fwpkg

Important Note!

For PLDM enabled VPI (Virtual Protocol Interconnect) adapters supporting both InfiniBand mode and Ethernet modes, every firmware version is made available in two different formats at HPE.com:

1. HPE signed PLDM Firmware Package (.FWPKG filename extension) updatable via iLO.
2. Firmware binary (.bin filename extension) updatable via mstflint utility from the Operating System.

Choose the appropriate firmware file format based on your preference and what suits your environment.

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A list of known issues with this release is available at: <https://docs.nvidia.com/networking/display/ConnectX6Firmwarev20371014/Known+Issues>

Note: The firmware version xx.37.1014 is generic firmware distributed by NVIDIA and is not published by HPE. HPE does not recommend customers to use the version xx.37.1014, however the list of 'Known issues' remain the same between the versions xx.37.1700 and xx.37.1014.

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

No fixes in this version.

Enhancements

Security Hardening Enhancements: This release contains important reliability improvements and security hardening enhancements. HPE recommends upgrading your device's firmware to this release to improve the firmware security and reliability of your device.

New features and changes included in version 20.37.1700:

- A new capability enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVMI.
- Updated the link maintenance flow to avoid high uncorrectable error rate.

Supported Devices and Features

This software package contains the following firmware versions:

| Mellanox InfiniBand Adapter | Firmware Version | PSID |
|--|------------------|---------------|
| HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter (P31323-B21 and P31323-H21) | 20.37.1700 | MT_0000000592 |

Mellanox Firmware Package (FWPKG) for HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter : HPE part numbers P31324-B21 and P31324-H21
 Version: 20.37.1700 **(Recommended)**
 Filename: 20_37_1700-MCX653106A-HDA_HPE_Ax.pldm.fwpgk

Important Note!

For PLDM enabled VPI (Virtual Protocol Interconnect) adapters supporting both InfiniBand mode and Ethernet modes, every firmware version is made available in two different formats at HPE.com:

1. HPE signed PLDM Firmware Package (.FWPKG filename extension) updatable via iLO.
2. Firmware binary (.bin filename extension) updatable via mstflint utility from the Operating System.

Choose the appropriate firmware file format based on your preference and what suits your environment.

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 |
| 200GbE/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 | 200GbE/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 |

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A list of known issues with this release is available

at: <https://docs.nvidia.com/networking/display/ConnectX6Firmwarev20371014/Known+Issues>

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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

No fixes in this version.

Enhancements

Security Hardening Enhancements: This release contains important reliability improvements and security hardening enhancements. HPE recommends upgrading your device's firmware to this release to improve the firmware security and reliability of your device.

New features and changes included in version 20.37.1700:

- A new capability enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVMi.
- Updated the link maintenance flow to avoid high uncorrectable error rate.

Supported Devices and Features

This software package contains the following firmware versions:

| Mellanox InfiniBand Adapter | Firmware Version | PSID |
|--|-------------------------|---------------|
| HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 MCX653106A-HDAT Adapter(P31324-B21 and P31324-H21) | 20.37.1700 | MT_0000000594 |

Mellanox Firmware Package (FWPKG) for HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter : HPE part numbers P31348-B21 and P31348-H21

Version: 20.37.1700 (**Recommended**)

Filename: 20_37_1700-MCX653436A-HDA_HPE_Ax.pldm.fwpkg

Important Note!

For PLDM enabled VPI (Virtual Protocol Interconnect) adapters supporting both InfiniBand mode and Ethernet modes, every firmware version is made available in two different formats at HPE.com:

1. HPE signed PLDM Firmware Package (.FWPKG filename extension) updatable via iLO.
2. Firmware binary (.bin filename extension) updatable via mstflint utility from the Operating System.

Choose the appropriate firmware file format based on your preference and what suits your environment.

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 |
| 200GbE/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 | 200GbE/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 |

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A list of known issues with this release is available

at: <https://docs.nvidia.com/networking/display/ConnectX6Firmwarev20371014/Known+Issues>

Note: The firmware version xx.37.1014 is generic firmware distributed by NVIDIA and is not published by HPE. HPE does not recommend customers to use the version xx.37.1014, however the list of 'Known issues' remain the same between the versions xx.37.1700 and xx.37.1014.

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

No fixes in this version.

Enhancements

Security Hardening Enhancements: This release contains important reliability improvements and security hardening enhancements. HPE recommends upgrading your device's firmware to this release to improve the firmware security and reliability of your device.

New features and changes included in version 20.37.1700:

- A new capability enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVMI.
- Updated the link maintenance flow to avoid high uncorrectable error rate.

Supported Devices and Features

This software package contains the following firmware versions:

| Mellanox InfiniBand Adapter | Firmware Version | PSID |
|--|------------------|---------------|
| HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter (P31348-B21 and P31348-H21) | 20.37.1700 | MT_0000000593 |

Mellanox Firmware Package (FWPKG) for HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter : HPE part numbers P23665-B21 and P23665-H21

Version: 20.37.1700 (**Recommended**)

Filename: 20_37_1700-MCX653105A-ECA_HPE_Ax.pldm.fwpkg

Important Note!

For PLDM enabled VPI (Virtual Protocol Interconnect) adapters supporting both InfiniBand mode and Ethernet modes, every firmware version is made available in two different formats at HPE.com:

1. HPE signed PLDM Firmware Package (.FWPKG filename extension) updatable via iLO.
2. Firmware binary (.bin filename extension) updatable via mstflint utility from the Operating System.

Choose the appropriate firmware file format based on your preference and what suits your environment.

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A list of known issues with this release is available

at: <https://docs.nvidia.com/networking/display/ConnectX6Firmwarev20371014/Known+Issues>

Note: The firmware version xx.37.1014 is generic firmware distributed by NVIDIA and is not published by HPE. HPE does not recommend customers to use the version xx.37.1014, however the list of 'Known issues' remain the same between the versions xx.37.1700 and xx.37.1014.

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

No fixes in this version.

Enhancements

Security Hardening Enhancements: This release contains important reliability improvements and security hardening enhancements. HPE recommends upgrading your device's firmware to this release to improve the firmware security and reliability of your device.

New features and changes included in version 20.37.1700:

- A new capability enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVMI.
- Updated the link maintenance flow to avoid high uncorrectable error rate.

Supported Devices and Features

This software package contains the following firmware versions:

| Mellanox InfiniBand Adapter | Firmware Version | PSID |
|--|------------------|---------------|
| HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter (P23665-B21 and P23665-H21) | 20.37.1700 | MT_0000000452 |

Mellanox Firmware Package (FWPKG) for HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter : HPE part numbers P23666-B21 and P23666-H21

Version: 20.37.1700 **(Recommended)**

Filename: 20_37_1700-MCX653106A-ECA_HPE_Ax.pldm.fwpgk

Important Note!

For PLDM enabled VPI (Virtual Protocol Interconnect) adapters supporting both InfiniBand mode and Ethernet modes, every firmware version is made available in two different formats at HPE.com:

1. HPE signed PLDM Firmware Package (.FWPKG filename extension) updatable via iLO.
2. Firmware binary (.bin filename extension) updatable via mstflint utility from the Operating System.

Choose the appropriate firmware file format based on your preference and what suits your environment.

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 |

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A list of known issues with this release is available at: <https://docs.nvidia.com/networking/display/ConnectX6Firmwarev20371014/Known+Issues>

Note: The firmware version xx.37.1014 is generic firmware distributed by NVIDIA and is not published by HPE. HPE does not recommend customers to use the version xx.37.1014, however the list of 'Known issues' remain the same between the versions xx.37.1700 and xx.37.1014.

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

No fixes in this version.

Enhancements

Security Hardening Enhancements: This release contains important reliability improvements and security hardening enhancements. HPE recommends upgrading your device's firmware to this release to improve the firmware security and reliability of your device.

New features and changes included in version 20.37.1700:

- A new capability enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVM1.
- Updated the link maintenance flow to avoid high uncorrectable error rate.

Supported Devices and Features

This software package contains the following firmware versions:

| Mellanox InfiniBand Adapter | Firmware Version | PSID |
|--|-------------------------|---------------|
| HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT Adapter (P23666-B21 and P23666-H21) | 20.37.1700 | MT_0000000453 |

Mellanox Firmware Package (FWPKG) for Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE
Version: 22.37.1700 (**Recommended**)
Filename: 22_37_1700-MCX623105AS-VDA_Ax.pldm.fwpkg

Important Note!

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A list of known issues with this release is available at: <https://docs.nvidia.com/networking/display/ConnectX6DxFirmwarev22371014/Known+Issues>

Note: The firmware version xx.37.1014 is generic firmware distributed by NVIDIA and is not published by HPE. HPE does not recommend customers to use the version xx.37.1014, however the list of 'Known issues' remain the same between the versions xx.37.1700 and xx.37.1014.

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 22.37.1700:

- No ping in NODNIC VF when VLAN stripping was enabled.
- vDPA application initialization failed due to virtual queue creation failure. The failure came with the "0x8f7a: ring address translate failed" assert which indicates incorrect permission supplied by QEMU for virtual ring memory.
- CNP received, handled, and ignored counters in the hardware counters could not work after moving to Programmable Congestion Control mode.

Enhancements

New features and changes included in version 22.37.1700:

- Added a safety mechanism to prevent the link from getting stuck when receiving bad tuning results. In this case, the linkup flow is restarted and the mechanism retries to raise the link.
- Improved rate limit token re-distribution algorithm.
- Improved non-consumed bandwidth re-distribution.
- Added mergeable buffer support (VIRTIO_NET_F_MRG_RXBUF in virtio spec) for VDPA kernel mode to improve performance in case of large MTU such as 9K. The feature is disabled by default and must be manually enabled while creating or modifying the virtio device.

Note: For best performance, it is NOT recommended to enable the feature if the VDPA MTU is set to the default value (1500).

- A new capability that enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVMI.
- Added a flow rule that enables offloading of multicast traffic by broadcasting it to multi-Flow-Table in FDB.
- Enables a smooth and statically switch between PCC algorithms. In addition, the user can now switch between PCC algorithms while running traffic.
- Added support for running PCC firmware trace without saving and sending the DB strings to the tool with the following changes:
 - Added new string section to the user PCC image creation tool
 - Added the new PCC DB strings to MTRC access registers output
 - On the tool's part: added support to reading the string.db using the MTRC access registers
- Added support for 32 actions in the header modify pattern using bulk allocation.
- The software can explicitly set the SL of an RTT response packet, instead of it being taken from the RTT request packet's SL. The RTT response packet SL may be set/queried via the CONGESTION_CONTROL_HCA_NP_PARAMETER MAD.

Supported Devices and Features

| HPE Part Number | Mellanox Ethernet Only Adapters | PSID |
|-----------------|--|---------------|
| P10180-B21 | Mellanox MCX623105AS-VDAT Ethernet 200Gb 1-port QSFP56 Adapter for HPE | MT_0000000435 |

Mellanox Firmware Package (FWPKG) for Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE
Version: 22.37.1700 (**Recommended**)
Filename: 22_37_1700-MCX623106AS-CDA_Ax.pldm.fwpkg

Important Note!

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A list of known issues with this release is available at: <https://docs.nvidia.com/networking/display/ConnectX6DxFirmwarev22371014/Known+Issues>

Note: The firmware version xx.37.1014 is generic firmware distributed by NVIDIA and is not published by HPE. HPE does not recommend customers to use the version xx.37.1014, however the list of 'Known issues' remain the same between the versions xx.37.1700 and xx.37.1014.

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 22.37.1700:

- No ping in NODNIC VF when VLAN stripping was enabled.
- vDPA application initialization failed due to virtual queue creation failure. The failure came with the "0x8f7a: ring address translate failed" assert which indicates incorrect permission supplied by QEMU for virtual ring memory.
- CNP received, handled, and ignored counters in the hardware counters could not work after moving to Programmable Congestion Control mode.

Enhancements

New features and changes included in version 22.37.1700:

- Added a safety mechanism to prevent the link from getting stuck when receiving bad tuning results. In this case, the linkup flow is restarted and the mechanism retries to raise the link.
- Improved rate limit token re-distribution algorithm.
- Improved non-consumed bandwidth re-distribution.
- Added mergeable buffer support (VIRTIO_NET_F_MRG_RXBUF in virtio spec) for VDPA kernel mode to improve performance in case of large MTU such as 9K. The feature is disabled by default and must be manually enabled while creating or modifying the virtio device.

Note: For best performance, it is NOT recommended to enable the feature if the VDPA MTU is set to the default value (1500).

- A new capability that enables the VM to track and limit its Vport's activity. This is done using the new q_counters counter which enables aggregation of other Vport's from PF GVM1.
- Added a flow rule that enables offloading of multicast traffic by broadcasting it to multi-Flow-Table in FDB.
- Enables a smooth and statically switch between PCC algorithms. In addition, the user can now switch between PCC algorithms while running traffic.
- Added support for running PCC firmware trace without saving and sending the DB strings to the tool with the following changes:
 - Added new string section to the user PCC image creation tool
 - Added the new PCC DB strings to MTRC access registers output
 - On the tool's part: added support to reading the string.db using the MTRC access registers
- Added support for 32 actions in the header modify pattern using bulk allocation.
- The software can explicitly set the SL of an RTT response packet, instead of it being taken from the RTT request packet's SL. The RTT response packet SL may be set/queried via the CONGESTION_CONTROL_HCA_NP_PARAMETER MAD.

Supported Devices and Features

| HPE Part Number | Mellanox Ethernet Only Adapters | PSID |
|-----------------|--|---------------|
| P25960-B21 | Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE | MT_0000000437 |

Firmware - Storage Controller

Firmware Package - HPE Gen11 Boot Controller NS204i-u and HPE Gen10 Plus Boot Controller NS204i-p, NS204i-t, NS204i-r

Version: 1.2.14.1010 (**Recommended**)

Filename: HPE_NS204i_Gen11_1.2.14.1010_A.fwpkg

Important Note!

Current firmware has to be 1.0.14.1063 or later in order to enable PLDM firmware update functionality for the controller. Please find the smart component versions of 1.0.14.1063 in below link:

- Windows: <https://www.hpe.com/global/swpublishing/MTX-be195b2891724ec8bb72c8bb2>
- Linux: <https://www.hpe.com/global/swpublishing/MTX-269e14d0e2524277bf699f433>
- VMware: <https://www.hpe.com/global/swpublishing/MTX-1ffaca997cf248cd9f832a04c6>

Prerequisites

- iLO 6 version 1.10 or later is required for Gen11 servers.
- iLO 5 version 2.81 or later is required for Gen10 and Gen10 Plus servers

Enhancements

[Top](#)

Enable Redfish Write for Drive.SecureErase and Storage.ResetToDefault. Users are able to reset the controller through PLDM.

Firmware Package - HPE MR216i-o Gen11 Tri Mode Controller
Version: 52.24.3-4948 (**Recommended**)
Filename: HPE_MR216i-o_Gen11_52.24.3-4948_A.fwpkg

Important Note!

This firmware version to be used on HPE MR216i-o Gen11 Controller.

Fixes

- Fix a00127934en_us: HPE ProLiant Gen10 Plus Servers - Unable to Switch From LKM to EKM With MR Controllers When Boot Time Password is Set
- Fix an issue that Sanitize Block Erase on NVMe drive along with shutdown sequence may cause assertion in firmware.
- Fix an issue that GET Volume query from REST client may fail when multiple Volumes are configured on the controller
- Fix an issue that firmware throws error when setting WCE (Disk Write Cache) = 0 for JBOD drive.
- Fix an issue that HDD sensor shows temperature on 14-HD Max when there is no drive installed.
- Fix an issue that HII page may hang while there is pinned cache then do drives initialization and View Server Profile.
- Fix a rare issue that controller may not getting discovered when there is power loss during cache restoration from a previous power loss.
- Fix an issue that controller may hang and Online Controller Reset is triggered after running "storcli /cx set debug reset all" and then "storcli /cx get snapdump".
- Fix an issue that enable security on logical drive may enable security on other unrelated drives which were configured as Dedicated Spare drive for other secured logical drive before.
- Fix an issue that drive running sanitize overwrite may become Unconfigured Bad Unsupported after a cold boot
- Fix a rare issue that firmware may hit assertion failure when a drive causes IO issue and fails.
- Fix an issue that IML 1906 may be incorrectly logged when doing config clear and reboot.
- Fix an issue that NVMe drives may move to Unconfigured Bad state from Unconfigured Good during driver unload-reload.
- Fix an issue that SPDM GET_MEASUREMENTS command signature verification is failing at iLO

Enhancements

- DMTF PLDM Redfish Device Enablement enhancements
 - Support Volume Creation and Deletion by the following Redfish requests
 - POST VolumeCollection
 - DELETE Volume
 - GET Volume Capabilities
 - Added support for the following Redfish ACTION requests:
 - POST Storage.ResetToDefaults
 - POST Volume.Initialize
 - POST Drive.SecureErase
 - Added support for Redfish PATCH requests for the following properties:
 - PATCH Volume.DedicatedSpareDrives
 - PATCH Volume.DisplayName
 - PATCH Volume.ReadCachePolicy
 - PATCH Volume.WriteCachePolicy
 - PATCH Drive.HotspareType
 - PATCH Drive.LocationIndicatorActive
 - PATCH Drive.WriteCacheEnabled
- Support DMTF PLDM firmware update for drive

Firmware Package - HPE MR216i-p Gen11 Tri Mode Controller
Version: 52.24.3-4948 (**Recommended**)
Filename: HPE_MR216i-p_Gen11_52.24.3-4948_A.fwpkg

Important Note!

This firmware version to be used on HPE MR216i-p Gen11 Controller.

Fixes

- Fix a00127934en_us: HPE ProLiant Gen10 Plus Servers - Unable to Switch From LKM to EKM With MR Controllers When Boot Time Password is Set
- Fix an issue that Sanitize Block Erase on NVMe drive along with shutdown sequence may cause assertion in firmware.
- Fix an issue that GET Volume query from REST client may fail when multiple Volumes are configured on the controller

- Fix an issue that firmware throws error when setting WCE (Disk Write Cache) = 0 for JBOD drive.
- Fix an issue that HDD sensor shows temperature on 14-HD Max when there is no drive installed.
- Fix an issue that HII page may hang while there is pinned cache then do drives initialization and View Server Profile.
- Fix a rare issue that controller may not getting discovered when there is power loss during cache restoration from a previous power loss.
- Fix an issue that controller may hang and Online Controller Reset is triggered after running "storcli /cx set debug reset all" and then "storcli /cx get snapdump".
- Fix an issue that enable security on logical drive may enable security on other unrelated drives which were configured as Dedicated Spare drive for other secured logical drive before.
- Fix an issue that drive running sanitize overwrite may become Unconfigured Bad Unsupported after a cold boot
- Fix a rare issue that firmware may hit assertion failure when a drive causes IO issue and fails.
- Fix an issue that IML 1906 may be incorrectly logged when doing config clear and reboot.
- Fix an issue that NVMe drives may move to Unconfigured Bad state from Unconfigured Good during driver unload-reload.
- Fix an issue that SPDM GET_MEASUREMENTS command signature verification is failing at iLO

Enhancements

- DMTF PLDM Redfish Device Enablement enhancements
 - Support Volume Creation and Deletion by the following Redfish requests
 - POST VolumeCollection
 - DELETE Volume
 - GET Volume Capabilities
 - Added support for the following Redfish ACTION requests:
 - POST Storage.ResetToDefaults
 - POST Volume.Initialize
 - POST Drive.SecureErase
 - Added support for Redfish PATCH requests for the following properties:
 - PATCH Volume.DedicatedSpareDrives
 - PATCH Volume.DisplayName
 - PATCH Volume.ReadCachePolicy
 - PATCH Volume.WriteCachePolicy
 - PATCH Drive.HotspareType
 - PATCH Drive.LocationIndicatorActive
 - PATCH Drive.WriteCacheEnabled
- Support DMTF PLDM firmware update for drive

Firmware Package - HPE MR408i-o Gen11 Tri Mode Controller

Version: 52.24.3-4948 (**Recommended**)

Filename: HPE_MR408i-o_Gen11_52.24.3-4948_A.fwpkg

Important Note!

This firmware version to be used on HPE MR408i-o Gen11 Controller.

Fixes

- Fix a00127934en_us: HPE ProLiant Gen10 Plus Servers - Unable to Switch From LKM to EKM With MR Controllers When Boot Time Password is Set
- Fix an issue that Sanitize Block Erase on NVMe drive along with shutdown sequence may cause assertion in firmware.
- Fix an issue that GET Volume query from REST client may fail when multiple Volumes are configured on the controller
- Fix an issue that firmware throws error when setting WCE (Disk Write Cache) = 0 for JBOD drive.
- Fix an issue that HDD sensor shows temperature on 14-HD Max when there is no drive installed.
- Fix an issue that HII page may hang while there is pinned cache then do drives initialization and View Server Profile.
- Fix a rare issue that controller may not getting discovered when there is power loss during cache restoration from a previous power loss.
- Fix an issue that controller may hang and Online Controller Reset is triggered after running "storcli /cx set debug reset all" and then "storcli /cx get snapdump".
- Fix an issue that enable security on logical drive may enable security on other unrelated drives which were configured as Dedicated Spare drive for other secured logical drive before.
- Fix an issue that drive running sanitize overwrite may become Unconfigured Bad Unsupported after a cold boot
- Fix a rare issue that firmware may hit assertion failure when a drive causes IO issue and fails.
- Fix an issue that IML 1906 may be incorrectly logged when doing config clear and reboot.
- Fix an issue that NVMe drives may move to Unconfigured Bad state from Unconfigured Good during driver unload-reload.
- Fix an issue that SPDM GET_MEASUREMENTS command signature verification is failing at iLO

Enhancements

- DMTF PLDM Redfish Device Enablement enhancements
 - Support Volume Creation and Deletion by the following Redfish requests
 - POST VolumeCollection

- DELETE Volume
 - GET Volume Capabilities
- Added support for the following Redfish ACTION requests:
 - POST Storage.ResetToDefaults
 - POST Volume.Initialize
 - POST Drive.SecureErase
- Added support for Redfish PATCH requests for the following properties:
 - PATCH Volume.DedicatedSpareDrives
 - PATCH Volume.DisplayName
 - PATCH Volume.ReadCachePolicy
 - PATCH Volume.WriteCachePolicy
 - PATCH Drive.HotspareType
 - PATCH Drive.LocationIndicatorActive
 - PATCH Drive.WriteCacheEnabled
- Support DMTF PLDM firmware update for drive

Firmware Package - HPE MR416i-o Gen11 Tri Mode Controller
 Version: 52.24.3-4948 **(Recommended)**
 Filename: HPE_MR416i-o_Gen11_52.24.3-4948_A.fwpkg

Important Note!

This firmware version to be used on HPE MR416i-o Gen11 Controller.

Fixes

- Fix a00127934en_us: HPE ProLiant Gen10 Plus Servers - Unable to Switch From LKM to EKM With MR Controllers When Boot Time Password is Set
- Fix an issue that Sanitize Block Erase on NVMe drive along with shutdown sequence may cause assertion in firmware.
- Fix an issue that GET Volume query from REST client may fail when multiple Volumes are configured on the controller
- Fix an issue that firmware throws error when setting WCE (Disk Write Cache) = 0 for JBOD drive.
- Fix an issue that HDD sensor shows temperature on 14-HD Max when there is no drive installed.
- Fix an issue that HII page may hang while there is pinned cache then do drives initialization and View Server Profile.
- Fix a rare issue that controller may not getting discovered when there is power loss during cache restoration from a previous power loss.
- Fix an issue that controller may hang and Online Controller Reset is triggered after running "storcli /cx set debug reset all" and then "storcli /cx get snapdump".
- Fix an issue that enable security on logical drive may enable security on other unrelated drives which were configured as Dedicated Spare drive for other secured logical drive before.
- Fix an issue that drive running sanitize overwrite may become Unconfigured Bad Unsupported after a cold boot
- Fix a rare issue that firmware may hit assertion failure when a drive causes IO issue and fails.
- Fix an issue that IML 1906 may be incorrectly logged when doing config clear and reboot.
- Fix an issue that NVMe drives may move to Unconfigured Bad state from Unconfigured Good during driver unload-reload.
- Fix an issue that SPDM GET_MEASUREMENTS command signature verification is failing at iLO

Enhancements

- DMTF PLDM Redfish Device Enablement enhancements
 - Support Volume Creation and Deletion by the following Redfish requests
 - POST VolumeCollection
 - DELETE Volume
 - GET Volume Capabilities
 - Added support for the following Redfish ACTION requests:
 - POST Storage.ResetToDefaults
 - POST Volume.Initialize
 - POST Drive.SecureErase
 - Added support for Redfish PATCH requests for the following properties:
 - PATCH Volume.DedicatedSpareDrives
 - PATCH Volume.DisplayName
 - PATCH Volume.ReadCachePolicy
 - PATCH Volume.WriteCachePolicy
 - PATCH Drive.HotspareType
 - PATCH Drive.LocationIndicatorActive
 - PATCH Drive.WriteCacheEnabled
- Support DMTF PLDM firmware update for drive

Firmware Package - HPE MR416i-p Gen11 Tri Mode Controller
 Version: 52.24.3-4948 **(Recommended)**

Important Note!

This firmware version to be used on HPE MR416i-p Gen11 Controller.

Fixes

- Fix a00127934en_us: HPE ProLiant Gen10 Plus Servers - Unable to Switch From LKM to EKM With MR Controllers When Boot Time Password is Set
- Fix an issue that Sanitize Block Erase on NVMe drive along with shutdown sequence may cause assertion in firmware.
- Fix an issue that GET Volume query from REST client may fail when multiple Volumes are configured on the controller
- Fix an issue that firmware throws error when setting WCE (Disk Write Cache) = 0 for JBOD drive.
- Fix an issue that HDD sensor shows temperature on 14-HD Max when there is no drive installed.
- Fix an issue that HII page may hang while there is pinned cache then do drives initialization and View Server Profile.
- Fix a rare issue that controller may not getting discovered when there is power loss during cache restoration from a previous power loss.
- Fix an issue that controller may hang and Online Controller Reset is triggered after running "storcli /cx set debug reset all" and then "storcli /cx get snapdump".
- Fix an issue that enable security on logical drive may enable security on other unrelated drives which were configured as Dedicated Spare drive for other secured logical drive before.
- Fix an issue that drive running sanitize overwrite may become Unconfigured Bad Unsupported after a cold boot
- Fix a rare issue that firmware may hit assertion failure when a drive causes IO issue and fails.
- Fix an issue that IML 1906 may be incorrectly logged when doing config clear and reboot.
- Fix an issue that NVMe drives may move to Unconfigured Bad state from Unconfigured Good during driver unload-reload.
- Fix an issue that SPDM GET_MEASUREMENTS command signature verification is failing at iLO

Enhancements

- DMTF PLDM Redfish Device Enablement enhancements
 - Support Volume Creation and Deletion by the following Redfish requests
 - POST VolumeCollection
 - DELETE Volume
 - GET Volume Capabilities
 - Added support for the following Redfish ACTION requests:
 - POST Storage.ResetToDefaults
 - POST Volume.Initialize
 - POST Drive.SecureErase
 - Added support for Redfish PATCH requests for the following properties:
 - PATCH Volume.DedicatedSpareDrives
 - PATCH Volume.DisplayName
 - PATCH Volume.ReadCachePolicy
 - PATCH Volume.WriteCachePolicy
 - PATCH Drive.HotspareType
 - PATCH Drive.LocationIndicatorActive
 - PATCH Drive.WriteCacheEnabled
- Support DMTF PLDM firmware update for drive

Firmware - Storage Fibre Channel

[Top](#)

HPE Firmware Flash for Emulex 32Gb and 64Gb Fibre Channel Host Bus Adapters

Version: 14.2.589.5 **(Recommended)**

Filename: P14.2.589.5_header.pldm.fwpkg

Important Note!

This component is supported only on Gen11 ProLiant servers.

Release notes:

[Broadcom Release notes](#)

This Firmware package contains following firmware versions:

| Adapter | Speed | Universal Boot Image | Firmware | UEFI | Boot Bios |
|---|-------|----------------------|------------|------------|------------|
| HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter | 32Gb | 14.2.589.5 | 14.2.589.5 | 14.2.579.0 | 14.2.566.0 |
| HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter | 32Gb | 14.2.589.5 | 14.2.589.5 | 14.2.579.0 | 14.2.566.0 |
| HPE SN1700E 64Gb Single Port Fibre Channel Host Bus | | | | | |

| | | | | | |
|---|------|------------|------------|------------|------------|
| Adapter | 64Gb | 14.2.589.5 | 14.2.589.5 | 14.2.579.0 | 14.2.566.0 |
| HPE SN1700E 64Gb Dual Port Fibre Channel Host Bus Adapter | 64Gb | 14.2.589.5 | 14.2.589.5 | 14.2.579.0 | 14.2.566.0 |

Added support for:

RedHat Enterprise Linux 8.8

RedHat Enterprise Linux 9.2

SuSE Linux Enterprise Server 15 SP5

Enhancements

This Firmware package contains following firmware versions:

| Adapter | Speed | Universal Boot Image | Firmware | UEFI | Boot Bios |
|---|-------|----------------------|------------|------------|------------|
| HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter | 32Gb | 14.2.589.5 | 14.2.589.5 | 14.2.579.0 | 14.2.566.0 |
| HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter | 32Gb | 14.2.589.5 | 14.2.589.5 | 14.2.579.0 | 14.2.566.0 |
| HPE SN1700E 64Gb Single Port Fibre Channel Host Bus Adapter | 64Gb | 14.2.589.5 | 14.2.589.5 | 14.2.579.0 | 14.2.566.0 |
| HPE SN1700E 64Gb Dual Port Fibre Channel Host Bus Adapter | 64Gb | 14.2.589.5 | 14.2.589.5 | 14.2.579.0 | 14.2.566.0 |

Added support for:

RedHat Enterprise Linux 8.8

RedHat Enterprise Linux 9.2

SuSE Linux Enterprise Server 15 SP5

Supported Devices and Features

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

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1610E 32Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter

64Gb Fibre Channel Host Bus Adapter:

- HPE SN1700E 64Gb Dual port Fibre Channel Host Bus Adapter
- HPE SN1700E 64Gb Single port Fibre Channel Host Bus Adapter

HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 8.0

Version: 2023.09.01 (**Recommended**)

Filename: CP056156.compsig; CP056156.zip

Important Note!

This component is supported only on Gen11 ProLiant servers.

Release Notes:

[HPE QLogic Adapters Release Notes](#)

This Firmware package contains following firmware versions:

| Adapter | Speed | MBI | Firmware | UEFI | Boot Bios |
|---|-------|----------|----------|------|-----------|
| HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter | 32Gb | 02.08.05 | 09.12.01 | 7.34 | 0.0 |
| HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter | 32Gb | 02.08.05 | 09.12.01 | 7.34 | 0.0 |
| HPE SN1700Q 64Gb Dual Port Fibre Channel Host Bus Adapter | 64Gb | 02.08.05 | 09.12.01 | 7.34 | 0.0 |
| HPE SN1700Q 64Gb Single Port Fibre Channel Host Bus Adapter | 64Gb | 02.08.05 | 09.12.01 | 7.34 | 0.0 |

Fixed the following behavior:

Temperature Misreading: the adapter was reading incorrect reading of the temperature on the HPE SN1610Q 32Gb Fibre Channel Host Bus adapter's Small Form-factor Pluggable. The symptom would result in a temperature spike and potentially reset the system

Enhancements:

Non-disruptive firmware upgrades: non-disruptive firmware updates is enabled and will not require a server reboot to apply.

Prerequisites

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

<http://www.hpe.com/storage/spock/>

The HPE supplied Qlogic driver must be installed prior to this firmware component being identified by SUM for deployment. The OOB driver is available on the Service Pack for ProLiant (SPP) which is available at <http://www.hpe.com/servers/spp/download/>

Fixes

Fixed the following behavior:

Temperature Misreading: the adapter was reading incorrect reading of the temperature on the HPE SN1610Q 32Gb Fibre Channel Host Bus adapter's Small Form-factor Pluggable. The symptom would result in a temperature spike and potentially reset the system

Enhancements

This Firmware package contains following firmware versions:

| Adapter | Speed | MBI | Firmware | UEFI | Boot Bios |
|---|-------|----------|----------|------|-----------|
| HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter | 32Gb | 02.08.05 | 09.12.01 | 7.34 | 0.0 |
| HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter | 32Gb | 02.08.05 | 09.12.01 | 7.34 | 0.0 |
| HPE SN1700Q 64Gb Dual Port Fibre Channel Host Bus Adapter | 64Gb | 02.08.05 | 09.12.01 | 7.34 | 0.0 |
| HPE SN1700Q 64Gb Single Port Fibre Channel Host Bus Adapter | 64Gb | 02.08.05 | 09.12.01 | 7.34 | 0.0 |

Non-disruptive firmware upgrades: non-disruptive firmware updates is enabled and will not require a server reboot to apply.

Supported Devices and Features

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

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

64Gb Fibre Channel Host Bus Adapter:

- HPE SN1700Q 64Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1700Q 64Gb Single Port Fibre Channel Host Bus Adapter

Software - Management

[Top](#)

HPE Agentless Management Bundle Smart Component on ESXi for Gen11 Servers

Version: 2023.09.01 **(Recommended)**

Filename: cp057940.compsig; cp057940.zip

Fixes

- Fixed incorrect slot type is displayed on Gen11 SR416ie-m and SR932i-p storage controllers.

HPE iLO Driver Bundle Smart Component for ESXi 7.0

Version: 2023.09.00 **(Recommended)**

Filename: cp058423.compsig; cp058423.zip

Enhancements

- Added support for vSphere 8.0U2.

Software - Storage Controller

[Top](#)

HPE MegaRAID Storage Administrator StorCLI for VMware8.0 (For Gen10P and Gen11 Controllers)

Version: 2023.05.01 (**Recommended**)

Filename: cp055716.compsig; cp055716.zip

Enhancements

Initial Release.

Software - Storage Fibre Channel

[Top](#)

HPE QLogic Fibre Channel driver component for VMware vSphere 8.0

Version: 2023.06.01 (**Recommended**)

Filename: cp054983.compsig; cp054983.zip

Important Note!

This component is supported only on Gen11 ProLiant servers.

Release Notes:

[HPE QLogic Adapters Release Notes](#)

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

Prerequisites

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

<http://www.hpe.com/storage/spock/>

Enhancements

Driver version 5.4.81.2_1

Supported Devices and Features

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

32Gb Fibre Channel Host Bus Adapter:

- HPE SN1610Q 32Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter

64Gb Fibre Channel Host Bus Adapter:

- HPE SN1700Q 64Gb Dual Port Fibre Channel Host Bus Adapter
 - HPE SN1700Q 64Gb Single Port Fibre Channel Host Bus Adapter
-

Software - System Management

[Top](#)

HPE Agentless Management Bundle for ESXi on Gen11

Version: 701.11.5.0 (**Recommended**)

Filename: amsdvComponent_701.11.5.0.2-1_22267107.zip

Fixes

- Fixed incorrect slot type is displayed on Gen11 SR416ie-m and SR932i-p storage controllers.
-

Integrated Smart Update Tools for VMware ESXi 8.0

Version: 800.4.5.0 (**Recommended**)

Filename: sutComponent_800.4.5.0.22-0-signed_component-22307014.zip

Important Note!

Integrated Smart Update Tools for ESXi 8.0 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.

Get connected

hpe.com/info/getconnected

Current HPE driver, support, and security alerts delivered directly to your desktop

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