VMware Deliverable Release Notes

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:

OS Support Tool for HPE Synergy

Information on HPE Synergy Software Releases is available at:

HPE Synergy Software Releases - Overview

Gen11 SPP 2024.11.00.00 Release Notes for VMware ESXi 7.0

BIOS - System ROM Driver - Lights-Out Management Driver - Network Driver - Storage Controller Firmware - Network Firmware - Storage Controller Firmware - Storage Fibre Channel Software - Management Software - Storage Controller Software - Storage Fibre Channel Software - Storage Fibre Channel Software - Storage Fibre Channel Software - System Management

BIOS - System ROM

ROM Flash Firmware Package - HPE ProLiant DL110 Gen11 (U62) Servers Version: 2.34_10-04-2024 (**Recommended**) Filename: U62_2.34_10_04_2024.fwpkg

Important Note!

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Deliverable Name:

HPE DL110 Gen11 System ROM - U62

Release Version:

2.34_10-04-2024

Last Recommended or Critical Revision:

2.34_10-04-2024

Previous Revision:

2.32_09-09-2024

Firmware Dependencies:

None

Enhancements/New Features:

Added Zilia DIMM manufacturer ID for SMBIOS information.

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

<u>Fixes</u>

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

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Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

Enhancements

Added Zilia DIMM manufacturer ID for SMBIOS information.

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ROM Flash Firmware Package - HPE ProLiant DL320/ML110 Gen11 (U63) Servers Version: 2.34_10-04-2024 (Recommended) Filename: U63 2.34 10 04 2024.fwpkg
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Important Note!

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Deliverable Name:

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

Release Version:

2.34_10-04-2024

Last Recommended or Critical Revision:

2.34_10-04-2024

Previous Revision:

2.32_09-09-2024

Firmware Dependencies:

None

Enhancements/New Features:

Added Zilia DIMM manufacturer ID for SMBIOS information.

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

<u>Fixes</u>

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

Enhancements

Added Zilia DIMM manufacturer ID for SMBIOS information.

```
ROM Flash Firmware Package - HPE Alletra 4110/Alletra 4120/ProLiant DL380a Gen11 (U58) Servers Version: 2.34_10-04-2024 (Recommended) Filename: U58_2.34_10_04_2024.fwpkg
```

Important Note!

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Deliverable Name:

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

Release Version:

2.34_10-04-2024

Last Recommended or Critical Revision:

2.34_10-04-2024

Previous Revision:

2.32_09-09-2024

Firmware Dependencies:

None

Enhancements/New Features:

Added Zilia DIMM manufacturer ID for SMBIOS information.

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

<u>Fixes</u>

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

Enhancements

Added Zilia DIMM manufacturer ID for SMBIOS information.

ROM Flash Firmware Package - HPE Alletra 4140 (U57) Servers Version: 2.34_10-04-2024 (**Recommended**) Filename: U57_2.34_10_04_2024.fwpkg

Important Note!

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Deliverable Name:

HPE Alletra 4140 System ROM - U57

Release Version:

2.34 10-04-2024

Last Recommended or Critical Revision:

2.34_10-04-2024

Previous Revision:

2.32_09-09-2024

Firmware Dependencies:

None

Enhancements/New Features:

Added Zilia DIMM manufacturer ID for SMBIOS information.

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

<u>Fixes</u>

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

Enhancements

Added Zilia DIMM manufacturer ID for SMBIOS information.

ROM Flash Firmware Package - HPE ProLiant DL560 Gen11 (U59) Servers Version: 2.34_10-04-2024 (**Recommended**) Filename: U59_2.34_10_04_2024.fwpkg

Important Note!

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Deliverable Name:

HPE DL560 Gen11 System ROM - U59

Release Version:

2.34_10-04-2024

Last Recommended or Critical Revision:

2.34_10-04-2024

Previous Revision:

2.32_09-09-2024

Firmware Dependencies:

None

Enhancements/New Features:

Added Zilia DIMM manufacturer ID for SMBIOS information.

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

<u>Fixes</u>

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

Enhancements

Added Zilia DIMM manufacturer ID for SMBIOS information.

ROM Flash Firmware Package - HPE ProLiant ML350/DL360/DL380 Gen11 (U54) Servers Version: 2.34_10-04-2024 (**Recommended**) Filename: U54_2.34_10_04_2024.fwpkg

Important Note!

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Deliverable Name:

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

Release Version:

2.34_10-04-2024

Last Recommended or Critical Revision:

2.34_10-04-2024

Previous Revision:

2.32_09-09-2024

Firmware Dependencies:

None

Enhancements/New Features:

Added Zilia DIMM manufacturer ID for SMBIOS information.

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option

cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

<u>Fixes</u>

Important Notes:

This version of the System ROM should be paired with Server Platform Services (SPS) Firmware 06.01.04.047.0 (2.20_03_26_2024).

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where the firmware version and status in device inventory show incorrectly after setting bifurcation for option cards.

Addressed an issue where the product name information in Device Inventory of iLO web may show unknown or blank for M.2 drives.

Addressed an issue where ilorest BIOS attributes PersistentMemScanMem, PersistentMemAddressRangeScrub and PersistentMemNumaAffinity may present randomly.

Fixed an issue where the iLO firmware version may show incorrectly.

Fixed an issue where system may not have an evenly distributed NUMA node assignments among PCI slots for virtual NUMA mode.

Known Issues:

Enhancements

Added Zilia DIMM manufacturer ID for SMBIOS information.

ROM Flash Universal Firmware Package - HPE ProLiant DL145 Gen11 (A58) Servers Version: 1.30_10-04-2024 (**Optional**) Filename: A58_1.30_10_04_2024.fwpkg

Important Note!

Important Notes:

This revision of the System ROM includes AMD reference code GenoaPI 1.0.0.D for AMD 4th Generation EPYC processors.

Deliverable Name:

HPE DL145 Gen11 System ROM - A58

Release Version:

1.30_10-04-2024

Last Recommended or Critical Revision:

1.20_08-09-2024

Previous Revision:

1.20_08-09-2024

Firmware Dependencies:

None

Enhancements/New Features:

Added Redfish API for Boot Progress.

Problems Fixed:

Addressed an issue where System Information\Device Inventory in iLO web may show unknown entries after enabling bifurcation.

Addressed an issue where One button secure erase (OBSE) report may show incorrect Drive Port Number and Box Number for MicroChip SR controllers.

Addressed an issue where system may become stuck after enrolling many certificates and signatures.

Known Issues:

None

<u>Fixes</u>

Important Notes:

This revision of the System ROM includes AMD reference code GenoaPI 1.0.0.D for AMD 4th Generation EPYC processors.

Firmware Dependencies:

None

Problems Fixed:

Addressed an issue where System Information\Device Inventory in iLO web may show unknown entries after enabling bifurcation.

Addressed an issue where One button secure erase (OBSE) report may show incorrect Drive Port Number and Box Number for MicroChip SR controllers.

Addressed an issue where system may become stuck after enrolling many certificates and signatures.

Known Issues:

None

Enhancements

Added Redfish API for Boot Progress.

ROM Flash Universal Firmware Package - HPE ProLiant DL325/DL345 Gen11 (A56) Servers Version: 2.10_09-11-2024 (**Recommended**) Filename: A56_2.10_09_11_2024.fwpkg

Important Note!

Important Notes:

Initial version to support AMD 5th Generation EPYC processors. This revision of the System ROM includes AMD reference code TurinPI 1.0.0.0 for AMD 5th Generation EPYC processors.

Deliverable Name:

HPE ProLiant DL325 Gen11/DL345 Gen11 System ROM - A56

Release Version:

2.10_09-11-2024

Last Recommended or Critical Revision:

2.10_09-11-2024

Previous Revision:

1.70_09-05-2024

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version to support AMD 5th Generation EPYC processors.

Problems Fixed:

None

Known Issues:

None

Enhancements

Important Notes:

Initial version to support AMD 5th Generation EPYC processors. This revision of the System ROM includes AMD reference code TurinPI 1.0.0.0 for AMD 5th Generation EPYC processors.

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version to support AMD 5th Generation EPYC processors.

Known Issues:

None

ROM Flash Universal Firmware Package - HPE ProLiant DL365/DL385 Gen11 (A55) Servers Version: 2.14_10-11-2024 (**Recommended**) Filename: A55_2.14_10_11_2024.fwpkg

Important Note!

Important Notes:

Initial version to support AMD 5th Generation EPYC processors. This revision of the System ROM includes AMD reference code GenoaPI 1.0.0.0 for AMD 5th Generation EPYC processors.

Deliverable Name:

HPE DL385 Gen11/DL365 Gen11 System ROM - A55

Release Version:

2.14_10-11-2024

Last Recommended or Critical Revision:

2.14_10-11-2024

Previous Revision:

2.10_09-11-2024

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version to support AMD 5th Generation EPYC processors.

Problems Fixed:

None

Known Issues:

None

Enhancements

Important Notes:

Initial version to support AMD 5th Generation EPYC processors. This revision of the System ROM includes AMD reference code GenoaPI 1.0.0.0 for AMD 5th Generation EPYC processors.

Firmware Dependencies:

None

Enhancements/New Features:

This is the initial version to support AMD 5th Generation EPYC processors.

Known Issues:

None

Driver - Lights-Out Management HPE iLO Native Driver for ESXi 7.0

Version: 10.8.2 (Recommended)

Filename: ilo-driver_700.10.8.2.2-10EM.700.1.0.15843807_22942561.zip

<u>Fixes</u>

This product addressed a memory leak in vmkernel.

Driver - Network

HPE Broadcom NetXtreme-E Drivers for VMware vSphere 7.0 Version: 2024.09.00 (**Recommended**) Filename: cp062100.compsig; cp062100.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, 230.1.123000 or later, for use with this driver.

<u>Fixes</u>

This product addresses the problem to enabling NPAR+ SRIOV (more than supported VFs through Driver) causes system failure.

Enhancements

- This product enhances RoCE command size trimming.
- This product enhances driver logging to capture non-supported dual-rate transceiver async errors.

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 7.0 Version: 2024.09.00 (**Recommended**) Filename: cp062162.compsig; cp062162.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 3.24.0 or later, for use with this driver.

Enhancements

Top

Тор

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 7.0 Version: 2024.09.00 **(Recommended)** Filename: cp061667.compsig; cp061667.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 4.50 or later, for use with these drivers.

<u>Fixes</u>

This product fixed an issue which NIC port was in autonegotiation mode, many DOWN/UP sequences was applied by the link partner, and NIC port remained in DOWN state randomly.

Enhancements

This product added a warning message when RDMA critical error occurs.

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

Nvidia ConnectX-4, ConnectX-5, ConnectX-6 and ConnectX-7 "nmlx5_en" Driver Component for VMware ESXi 7.0 Update 3 Version: 2024.05.28 (**Recommended**) Filename: cp061484.compsig; cp061484.zip

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Important Note!

Important: Version 4.22.73.1006 supports VMware ESXi 7.0 Update 3 only.

Known Issues with driver version 4.22.73.1006:

- Out-of-buffer packets are not being counted as Rx drops.
- Due to hardware limitations, Model 1 Level 2 and Model 2 for Enhanced Network Stack (ENS) mode in vSphere 8.0 is not supported in ConnectX-5 and ConnectX-6 adapter cards.
- The driver version in iDRAC is not displayed correctly.
- Geneve options length support is limited to 56B. Received packets with options length bigger than 56B are dropped.
- 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 <vmnic_name>' command reports the 'Auto negotiation' capability always as 'true'.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- Although the max_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs per single port devices:
 - ConnectX-4 / ConnectX-5: up to 127

<u>Fixes</u>

The following issues have been fixed in driver version 4.22.73.1006:

- Performance issues were observed due to context switches over the hardware priority buffers that caused slower packet being sent when sending traffic with many different VLAN (CoS PCP/801.2p) priorities. To fix the issue, the driver provides a new module parameter trust_dscp_same_priority to map all DSCP priorities to the same traffic class to avoid such behavior.
 A specific steering rule creation issue when the teaming mode is on.
- Packets were dropped by ENS that were not set as MARK. Now MARK actions are available in both LAG and no LAG modes.

Enhancements

Supported Devices and Features

HPE Part Number	Device Name	PSID
P24837-B21	HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter	HPE0000000054
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HP_1200111023
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
817749-B21	HPE Ethernet 10/25Gb 2-port FLR-SFP28 MCX4121A-ACFT Adapter	HP_2690110034
817753-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX4121A-ACUT Adapter	HP_2420110034
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417
P10112-B21	Mellanox MCX562A-ACAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	MT_0000000241
P13188-B21	Mellanox MCX512F-ACHT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	MT_0000000416
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_000000238
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
874253-B21	HPE Ethernet 100Gb 1-port QSFP28 MCX515A-CCAT Adapter	HPE0000000014
P25960-B21	Mellanox MCX623106AS-CDAT Ethernet 100Gb 2-port QSFP56 Adapter for HPE	MT_0000000437
P06154-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe3 x16 MCX653105A-HDAT Adapter	HPE000000034
P06250-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe3 x16 MCX653105A-ECAT Adapter	HPE000000035
P06251-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe3 x16 MCX653106A-ECAT Adapter	HPE000000036
P23664-B21	HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 MCX653105A-HDAT Adapter	MT_0000000451
P23665-B21	HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter	MT_0000000452
P23666-B21	HPE InfiniBand HDR100/Ethernet 100Gb 2-port QSFP56 PCIe4 x16 MCX653106A-ECAT 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	
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
P42041-B21	Mellanox MCX631432AS-ADAI Ethernet 10/25Gb 2-port SFP28 OCP3 Adapter for HPE	MT_0000000551
P42044-B21	Mellanox MCX631102AS-ADAT Ethernet 10/25Gb 2-port SFP28 Adapter for HPE	MT_0000000575
P65333-B21	HPE InfiniBand NDR200/Ethernet 200GbE 2-port QSFP112 PCIe5 x16 MCX755106AC-HEAT Adapter	MT_0000001108
P45642-B22	HPE InfiniBand NDR200/Ethernet 200Gb 1-port OSFP PCIe5 x16 MCX75310AAS-HEAT Adapter	MT_0000001119
P45641-B23	HPE InfiniBand NDR/Ethernet 400Gb 1-port OSFP PCIe5 x16 MCX75310AAS-NEAT Adapter	MT_0000001120

Driver - Storage Controller

HPE MR416i-p, MR416i-o, MR216i-o, MR408i-o, MR216i-p Gen10P and Gen11 controller (64-bit) Driver for vSphere 7.0 Version: 2024.10.01 (**Recommended**) Filename: cp060850.compsig; cp060850.zip

Important Note!

• This new 7.28 release have not completed vSAN certification, please don't update for vSAN environment for now. Target to complete vSAN certification by end of December 2024.

<u>Fixes</u>

• Fix an issue that controller may stuck in boot state and cause unexpected controller reset when there is OCR (online controller reset). OCR can happen when doing online firmware update.

Enhancements

• New release for version 7.728.02.00.

HPE ProLiant Gen10 Smart Array and Gen10 Plus and Gen11 Smart RAID Controller Driver for VMware vSphere 7.0 (Driver Component). Version: 2024.10.01 (**Recommended**) Filename: cp059501.compsig; cp059501.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.
- Actual ESXi Version is 70.4672.0.104

<u>Fixes</u>

- Fixed an issue where a PSOD occurred during array delete operations.
- Fixed an issue where failed logical volumes take too long to be removed at the OS level.
- Fixed an issue where NVMe drives were not discovered after hot-plug operation.
- Fixed a potential data loss risk for SmartCache Logical Drives configured in WriteBack mode during shutdown.

Firmware - Network

Broadcom NX1 Online Firmware Upgrade Utility for VMware Version: 1.39.0 (**Recommended**) Filename: CP062085.compsig; CP062085.zip

Important Note!

This software package contains combo image v20.30.41 with the following firmware versions:

NIC	Boot Code Version	PXE Version	NCSI Version	UEFI Version
BCM 5719 1GbE 4p BASE-T Adptr	1.55	21.6.4	1.5.55	21.6.74
BCM 5719 1GbE 4p BASE-T OCP3 Adptr	1.55	21.6.4	1.5.55	21.6.74
BCM 5719 1GbE 4p BASE-T LOM Adptr	1.55	21.6.4	1.5.55	21.6.74
BCM 5720 1GbE 2p BASE-T LOM Adptr	1.43	21.6.4	1.5.55	21.6.74

<u>Top</u>

Тор

Prerequisites

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

<u>Fixes</u>

- This product addresses a problem that might cause a BSOD when trying to reboot the system from operating Windows systems due to NIC internal software mutex problem.
- This product addresses an issue where a random missing DHCP IP address occurs when the iLO shared NIC port is used, due to NIC internal software mutex problem.
- This product addresses an issue that might cause the POST to get stuck due to NIC internal software mutex problem.

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

HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware Version: 226.1.107.0 (**Recommended**) Filename: CP062143.compsig; CP062143.zip

Important Note!

HPE recommends HPE Broadcom NetXtreme-E Drivers for VMware, versions 2023.09.00 or later, for use with this firmware.

This software package contains NVM Image version 226.1.107000 with the following firmware versions:

NIC	Bootcode Version	NCSI Version	MBA Version	UEFI Version	RoCE Version
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 OCP3 Adapter	226.0.145.0		226.0.135.0	226.0.135.0	226.0.145.0
HPE Ethernet 10/25Gb 2-port SFP28 BCM57414 Adapter		226.0.145.0			
HPE Ethernet 10Gb 2-port BaseT BCM57416 OCP3 Adapter					
HPE Ethernet 10Gb 2-port BaseT BCM57416 Adapter					
HPE Ethernet 10Gb 2-port SFP+ BCM57412 OCP3 Adapter					
HPE Ethernet 10Gb 2-port SFP+ BCM57412 Adapter					
HPE Ethernet 10/25Gb 4-port SFP28 BCM57504 Adapter					
HPE Ethernet 10/25Gb 4-port SFP28 BCM57504 OCP3 Adapter					

<u>Prerequisites</u>

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

<u>Fixes</u>

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

Intel Online Firmware Upgrade Utility for VMware Version: 3.24.0 (**Recommended**) Filename: CP061688.compsig; CP061688.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	8000F134	1.3602.0	9.50
HPE Ethernet 10Gb 2-port SFP+ X710-DA2 Adapter	8000F13D	1.3602.0	9.50
Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter	800011F8	1.3602.0	N/A
Intel I350-T4 Ethernet 1Gb 4-port BASE-T OCP3 Adapter	80001234	1.3602.0	N/A
Intel(R) I350 Gigabit Network Connection (2-port)	8000119C	1.3602.0	N/A
Intel(R) I350 Gigabit Network Connection (4-port)	8000119D	1.3602.0	N/A

The combo image v1.3602.0 includes: Boot Agent: 1GbE - v1.5.90, 10GbE - v2.4.54, 40GbE - v1.1.45 & UEFI Drivers: 1GbE - v9.8.52, 10GbE - v8.2.46, 40GbE - v5.0.04

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 enhanced the compatibility with the latest drivers.

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) for HPE Ethernet 100Gb 1-port QSFP28 PCIe3 x16 MCX515A-CCAT Adapter : HPE part numbers P31246-B21 and P31246-H21

Version: 16.35.4030 (Recommended)

Filename: 16_35_4030-MCX515A-CCA_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/connectx5firmwarev16354030lts/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.

<u>Fixes</u>

The following issues have been fixed in version 16.35.4030:

- VF FLR would get stuck when its PF triggered the FLR as well.
- Unexpected source UDP port appeared in RoCE packets when the firmware ignored a non-PF driver configuration for RoCE source UDP port control (as set in SET_HCA_CAP.sw_r_roce_src_udp_port).

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 16.35.4030:

• Added support for postponing QP timeout "retry exceeded" errors for traffic directed at specific destinations. This new capability prevents broken connections for destinations in downtime because of live migration.

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)	16.35.4030	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: 20.42.1000 (Recommended)

Filename: 20_42_1000-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: <u>https://docs.nvidia.com/networking/display/connectx6firmwarev20421000/known+issues</u>

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 20.42.1000:

- RDE PortMetrics property Transceivers. SupplyVoltage was reflected in incorrect units of 100uV instead of V.
- HCA_CAP allowed rogue drivers to create more EQs than the number allowed in the HCA_CAP.max_num_eqs.
- Incorrect MPLS packets discards flow when the GLOBAL pause capability was disabled.

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 20.42.1000:

- Added a new command interface "Memory slow release" to enable/disable holding memory pages for a defined period of time. Once the timer expires, the firmware will return the pages to the driver.
- Added support for MVTS register via a miscellaneous driver using the access_register PRM command.

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)	20.42.1000	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: 20.42.1000 (Recommended)

Filename: 20_42_1000-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: <u>https://docs.nvidia.com/networking/display/connectx6firmwarev20421000/known+issues</u>

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.

<u>Fixes</u>

The following issues have been fixed in version 20.42.1000:

- RDE PortMetrics property Transceivers.SupplyVoltage was reflected in incorrect units of 100uV instead of V.
- HCA_CAP allowed rogue drivers to create more EQs than the number allowed in the HCA_CAP.max_num_eqs.
- Incorrect MPLS packets discards flow when the GLOBAL pause capability was disabled.

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 20.42.1000:

- Added a new command interface "Memory slow release" to enable/disable holding memory pages for a defined period of time. Once the timer expires, the firmware will return the pages to the driver.
- Added support for MVTS register via a miscellaneous driver using the access_register PRM command.

Supported Devices and Features

This software package contains the following firmware versions:

	Firmware Version	PSID
HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 OCP3 MCX653435A-HDAI Adapter (P31323-B21 and P31323-H21)	20.42.1000	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: 20.42.1000 (Recommended)

Filename: 20 42 1000-MCX653106A-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: <u>https://docs.nvidia.com/networking/display/connectx6firmwarev20421000/known+issues</u>

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.

<u>Fixes</u>

The following issues have been fixed in version 20.42.1000:

- RDE PortMetrics property Transceivers. SupplyVoltage was reflected in incorrect units of 100uV instead of V.
- HCA_CAP allowed rogue drivers to create more EQs than the number allowed in the HCA_CAP.max_num_eqs.
- Incorrect MPLS packets discards flow when the GLOBAL pause capability was disabled.

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 20.42.1000:

- Added a new command interface "Memory slow release" to enable/disable holding memory pages for a defined period of time. Once the timer expires, the firmware will return the pages to the driver.
- Added support for MVTS register via a miscellaneous driver using the access_register PRM command.

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)	20.42.1000	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: 20.42.1000 (Recommended)

Filename: 20_42_1000-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: <u>https://docs.nvidia.com/networking/display/connectx6firmwarev20421000/known+issues</u>

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.

<u>Fixes</u>

The following issues have been fixed in version 20.42.1000:

- RDE PortMetrics property Transceivers. SupplyVoltage was reflected in incorrect units of 100uV instead of V.
- HCA_CAP allowed rogue drivers to create more EQs than the number allowed in the HCA_CAP.max_num_eqs.
- Incorrect MPLS packets discards flow when the GLOBAL pause capability was disabled.

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 20.42.1000:

- Added a new command interface "Memory slow release" to enable/disable holding memory pages for a defined period of time. Once the timer expires, the firmware will return the pages to the driver.
- Added support for MVTS register via a miscellaneous driver using the access_register PRM command.

Supported Devices and Features

This software package contains the following firmware versions:

Mellanox InfiniBand Adapter	Version	PSID
HPE InfiniBand HDR/Ethernet 200Gb 2-port QSFP56 PCIe4 x16 OCP3 MCX653436A-HDAI Adapter (P31348-B21 and P31348-H21)	20.42.1000	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: 20.42.1000 (Recommended)

Filename: 20_42_1000-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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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.

<u>Fixes</u>

The following issues have been fixed in version 20.42.1000:

- RDE PortMetrics property Transceivers. SupplyVoltage was reflected in incorrect units of 100uV instead of V.
- HCA_CAP allowed rogue drivers to create more EQs than the number allowed in the HCA_CAP.max_num_eqs.
- Incorrect MPLS packets discards flow when the GLOBAL pause capability was disabled.

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 20.42.1000:

- Added a new command interface "Memory slow release" to enable/disable holding memory pages for a defined period of time. Once the timer expires, the firmware will return the pages to the driver.
- Added support for MVTS register via a miscellaneous driver using the access_register PRM command.

Supported Devices and Features

Mellanox InifiniBand Adapter	Firmware Version	PSID
HPE InfiniBand HDR100/Ethernet 100Gb 1-port QSFP56 PCIe4 x16 MCX653105A-ECAT Adapter (P23665-B21 and P23665-H21)	20.42.1000	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: 20.42.1000 (Recommended)

Filename: 20_42_1000-MCX653106A-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.

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				

Disclaimer: Certain software including drivers and documents may be available from NVIDIA. If you select a URL that directs you to http://www.nvidia.com/, you are then leaving HPE.com. Please follow the instructions on http://www.nvidia.com/ to download NVIDIA software or documentation. When downloading the NVIDIA software or documentation, you may be subject to NVIDIA terms and conditions, including licensing terms, if any, provided on its website or otherwise. HPE is not responsible for your use of any software or documents that you download from http://www.nvidia.com/, except that HPE may provide a limited warranty for NVIDIA software in accordance with the terms and conditions of your purchase of the HPE product or solution.

A list of known issues with this release is available at: <u>https://docs.nvidia.com/networking/display/connectx6firmwarev20421000/known+issues</u>

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

Fixes

The following issues have been fixed in version 20.42.1000:

- RDE PortMetrics property Transceivers. SupplyVoltage was reflected in incorrect units of 100uV instead of V.
- HCA CAP allowed roque drivers to create more EQs than the number allowed in the HCA CAP.max num eqs.
- Incorrect MPLS packets discards flow when the GLOBAL pause capability was disabled.

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 20.42.1000:

- Added a new command interface "Memory slow release" to enable/disable holding memory pages for a defined period of time. Once the timer expires, the firmware will return the pages to the driver.
- Added support for MVTS register via a miscellaneous driver using the access register PRM command.

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)	20.42.1000	MT_0000000453

Mellanox Firmware Package(FWPKG) for HPE NV60025M Ethernet 10/25Gb 2-port Secure Network Adapter Version: 26.41.1000 (Recommended)

Filename: 26_41_1000-S2A69-63001_Ax_header.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.

Enhancements

Upgraded to version 26.41.1000

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P46603-B21	HPE NV60025M Ethernet 10/25Gb 2-port Secure Network Adapter	HPE000000062

Mellanox Firmware Package(FWPKG) for HPE NV60100M 100Gb 2-port Storage Offload Adapter

Version: 22.41.1000 (Recommended)

Filename: 22 41 1000-R8M41-63001 Ax header.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.

Enhancements

Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P46603-B21	HPE NV60100M 100Gb 2-port Storage Offload Adapter	HPE0000000062

Firmware - Storage Controller

Controller Firmware Flash for ESXi7.0 and 8.0 - HPE MR216i-o Gen11 Tri Mode Controller Version: 52.26.3.5487 (**Recommended**) Filename: CP060621.compsig; CP060621.zip

<u>Fixes</u>

• Fix an issue that PLDM firmware update may fail. The issue may happen on controller, backplane and drive attached to controller.

Тор

Controller Firmware Flash for ESXi7.0 and 8.0 - HPE MR216i-p Gen11 Tri Mode Controller Version: 52.26.3.5487 (**Recommended**) Filename: CP060622.compsig; CP060622.zip

<u>Fixes</u>

• Fix an issue that PLDM firmware update may fail. The issue may happen on controller, backplane and drive attached to controller.

Controller Firmware Flash for ESXi7.0 and 8.0 - HPE MR408i-o Gen11 Tri Mode Controller Version: 52.26.3.5487 (**Recommended**) Filename: CP060623.compsig; CP060623.zip

<u>Fixes</u>

• Fix an issue that PLDM firmware update may fail. The issue may happen on controller, backplane and drive attached to controller.

Controller Firmware Flash for ESXi7.0 and 8.0 - HPE MR416i-o Gen11 Tri Mode Controller Version: 52.26.3.5487 (**Recommended**) Filename: CP060620.compsig; CP060620.zip

<u>Fixes</u>

• Fix an issue that PLDM firmware update may fail. The issue may happen on controller, backplane and drive attached to controller.

Controller Firmware Flash for ESXi7.0 and 8.0 - HPE MR416i-p Gen11 Tri Mode Controller Version: 52.26.3.5487 (**Recommended**) Filename: CP060619.compsig; CP060619.zip

<u>Fixes</u>

• Fix an issue that PLDM firmware update may fail. The issue may happen on controller, backplane and drive attached to controller.

Important Note!

1.24 is a initial version.

<u>Fixes</u>

• Fixed an issue that the health LED lights may turn on after hot plugging SATA drives

Enhancements

• Support firmware update for the UBM attached to the expander

Firmware Package - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208e-p, E208i-c, E208i-a, P204i-c, P416ie-m and P816i-a SR Gen10 and SR308i-o, SR308i-p Gen11 controllers Version: 7.11 (Recommended)

Filename: HPE_SR_Gen10_7.11_A.fwpkg

<u>Fixes</u>

- Fixed an issue where the host experienced BSOD while clearing the controller configuration.
- Fixed controller lockups caused by incorrect address reads and partial RAM initialization for PCIe functions, leading to ECC errors.
- Fixed issues with external storage.
- Fixed issues with the SATA drive.
- $\, \bullet \,$ Fixed issues with the SED drive.
- Fixed issues with the spare drive.
- Corrected MCTP-related issues.
- Fixed surface scan issues on the RAID 50.
- Fixed issues encountered during heavy I/O operations.
- Fixed volume issues on the failed drive.
- Fixed issues for incorrect Severity reported in Redfish events.
- Fixed issues for incorrect Status reported in Redfish resources.
- Fixed an issue with improper capacity information in Redfish drive Name.
- Fixed an issue where Redfish long running task status is not reported.
- Fixed an issue where DurableNameFormat for RAID volumes are reported as UUID in RDE READ operations, but should be NAA.
- Fixed an issue where failed to take ownership of, or to revert, a SED through Redfish.
- Fixed an issue when a drive hosting a RAID 0 Volume is removed and reinserted, a VolumeOK event is not generated.
- Fixed an issue where ILORest return "AccelerationMethod" as "ControllerCache" instead of "none" when controller cache is not enable or preset.

Enhancements

- Added support for saving Managed SED master key and reset key in cipher text in controller NVRAM instead of clear text.
- Changed temperature polling period from 1 minute to 5 minutes for HBA mode drives that are in low power state.
- Added support for clearing UREs in unmapped LBA range of fault tolerant logical drives.
- Improved random write and mixed read-write performance.
- Added support for SED encryption configuration through Redfish interface.
- Added support of Redfish Chassis implementation for UBM Backplanes.
- Added Redfish ACTION:
 - Storage.SetEncryptionKey
- Added support for Redfish property PATCH:
 - Storage.EncryptionMode
 - Storage.HotspareActivationPolicy
 - Drive.HostspareReplacementMode
 - Drive.HotspareType
 - Volume.Encrypted
- Added support for Redfish Status.Conditions property to resources:
 - Drive
 - Port
 - StorageController
 - StorageController.CacheSummary
 - Volume
- Added support for Redfish properties:
 - Drive.DriveFormFactor
 - Drive.FirmwareVersion
 - Drive.Manufacture (SAS only)
 - Drive.SlotCapableProtocols
 - StorageController.AssetTag
 - StorageController.Links.PCIeFunction
 - Volume.BlockSizeBytes

• Added support for PLDM Type5 UBM PIC firmware flashing behind expander.

Firmware Package - HPE MR216i-o Gen11 Tri Mode Controller Version: 52.28.3-5681 (**Recommended**) Filename: HPE_MR216i-o_Gen11_52.28.3-5681_A.fwpkg

Important Note!

- This firmware version to be used on HPE MR216i-o Gen11 Controller.
- This new 7.28 release have not completed vSAN certification, please don't update for vSAN environment for now. Target to complete vSAN certification by end of December 2024.

Prerequisites

iLO6 version should be at least 1.53 is required for chassis&Fabric support.

<u>Fixes</u>

- Fix a00138425en_us: HPE MR Gen10 Plus/Gen11 Controllers The Health Status Is Erroneously Displayed As "OK" In The Server Health Tab After a Drive or Storage Volume is in a Failed State.
- Fix an issue that PLDM firmware update for controller and downstream device may failed due to checksum error.
- Fix an issue that ControllerPreviousError (0x7f833119) event may be logged in IML when there is large capacity NVMe drive installed and graceful shutdown.
- Fix an issue that controller may crash during firmware self-activation and cause iLO to show firmware update fail.
- Fix a rare issue that ControllerPreviousError (0x7f833119) event may be logged in IML when server reboot and there is firmware log migration.
- Fix a rare issue that imported secured drives in a span (parity group) became unsecured and data is not recovered. The issue happens only when all drives in a span are removed, re-insert and do import operation.
- Fix an issue that controller reset may occur and not be recovered when adding drives to do transformation and get logical drive information from storcli, MRSA or Redfish client simultaneously.
- Fix a rare issue that data mis compare may happen when simultaneously write and read data for many times before the written data is flushed to physical drive.
- Fix a rare issue that drive might be marked as Unconfigured Bad when hot-insert.
- Fix a rare issue that drive may be marked as Unconfigured Bad if there is link reset happens.
- Fix an issue that Read(32) or Write(32) CDB sent to NVMe drive reported incorrect additional sense code.
- Fix a rare issue that controller may stop responding when there is IO running and plugout drives to make volume offline.
- Fix an issue that drive removal events are delayed when NVMe drive hot-insert and hotremove are performed when mixing SAS/SATA and NVMe drives.
- Fix a rare issue that controller may assert if UBM backplane firmware update failed.
- Fix an assertion failure that may happens when running IO and task management. In this case, IO's marked for abort are getting completed before the firmware really get a chance to abort them.
- Fix an issue that Redfish client is allowed to create different RAID level on the existing span (parity group) configuration which is unsupported.
- Fix an issue that logical drive creation with "0" capacity creating full drive capacity in Redfish client. It is not allowed to use CapacityBytes less than 1GB.

Enhancements

- Support non-hotplug backplane configuration which is used in HPE ProLiant MicroServer Gen11
 - All the Redfish Drive resources will be listed directly under storage with "%L<StorageId>/Drives/{DriveId}
 - Box field will not be displayed anywhere as there is no Box in this case
- LTO support
 - Please check Tape Compatibility matrix on SPoCK (www.hpe.com/storage/TapeCompatibilityMatrix)
 - On Linux, using IO sizes larger than 256KB may result in an error
 - Redfish support is not available for Tape drives
 - The Tape drive appears as a 0KB drive in MRSA and storcli
 - Note: LTO does not support OBSE. OBSE will show fail result on the server with LTO installed.
- Change SBR (secondary bus reset) handle method. With this change, the boot up time is shorten for the vm which has passthrough MR controller configured
- Firmware logging (snapdump) improvement
 - Include protocol layer logs from initial discovery at start of day to address Drive lost across reboots
 - Additional snapdumps are generated if drive failure conditions are detected
 - Use storcli /cx set captureSodPlLogs=<on|off> to enable/disable the function

Firmware Package - HPE MR216i-p Gen11 Tri Mode Controller Version: 52.28.3-5681 (**Recommended**) Filename: HPE_MR216i-p_Gen11_52.28.3-5681_A.fwpkg

- This firmware version to be used on HPE MR216i-p Gen11 Controller.
- This new 7.28 release have not completed vSAN certification, please don't update for vSAN environment for now. Target to complete vSAN certification by end of December 2024.

Prerequisites

iLO6 version should be at least 1.53 is required for chassis&Fabric support.

<u>Fixes</u>

- Fix a00138425en_us: HPE MR Gen10 Plus/Gen11 Controllers The Health Status Is Erroneously Displayed As "OK" In The Server Health Tab After a Drive or Storage Volume is in a Failed State.
- Fix an issue that PLDM firmware update for controller and downstream device may failed due to checksum error.
- Fix an issue that ControllerPreviousError (0x7f833119) event may be logged in IML when there is large capacity NVMe drive
 installed and graceful shutdown.
- Fix an issue that controller may crash during firmware self-activation and cause iLO to show firmware update fail.
- Fix a rare issue that ControllerPreviousError (0x7f833119) event may be logged in IML when server reboot and there is firmware log migration.
- Fix a rare issue that imported secured drives in a span (parity group) became unsecured and data is not recovered. The issue happens only when all drives in a span are removed, re-insert and do import operation.
- Fix an issue that controller reset may occur and not be recovered when adding drives to do transformation and get logical drive information from storcli, MRSA or Redfish client simultaneously.
- Fix a rare issue that data mis compare may happen when simultaneously write and read data for many times before the written data is flushed to physical drive.
- Fix a rare issue that drive might be marked as Unconfigured Bad when hot-insert.
- Fix a rare issue that drive may be marked as Unconfigured Bad if there is link reset happens.
- Fix an issue that Read(32) or Write(32) CDB sent to NVMe drive reported incorrect additional sense code.
- Fix a rare issue that controller may stop responding when there is IO running and plugout drives to make volume offline.
- Fix an issue that drive removal events are delayed when NVMe drive hot-insert and hotremove are performed when mixing SAS/SATA and NVMe drives.
- Fix a rare issue that controller may assert if UBM backplane firmware update failed.
- Fix an assertion failure that may happens when running IO and task management. In this case, IO's marked for abort are getting completed before the firmware really get a chance to abort them.
- Fix an issue that Redfish client is allowed to create different RAID level on the existing span (parity group) configuration which is unsupported.
- Fix an issue that logical drive creation with "0" capacity creating full drive capacity in Redfish client. It is not allowed to use CapacityBytes less than 1GB.

Enhancements

- Support non-hotplug backplane configuration which is used in HPE ProLiant MicroServer Gen11
 - All the Redfish Drive resources will be listed directly under storage with "%L<StorageId>/Drives/{DriveId}"
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 - The Tape drive appears as a OKB drive in MRSA and storcli
 - Note: LTO does not support OBSE. OBSE will show fail result on the server with LTO installed.
- Change SBR (secondary bus reset) handle method. With this change, the boot up time is shorten for the vm which has passthrough MR controller configured
- Firmware logging (snapdump) improvement
 - Include protocol layer logs from initial discovery at start of day to address Drive lost across reboots
 - Additional snapdumps are generated if drive failure conditions are detected
 - Use storcli /cx set captureSodPlLogs=<on|off> to enable/disable the function

Firmware Package - HPE MR408i-o Gen11 Tri Mode Controller Version: 52.28.3-5681 (**Recommended**) Filename: HPE_MR408i-o_Gen11_52.28.3-5681_A.fwpkg

Important Note!

- This firmware version to be used on HPE MR408i-o Gen11 Controller.
- This new 7.28 release have not completed vSAN certification, please don't update for vSAN environment for now. Target to complete vSAN certification by end of December 2024.

Prerequisites

<u>Fixes</u>

- Fix a00138425en_us: HPE MR Gen10 Plus/Gen11 Controllers The Health Status Is Erroneously Displayed As "OK" In The Server Health Tab After a Drive or Storage Volume is in a Failed State.
- Fix an issue that PLDM firmware update for controller and downstream device may failed due to checksum error.
- Fix an issue that ControllerPreviousError (0x7f833119) event may be logged in IML when there is large capacity NVMe drive installed and graceful shutdown.
- Fix an issue that controller may crash during firmware self-activation and cause iLO to show firmware update fail.
- Fix a rare issue that ControllerPreviousError (0x7f833119) event may be logged in IML when server reboot and there is firmware log migration.
- Fix a rare issue that imported secured drives in a span (parity group) became unsecured and data is not recovered. The issue happens only when all drives in a span are removed, re-insert and do import operation.
- Fix an issue that controller reset may occur and not be recovered when adding drives to do transformation and get logical drive information from storcli, MRSA or Redfish client simultaneously.
- Fix a rare issue that data mis compare may happen when simultaneously write and read data for many times before the written data is flushed to physical drive.
- Fix a rare issue that drive might be marked as Unconfigured Bad when hot-insert.
- Fix a rare issue that drive may be marked as Unconfigured Bad if there is link reset happens.
- Fix an issue that Read(32) or Write(32) CDB sent to NVMe drive reported incorrect additional sense code.
- Fix a rare issue that controller may stop responding when there is IO running and plugout drives to make volume offline.
- Fix an issue that drive removal events are delayed when NVMe drive hot-insert and hotremove are performed when mixing SAS/SATA and NVMe drives.
- Fix a rare issue that controller may assert if UBM backplane firmware update failed.
- Fix an assertion failure that may happens when running IO and task management. In this case, IO's marked for abort are getting completed before the firmware really get a chance to abort them.
- Fix an issue that Redfish client is allowed to create different RAID level on the existing span (parity group) configuration which is unsupported.
- Fix an issue that logical drive creation with "0" capacity creating full drive capacity in Redfish client. It is not allowed to use CapacityBytes less than 1GB.

Enhancements

- Support non-hotplug backplane configuration which is used in HPE ProLiant MicroServer Gen11
 - All the Redfish Drive resources will be listed directly under storage with "%L<StorageId>/Drives/{DriveId}"
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- Firmware logging (snapdump) improvement
 - Include protocol layer logs from initial discovery at start of day to address Drive lost across reboots
 - Additional snapdumps are generated if drive failure conditions are detected
 - Use storcli /cx set captureSodPlLogs=<on|off> to enable/disable the function

Firmware Package - HPE MR416i-o Gen11 Tri Mode Controller Version: 52.28.3-5681 (**Recommended**) Filename: HPE_MR416i-o_Gen11_52.28.3-5681_A.fwpkg

Important Note!

- This firmware version to be used on HPE MR416i-o Gen11 Controller.
- This new 7.28 release have not completed vSAN certification, please don't update for vSAN environment for now. Target to complete vSAN certification by end of December 2024.

<u>Prerequisites</u>

iLO6 version should be at least 1.53 is required for chassis&Fabric support.

<u>Fixes</u>

- Fix a00138425en_us: HPE MR Gen10 Plus/Gen11 Controllers The Health Status Is Erroneously Displayed As "OK" In The Server Health Tab After a Drive or Storage Volume is in a Failed State.
- Fix an issue that PLDM firmware update for controller and downstream device may failed due to checksum error.

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Enhancements

- Support non-hotplug backplane configuration which is used in HPE ProLiant MicroServer Gen11
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 - Use storcli /cx set captureSodPlLogs=<on|off> to enable/disable the function

Firmware Package - HPE MR416i-p Gen11 Tri Mode Controller Version: 52.28.3-5681 (**Recommended**) Filename: HPE_MR416i-p_Gen11_52.28.3-5681_A.fwpkg

Important Note!

- This firmware version to be used on HPE MR416i-p Gen11 Controller.
- This new 7.28 release have not completed vSAN certification, please don't update for vSAN environment for now. Target to complete vSAN certification by end of December 2024.

Prerequisites

iLO6 version should be at least 1.53 is required for chassis&Fabric support.

<u>Fixes</u>

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- Fix an issue that controller reset may occur and not be recovered when adding drives to do transformation and get logical

drive information from storcli, MRSA or Redfish client simultaneously.

- Fix a rare issue that data mis compare may happen when simultaneously write and read data for many times before the written data is flushed to physical drive.
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Enhancements

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- Change SBR (secondary bus reset) handle method. With this change, the boot up time is shorten for the vm which has passthrough MR controller configured
- Firmware logging (snapdump) improvement
 - Include protocol layer logs from initial discovery at start of day to address Drive lost across reboots
 - Additional snapdumps are generated if drive failure conditions are detected
 - Use storcli /cx set captureSodPlLogs=<on|off> to enable/disable the function

Firmware Package - HPE SR932i-p Gen10 Plus /SR416i-a Gen10 Plus/SR932i-p Gen11/SR416ie-m Gen11 Controllers Version: 03.01.30.106 (Recommended)

Filename: HPE_SR416_SR932_Gen10P_Gen11_03.01.30.106_A.fwpkg

Fixes

- Fixed an issue where the host experienced BSOD while clearing the controller configuration.
- Fixed controller lockups caused by incorrect address reads and partial RAM initialization for PCIe functions, leading to ECC errors.
- Fixed an issue where a possible controller lockup was observed after a factory reset.
- Fixed issues with external storage.
- Fixed issues with the SATA drive.
- Fixed issues with the SED drive.
- Fixed issues with the spare drive.
- Corrected MCTP-related issues.
- Fixed SPDM-related issues.
- Fixed issues related to volume creation and rebuilding.
- Fixed volume issues on the failed drive.
- Fixed surface scan issues on the RAID 50.
- Fixed issues encountered during heavy I/O operations.
- Fixed issues for incorrect Severity reported in Redfish events.
- Fixed issues for incorrect Status reported in Redfish resources.
- Fixed an issue with improper capacity information in Redfish drive Name.
- Fixed an issue where Redfish long running task status is not reported.
- Fixed an issue where DurableNameFormat for RAID volumes are reported as UUID in RDE READ operations, but should be NAA.
- Fixed an issue where failed to take ownership of, or to revert, a SED through Redfish.
- Fixed an issue when a drive hosting a RAID 0 Volume is removed and reinserted, a VolumeOK event is not generated.

Enhancements

- Added support for saving Managed SED master key and reset key in cipher text in controller NVRAM instead of clear text.
- Changed temperature polling period from 1 minute to 5 minutes for HBA mode drives that are in low power state.
- Added support for clearing UREs in unmapped LBA range of fault tolerant logical drives.
- Improved RAID 1/10 write sequential performance.
- Added support for SED encryption configuration through Redfish interface.
- Added support of Redfish Chassis implementation for UBM Backplanes.

- Added Redfish ACTION:
 - Storage.SetEncryptionKey
- Added support for Redfish property PATCH:
 - Storage.EncryptionMode
 - Storage.HotspareActivationPolicy
 - Drive.HostspareReplacementMode
 - Drive.HotspareType
 - Volume.Encrypted
- Added support for Redfish Status.Conditions property to resources:
 - Drive
 - Port
 - StorageController
 - StorageController.CacheSummary
 - Volume
- Added support for Redfish properties:
 - Drive.DriveFormFactor
 - Drive.FirmwareVersion
 - Drive.Manufacture (SAS only)
 - Drive.SlotCapableProtocols StorageController.AssetTag
 - StorageController.Links.PCIeFunction

 - Volume.BlockSizeBytes Volume.LogicalUnitNumber
- Added support for PLDM Type5 UBM PIC firmware flashing behind expander.

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component Version: 5.04 (A) (Recommended) Filename: D3000.fwpkg

Important Note!

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.

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.

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 :

- HPE Smart Array SR P416ie-m Gen11 Controller
- HPE Smart Array E208e-p Controller

Important Note!

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.

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.

<u>Fixes</u>

The following fixes were incorporated in this version:

- · Code optimization to save memory repo.
- TLB exception seen while doing esp reset when expander reset was in progress.
- Added the psoc 8.93 binary in peripheral images, updated the reveille version numbers.
- Added whole new Delta PS-pmbus code , Updated the ESP version number.

Please refer to the <u>Release Notes</u> for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

Supported Devices and Features

The D3610B / D3710B Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- HPE Smart Array SR P416ie-m Gen11 Controller
- HPE Smart Array E208e-p Controller

Online ROM Flash Component for VMware ESXi - HPE Smart Array P408i-p, P408e-p, P408i-a, E208i-p, E208e-p, E208i-a, P816i-a SR Gen10

Version: 5.61 (D) (Recommended)

Filename: CP057475.compsig; CP057475.zip

Enhancements

Support Gen10, Gen10 Plus and Gen11 servers

Firmware - Storage Fibre Channel

HPE Firmware Flash for Emulex 32Gb and 64Gb Fibre Channel Host Bus Adapters Version: 14.4.329.10 (**Recommended**) Filename: P14.4.329.10_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	14.4.329.10	14.4.329.10	14.4.329.9	14.4.290.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	14.4.329.10	14.4.329.10	14.4.329.9	14.4.290.0
HPE SN1700E 64Gb Single Port Fibre Channel Host Bus Adapter	64Gb	14.4.329.10	14.4.329.10	14.4.329.9	14.4.290.0
HPE SN1700E 64Gb Dual Port Fibre Channel Host Bus Adapter	64Gb	14.4.329.10	14.4.329.10	14.4.329.9	14.4.290.0

Top

Prerequisites

The minimum version for adapter to support PLDM is 14.0.499.25

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	14.4.329.10	14.4.329.10	14.4.329.9	14.4.290.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	14.4.329.10	14.4.329.10	14.4.329.9	14.4.290.0
HPE SN1700E 64Gb Single Port Fibre Channel Host Bus Adapter	64Gb	14.4.329.10	14.4.329.10	14.4.329.9	14.4.290.0
HPE SN1700E 64Gb Dual Port Fibre Channel Host Bus Adapter	64Gb	14.4.329.10	14.4.329.10	14.4.329.9	14.4.290.0

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 Emulex Fibre Channel Host Bus Adapters for VMware vSphere 7.0 Version: 2022.08.01 (**Recommended**) Filename: CP050061.compsig; CP050061.zip

Important Note!

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	14.0.499.25	14.0.499.25	14.0.499.2	14.0.490.0
HPE SN1610E 32Gb Dual Port Fibre Channel Host Bus Adapter	32Gb	14.0.499.25	14.0.499.25	14.0.499.2	14.0.490.0
HPE SN1700E 64Gb Single Port Fibre Channel Host Bus Adapter	64Gb	14.0.499.25	14.0.499.25	14.0.499.2	14.0.490.0
HPE SN1700E 64Gb Dual Port Fibre Channel Host Bus Adapter	64Gb	14.0.499.25	14.0.499.25	14.0.499.2	14.0.490.0

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:

Speed	Universal Boot Image	Firmware	UEFI	Boot Bios
32Gb	14.0.499.25	14.0.499.25	14.0.499.2	14.0.490.0
32Gb	14.0.499.25	14.0.499.25	14.0.499.2	14.0.490.0
64Gb	14.0.499.25	14.0.499.25	14.0.499.2	14.0.490.0
	32Gb 32Gb	Speed Image 32Gb 14.0.499.25 32Gb 14.0.499.25	Speed Image Firmware 32Gb 14.0.499.25 14.0.499.25 32Gb 14.0.499.25 14.0.499.25	Speed Image Firmware OEFI 32Gb 14.0.499.25 14.0.499.25 14.0.499.25 32Gb 14.0.499.25 14.0.499.25 14.0.499.25

Supported Devices and Features

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

32Gb FC Adapter:

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

64Gb FC 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 32Gb and 64Gb Fibre Channel Host Bus Adapters Version: 02.10.00 **(Recommended)** Filename: mh021000.upd_header.pldm.fwpkg

Important Note!

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	02.10.00	09.15.00	7.36	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.10.00	09.15.00	7.36	0.0
HPE SN1700Q 64Gb Dual Port Fibre Channel Host Bus Adapter	64Gb	02.10.00	09.15.00	7.36	0.0
HPE SN1700Q 64Gb Single Port Fibre Channel Host Bus Adapter	64Gb	02.10.00	09.15.00	7.36	0.0

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	02.10.00	09.15.00	7.36	0.0
HPE SN1610Q 32Gb Single Port Fibre Channel Host Bus Adapter	32Gb	02.10.00	09.15.00	7.36	0.0
HPE SN1700Q 64Gb Dual Port Fibre Channel Host Bus Adapter	64Gb	02.10.00	09.15.00	7.36	0.0
HPE SN1700Q 64Gb Single Port Fibre Channel Host Bus Adapter	64Gb	02.10.00	09.15.00	7.36	0.0

Supported Devices and Features

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

32Gb Fibre Channel Host Bus Adapter:

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

HPE Fiber Channel and Storage Enablement Bundle Smart Component for ESXi 7.0 Version: 2024.09.01 (**Recommended**) Filename: cp062084.compsig; cp062084.zip

Enhancements

This product carries SBOM signatures.

Enhancements

Revise the product name to support ESXi 8.0.

Smart Storage Administrator (SSA) CLI Smart Component for ESXi 7.0 for Gen10/Gen10 Plus/Gen11 Controllers Version: 2024.10.01 (**Recommended**) Filename: cp059214.compsig; cp059214.zip

Important Note!

Actual ESXi Version is 6.40.6.0

<u>Fixes</u>

- Fixed an issue where failed drive details were displayed multiple times in the 'show config' output.
- Fixed incorrect error messages displayed in SSACLI when the modify command threw an error if the 'drive' and 'drivetype' parameters coexisted.
- Fixed an issue where the array creation command failed when executed with the drives=all and drivetype=sata_hdd parameters.
- Fixed an issue where the drives behind the enclosures were missing in the SSACLI output.
- Fixed an issue where users encountered a failure when launching the SSASCRIPTING tool to restore a RAID configuration with an unsupported parameter for PrebootHealthReporting.

Enhancements

• To improve the output format of the NVMe drive health log for the show command.

Software - Storage Controller

HPE MegaRAID Storage Administrator StorCLI for VMware7.0 (For Gen10P and Gen11 Controllers) Version: 2024.10.01 **(Recommended)** Filename: cp060856.compsig; cp060856.zip

Important Note!

Actual ESXi Version is 007.2812.0000.0000

Enhancements

- Support Non-Hotplug configurations
- Add Transport Level Retries (TLR) LTO Tape Drive support
- Support upgrading from VMware ESXi 7 to VMware ESXi 8
- Enhance MR controller logging to include PL (protocol layer) logs from initial
- discovery at Start of the day to address Drive lost across reboots
 - storcli /cx show captureSodPlLogs
 - storcli /cx set captureSodPlLogs=<on|off>

Software - Storage Fibre Channel

HPE QLogic Fibre Channel driver component for VMware vSphere 7.0 Version: 2024.09.01 (**Recommended**) Filename: cp059832.compsig; cp059832.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.

This Driver is supported on VMware 7.0U3 only

<u>Top</u>

Top

Prerequisites

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

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

Enhancements

Driver version 5.3.83.1

This Driver is supported on VMware 7.0U3 only

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 HPE Agentless Management Bundle for ESXi on Gen11 Version: 701.11.7.0 (Recommended) Filename: amsdvComponent_701.11.7.0.2-1_24237060.zip

<u>Fixes</u>

See the <u>AMS Release Notes</u> for information about the issues resolved in this release.

Enhancements

See the <u>AMS Release Notes</u> for information about the enhancements in this release.

HPE Agentless Management Bundle Smart Component on ESXi for Gen11 Servers Version: 2024.09.01 (**Recommended**) Filename: cp062858.compsig; cp062858.zip

<u>Fixes</u>

See the <u>AMS Release Notes</u> for information about the issues resolved in this release.

Enhancements

See the <u>AMS Release Notes</u> for information about the enhancements in this release.

HPE Fiber Channel and Storage Enablement Component for ESXi 7.0 Version: 3.9.0 (**Recommended**) Filename: fc-enablement-component 700.3.9.0.4-1 20266032.zip

Enhancements

Supports VMware ESXi 7.0 U2 and ESXi 7.0 U3

Top

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