

# VMware Deliverable Release Notes

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

[HPE Synergy Software Releases](#)

[HPE Integrity Superdome X](#)

[HPE Superdome Flex](#)

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## Service Pack for ProLiant 2019.12.0 Release Notes for VMware vSphere 6.7

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### Driver - Network

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HPE Blade Emulex 10/20GbE Driver for VMware vSphere 6.7

Version: 2019.12.20 (B) **(Optional)**

Filename: cp041867.compsig; cp041867.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 CPOxxxxx.xml file.

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

### Enhancements

Initial release.

### Supported Devices and Features

This driver supports the following network adapters:

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

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HPE Blade Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp039935.compsig; cp039935.zip

### Important Note!

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

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

### Enhancements

Initial release.

### Supported Devices and Features

This driver supports the following network adapters:

- HPE FlexFabric 20Gb 2-port 650FLB Adapter
  - HPE FlexFabric 20Gb 2-port 650M Adapter
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HPE Blade Intel ixgben Driver for VMware vSphere 6.7  
Version: 2019.12.20 **(Optional)**  
Filename: cp039953.compsig; cp039953.zip

### **Important Note!**

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

HPE recommends the firmware provided in *HPE Blade Intel Online Firmware Upgrade Utility for VMware*, version 1.0.7 or later, for use with this driver.

### **Fixes**

This product corrects a recursion termination condition so that recursion correctly ends in the case of PCIe link down.

This product addresses an issue where the ixgben driver has high CPU overhead when an SFP+ module is absent.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

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

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

### **Important Note!**

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

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

### **Fixes**

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

This product addresses a PSOD seen with FCoE.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

These drivers support the following network adapters:

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

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HPE Broadcom NetXtreme-E Drivers for VMware vSphere 6.7  
Version: 2019.12.20 **(Optional)**  
Filename: cp039894.compsig; cp039894.zip

### **Important Note!**

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

HPE recommends the firmware provided in *HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware*, version

5.9.0 or later, for use with this driver.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter

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HPE Emulex 10/20 GbE Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp039595.compsig; cp039595.zip

### **Important Note!**

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

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

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

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HPE Emulex 10/20GbE iSCSI Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp040824.compsig; cp040824.zip

### **Important Note!**

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

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

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This driver supports the following network adapters:

- HP StoreFabric CN1200E Dual Port Converged Network Adapter
- HPE StoreFabric CN1200E-T Adapter

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HPE Intel i40en Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp040370.compsig; cp040370.zip

### **Important Note!**

This component is intended to be used by HPE applications. It is a zip file that contains the same driver deliverable available from

the vmware.com and the HPE vibstdepot.hpe.com webpages, plus an HPE specific CPOxxxxx.xml file.

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.0 or later, for use with this driver.

### **Fixes**

This product addresses an issue where VLAN tag traffic dropped problem.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HPE Ethernet 1Gb 2-port 368i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE Intel igbn Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp040829.compsig; cp040829.zip

### **Important Note!**

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.0 or later, for use with this driver.

### **Fixes**

This product addresses an issue where race condition during NIC adapter reset.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

These drivers support the following network adapters:

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

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HPE Intel ixgben Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp040372.compsig; cp040372.zip

### **Important Note!**

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

HPE recommends the firmware provided in *HPE Intel Online Firmware Upgrade Utility for VMware*, version 3.12.0 or later, for use with this driver.

## **Fixes**

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

## **Enhancements**

This product now remove supports Synergy and Blade Server.

## **Supported Devices and Features**

These drivers support the following network adapters:

- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HP Ethernet 10Gb 2-port 560SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter

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HPE QLogic FastLinQ 10/25/50 GbE Multifunction Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp039896.compsig; cp039896.zip

## **Important Note!**

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

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

## **Fixes**

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

## **Enhancements**

This product now remove supports Synergy and Blade Server.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter
- HPE StoreFabric CN1300R Converged Network Adapter

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HPE QLogic NX2 10/20 GbE Multifunction Driver for VMware vSphere 6.7

Version: 2019.12.20 **(Optional)**

Filename: cp040827.compsig; cp040827.zip

## **Important Note!**

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

HPE recommends the firmware provided in *HPE QLogic NX2 Online Firmware Upgrade Utility for VMware*, version 1.26.0 or later, for use with this driver.

## **Fixes**

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

## **Enhancements**

This product now remove supports Synergy and Blade Server.

## **Supported Devices and Features**

These drivers support the following network adapters:

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

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net-mst kernel module driver component for VMware ESXi 6.5 and 6.7

Version: 2019.01.02 **(Recommended)**

Filename: cp038662.compsig; cp038662.zip

## **Important Note!**

This component is intended to be used by HP applications. It is a zip that contains the same driver deliverable available from the HP [vibsdepot.hp.com](http://vibsdepot.hp.com) webpage, plus an HP specific CPXXXX.xml file.

## **Prerequisites**

NA

## **Fixes**

NMST version 4.12.0.105

## **Enhancements**

NMST version 4.12.0.105

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nmlx5\_en driver component for VMware ESXi 6.7

Version: 2019.06.19 **(Recommended)**

Filename: cp040235.compsig; cp040235.zip

## **Important Note!**

### **Known Issues in version 4.17.15.16:**

- ECN tunable parameter initialAlphaValue for the Reaction Point protocol cannot be modified.
- ECN statistic counters accumulatorsPeriod and ecnMarkedRoce-Packets display wrong values and cannot be cleared.
- The maximum value of RSS must be lower than the number of CPU cores.
- The hardware can offload only up to 256B of headers.
- The "esxcli network sriovnic vf stats" command is not supported. When running this command on a vmknic, a failure message is displayed.
- There is no traffic between PV and SR-IOV VF connected to different ports on the same HCA.
- Setting the "Allow Guest MTU Change" option in vSphere Client is currently not functional. Although guest MTU changes in SR-IOV are allowed, they do not affect the port's MTU and the guest's MTU remains the same as the PF MTU.
- When a guest is assigned an IB PCI passthru device or an IB VF, VMware Tools networking information for the guest may be incorrect. This affects how the guest networking information, such as interfaces and their IPs, is displayed in vCenter.
- Operations on vmnics which are in passthru mode are not supported.
- The 'esxcli mellanox uplink link info -u <vmnic\_name>' command reports the 'Auto negotiation' capability always as 'true'.
- SMP MADs (ibnetdiscover, sminfo, iblinkinfo, smpdump, ibqueryerr, ibdiagnet and smpquery) are not supported on the VFs.
- IPv6 as inner packet is not supported.
- Firmware VF configuration must be N+1 (while N is the required VF number). For example: If your configuration requires 10 VFs, the firmware must be set to support 16 VFs (ESXi Limitation).
- Wake-on-LAN does not notify when invalid parameters are provided.
- Nested ESXi might not function properly.
- Device RSS fails to hash traffic to sufficient RX rings with Broadcast traffic.
- In stress condition 'Watchdog' may appear, leading to uplink going up and down.
- Reloading the driver when the SR-IOV VFs are ON, will result in Purple Screen of Death (PSOD).
- A PSOD may occur during vMotion over ENS(Enhanced Network stack) VMK.
- VGT traffic over VXLAN interfaces is currently not supported.
- VMs with SR-IOV cannot be powered on when running low on available vectors.
- During ENS uplink detachment from the ENS DVS, the below error message regarding the queue still being allocated or that the requested queue is not in use may appear. *"Driver covers for OS issue and the messages are for information only."*
- Although the max\_vfs module parameter range is "0-128", due to firmware limitations, the following are the supported VFs

per single port devices:

- ConnectX-4: up to 127
- ConnectX-5: up to 63

## **Fixes**

**The following issues have been fixed in version in 4.17.15.16:**

- Fixed an issue that prevented ESXi from being discovered via the CDP (Cisco Discovery Protocol) protocol on ConnectX-4 Lx adapter cards.

## **Enhancements**

**Changes and New Features in smart component version 2019.06.19:**

- Added support for the following adapters:
  - HPE Ethernet 10/25Gb 2-port 642SFP28 Adapter (HPE Part Number: P13188-B21)
  - HPE Ethernet 10/25Gb 2-port 642SFP28 OCP3 Adapter (HPE Part Number: P10112-B21)
  - HPE Ethernet 10Gb 2-port 548SFP+ OCP3 Adapter (HPE Part Number: P11341-B21)

**New features and changes in version 4.17.15.16:**

- Enhanced Network Stack (ENS)

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VMware ESXi 6.5 and 6.7 MST Drivers Offline Bundle for Mellanox Adapters

Version: 4.12.0.105 **(Recommended)**

Filename: MLNX-NMST-ESX-6.5.0-4.12.0.105.zip

## **Prerequisites**

NA

## **Enhancements**

VM65/67 nmst 4.12.0.105

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## **Driver - Storage Controller**

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HPE Dynamic Smart Array B140i Controller Driver for VMware vSphere 6.7 (Driver Component).

Version: 2019.05.01 **(Recommended)**

Filename: cp039788.compsig; cp039788.zip

## **Important Note!**

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

## **Fixes**

Fixes an issue where the driver will not upgrade due to the AHCI driver taking priority.

This issue is only encounter when upgrading to version 2018.09.31 (5.5.0.66-1). All other versions are not affected.

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HPE Dynamic Smart Array Controller Driver for VMware vSphere 6.7 (Bundle file).

Version: 5.5.0.68-1 **(Recommended)**

Filename: hpdsa-5.5.0.68.zip

## **Fixes**

Fixes an issue where the driver will not upgrade due to the AHCI driver taking priority.

This issue is only encounter when upgrading to version 2018.09.31 (5.5.0.66-1). All other versions are not affected.

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HPE ProLiant Gen10 Smart Array Controller Driver for VMware ESXi 6.7 (Bundle file)

Version: 1.0.4.3008 **(Recommended)**  
Filename: VMW-ESX-6.7.0-smartpqi-1.0.4.3008-offline\_bundle-14862538.zip

### **Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

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HPE ProLiant Gen10 Smart Array Controller Driver for VMware vSphere 6.7 (Driver Component).  
Version: 2019.12.01 **(Recommended)**  
Filename: cp040981.compsig; cp040981.zip

### **Important Note!**

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

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### **Enhancements**

Add Timeout support field in pass-through and task management request in order to enable a recover mechanism when a when a pass-through command fails to complete.

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HPE ProLiant Smart Array Controller Driver for VMware vSphere 6.7 (Bundle file)  
Version: 2.0.44-1 **(Recommended)**  
Filename: VMW-ESX-6.7.0-nhpsa-2.0.44-offline\_bundle-14136205.zip

### **Fixes**

- Fix an issue where data could become inaccessible if a hot plug is performed while using SATA drivers connected to the controller directly without an external storage enclosure.
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HPE ProLiant Smart Array Controller Driver for VMware vSphere 6.7 (Driver Component).  
Version: 2019.09.01 **(Recommended)**  
Filename: cp040735.compsig; cp040735.zip

### **Important Note!**

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

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### **Fixes**

- Fix an issue where data could become inaccessible if a hot plug is performed while using SATA drivers connected to the controller directly without an external storage enclosure.
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HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.7  
Version: 7.706.08.00-1 **(Optional)**  
Filename: VMW-ESX-6.7.0-lsi\_mr3-7.706.08.00-offline\_bundle-11327181.zip

### **Enhancements**

- Added VMware vSphere 6.7 OS support
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HPE Smart Array P824i-p MR controller (64-bit) Driver for vSphere 6.7 (Driver Component)  
Version: 2018.02.12 **(Optional)**  
Filename: cp035605.compsig; cp035605.zip

### **Important Note!**

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

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### **Enhancements**

- Added VMware vSphere 6.7 OS support



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## Firmware - Network

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HPE Blade Intel Online Firmware Upgrade Utility for VMware

Version: 1.0.7 **(Optional)**

Filename: CP040426.compsig; CP040426.zip

### **Important Note!**

HPE recommends the *HPE Blade Intel ixgben Drivers for VMware*, versions 2019.12.20, for use with this firmware.

### **Prerequisites**

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

### **Fixes**

This product addresses an issue where the "Firmware Image Properties," "Device Level Configuration," and "Link Speed Status" options in NIC HII menu disappear when F7 is pressed.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This package supports the following network adapters:

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

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HPE Blade QLogic NX2 Online Firmware Upgrade Utility for VMware

Version: 1.0.8 **(Optional)**

Filename: CP039870.compsig; CP039870.zip

### **Important Note!**

HPE recommends *HPE Blade QLogic NX2 10/20GbE Multifunction Drivers for VMware*, versions 2019.12.20 or later, for use with this firmware.

### **Prerequisites**

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

### **Fixes**

This product addresses an incorrect local sequence number in the Link Layer Discovery Protocol (LLDP).

This product addresses an issue where boot mode is not restored to the default value after a factory reset.

This product addresses an issue where the F1 help messages "Number of VFs per PF" and "Legacy Boot Protocol" option display incorrectly in Japanese and Simplified Chinese languages.

### **Enhancements**

Initial release.

### **Supported Devices and Features**

This product supports the following network adapters:

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

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HPE Broadcom NetXtreme-E Online Firmware Upgrade Utility for VMware

### **Important Note!**

HPE recommends *HPE Broadcom NetXtreme-E Drivers for VMware*, versions 2019.08.02 or later, for use with this firmware.

This software package contains NVM Image version 214.0.224000 with the following firmware versions:

<b>NIC</b>	<b>Bootcode Version</b>	<b>NCSI Version</b>	<b>MBA Version</b>	<b>UEFI Version</b>	<b>CCM Version</b>	<b>RoCE Version</b>
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	214.0.224.0	214.0.223.0	214.0.218.0	214.0.207.0	214.0.218.0	214.0.182.0
HPE Ethernet 10Gb 2-port 535T Adapter						
HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter						
HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter						

### **Prerequisites**

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

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 535FLR-T Adapter
- HPE Ethernet 10Gb 2-port 535T Adapter
- HPE Ethernet 10/25Gb 2-port 631FLR-SFP28 Adapter
- HPE Ethernet 10/25Gb 2-port 631SFP28 Adapter

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HPE Broadcom NX1 Online Firmware Upgrade Utility for VMware

Version: 1.25.2 (Optional)

Filename: CP040813.compsig; CP040813.zip

### **Important Note!**

HPE recommends *HP Broadcom tg3 Ethernet Drivers for VMware*, versions 2015.10.01, for use with this firmware.

This software package contains combo image v20.14.57 with the following firmware versions:

<b>NIC</b>	<b>Boot Code Version</b>	<b>PXE Version</b>	<b>NCSI Version</b>	<b>UEFI Version</b>	<b>CCM Version</b>
HPE Ethernet 1Gb 2-port 330i Adapter (22BD)	2.10	20.14.0	1.5.01	20.14.19	214.0.166.0
HPE Ethernet 1Gb 4-port 331i Adapter (22BE) HPE Ethernet 1Gb 4-port 331FLR Adapter HPE Ethernet 1Gb 4-port 331T Adapter	1.46	20.14.0	1.5.01	20.14.19	214.0.166.0
HPE Ethernet 1Gb 2-port 332i Adapter (22E8) HPE Ethernet 1Gb 2-port 332T Adapter	1.40	20.14.0	1.5.01	20.14.19	214.0.166.0

### **Prerequisites**

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

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 1Gb 2-port 330i Adapter (22BD)
- HPE Ethernet 1Gb 4-port 331i Adapter (22BE)
- HPE Ethernet 1Gb 4-port 331FLR Adapter
- HPE Ethernet 1Gb 4-port 331T Adapter
- HPE Ethernet 1Gb 2-port 332i Adapter (22E8)
- HPE Ethernet 1Gb 2-port 332T Adapter

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HPE Firmware Flash for Emulex Converged Network Adapters for VMware vSphere 6.7

Version: 2019.03.01 **(Recommended)**

Filename: CP035747.compsig; CP035747.zip

### **Important Note!**

Release Notes:

[HPE StoreFabric Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

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

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

### **Fixes**

Fixed the following:

- Fixed unexpected behavior in Active Health System (AHS) logs show World Wide Node Name (wwnn) & World Wide Port Name (wwpn) in reverse order.
- Microsoft Windows Server 2012 R2 Hyper-V Storage Area Network (SAN) Disconnect.
- Link lost with firmware version 11.2.1263.19
- "FW not responding" message seen on card when creating Virtual Function (VF) in loop for HPE StoreFabric CN1200E-T 10GBASE-T Converged Network Adapter [NIC+ iSCSI] in Gen10 server.
- HP FlexFabric 20Gb 2-port 650FLB Adapter - Loss of access to storage after Virtual Connect (VC) login redistribution
- HP StoreFabric CN1200E Dual Port Converged Network Adapter does not complete to boot in Legacy Mode on Gen 9 Server
- Emulex Peripheral Component Interconnect (PCI) slot Network Interface Connector (NIC) reported as device path instead of product name
- Unable to disable shared memory feature in Human Interface Infrastructure (HII) menu
- 650M Adapter has some info in Chinese and Japanese show garbled code under Human Interface Infrastructure (HII) Form

### **Enhancements**

Updated CNA (XE100 series) firmware

#### **Firmware**

#### **Contains:**

CNA (XE100 series) firmware 12.0.1216.0

### **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

#### **XE100 Series:**

HP StoreFabric CN1200E Dual Port Converged Network Adapter

- HP FlexFabric 20Gb 2-port 650FLB Adapter
- HP FlexFabric 20Gb 2-port 650M Adapter
- HPE StoreFabric CN1200E-T Adapter

HPE Intel Online Firmware Upgrade Utility for VMware  
Version: 3.12.12 (Optional)  
Filename: CP040151.compsig; CP040151.zip

### **Important Note!**

HPE recommends at least one of the following drivers, as appropriate for your device, for use with this firmware:

- *HPE Intel igbn Drivers for VMware*, versions 2019.12.20
- *HPE Intel ixgben Drivers for VMware*, versions 2019.12.20
- *HPE Intel i40en Drivers for VMware*, versions 2019.12.20

This software package contains the following firmware versions for the below listed supported network adapters:

<b>NIC</b>	<b>EEPROM/NVM Version</b>	<b>OROM Version</b>	<b>Single NVM Version</b>
HP Ethernet 1Gb 2-port 361i Adapter	8000106F	1.2529.0	N/A
HP Ethernet 1Gb 2-port 361T Adapter	80000F91	1.2529.0	N/A
HP Ethernet 1Gb 2-port 363i Adapter	80000D00	1.2529.0	N/A
HPE Ethernet 1Gb 4-port 366i Communication Board	80000EBF	1.2529.0	N/A
HP Ethernet 1Gb 4-port 366i Adapter	8000105E	1.2529.0	N/A
HP Ethernet 1Gb 4-port 366FLR Adapter	80001060	1.2529.0	N/A
HP Ethernet 1Gb 4-port 366T Adapter	8000105F	1.2529.0	N/A
HPE Ethernet 1Gb 2-port 368i Adapter	80001DEA	1.2529.0	N/A
HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter	80001DE9	1.2529.0	N/A
HPE Ethernet 1Gb 4-port 369i Adapter	80001DEC	1.2529.0	N/A
HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	80000838	1.2529.0	N/A
HPE Ethernet 10Gb 2-port 560SFP+ Adapter	80000835	1.2529.0	N/A
HPE Ethernet 10Gb 2-port 568i Adapter	80001DEE	1.2529.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter	80001DE9	1.2529.0	N/A
HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter	80001DE9	1.2529.0	N/A
HPE Ethernet 10Gb 2-port 563i Adapter	800035C0	1.1375.0	N/A
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	8000641A	1.2529.0	10.51.5
HPE Ethernet 10Gb 2-port 562FLR-T Adapter	80000F56	1.2529.0	10.51.3
HPE Ethernet 10Gb 2-port 562SFP+ Adapter	80006424	1.2529.0	10.51.5
HPE Ethernet 10Gb 2-port 562T Adapter	80000F55	1.2529.0	10.51.3

The combo image v1.2529.0 includes: Boot Agent: 1GbE - v1.5.88, 10GbE - v2.4.34, 40GbE - v1.1.10 & UEFI Drivers: 1GbE - v9.0.03, 10GbE - v7.4.06, 40GbE - v3.9.11

The combo image v1.1375.0 includes: Boot Agent: 1GbE - v1.5.72, 10GbE - v2.3.46, 40GbE - v1.0.21 & UEFI Drivers: 1GbE - v6.9.13, 10GbE - v5.0.20, 40GbE - v1.5.14

Single NVM Version is new firmware format which represent an unified version in place of the previously used EEPROM/NVM Version or OROM version.

### **Prerequisites**

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

### **Fixes**

This product addresses an issue where LLDP are disabled.

This product addresses an issue where "Firmware Image Properties", "Device Level Configuration", and "Link Speed Status" options in NIC HII menu will disappear when F7 is pressed.

This product addresses an issue where POST when ESC Is Pressed to Enter The BIOS Setup Utility with HP Ethernet 1Gb 4-port 366FLR Adapter.

This product addresses an issue where there is no VLAN function under Legacy mode.

## **Enhancements**

This product now remove supports Synergy and Blade Server.

## **Supported Devices and Features**

This package supports the following network adapters:

- HP Ethernet 1Gb 4-port 366T Adapter
- HP Ethernet 1Gb 4-port 366FLR Adapter
- HPE Ethernet 1Gb 2-port 368FLR-MMT Adapter
- HP Ethernet 1Gb 2-port 361T Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter
- HPE Ethernet 10Gb 2-port 562T Adapter
- HPE Ethernet 10Gb 2-port 562SFP+ Adapter
- HPE Ethernet 10Gb 2-port 562FLR-T Adapter
- HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 560SFP+ Adapter
- HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter
- HPE Ethernet 10Gb 2-port 568i Adapter
- HPE Ethernet 1Gb 4-port 369i Adapter
- HPE Ethernet 1Gb 4-port 366i Communication Board
- HPE Ethernet 1Gb 2-port 368i Adapter
- HP Ethernet 1Gb 2-port 363i Adapter
- HP Ethernet 1Gb 4-port 366i Adapter
- HP Ethernet 1Gb 2-port 361i Adapter
- HPE Ethernet 10Gb 2-port 568FLR-MMT Adapter

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HPE QLogic FastLinQ Online Firmware Upgrade Utility for VMware

Version: 4.11.9 **(Optional)**

Filename: CP039777.compsig; CP039777.zip

## **Important Note!**

HPE recommends *HPE QLogic FastLinQ 10/25/50GbE Multifunction Drivers for VMware*, versions 2019.12.20 or later, for use with this firmware.

This software package contains combo image v8.50.22. This combo image includes: Boot Code (MFW): 8.50.9.0, UEFI: 4.1.9.2 and PXE: 2.0.19. The users will only see the combo image versions in the interactive mode firmware update or while using HPSUM/SPP to update the firmware on the supported adapters.

## **Prerequisites**

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

## **Fixes**

This product addresses an issue where 2nd port reports "function type: disabled" with HPE Ethernet 10Gb 2-port 524SFP+ Adapter.

## **Enhancements**

This product now remove supports Synergy and Blade Server.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10Gb 2-port 524SFP+ Adapter
- HPE Ethernet 10Gb 2-port 521T Adapter
- HPE Ethernet 10/25Gb 2-port 622FLR-SFP28 Converged Network Adapter
- HPE Ethernet 10/25Gb 2-port 621SFP28 Adapter
- HPE StoreFabric CN1300R Converged Network Adapter
- HPE StoreFabric CN1200R-T Converged Network Adapter

HPE QLogic NX2 Online Firmware Upgrade Utility for VMware

Version: 1.26.4 **(Optional)**

Filename: CP039778.compsig; CP039778.zip

### **Important Note!**

HPE recommends HPE QLogic NX2 10/20GbE Multifunction Drivers for VMware, versions 2019.12.20 or later, for use with this firmware.

This software package contains combo image v7.18.23 with the following firmware versions:

<b>NIC</b>	<b>Boot Code Version</b>	<b>PXE Version</b>	<b>UEFI Version</b>	<b>iSCSI Version</b>	<b>FCoE Version</b>	<b>CCM Version</b>	<b>L2 Version</b>
HP Ethernet 10Gb 2-port 530SFP+ Adapter HP Ethernet 10Gb 2-port 530T Adapter	7.15.77	7.14.13	8.4.2	n/a	n/a	7.14.4	7.12.25
HP Ethernet 10Gb 2-port 533FLR-T Adapter HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter HPE FlexFabric 10Gb 4-port 536FLR-T Adapter HP StoreFabric CN1100R Dual Port Converged Network Adapter HPE StoreFabric CN1100R-T Converged Network Adapter	7.15.77	7.14.13	8.4.2	7.14.0	7.14.3	7.14.4	7.12.25

### **Prerequisites**

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

### **Fixes**

This product addresses an incorrect local sequence number in the Link Layer Discovery Protocol (LLDP).

This product addresses an issue where boot mode is not restored to the default value after a factory reset.

### **Enhancements**

This product now remove supports Synergy and Blade Server.

### **Supported Devices and Features**

This product supports the following network adapters:

- HP Ethernet 10Gb 2-port 530SFP+ Adapter
- HP Ethernet 10Gb 2-port 530T Adapter
- HP Ethernet 10Gb 2-port 533FLR-T Adapter
- HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter
- HPE FlexFabric 10Gb 4-port 536FLR-T Adapter
- HP StoreFabric CN1100R Dual Port Converged Network Adapter
- HPE StoreFabric CN1100R-T Converged Network Adapter

Intel Online Firmware Upgrade Utility for VMware

Version: 3.12.10 **(Optional)**

Filename: CP041196.compsig; CP041196.zip

### **Important Note!**

This software package contains the following firmware versions for the below listed supported network adapters:

<b>NIC</b>	<b>EEPROM/NVM Version</b>	<b>OROM Version</b>
HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter	80001099	1.2529.0
HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter	80001097	1.2529.0
Intel(R) I350 Gigabit Backplane Connection	8000108E	1.2529.0
Intel(R) I350 Gigabit Network Connection	8000108F	1.2529.0

The combo image v1.2529.0 includes: Boot Agent: 1GbE - v1.5.88 & UEFI Drivers: 1GbE - v9.0.03.

## **Prerequisites**

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

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This package supports the following network adapters:

- Intel(R) I350 Gigabit Backplane Connection
- Intel(R) I350 Gigabit Network Connection
- HPE Ethernet 1Gb 4-port BaseT I350-T4 Adapter
- HPE Ethernet 1Gb 4-port BaseT I350-T4 OCP3 Adapter

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Marvell FastLinQ Online Firmware Upgrade Utility for VMware

Version: 4.11.14 (**Optional**)

Filename: CP041147.compsig; CP041147.zip

## **Important Note!**

This software package contains combo image v8.50.78. This combo image includes: Boot Code (MFW): 8.50.9.0 and UEFI: 6.1.6.9.

## **Prerequisites**

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

## **Enhancements**

Initial release.

## **Supported Devices and Features**

This product supports the following network adapters:

- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HOCU OCP3 Adapter
- HPE Ethernet 10/25Gb 2-port SFP28 QL41232HLCU Adapter
- HPE Ethernet 10Gb 4-port SFP+ QL41134HLCU Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HLRJ Adapter
- HPE Ethernet 10Gb 2-port BaseT QL41132HQRJ OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HOCU OCP3 Adapter
- HPE Ethernet 10Gb 2-port SFP+ QL41132HLCU Adapter

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Online Firmware Upgrade Utility (ESXi 6.7) for HPE Ethernet 10Gb 2-port 548SFP+ Adapter

Version: 1.0.1 (**Recommended**)

Filename: CP040054.compsig; CP040054.zip

## **Important Note!**

### **Known Issues in firmware 14.26.XXXX :**

- Hardware arbitration is currently disabled in Open Compute Project (OCP)3.0 cards. It will be supported on future releases for the same hardware.
- Secure state is not updated after firmware burning due to the following behavior.
- By default, mixfwreset takes the lowest supported fwreset level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the reset level 0 is set as the default value while resetting after burning. **Workaround:** Set the reset level to 3 explicitly in mixfwreset.
- Since Packet Pacing enforce max\_tc value is "1", features that require multiple Traffic Class (TC)s will not be active when this mode is available.

## **Fixes**

### **Fixes in version 14.26.XXXX :**

- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.

- Fixed a rare issue that resulted in "destroy mkey " command getting stuck when rebooting the hypervisor.
- The total firmware reset time is increased by 1 second.

## Enhancements

**Firmware for the following device is updated to 14.26.1040:**

P11338-B21 (HPE Ethernet 10Gb 2-port 548SFP+ Adapter)

## Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P11338-B21	HPE Ethernet 10Gb 2-port 548SFP+ Adapter	HPE0000000038

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox Ethernet only adapters

Version: 1.0.2 (**Recommended**)

Filename: CP040049.compsig; CP040049.zip

## Important Note!

The Firmware Upgrade Utility has been split into 2 packages for Mellanox Ethernet Only NIC adapters, one supporting Synergy platforms and the other supporting ProLiant and Apollo platforms. This package supports Mellanox Ethernet Only NIC adapters on ProLiant and Apollo servers.

The latest version of Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox Ethernet only Mezzanine adapters 1.0.0 supported on HPE Synergy Servers is available on HPE support center, [https://support.hpe.com/hpsc/swd/public/detail?swItemId=MTX\\_b5a6ed2c31e14450a58981fa02](https://support.hpe.com/hpsc/swd/public/detail?swItemId=MTX_b5a6ed2c31e14450a58981fa02)

## **Known Issues for FW version 2.42.5044 :**

- When using the QSFP module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV setup, using mlxconfig when the PF is passed through to a VM requires a reboot of the Hypervisor.
- Downgrade to previous GA requires server reboot. Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot. Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management tools and that returned by fabric/driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX®-3 adapters
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed
- RH6.3 Inbox driver causes kernel panic when SR-IOV is enabled on VPI cards due to driver compatibility issue.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.
- MFT tools might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang.
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only).
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV
- Bloom filter is currently not supported.
- Firmware downgrade message When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3
- RM#DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3
- RM#VPD read-only fields are writable.
- Increasing SymbolErrorCounter When working in VPI mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- ConnectX-3 Pro VF device ID is presented the same as ConnectX-3 VF device ID due to driver limitations.
- RSOD while running PXE (legacy) on G9 servers. This occurs only when PXE boot fails and BIOS boots from HDD. Currently it is pending BIOS fix.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.
- RDP over IPv6 is currently not functional.
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule"
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.
- 56GbE link is not raised when using 100GbE optic cables.



- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx-4\_en\_get\_drvinfo() that is called from asynchronous event handler.
- 832298: When running ibdump, loopback traffic is mirroring into the kernel driver.
- AHS reports wrong MTU size
- RM#846523: MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer

#### **Known Issues for FW version 14.26.1040 :**

- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- Secure state is not updated after firmware burning due to the following behavior.
- Since Packet Pacing enforce max\_tc value is "1", features that require multiple TCs will not be active when this mode is available.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.

#### **Known Issues for FW version 16.26.1040 :**

- Occasionally Bluescreen might occur when using mlxfwreset for Socket Direct devices on Windows.
- SX\_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX\_RDMA table.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- The sw\_reset option is not supported when ATS is enabled.
- When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header.
- DC LAG can function only in case there is a single PF per port without any active VFs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
- Firmware asserts may occur when setting the PF\_BAR2\_SIZE value higher than the maximum supported size.

### **Fixes**

#### **Fixes submitted in version 2.42.5044 :**

- An issue that prevented the firmware from detecting a link\_down event thus preventing the IB bond interface from going to a failover mode.

#### **Fixes submitted in version 14.26.1040:**

- A function was misbehaving when a PCIe TLP was set with a poisoned indication.
- The "destroy mkey " command was getting stuck when rebooting the hypervisor.
- The total firmware reset time is increased by 1 second.

#### **Fixes submitted in version 16.26.1040:**

- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hosts.
- Unexpected queue pairs transitioned to error in lossy tests.
- Limited the maximum amount of dumps created on a PF.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Stability issues with RDMA over Converged Ethernet (RoCE) retransmissions under stress were affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Large number of packets dropped when running Jumbo frames with TTL rewrite.
- Limited the number of the elements in the Quality of Service (QoS) tree 2K.  
Note: Creating more than 250 Vport\_tc for every TC is not allowed.
- Queue Pair (QP) flow query was always taking port 1, Firmware will now reply the proper port, 1 or 2, for the dual port RoCE net device.
- The nack counters constantly reported as "0".
- In a rare scenario when the driver is executing the "2err" command and the QP is in Send Queue (SQ) drain state, the firmware might post event of broken Work Queue (WQ) instead of sending error Completion Queue Element (CQEs) on all the Work Queue Entry (WQEs).

### **Enhancements**

#### **Firmware for the following devices are updated to 2.42.5044 :**

779799-B21 (HP Ethernet 10G 2-port 546FLR-SFP+ Adapter)  
779793-B21 (HP Ethernet 10G 2-port 546SFP+ Adapter)

#### **Firmware for the following devices are updated to 14.26.1040:**

817749-B21 (HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter)

#### **Firmware for the following devices are updated to 14.26.1040 :**

817753-B21 (HPE Ethernet 25Gb 2-port 640SFP28 Adapter)

## Firmware for the following device is updated to 16.26.1040 :

874253-B21 (HPE Ethernet 100Gb 1-port 842QSFP28 Adapter)

## New features and changes in version 14.26.1040 and 16.26.1040 :

- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdif.
- The ICMD Query Caps indicate support and expose the list of the supported counters.
- Enabled a new feature User Context Object (DEVX) which is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX contexts. The allowed functionalities of this capability depend on the user permissions.
- Support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- Reliability improvements and security hardening enhancements were done.

## New features and changes in version 16.26.1040 :

- Added support for the following features:
  - Address Translation Service (ATS) support for MKEY and UMEM.
  - Exposing the VPD on the VF.
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/FDB.

## Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
779793-B21	HP Ethernet 10Gb 2-port 546SFP+ Adapter	HP_1200111023
779799-B21	HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	HP_2240110004
817749-B21	HPE Ethernet 25Gb 2-port 640FLR-SFP28 Adapter	HP_2690110034
817753-B21	HPE Ethernet 25Gb 2-port 640SFP28 Adapter	HP_2420110034
874253-B21	HPE Ethernet 100Gb 1-port 842QSFP28 Adapter	HPE000000014

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and Infiniband mode) ConnectX4 and ConnectX5 devices on VMware ESXi 6.7

Version: 1.0.1 (**Recommended**)

Filename: CP039802.compsig; CP039802.zip

## Important Note!

### Known Issues in firmware 12.26.1040:

- Secure state is not updated after firmware burning due to the following behavior.  
By default, mlxfwreset takes the lowest supported fwreset level. Changing to/from secure boot keeps the firmware versions the same except for when performing INI changes. As a result, the reset level 0 is set as the default value while resetting after burning.  
**Workaround:** Set the reset level to 3 explicitly in mlxfwreset.
- Since Packet Pacing enforce max\_tc value is "1", features that require multiple TCs will not be active when this mode is available.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.

### Known Issues in firmware 16.26.1040:

- Occasionally Bluescreen might occur when using mlxfwreset for Socket Direct devices on Windows.
- SX\_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX\_RDMA table.  
**Workaround:** Use SX\_RDMA with Dual Port GVMi instead.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- The sw\_reset option is not supported when ATS is enabled.
- When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header. Meaning, using VLAN push/pop may not work properly when using vport context VLAN. The features that may be affected by this and not work properly are:
  - Host chaining
  - Mirroring in FDB
  - TTL modify in FDB
  - VGT+
- DC LAG can function only in case there is a single PF per port without any active VFs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.

- Firmware asserts may occur when setting the PF\_BAR2\_SIZE value higher than the maximum supported size (maximum PF\_BAR2\_SIZE is 4 for .  
**Workaround:** Configure within limits (NIC PF\_BAR\_SIZE <= 4).
- CWD4 AOM cable is currently not supported.

## Fixes

### **Fixes submitted in version 12.26.1040:**

- IPoIB could not to function when there were Dynamically Connected Transport (DC) CNAK Queue Pairs (QPs) active.
- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hosts.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.

### **Fixes submitted in version 16.26.1040:**

- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hosts.
- Unexpected queue pairs transitioned to error in lossy tests.
- Limited the maximum amount of dumps created on a PF.
- Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- Stability issues with RDMA over Converged Ethernet (RoCE) retransmissions under stress were affecting Zero-Touch-RoCE.
- Fixed an issue that caused a function to misbehave when a PCIe Transaction Layer Packet (TLP) was set with a poisoned indication.
- Large number of packets dropped when running Jumbo frames with TTL rewrite.
- Limited the number of the elements in the Quality of Service (QoS) tree 2K.  
Note: Creating more than 250 Vport\_tc for every TC is not allowed.
- Queue Pair (QP) flow query was always taking port 1, Firmware will now reply the proper port, 1 or 2, for the dual port RoCE net device.
- The nack counters constantly reported as "0".
- In a rare scenario when the driver is executing the "2err" command and the QP is in Send Queue (SQ) drain state, the firmware might post event of broken Work Queue (WQ) instead of sending error Completion Queue Element (CQEs) on all the Work Queue Entry (WQEs).

## Enhancements

### **Firmware for the following devices are updated to 12.26.1040:**

825110-B21 (HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter)  
825111-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter)

### **Firmware for the following devices are updated to 16.26.1040:**

879482-B21 (HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter)  
872726-B21 (HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter)

### **Changes and New features in firmware version 12.26.1040 and 16.26.1040:**

- Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdif. They can be called via the vsec space. The counters' values are returned only via the tracer. The ICMD Query Caps indicate support and expose the list of the supported counters.
- User Context Object (DEVX) is a containerized sandbox per user, to access PRM command securely by using General Object commands, UMEM and UCTX contexts. The allowed functionalities of this capability depend on the user permissions. The following functionalities are still managed by the Kernel:
  - Resource cleaning
  - UCTX stamping
  - Blocking the physical address and IRQ from these UCTX
- Added support for reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
- Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- This release contains important reliability improvements and security hardening enhancements. Mellanox recommends upgrading your device firmware to this release to improve the device firmware security and reliability.

### **Changes and New features in firmware version 16.26.1040:**

- Added support for the following features:
  - Address Translation Service (ATS) support for MKEY and UMEM.
  - Exposing the Vital Product Data (VPD) on Virtual Function (VF).
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - Creating software managed steering tables in eSwitch/Forwarding Table (FDB).

## Supported Devices and Features

HPE Part Number	Device Name	PSID
825110-B21	HPE InfiniBand EDR/Ethernet 100Gb 1-port 840QSFP28 Adapter	HP_2180110032
825111-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 840QSFP28 Adapter	HP_2190110032
872726-B21	HPE InfiniBand EDR/Ethernet 100Gb 2-port 841QSFP28 Adapter	HPE0000000009
879482-B21	HPE InfiniBand FDR/Ethernet 40/50Gb 2-port 547FLR-QSFP Adapter	HPE0000000022

Online Firmware Upgrade Utility (ESXi 6.7) for HPE Mellanox VPI (Ethernet and Infiniband mode) devices on VMware ESXi 6.7  
Version: 1.0.2 (**Recommended**)  
Filename: CP040823.compsig; CP040823.zip

### Important Note!

#### Known Issues in firmware 2.42.5000, 2.42.5052:

- When using the QSFP module RTX320-581, and performing a driver restart for the firmware upgrade/downgrade to take effect, the link does not come up  
**Workaround:** Reboot the server.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LES will not be active while the ETH link is in an idle mode
- Downgrading from v2.30.8000 or later to an earlier version than 2.30.8000 requires server reboot.  
**Workaround:** Reboot the server.
- On ConnectX-3 Ethernet adapter cards, there is a mismatch between the GUID value returned by firmware management cards tools and that returned by fabric/driver utilities that read the GUID via device firmware (e.g., using ibstat). Mlxburn/flint return 0xffff as GUID while the utilities return a value derived from the MAC address. For all driver/firmware/software purposes, the latter value should be used.  
**Workaround:** Use the GUID value returned by the fabric/driver utilities (not 0xffff).
- SBR should be asserted for a minimum of 50 milliseconds for the ConnectX®-3 adapters.
- On Pilot1 SL230, PCIe link occasionally does not come up at Gen3 speed.
- RH6.3 Inbox driver causes kernel panic when SR-IOV is enabled on VPI cards due to driver compatibility issue.
- In advanced steering mode, side band management connectivity may be lost when having more than 8 QP per mcg.
- When SR-IOV is disabled in the system BIOS, a PCI issue is noticed in Ubuntu v12.04.3 with Linux kernel v3.8 which affects NICs of several manufacturers including Mellanox's, preventing them from operating.  
**Workaround:** Enable SR-IOV in the BIOS.
- MFT tools might leave the flash semaphore locked if the tool operation is forced stopped. The locked semaphore prevents the firmware from accessing the flash and causes firmware hang..  
**Workaround:** Clear the semaphore using MFT command: flint -clear\_semaphore
- Cable Info MAD reports a wrong cable info when using the MC2210411-SR4 module.
- Gen2 failure at temperature sweep up to 10C/min (for MT27518A1-FDIR-BV only).
- PCIe Gen2 link unstable at temperature sweep of 10C/min for MT27518A1-FDIR-BV.
- Bloom filter is currently not supported.
- When downgrading from firmware v2.11.0000 and using MFT 3.0.0-3, the following message is displayed due to the mlxconfig tool:  
*You are trying to override configurable FW by non-configurable FW.  
If you continue, old FW configurations will be cleared, do you want to continue ? (y/n) [n] : y  
You are trying to restore default configuration,  
do you want to continue ?  
(y/n) [n] : y*
- DMFS should not be enabled when working with InfiniBand on MLNX\_OFED-2.0.3.  
**Workaround:** Upgrade to MLNX\_OFED-2.1-x.x.x. or later.
- VPD read-only fields are writable.  
**Workaround:** Do not write to read- only fields if you wish to preserve them.
- When working in VPI mode with port1 FDR and port2 40G, error counters misbehave and increase rapidly.
- Setting the device to 128Byte CQ/EQ stride will cause misbehavior of sideband management resulting in communication loss.
- CQ and EQ cannot be configured to different stride sizes.
- ConnectX-3 Pro VF device ID is presented the same as ConnectX-3 VF device ID due to driver limitations.  
**Workaround:** Use the physical function device ID to identify the device.
- Changing port protocol from ETH to IB on port with NCSI/IPMI enabled while the port is connected to ETH switch is not supported.  
**Workaround:**
  - Unplug the cable from the switch
  - Restart driver
  - Change the protocol via the appropriate tools.
- RDP over IPv6 is currently not functional.  
**Workaround:** Set the default RoCE mode in the software to RoCE v2 (also when not using RoCE).
- Sniffer QP cannot be removed from the regular rule after adding the QP with insertion scheme equals to "push to that rule".
- Since only a single Boot Entry Vector (BEV) per PCI Physical Function is supported, disabling the first port causes the second port to disappear as well.
- The NIC does not notify the driver of a link-down incident when a cable is unplugged from a NIC port with 56GbE port link.

- 56GbE link is not raised when using 100GbE optic cables.
- When working with MLNX\_OFED v3.3-1.0.0.0, server reboot could get stuck due to a kernel panic in mlx4\_en\_get\_drvinfo() that is called from asynchronous event handler.
- When running ibdump, loopback traffic is mirroring into the kernel driver.
- Enabling/disabling cq\_timestamp using mlxconfig is not supported.
- In a card with 2 separate LEDs scheme (a Phy LED and a logic LED) only the Phy LED will lit. Meaning, the orange LED will not be active while the ETH link is in an idle mode.
- In SR-IOV (Single Root I/O Virtualization) setup, using mlxconfig when the PF (Physical Function) is passed through to a VM (Virtual Machine) requires a reboot of the Hypervisor.
- Adapter card MCX349A-XCCN may experience longer linkup times of a few seconds with specific switches.
- Adapter card MCX349A-XCCN does not respond to ethtool "identify" command (ethtool -p/--identify).
- MAC address that are set from the OS using ifconfig are not reflected in the OCBB buffer.

## **Fixes**

### **Fixes in version 2.42.5000:**

- PortRcvPkts counter was prevented from being cleared after resetting it.
- The system Timed Out on the configuration cycle of the Virtual Functions (VFs) when more than 10 Virtual Functions performed FLR and the completion Time Out value was configured to a range of less than 16 msec.
- The server hangs and results in NMI when running "mlxftop -d mt4103\_pci\_cr0" while restarting the driver in parallel (from a different thread). In this case, the downstream bridge over the device reported completion timeout error.
- In flow\_steering, BMC could not receive a ping over IPV6 after running bmc\_reboot.
- While closing the HCA, the RX packet caused bad access to resources that did not exist, and consequently caused the QPCGW or the irisc to get stuck.
- The master SMLID and the LID was either 0 or 0xFFFF when the port was neither active nor armed.
- ibdump could not capture all MADs packets.
- link did not go up after reboot.
- Fixed a rare issue that cause the PCIe configuration cycle that arrived during the time of sw\_reset to generate 2 completions.
- Network Controller Sideband Interface (NC-SI) did not work when adding the disable\_static\_steering\_ini field in the ini file, due to memory allocation issue for this field in the scratchpad.

### **Fixes in version 2.42.5052:**

- Fixed Uncorrectable Machine Check Exception issue. The internal resources for handling packets were not allowed to be flushed when the driver was brought down and occasionally caused Red Screen of Death (RSOD). The fix was applied to the ROM code only and has only external timing influences upon the driver's teardown.

## **Enhancements**

### **Firmware for the following devices are updated to 2.42.5000:**

764282-B21  
764286-B21

### **Firmware for the following devices are updated to 2.42.5052:**

764283-B21  
764284-B21  
764285-B21

### **New features in firmware version 2.42.5000:**

- Added support for the following features.
  - new TLV: CX3\_GLOBAL\_CONF to enable/disable timestamp on incoming packets through mlxconfig configuration.
  - User MAC configuration.
  - Automatically collecting mstdump before driver reset.
  - A mechanism to detect DEAD\_IRISC (plastic) from TPT (iron) and raise an assert.
  - A new field is added to "set port" command which notifies the firmware what is the user\_mtu size.
- Improved the debug ability for command timeout cases

## **Supported Devices and Features**

### **Supported Devices:**

HP Part Number	Device Name	PSID
764282-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+M Adapter	HP_1350110023

764283-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+M Adapter	HP_1360110017
764284-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	HP_1370110017
764285-B21	HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	HP_1380110017
764286-B21	HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	HP_1390110023

Online Firmware Upgrade Utility (ESXi 6.7) for Mellanox Open Ethernet cards  
Version: 1.0.0 **(Recommended)**  
Filename: CPO41640.compsig; CPO41640.zip

### **Important Note!**

#### **Known Issues in firmware 14.26.1040 and 14.26.2000:**

- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- Since Packet Pacing enforce max\_tc value is "1", features that require multiple TCs will not be active when this mode is available.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.

#### **Known Issues in firmware 16.26.1040 and 16.26.2000 :**

- Creating an NVMoF offloaded target while running the LFWP flow may cause the device to become unstable.
- sw\_reset action fails in case it is initiated during live-patch flow.
- Occasionally Bluescreen might occur when using mlxfwreset for Socket Direct devices on Windows.
- SX\_RDMA is not supported when Dual Port RoCE feature is enabled. Due to this behavior, packets sent on other port are be processed by the SX\_RDMA table.
- Hardware arbitration is currently disabled in OCP3.0 cards. It will be supported on future releases for the same hardware.
- The sw\_reset option is not supported when ATS is enabled
- When using the hairpin feature, and using VLAN strip or using the "modify esw vport context" command, the packets can have an incorrect VLAN header.
- DC LAG can function only in case there is a single PF per port without any active VFs.
- Due to performance considerations, unicast loopback traffic will go through the NIC SX tables, and multicast loopback traffic will skip the NIC SX tables.
- Firmware asserts may occur when setting the PF\_BAR2\_SIZE value higher than the maximum supported size (maximum PF\_BAR2\_SIZE is 4).
- CWDM4 AOM cable is currently not supported

### **Fixes**

#### **Fixes in version 14.26.2000 :**

- Enabled the option to prevent clock and capture CPLD GPIOs glitch upon firmware reset.

#### **Fixes in version 14.26.1040 :**

- Fixed an issue that caused a function to misbehave when a PCIe Traffic Light Protocol(TLP) was set with a poisoned indication.
- Fixed a rare issue that resulted in "destroy mkey " command getting stuck when rebooting the hypervisor.

#### **Fixes in version 16.26.2000 :**

- Enabled the option to prevent clock and capture CPLD GPIOs glitch upon firmware reset.
- Fixed an issue that slowed the firmware flows when executing many destroy XRQ commands on an XRQ that supported DC transport service.
- Fixed an issue that caused performance degradation when working in dual-port devices under bidirectional traffic stress.

#### **Fixes in version 16.26.1040 :**

- On rare occasions, when firmware coalesce Host stuck events occur, a async event might be delayed to be reported, and not be triggered until the next time the PCIe hangs on one of the hosts.
- Fixed an issue that resulted in unexpected queue pairs transitioned to error in lossy tests.

- o Limited the maximum amount of dumps created on a Physical Function(PF).
- o Renamed the GMP Mellanox Vendor Specific External Capability mask enum from IsDiagnosticCountersSupported to IsDiagnosticDataSupported.
- o Fixed a stability issue in RoCE retransmissions under stress affecting Zero-Touch-RoCE.
- o Fixed an issue that caused a function to misbehave when a PCIe TLP was set with a poisoned indication.
- o Fixed an issue that caused large number of packet to drop when running Jumbo frames with Time to live (TTL) rewrite
- o Limited the number of the elements in the QoS tree 2K. Creating more than 250 Vport\_tc for every TC was not allowed
- o Fixed the query QP flow. Instead of always taking port 1, FW will now reply the proper port, 1 or 2, for the dual port RDMA over Converged Ethernet(RoCE) net device.
- o Fixed an issue that caused the nack counters to constantly be reported as "0".
- o In a rare scenario when the driver was executing the "2err" command and th Queue pair(QP) was in SQ drain state, the firmware might post event of broken Work Queue (WQ) instead of sending error CQEs on all the WQEs.

## Enhancements

### Firmware for the following devices is updated to 14.26.1040 :

P21930-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCAT Adapter)

### Firmware for the following devices is updated to 14.26.2000 :

P11341-B21 (HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter)

### Firmware for the following devices is updated to 16.26.1040:

P13188-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACAT Adapter )

P21927-B21 (HPE Ethernet 100Gb 2-Port QSFP28 MCX516A-CCAT Adapter)

### Firmware for the following devices is updated to 16.26.2000:

P10112-B21 (HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter)

### New features and changes in version 14.26.1040 and 16.26.1040 :

- o Enabled the firmware by using the ICMD commands to deal with diagnostic counters similar to cmdif. They can be called via the vsec space. The counters' values are returned only via the tracer. The ICMD Query Caps indicate support and expose the list of the supported counters.
- o Zero-Touch-RoCE counters are now available to the user for debuggability purposes when using the Zero-Touch-RoCE feature.
- o Added Address Translation Service (ATS) support for MKEY and UMEM VPD Added support for exposing the VPD on the VF.
- o Added support for the following
  - Reporting the supported affiliated and unaffiliated asynchronous events to DEVX users through the command interface.
  - Hairpin Drop Counter.
  - Hairpin and TM RNDV QPs to work with DevX.
  - creating software managed steering tables in eSwitch/FD

### New features and changes in version 14.26.2000 and 16.26.2000 :

- o Live Firmware Patch (LFWP) allows applying of critical hot fixes without interrupting data traffic and without any user application interruptions

## Supported Devices and Features

HPE Part Number	Mellanox Ethernet Only Adapters	PSID
P21930-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4121A-XCHT Adapter	MT_0000000414
P11341-B21	HPE Ethernet 10Gb 2-port SFP+ MCX4621A-ACAB OCP3 Adapter	MT_0000000238
P13188-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX512F-ACHT Adapter	MT_0000000416
P10112-B21	HPE Ethernet 10/25Gb 2-port SFP28 MCX562A-ACAI OCP3 Adapter	MT_0000000241
P21927-B21	HPE Ethernet 100Gb 2-port QSFP28 MCX516A-CCHT Adapter	MT_0000000417

## Firmware - NVDIMM

Firmware Package - 16GB NVDIMM-N DDR4-2666

Version: 1.04 (A) **(Recommended)**

Filename: nvdimm-16gb\_1.04.fwpkg

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## Fixes

Initial release.

## Enhancements

Initial release.

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Firmware package for HPE Persistent Memory featuring Intel Optane DC Persistent Memory on HPE Gen10 Servers  
Version: 01.02.00.5375 **(Recommended)**  
Filename: dcpmm\_01.02.00.5375.fwpkg

## Enhancements

Initial release of Firmware for HPE Persistent Memory for Gen10 Servers.

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## **Firmware - Storage Controller**

HPE D6020 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)  
Version: 2.74 (D) **(Recommended)**  
Filename: CP041167.compsig; CP041167.md5; CP041167.zip

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## **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D6020(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

## **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D6020.log and flash summary is logged to /var/cpq/Component.log.

## **Fixes**

**The following fixes were incorporated in this version:**

- Temperature sensors logic inside gSEP model and SES database
- When an IOM is pulled the surviving IOM reports false critical temperatures

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

## **Supported Devices and Features**

The D6020 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- HP Smart Array P841 Controller
- HP Smart Array P441 Controller
- HP Smart HBA H241
- HP Smart Array P741m Controller



- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller
- HPE Smart Array P408e-m Controller

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HPE D8000 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)  
Version: 0105 (**Recommended**)  
Filename: CP041301.compsig; CP041301.md5; CP041301.zip

### **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D8000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/codeload.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

### **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D8000.log and flash summary is logged to /var/cpq/Component.log.

### **Fixes**

**The following fixes were incorporated in this version:**

- SAS drive LED behavior was corrected to align with the Smart Array specification, specifically:
  - The Activity LED of a sanitize erase drive now turns ON when connected.
  - The Array present LED now turns ON for the SAS drive.
  - The Activity LED now blinks on all drives during a SAS drive rebuild.
- The Serial Output Buffer (SOB) has a fixed sized for stored entries. Now, when the buffer is full, the oldest entries are cleared or committed to persistent storage (if available). For this reason, subsequent requests to read the SOB only retrieves new entries that have been logged since the last successful request to read the SOB.
- The drive activity LED has been changed to a function as described in the installation and maintenance guide.
- The reboot flag was changed to issue a hard reset, which enables the service delivery subsystem (ZPSDS) information be shared across (expanded across) the internal expanders to all devices attached.
- The drive activity LED on the SAS disk drives was changed to support the ACTIVE\_LOW signal state. The ACTIVE\_LOW signal state is the default operation state for most drives.
- The SCSI WRITE BUFFER MODE was changed from activate to soft reset. This change improves the host ability to detect and report whether the enclosure is going to perform a disruptive or non-disruptive activation after a firmware upgrade.
- With I/O module firmware v0105 and PQI firmware 2.02 , the slot power cycle issue has been resolved by changing the power cycle SES request to return a failure when a partner slot is not connected.

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

### **Supported Devices and Features**

The D8000 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller

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Online ROM Flash Component for ESXi (x86) - HPE Smart Array P824i-p MR Gen10  
Version: 24.23.0-0042 (**Optional**)  
Filename: CP036878.compsig; CP036878.zip

## **Enhancements**

- Added support for the Apollo 4510 system

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Online ROM Flash Component for VMware ESXi – HPE 12Gb/s SAS Expander Firmware for HPE Smart Array Controllers and HPE HBA Controllers

Version: 4.22 (**Recommended**)

Filename: CP040617.compsig; CP040617.zip

## **Important Note!**

- Power cycle / cold reboot is required if firmware is upgraded from version 1.31 or earlier.

## **Fixes**

- Fixes an issue where false Smart Carrier authentication errors may happen.

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Online ROM Flash Component for VMware ESXi - HPE Apollo 2000 Gen10 Backplane Expander Firmware

Version: 1.00 (C) (**Optional**)

Filename: CP037611.compsig; CP037611.zip

## **Important Note!**

Customers who already installed firmware version 1.00 do not need to update to 1.00 (C).

## **Enhancements**

- Added support for VMware vSphere 6.7 OS

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Online ROM Flash Component for VMware ESXi – HPE Apollo 2000 System - SAS Expander

Version: 1.00 (C) (**Recommended**)

Filename: CP035160.compsig; CP035160.zip

## **Important Note!**

Customers who already have previous firmware version 1.00 installed do not need to update to 1.00(C).

## **Enhancements**

- Added VMware vSphere 6.7 OS support

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Online ROM Flash Component for VMware ESXi – HPE Apollo 4200 Backplane Expander Firmware

Version: 1.78 (A) (**Optional**)

Filename: CP038813.compsig; CP038813.zip

## **Important Note!**

- Power cycle / cold reboot is required if firmware is upgraded from version 1.03 or earlier.

## **Enhancements**

- Added HPE Smart Array P824i-p controller support

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Online ROM Flash Component for VMware ESXi - HPE Apollo 45xx Gen10 Backplane Expander Firmware

Version: 1.56 (D) (**Recommended**)

Filename: CP038103.compsig; CP038103.zip

## **Enhancements**

- Added HPE Smart Array P824i-p controller support

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Online ROM Flash Component for VMware ESXi – HPE Apollo 45xx Gen9 Backplane Expander Firmware

Version: 2.50 **(Optional)**  
Filename: CP038042.compsig; CP038042.zip

### **Important Note!**

- Please un-plug and re-plug the power cord to the server for firmware upgrade from version 1.03 or earlier to take effect.

### **Fixes**

- Expander may reset during heavy SSACLI polling
- SATA drives may take longer to spin up, not be initially detected, and then hot add later. This can prevent system boot or affect the logical drive status.

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Online ROM Flash component for VMware ESXi - HPE Dual 8GB microSD USB  
Version: 1.3.2.215 (B) **(Recommended)**  
Filename: CP037940.compsig; CP037940.zip

### **Fixes**

- To show corresponding HPE Dual 8GB Micron SD part number in Agentless Management Service version 11.2.0 or later.

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Online ROM Flash Component for VMware ESXi - HPE Express Bay Enablement Switch Card  
Version: 1.78 (B) **(Optional)**  
Filename: CP035193.zip

### **Important Note!**

Customers who already have firmware version 1.78 installed do not need to update to 1.78(B).

- Power cycle / cold reboot is required after installation for updates to take effect.

### **Prerequisites**

- The HP ProLiant iLO firmware version must be v2.20 or later. If the HP ProLiant iLO firmware is older than v2.20 you will receive the following error message:

*Check dependency failed.*

*Current version: iLOx x.xx*

*Minimum version required: iLO4 2.20*

*The software will not be installed on this system because the required hardware is not present in the system or the software/firmware doesn't apply to this system*

### **Enhancements**

- Added VMware vSphere 6.7 OS support

---

Online ROM Flash Component for VMware ESXi - HPE SAS Expander Firmware for HPE D2500sb Storage Blade  
Version: 2.00 (C) **(Optional)**  
Filename: CP037690.compsig; CP037690.zip

### **Important Note!**

Customers who already installed firmware version 2.00 do not need to update to 2.00 (C).

- When using ESXi6.0 you must be at upgrade 3 or newer. The required SmartPQI driver is not present in earlier versions of the OS

### **Prerequisites**

When using ESXi6.0 you must be at upgrade 3 or newer. The required SmartPQI driver is not present in earlier versions of the OS

### **Enhancements**

- Added support for VMware vSphere 6.7 OS
-

Online ROM Flash Component for VMware ESXi - HPE Smart Array P408i-p, P408e-p, P408i-a, P408i-c, E208i-p, E208e-p, E208i-c, E208i-a, P408i-sb, P408e-m, P204i-c, P204i-b, P816i-a and P416ie-m SR Gen10

Version: 2.62 **(Recommended)**

Filename: CP039559.compsig; CP039559.zip

### **Fixes**

- While processing I/O's larger than the RAID volume stripe size, the controller could stop responding.
- If an active IO module cable is unplugged and re-inserted multiple times, the first reset request is lost and subsequent reset requests are aligned in a queue until the original request is completed. However, the first request will never complete and will result in error message 24613 in the ahs logs.

### **Enhancements**

- Add UBM1 Support
- Support for backup power source charge timeout values from UEFI
- UBM2 backplane support
- Drive hotplug support for UBM backplanes

---

Online ROM Flash Component for VMware ESXi - Smart Array and Smart HBA H240ar, H240nr, H240, H241, H244br, P240nr, P244br, P246br, P440ar, P440, P441, P542D, P741m, P840, P840ar, and P841

Version: 7.00 **(Recommended)**

Filename: CP039996.compsig; CP039996.zip

### **Fixes**

- Occasionally the drive will not accept any IO's after running Sanitize command for a period of time due to the FW being out of sync with the drive during that time
- Non-HPE drives could report "Task Set Full" due to the drives reaching the qdepth limit during heavy workload
- Raid volume is not discovered due to a bad drive consuming two slots during hotplug
- Data could become inaccessible when upgrading from firmware versions prior to 4.5x
- The controller could stop responding when executing a SCSI verify command due to a CPU exception
- The system could stop communicating due to an I/O command timeout
- While on HBA mode, a drive could stop responding due to an early allocated buffer release
- A SAS drive WWN is reported inaccurately due to an incorrect report causing the driver to be out of sync with the device
- If using a 4G module, the controller could stop responding due to the SSD Cache metadata exceeding its limits during a Backup
- SSD Smart Cache module become disabled due to a reduction in usable cache space

### **Enhancements**

Add optimization for the iLO communication interface in order to have a more effective mechanism to check for ownership of the communication buffer

---

Online ROM Flash Component for VMware ESXi - Smart Array P220i, P222, P420i, P420, P421, P721m, and P822

Version: 8.32 (C) **(Recommended)**

Filename: CP039258.compsig; CP039258.zip

### **Enhancements**

- Improved integration with Smart Update Manager. If target device was previously updated to firmware v 8.32, it is not necessary to update to v8.32(C).

---

Online ROM Flash Component for VMware ESXi - Smart Array P230i, P430, P431, P731m, P830i, and P830

Version: 5.02 **(Recommended)**

Filename: CP039414.compsig; CP039414.zip

### **Fixes**

- The firmware updates could fail while SmartCache is enabled due to active I/O in the Smart Cache.
  - The serial output of the expander could fail to be populated in the controller logs due to the buffer not being handled appropriately by the controller
-

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## Firmware - Storage Fibre Channel

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HPE Firmware Flash for Emulex Fibre Channel Host Bus Adapters for VMware vSphere 6.7

Version: 2019.12.01 **(Recommended)**

Filename: CP039574.compsig; CP039574.zip

### **Important Note!**

Release Notes:

[HPE StoreFabric Emulex Adapter Release Notes](#)

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

### **Prerequisites**

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

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

### **Enhancements**

We have separate components to update fibre channel and converged network adapters. This is a fibre channel update component.

#### **16 Gb Standup, 16 Gb Mezzanine, and 32 Gb Standup**

##### **For LPe 32000 Family:**

- Enhanced the firmware to handle heavy VDM (vendor-defined message) load correctly without any unexpected behavior.
- Enhanced MCTP (Management Component Transport Protocol) error handling by adding code that will exit gracefully.

Updated 16/32 Gb HBA/Mezz universal boot

Updated 16Gb HBA/Mezz universal boot

Updated 8Gb HBA/Mezz universal boot

##### **Contains:**

16/32 Gb HBA/Mezz universal boot 12.4.270.5

16 Gb HBA/Mezz universal boot 12.4.270.3

8 Gb standup/mezz firmware 2.10X6

8 Gb standup/mezz universal boot image 12.40a6 (12.4.262.0 BIOS, 12.4.153.0 UEFI)

### **Supported Devices and Features**

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

## 8Gb FC:

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

## LPe16000 (16Gb) FC:

- HPE SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HPE SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HPE Fibre Channel 16Gb LPe1605 Mezz

## LPe31000/32000 (16Gb/32Gb) FC:

- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

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HPE Firmware Flash for QLogic Fibre Channel Host Bus Adapters for VMware vSphere 6.7

Version: 2019.12.01 (**Recommended**)

Filename: CP039708.compsig; CP039708.zip

## **Important Note!**

[HPE StoreFabric QLogic Adapter Release Notes](#)

## **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:

### **Gen 4 Fibre Channel Host Bus Adapter:**

#### **Firmware:**

- Unexpected behavior of an Initiator performance seen when certain targets return otherwise good FCP\_RSP IUs, but containing a non-zero parameter field. This was caused by configuring the application-specific integrated circuit (ASIC) to treat this condition as a non-performance case
- Firmware system unexpected behavior that occurred in target mode during an Fibre Channel Protocol (FCP) exchange for a write Input Output (IO)
- Firmware system unexpected behavior or non-fatal unexpected behavior resulting from the aborted Direct Memory Access (DMA) of an FCP\_RSP IU payload to the host.
- Eliminate stalls when transmitting response frame after data frames in certain cases.

#### **BIOS:**

- NONE

#### **UEFI:**

- NONE

### **Gen 5 Fibre Channel Host Bus Adapter:**

#### **Firmware:**

- The link did not come up with a certain 16G Small Form-factor Pluggable (SFP) model that required longer time to complete a write access than the firmware expected
- After the link was brought down over an electrical connection, the Loss of Sync counter of the *Link Error Status* Block was not

incremented due to an unhandled transition in the FC\_port state machine

- Unexpected behavior of an Initiator performance seen when certain targets return otherwise good FCP\_RSP IUs, but containing a non-zero parameter field. This was caused by configuring the application-specific integrated circuit (ASIC) to treat this condition as a non-performance case

**BIOS:**

- NONE

**UEFI:**

- NONE

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

**Firmware:**

- The link did not come up with a certain 16G Small Form- factor Pluggable (SFP) model that required longer time to complete a write access than the firmware expected
- After the link was brought down over an electrical connection, the Loss of Sync counter of the *Link Error Status* Block was not incremented due to an unhandled transition in the FC\_port state machine
- Unexpected behavior of an Initiator performance seen when certain targets return otherwise good FCP\_RSP IUs, but containing a non-zero parameter field. This was caused by configuring the application-specific integrated circuit (ASIC) to treat this condition as a non-performance case

**BIOS:**

- NONE

**UEFI:**

- Firmware Management Protocol *SetImage* unexpected behavior that caused QLogic Converge Console (QCC) Command Line Interface (CLI) to display the wrong Flash Image Version.

**Enhancements**

**Gen 4 Fibre Channel Host Bus Adapter:**

**UEFI:**

- Config Reset Protocol now checks the Level parameter.
- Changed Human Information Infrastructure (HII) Configuration Language name to x-UEFI-MARVELL.
- Updated Legacy Human Information Infrastructure (HII) strings.
- Updated Firmware Management Protocol Human Information Infrastructure (HII) strings.
- Driver Health Protocol now supports child handles.
- Config Reset Protocol now restores adapter World Wide Port Name (WWPN) & World Wide Node Name (WWNN).
- Added UEFI 2.7 support

**Gen 5 Fibre Channel Host Bus Adapter:**

**UEFI:**

- Removed Loaded Image Protocol check from Driver Binding Protocol.
- Config Reset Protocol now checks the Level parameter.
- Changed Human Information Infrastructure (HII) Configuration Language name to x-UEFI-MARVELL.
- Updated Legacy Human Information Infrastructure (HII) strings.
- Updated Firmware Management Protocol Human Information Infrastructure (HII) strings.
- Driver Health Protocol now supports child handles.
- Config Reset Protocol now restores adapter World Wide Port Name (WWPN) & World Wide Node Name (WWNN).
- Added UEFI 2.7 support

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

**UEFI:**

- Removed Loaded Image Protocol check from Driver Binding Protocol.
- Config Reset Protocol now checks the Level parameter.
- Changed Human Information Infrastructure (HII) Configuration Language name to x-UEFI-MARVELL.
- Updated Legacy Human Information Infrastructure (HII) strings.
- Updated Firmware Management Protocol Human Information Infrastructure (HII) strings.
- Driver Health Protocol now supports child handles.
- Config Reset Protocol now restores adapter World Wide Port Name (WWPN) & World Wide Node Name (WWNN).
- Added UEFI 2.7 support

Updated the Firmware/BIOS/UEFI packages for 8 Gb, 16 Gb and 32 Gb products.

- Gen4 Fibre Channel Host Bus Adapter:
  - Package 3.81.05
  - Firmware 8.08.206

- UEFI 7.00
  - BIOS 3.56
- Gen5 Fibre Channel Host Bus Adapter:
  - Package 6.02.01
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.43
- Gen6 Fibre Channel Host Bus Adapter:
  - Package 1.73.07
  - Firmware 8.08.230
  - UEFI 7.02
  - BIOS 3.64
- Gen7 Fibre Channel Host Bus Adapter:
  - Package 02.02.15
  - Firmware 09.02.02
  - UEFI 7.08
  - BIOS 0.0

## **Supported Devices and Features**

This firmware supports the following HPE adapters:

### **Gen 4 Fibre Channel Host Bus Adapter:**

- HPE 81Q PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **Gen 5 Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

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

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

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

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

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## **Firmware (Entitlement Required) - Storage Controller**

HPE D3600/D3700/D3610/D3710 12Gb SAS Disk Enclosure ROM Flash Component for VMware (ESXi)

Version: 4.12 **(Recommended)**

Filename: CP036702.compsig; CP036702.md5; CP036702.zip

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### **Important Note!**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted. In single domain configuration, if user hosts an OS in D3000(or any storage box) and flash the SEPs, it will hang/crash everytime as SmartComponent will reset the SEPs after flash/code load.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.

### **Prerequisites**

**IMPORTANT:** Firmware updates must be performed during a system maintenance window, with all I/O to the system halted.

**WARNING!** Do not power cycle or restart during the firmware update as this can result in loss of capabilities for this unit. It typically takes several minutes for the firmware to load.

**NOTE:** All firmware flash progress messages are logged to /var/cpq/D3000.log and flash summary is logged to /var/cpq/Component.log.



## **Fixes**

The following fix is incorporated in this version:

- The Enabled-ClusterS2D command now completes successfully when executed on a SATA drive within a D3610 disk enclosure.

Please refer to the [Release Notes](#) for the complete listing of fixes, enhancements, known issues and work-arounds corresponding to this firmware.

## **Enhancements**

The following enhancement has been added in this version:

- Added support of VMware vsphere 6.7

## **Supported Devices and Features**

The D3600 / D3700 / D3610 / D3710 Enclosure can be attached to any of the following HPE Storage Controllers and Host Bus Adapters :

- HP Smart Array P841 Controller
- HP Smart Array P441 Controller
- HP Smart HBA H241
- HP Smart Array P741m Controller
- HPE Smart Array P408e-p Controller
- HPE Smart Array E208e-p Controller
- HPE Smart Array P408e-m Controller
- HPE Smart Array P416ie-m Controller

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## **Software - Management**

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HPE Management Bundle Smart Component for ESXi 6.7

Version: 2019.12.01 **(Recommended)**

Filename: cp040138.compsig; cp040138.zip

## **Fixes**

### **WBEM Providers**

- Fix incorrect CacheOperationalStatus data for Smart Array B140i Controller
- Fix memory leak issues causing ESXi host to become unresponsive or crash

### **Agentless Management Service**

- Fix buffer overrun when acquiring vib summary from ESXi host database
- Fix cpqSePciSlotBoardName for empty slots with no CPU
- Fix cpqSePciSlotBoardName for FC Adapters with specific Device IDs
- Disable multiple IPv6 support in Gen9 to fix Host discovery issues due to missing support in iLO
- Fix AMS hang when total IPv6 address string sizes exceed 256 bytes

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## **Software - Storage Controller**

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HPE MegaRAID Storage Administrator StorCLI for VMware6.7

Version: 2019.09.00 **(Optional)**

Filename: cp040119.compsig; cp040119.zip

## **Enhancements**

Updated Product Name with the OS version.

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## **Software - Storage Fibre Channel**

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Emulex Fibre Channel driver component for VMware vSphere 6.7

Version: 2019.12.01 **(Recommended)**

Filename: cp039583.compsig; cp039583.zip

## **Important Note!**

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

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Prerequisites**

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

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

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

## **Enhancements**

Updated to Driver version 12.4.242.0

- Reset the link or the adapter instead of doing an infinite PLOGI retry.

## **Supported Devices and Features**

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

### **8Gb FC:**

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

### **LPe16000 (16Gb) FC:**

- HP SN1000E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1000E 16Gb Single Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter
- HP SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1100E 4P 16Gb Fibre Channel Host Bus Adapter
- HP Fibre Channel 16Gb LPe1605 Mezz

### **LPe31000/32000 (16Gb/32Gb) FC:**

- HPE StoreFabric SN1200E 16Gb 2P FC HBA
- HPE StoreFabric SN1200E 16Gb 1P FC HBA
- HPE StoreFabric SN1600E 32Gb 2p FC HBA
- HPE StoreFabric SN1600E 32Gb 1p FC HBA

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Emulex(BRCM) Fibre Channel over Ethernet driver for VMware vSphere 6.7

Version: 2019.03.01 **(Recommended)**

Filename: cp035743.compsig; cp035743.zip

### **Important Note!**

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

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

IF the server contains only CNA adapters and lpfc driver is already been installed, post the new driver update, please remove the lpfc driver using the following command:

```
#esxcli software vib remove lpfc
```

### **Prerequisites**

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

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

Beginning with software release 11.2, Fibre Channel (LightPulse) adapters and Converged Network adapters (OneConnect) have independent software kits.

It is highly recommended that you review the Broadcom Software Kit Migration User Guide for more detailed information regarding this change.

To obtain the guide:

1. Go to <http://www.hpe.com/support/manuals>
2. Using the HPE model number as your guide, enter the adapter model number in the Search products box, and then click >>.

This document provides special instructions and considerations for using the driver kits for FC and CNA adapters.

Special cases include those in which pre-11.2 (original) drivers and applications are replaced by the new 11.2 drivers and applications, and cases in which inbox drivers are replaced by the new 11.2 out-of-box (OOB) drivers.

IF the server contains only CNA adapters and lpfc driver is already been installed, post the new driver update, please remove the lpfc driver using the following command:

```
#esxcli software vib remove lpfc
```

### **Fixes**

Fixed the following:

- Added workaround to reduce the race probability in Input Output Device Management (IODM).
- VMWare vSphere 6.7 Update 1 becomes unresponsive to commands like "esxstop" and "esxcli storage core adapter list" after vmkfstool bus and target reset.
- Fixed Purple Screen of Death (PSOD) Triggered by assert that when destroying a Slab and there was still one object not released.

### **Enhancements**

Added support for VMWare vSphere 6.7 Update 1.

Updated to Driver version 12.0.1211.0

## **Supported Devices and Features**

This component is supported on following Emulex Converged Network Adapters:

### **XE100 Series:**

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

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QLogic Fibre Channel driver component for VMware vSphere 6.7

Version: 2019.12.01 **(Recommended)**

Filename: cp039713.compsig; cp039713.zip

### **Important Note!**

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

### **Prerequisites**

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

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

### **Fixes**

Fixed the following:

- Incorrect supported speed values were being reported in management app
- Purple Screen of Death (PSOD) observed during N\_Port ID Virtualization (NPIV) failover
- Sending Small Computer System Interface (SCSI) pass thru commands to an N\_Port ID Virtualization (NPIV) port was incomplete
- Driver vmkmgmt shows the VM Identifier (VMID) info under the N\_Port ID Virtualization (NPIV) section, when N\_Port ID Virtualization (NPIV) is not enabled
- Various unexpected behaviors with introduced Simplified Fabric Discovery support.
- ql2xt10difvendor was disabled and associated with ql2xenablesmartan
- zdump does not get saved off on Boot From SAN (BFS) configuration
- *FDMI 2 RHBA* command was getting rejected by the switch

### **Enhancements**

Driver version 3.1.29.0

Added support for the following:

- Simplified Fabric Discovery support
- Secure adapter and fw support displayed in vmkmgmt interface
- Correctly indicate default values for module parameter

## **Supported Devices and Features**

This driver supports the following HPE adapters:

### **Gen 4 Fibre Channel Host Bus Adapter:**

- HPE 81Q PCIe Fibre Channel Host Bus Adapter
- HPE 82Q 8Gb Dual Port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric 84Q 4P 8Gb Fibre Channel HBA
- HPE QMH2572 8Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem

### **Gen 5 Fibre Channel Host Bus Adapter:**

- HPE QMH2672 16Gb Fibre Channel Host Bus Adapter for c-Class BladeSystem
- HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter
- HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter

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

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

## Gen 7 Fibre Channel Host Bus Adapter:

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

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### Software - System Management

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HPE MegaRAID Storage Administrator StorCLI for VMware

Version: 1.25.12 **(Optional)**

Filename: vmware-esx-storcli-1.25.12.vib; VMWARE\_MN\_NDS\_Readme.txt

#### Enhancements

- Added support for the Apollo 4510 system

---

HPE MegaRAID Storage Administrator StorCLI for VMware

Version: 1.25.12 **(Recommended)**

Filename: storcli-esxi6.7-bundle-1.25.12.zip

#### Enhancements

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

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HPE Offline Bundle for ESXi 6.7

Version: 3.5.0 **(Recommended)**

Filename: esxi6.7uX-mgmt-bundle-3.5.0-12.zip

#### Fixes

##### WBEM Providers

- Fix incorrect CacheOperationalStatus data for Smart Array B140i Controller
- Fix memory leak issues causing ESXi host to become unresponsive or crash

##### Agentless Management Service

- Fix buffer overrun when acquiring vib summary from ESXi host database
- Fix cpqSePciSlotBoardName for empty slots with no CPU
- Fix cpqSePciSlotBoardName for FC Adapters with specific Device IDs
- Disable multiple IPv6 support in Gen9 to fix Host discovery issues due to missing support in iLO
- Fix AMS hang when total IPv6 address string sizes exceed 256 bytes

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HPE Smart Storage Administrator (HPE SSA) CLI for VMware 6.7

Version: 4.15.6.0 **(Optional)**

Filename: ssacli-4.15.6.0-6.7.0.vib

#### Enhancements

- Added support to enable SmartCache on volumes greater than 256TB

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HPE Utilities Offline Bundle for ESXi 6.7

Version: 3.5.0 **(Recommended)**

Filename: esxi6.7-util-bundle-3.5.0-23.zip; relnotes.txt

#### Important Note!

Refer to the HPE VMware Utilities Guide for VMware vSphere 6.7 U3 which is located at [HPE Information Library](#).

#### Enhancements

Updated the Smart Storage Administrator CLI (SSACLI)

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