

# HP Virtual Connect Version 3.18 Release Notes

## Abstract

This document provides Virtual Connect release information for version 3.18. This document supersedes the information in the documentation set released with version 2.3x, 3.0x, 3.10, 3.15, and 3.17. This document is intended for the person who installs, administers, and troubleshoots servers and storage systems. HP assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.



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# Hardware and firmware requirements

## HP Virtual Connect firmware

The latest HP Virtual Connect firmware package (version 3.18) contains the following firmware versions:

- HP VC FlexFabric 10Gb/24-Port version 3.18
- HP VC-Enet version 3.18 (VCM is part of the HP VC-Enet component of the HP Virtual Connect firmware package)
- HP VC 4Gb FC version 1.41
- HP VC 8Gb 24-Port FC version 1.04
- HP VC 8Gb 20-Port FC version 1.41



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**IMPORTANT:** When updating firmware, update each domain with the entire firmware package, which includes the individual VC-Enet and VC-FC firmware. Updating only the VC-Enet firmware or only the VC-FC firmware is not supported.

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## Firmware upgrade requirements



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**IMPORTANT:** For optimal operation of HP Virtual Connect, use the recommended firmware versions.

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**IMPORTANT:** When using Virtual Connect Enterprise Manager (VCEM) for firmware upgrades, the VCEM version used must support the VC release. For the correct VCEM version, see "Virtual Connect Enterprise Manager Support."

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Always install the firmware recommended for this release for the following items:

- Server blade system ROMs
- Ethernet mezzanines
- Fibre Channel mezzanines
- HP BladeSystem Onboard Administrator
- iLO

For a complete list of recommended firmware and software versions for HP BladeSystem environments with VC FlexFabric Modules and FlexFabric Adapters, see the HP BladeSystem Firmware Maintenance website (<http://www.hp.com/go/ bladesystemupdates>). Click the **Compatibility** tab and scroll to the Additional Information section to download the recommended HP Virtual Connect FlexFabric Solution Recipe update document.

Each HP Virtual Connect firmware package contains a separate HP VC-FC firmware version. The following tables show the version of VC-FC firmware included with each VC firmware package.



**IMPORTANT:** When upgrading the HP VC 4Gb FC firmware from version VC-FC 1.2x to version VC-FC 1.4x, the VC-FC module can drop connectivity temporarily during the activation process. A redundant customer configuration experiences a failover with no loss of application connectivity to the fabric.

| Virtual Connect firmware                          | v1.31 | v1.32, v1.34 | v2.01, v2.02 | v2.10, v2.12 | v2.30 – v2.33 | v2.34 | v3.0x | v3.10, v3.15 | v3.17, v3.18 |
|---|-------|--------------|--------------|--------------|---------------|-------|-------|--------------|--------------|
| VC 4Gb FC firmware within Virtual Connect         | 1.20  | 1.21         | 1.30         | 1.32         | 1.40          | 1.41  | 1.40  | 1.41         | 1.41         |
| VC 8Gb 20-Port FC firmware within Virtual Connect | —     | —            | —            | 1.32         | 1.40          | 1.41  | 1.40  | 1.41         | 1.41         |
| VC 8Gb 24-Port FC firmware within Virtual Connect | —     | —            | —            | 1.00         | 1.01          | 1.01  | 1.02  | 1.03         | 1.04         |

The following table shows firmware upgrade/downgrade support for the HP VC 4Gb FC Modules or HP VC 8Gb 20-Port FC Modules.

| Upgrade to or downgrade from | 1.31           | 1.32, 1.34     | 2.01, 2.02     | 2.10, 2.12     | v2.3x          | 3.0x           | 3.10, 3.15, 3.17, 3.18 |
|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------------|
| VC 1.31                      | —              | Normal         | Fabric outage*         |
| VC 1.32/1.34                 | Normal         | —              | Fabric outage*         |
| VC 2.01/2.02                 | Fabric outage* | Fabric outage* | —              | Normal         | Normal         | Normal         | Normal                 |
| VC 2.10/2.12                 | Fabric outage* | Fabric outage* | Normal         | —              | Normal         | Normal         | Normal                 |
| VC 2.3x                      | Fabric outage* | Fabric outage* | Normal         | Normal         | —              | Normal         | Normal                 |
| VC 3.0x                      | Fabric outage* | Fabric outage* | Normal         | Normal         | Normal         | —              | Normal                 |
| VC 3.10/3.15/3.17/3.18       | Fabric outage* | Fabric outage* | Normal         | Normal         | Normal         | Normal         | —                      |

\* Always reset the module after the upgrade or downgrade.

On HP Virtual Connect 4Gb Fibre Channel Modules (with enhanced NPIV), downgrading the firmware to any version older than VC 2.10 is not supported.

## Recommended firmware versions for this release

| Product                  | Minimum firmware version                    |
|--------------------------|---|
| HP Onboard Administrator | Minimum 3.11. HP recommends 3.31 or higher. |
| iLO 2                    | Minimum 1.82. HP recommends 2.01 or higher. |
| iLO 3                    | Minimum 1.10. HP recommends 1.20 or higher. |

For more information on required firmware versions and to download firmware upgrades, see the HP website (<http://www.hp.com/go/bladesystemupdates>).

Versions 3.15 and higher of HP Virtual Connect Manager check the server ROM image version and display an incompatible state only for server blades that have a VC Server Profile assigned and are using incompatible server ROM versions. Version checking of mezzanine card firmware is not available, so be sure to verify that the mezzanine card firmware is up-to-date.

Server blades and mezzanine cards that do not meet the required firmware versions do not accept Virtual Connect-assigned parameters such as MACs and WWNs properly, and therefore maintain factory defaults. However, these server blades do have the Ethernet network and Fibre Channel fabric connectivity specified in their Virtual Connect server profiles. This connectivity enables you to use network-based firmware update tools for server blade and mezzanine firmware updates.

## Important notes

- HP recommends that users with greater than 55 networks defined in their domain update to version 3.18 at their earliest convenience, as identified in Customer Advisory c0278623 on the HP website (<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c02786232>). This version is optional for users with fewer than 55 networks defined in their domain.
- Immediately review OA Customer Advisory c02639172 on the HP website (<http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?lang=en&cc=us&objectID=c02639172>) to see if any recent changes made to the enclosure configuration are at risk of not being persistently preserved. If you made changes using a non-Administrator user account, before the next OA firmware upgrade or reset, execute the workaround documented in Customer Advisory c02639172 to ensure that the enclosure configuration changes are being persistently preserved. The issue described in Customer Advisory c02639172 was resolved with OA 3.21 and later.
- If downgrading from a VC domain with VC firmware version 3.10 or higher, the Domain Configuration file cannot be read by lower versions of VC firmware, and the configuration file will be deleted. The user must recreate the Domain Configuration file or restore with a previously saved Domain Configuration file associated with the version of the downgraded firmware.
- QLogic QMH2562 8Gb FC HBA and HP Emulex LPe 1205 8Gb FC HBA are supported with Integrity server blades and ProLiant BL G6 server blades or later only.
- To operate with HP VC 8Gb 20-Port FC modules, all HP Emulex LPe 1205 8Gb FC HBAs that are revision A (identified by label EDC A-4904) must perform a CFL region 19 flash update. For download and installation instructions, see the LPe1205 product page on the HP website (<http://www.hp.com>).
- Although the GUI enables the selection of SNMP v2 traps, the VC 4Gb FC Module and the VC 8Gb 20-Port FC Module default to v1 traps.
- Configuring more than one FC trap destination with the same IP trap destination address results in only one entry, with the community string being the latter of the duplicated trap entries. The other community strings in the duplicate traps are not used to send traps.
- Changes in the server RBSU can override Virtual Connect server profile settings for PXE (enabled or disabled). If you make a change in RBSU, that change is not reflected in Virtual Connect Manager. If you set PXE through RBSU, HP recommends using the "Use-BIOS" setting.
- For proper server functionality in a Virtual Connect environment, enable the RBSU option by selecting **System Options > Embedded NIC Boot Options > Network Boot**. If you disable the RBSU option with RBSU, ProLiant G7 servers may not accept Virtual Connect configuration information correctly, which causes the server to malfunction.

- Although 320 VLANs can be supported within each module, the overall number of VLANs within the VC domain is also restricted because of performance limitations of the VCM during module restore or recovery. The limits are defined based on usage scenarios.

- New GUI components

The VCM GUI introduces a new visual component in 3.0x. Data grids add simplicity and pleasant tone by accessing available operations through a right-click context menu. To add, delete, or edit a row (such as a connection or a profile), select the row and then right-click the row to access the context menu.

Some properties displayed in a data grid are editable. An editable indicator provides feedback on which items can be edited inside a data grid. The editable indicator underlines a property when you move the cursor over the property. If the property is underlined, left-click the property to edit.

- After an enclosure import, the Virtual Connect CLI shows the Stacking Links Connections Status as "Failed" until all modules have been initialized. Depending on the actual configuration, this may take up to 30 seconds.
- Before installing any BL8x0c i2 servers, be sure to do the following:
  - Verify that no profiles are assigned to any of the bays where the BL8x0c i2 servers will be installed.
  - Perform the updates to the recommended OA and VC firmware revisions.

If any BL8x0c i2 servers have already been installed, then they can be left powered on during the entire update to the recommended OA and VC firmware revisions.

- Brocade 804 8Gb FC HBA for HP BladeSystem c-Class is supported only with HP ProLiant G6 servers or later.
- Each FlexNIC and FlexHBA is recognized by the server as a PCIe physical function device. Adjustable speeds range from 100Mb to 10Gb in 100-Mb increments when connected to an NC553i/m 10Gb 2-port FlexFabric Converged Network Adapter or any Flex-10 NIC. Adjustable speeds range from 1Gb to 10Gb in 100-Mb increments when connected to an NC551i/m Dual Port FlexFabric 10Gb Converged Network Adapter.

Virtual Connect Manager version 3.00 or higher requires Adobe Flash Player 10.x or higher.

Adobe recommends updating Adobe Flash Player 10.1.53.64 or earlier to Adobe Flash Player 10.1.82.76 or higher. For the latest Adobe Flash Player Security Bulletin Updates, see the Adobe website (<http://www.adobe.com/support/security/index.html#flashplayer>).

Releases of Virtual Connect Manager after version 3.15 may require Adobe Flash Player 10.x or higher (including security updates from the Adobe website (<http://www.adobe.com/support/security/#flashplayer>)) and will no longer function with older 9.x versions of the Adobe Flash Player.

- The HP NC551m Dual Port FlexFabric 10Gb Converged Network Adapter is only supported with ProLiant G6 server blades or later.
- VC FlexFabric 10Gb/24-port Modules are only supported in BladeSystem c7000 enclosures with Virtual Connect firmware v3.15 and higher.
- When VC 8Gb 20-port FC Module and VC FlexFabric 10Gb/24-port Module Fibre Channel uplink ports are configured to operate at 8Gb speed and connect to HP B-series (Brocade) Fibre Channel SAN switches, the minimum supported version of the Brocade Fabric OS (FOS) is v6.3.1 and v6.4.x. In addition, fill word on those switch ports must be configured with option Mode 3 to prevent connectivity issues at 8Gb speed.

On HP B-series (Brocade) FC switches, use the `portCfgFillWord (portCfgFillWord <Port#> <Mode>)` command to configure this setting:

| <b>Mode</b> | <b>Link Init/Fill Word</b>        |
|-------------|-----------------------------------|
| Mode 0      | IDLE/IDLE                         |
| Mode 1      | ARBF/ARBF                         |
| Mode 2      | IDLE/ARBF                         |
| Mode 3      | If ARBF/ARBF fails, use IDLE/ARBF |

Modes 2 and 3 are compliant with FC-FS-3 specifications (standards specify the IDLE/ARBF behavior of Mode 2, which is used by Mode 3 if ARBF/ARBF fails after 3 attempts). For most environments, Brocade recommends using Mode 3, as it provides more flexibility and compatibility with a wide range of devices. In the event that the default setting or Mode 3 does not work with a particular device, contact your switch vendor for further assistance.

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# New features

The VC 3.18 release includes no new features.

The VC 3.17 release includes the following new features:

- HP Virtual Connect FlexFabric 10Gb/24-port Module FCoE support for HP Integrity BL8x0c i2 Series Server Blades with HP NC551m FlexFabric Converged Network Adapters.

The VC 3.15 release includes the following new features:

- Support for the HP ProLiant BL620c G7 Server Blade
- Support for the HP ProLiant BL680c G7 Server Blade
- Support for the HP VC FlexFabric 10Gb/24-port Module
- Support for the HP ProLiant BL2x220c G7 Server Blades
- Support for the HP NC542m Dual Port Flex-10 10GbE BL-c Adapter
- Support for the HP NC551m Dual Port FlexFabric 10Gb Converged Network Adapter
- Support for the HP NC552m 10Gb 2-port Flex-10 Ethernet Adapter
- Support for the HP NC553m 10Gb 2-Port FlexFabric Converged Network Adapter
- Support for the HP NC551m Dual Port FlexFabric 10Gb Converged Network Adapter and NC553i/m 10Gb 2-Port FlexFabric Converged Network Adapter protocol personality change between FCoE and iSCSI
- Support for the full iSCSI and TCP offload with NC551m FlexFabric adapters and FlexFabric/Flex-10 modules
- Support for iSCSI boot with NC551i and NC553i/m FlexFabric adapters and FlexFabric/Flex-10 modules

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# Resolved issues

The following issues have been resolved in the VC 3.18 release:

- Resolved an issue where a Virtual Connect domain could experience a network outage when a VC Ethernet module experienced one of the following:
  - Power cycle (Off/On) from the Onboard Administrator
  - Reset/reboot from the Onboard Administrator
  - Removal/replacement in the interconnect bay
  - Power cycle of the entire enclosure

This issue applied to domains configured as follows:

- Virtual Connect 1/10Gb Ethernet Modules—More than 55 networks
- Virtual Connect 1/10Gb-F Ethernet Modules—More than 55 networks
- Virtual Connect Flex-10 10Gb Ethernet Modules—More than 70 networks
- Virtual Connect FlexFabric 10Gb/24-port Modules—More than 70 networks

The following issues have been resolved in the VC 3.17 release:

- Resolved an issue where the primary VC module could not communicate with other modules due to an implementation problem in the reverse DNS lookup support function when DNS was enabled in the VC infrastructure. With VC 3.15, enabling DNS in the EBIPA settings of the OA resulted in the primary VC module not communicating with other Ethernet modules in the domain due to its inability to perform a DNS reverse lookup of the IP address. However, if DNS was not configured in the EBIPA settings of the OA, the VC modules did not exhibit this behavior because they did not need to perform the reverse lookup. VC release 3.17 resolves this implementation problem in the DNS reverse lookup function.
- Resolved an issue where the VCM GUI was using HTTP instead of HTTPS. Some VCM GUI pages were using the HTTP protocol instead of HTTPS, which required an open, unsecure HTTP port 80 in the data center firewall. The VCM GUI was changed to utilize the secure HTTPS port 443.
- Resolved an issue where changes in the SNMP configuration caused an outage. When two or more subsequent changes to the SNMP configuration were processed by VC Manager, they were processed sequentially. If multiple changes were performed in a relatively small window of time (under 20 seconds), the first change was not fully synchronized with all the modules in the domain when a second change to the SNMP configuration was processed by VCM. This caused a timing/race condition with the SNMP configuration changes, resulting in the VC modules getting out of sync and causing the stacking links between modules and enclosures to be reset until the domain fully synchronized. The potential network outage was up to 2 minutes.
- Resolved an issue where updating gen numbers while creating or assigning a profile caused a NO-COMM state. During VC server profile creation or assignment performed by VCEM and VCM (3.00 or later) as a one-step operation, VCM attempted to synchronize the configuration information across all of the modules in the domain. If the domain was a multi-enclosure domain and the enclosure that was not getting the profile assigned was in a NO-COMM state, the configuration synchronization failed when VCM was not able to communicate with that enclosure. Stacking links became disconnected due to the out of sync configuration, which caused an interruption of Ethernet traffic

between the enclosures and resulted in an outage. A change has been introduced in VC release 3.17 to properly deal with the configuration synchronization during a NO-COMM state.

- Resolved a GUI issue where renaming the associated network on the Edit Ethernet Network screen cleared the native property.
- Resolved a GUI issue where clicking the Server Connections tab on the Ethernet Networks screen caused a popup message to appear stating that there are no server connections to display, even when server profiles with assigned networks existed.
- Resolved a GUI issue where the Calculating Server Connections progress bar hung after clicking the Server Connections tab on the Ethernet Networks screen.
- The VC Ethernet module recovery algorithm has been optimized to recover odd-side modules and then even-side modules (previously the algorithm conducted a full reset/recovery of all modules in parallel). Depending on the domain configuration, this change reduces or eliminates a potential network outage experienced during a full enclosure recovery.
- Resolved a loss of FC connectivity issue when a VC 8Gb 24-Port FC Module received a multi-sequence frame from an in-band storage management application (the application was executing on a server within the c7000 enclosure). This resulted in a VC 8Gb 24-Port FC Module reset and loss of FC connectivity.
- Resolved an issue where the VC 8Gb 24-Port FC Module might not recover from a NO-COMM state after an OA failover. The IP address for the FC module was not being updated correctly, which was blocking the proper communication with the primary VC module.
- Resolved an issue where VCM reported a NO-COMM state for a VC-FC module, even though the VC-FC module was still responding to a ping command.
- Resolved an issue where the VC 8Gb 24-Port FC Module firmware version information did not display correctly on the OA rack firmware page after an OA reset. This resolution requires OA version 3.30 or higher.
- The VC recovery algorithm has been changed so that the current configuration number is validated after a complete recovery from an OA NO-COMM state. Previously, the read of the configuration number might have failed, and the module was scheduled unnecessarily for a full reset and recovery (the configuration numbers were not out of sync).
- Resolved an issue where the network nativelylan setting cleared after adding another network.
- Resolved an issue where an `hpcvm_deleteManagedObjects` return code error occurred when deleting a profile.
- Resolved an issue that delayed the startup time on an enclosure with eight Flex-10/FlexFabric modules.
- Resolved a performance issue where adding a single network caused an update of all configured networks.
- Resolved an issue where firmware details did not display on a Firefox browser window.
- Resolved an issue where FCoE login took longer than expected when changing between fabrics. When FCoE connectivity from FlexFabric adapters is utilized with FlexFabric modules, and server connectivity is changed between two different SAN fabrics within VCM, it can take the server up to 2 minutes to log in to the external SAN fabric. A change in the handling of the FCoE Initialization Protocol (FIP) was implemented to expedite the login process.
- Resolved an issue where the VCM CLI command `"set enet-vlan"` did not return an error for the command `"set enet-vlan VlanTagControl=Tunnel SharedServerVlanId=true"`.

- Resolved an HP Integrity BL8x0c i2 Series Server Blade issue where there were problems disconnecting Flex-10 ports with I/O modules that do not support Flex-10, which could result in disabled network ports appearing as enabled.
- Resolved a GUI issue where titles on the Device Bay Summary screen were not displayed consistently.
- Resolved an issue where an SNMP trap configuration with only FC traps selected could not have an associated set of severities. VC Manager appeared to allow specification of SNMP trap severities for FC trap categories. This functionality is not currently supported. The SNMP Configuration page was updated to disable severity selection if only FC trap categories are selected.
- Resolved an issue where an error was not indicated for login redistribution for a degraded/failed SAN in external connections.
- Resolved a GUI issue for HP Integrity BL8x0c i2 Series Server Blades where the entries in the Server Ethernet Adapter Information table did not properly collapse and expand.
- Resolved an issue found in an Integrity FlexFabric environment where the HP-UX boot path was lost while unassigning and reassigning a profile.
- Resolved an issue for a race condition between module recovery and enclosure recovery when an enclosure was recovering from an enclosure NO-COMM state.
- Resolved an issue when recovering from a module NO-COMM state where the correct module state is properly tracked to avoid unnecessary failure for LANIO calls and GenNumber requests.
- Resolved an FC module firmware issue where the VC 8Gb 24-port FC module firmware version is displayed as "Not Available" in OA, but VCM has the correct firmware version information.
- Resolved an FC module firmware issue where the DHCP client in the VC 8Gb 24-port FC module firmware became corrupted, causing the FC module to stop responding to VCM, resulting in a NO-COMM state.
- Resolved the restriction where the support dump could only be generated when the VC domain was in VCEM maintenance mode. When the VC domain is under VCEM control, this restriction required the domain to be placed in maintenance mode in order to retrieve the VCM support information. Placing the VC domain in maintenance mode is no longer required, and if the user has VC Domain privileges, the external VCEM manager lock is ignored and the VCM support information collection operation is allowed.
- Resolved an issue where the GUI stated that the event manager registration was expired, and then unexpectedly logged the user out of the GUI.
- Resolved an FC connection outage caused by a failure of the Virtual Connect FlexFabric primary module. The failure could occur if the backup module was reset, no checkpoints or configuration changes occurred between the primary and the backup modules, and then the primary module failed.
- Resolved two slow, small memory leaks that occurred in association with port link state changes. In reoccurring conditions, such as a server continuously repeating a PXE boot sequence that persisted for an extended period of days, the memory leaks would eventually result in degraded performance of the module and an eventual module restart. One occurrence lasted for 22 days before bad module behavior was experienced.
- Resolved an issue where a VC domain might enter into a NO-COMM state after performing an OA failover and fail back.
- Resolved an issue associated with Private Networks when the VC-Enet network topology required server connections to traverse an aggregated VC stacking link (one composed of multiple interfaces aggregated together into a LAG) wherein the communication from one or more server could be lost

when the aggregation group dissolved and was reformed. This resulted from all legs of the LAG not properly being reenabled in association with the Private Network. The servers that could experience the disruption were those whose transmissions were distributed (load balanced) to a leg of the LAG that was not reenabled for the Private Network.

- Resolved an issue where the stacking links showed a failed status after a module recovered from a NO-COMM state, even though no operational problem existed. Perform a VCM reset to update the stacking link status.
- Resolved a memory leak found in VCM during UI network reviews and profile assignments. This leak caused VCM to restart unexpectedly when prolonged.
- An adjustment was made for the limits used by VCM in monitoring its memory utilization so as to avoid conflict with the limits being used by the more general memory resource usage monitor for all applications running on the module. This adjustment ensures that when memory usage exceeds an expected, normal operational range, the VC management process can gracefully shut down. If configuration changes are made at the same time that the memory limit is exceeded, all configuration changes are saved.

The following issues have been resolved in the VC 3.15 release:

- Resolved an issue where a profile with multiple networks defined in a connection had no configured network. If the profile was edited without making any changes, and then the profile was applied to a server with a Flex-10 LOM, a VCM failure and restart would occur.
- Resolved an issue where creating a profile with duplicate multiple networks could result in a network outage.
- Resolved an issue where VCM would reset modules that had port mirroring enabled when VCM restarted, causing an outage.
- Resolved an issue where VC modules did not provide server blade information, such as the part number and CPU data, through the CLI.
- Resolved an issue where when using the VC CLI, a user was unable to add LDAP groups with names containing spaces.
- Resolved an issue where a profile was created with multiple networks that use a Shared Uplink Set (SUS) and no networks were selected. If the profile was applied to a server with Flex NICs, a VCM failure and restart would occur.
- Resolved an issue where the "About" HP VCM popup window caused IE8 to crash, resulting in the About window not being displayed.
- Resolved an issue where the left navigation tree in the VCM GUI showed the incorrect status for Uplinkset.

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# Known issues

## General

- iSCSI Boot from SAN is supported only on the NC551i Dual Port FlexFabric 10Gb Adapter and NC553i/m 10Gb 2-port FlexFabric Converged Network Adapter. The boot LUN IDs must be in the range of 0 to 8.
- No System Log message is logged for FC contact name changes.
- If an enclosure import is attempted with a server blade in a failed state, VC Manager might report an erroneous error. If the import completes, close the browser and log in again to verify that the import was successful. Use the OA to verify the working state of all server blades.
- If a BL2x220c server blade is present in an enclosure, the Hardware Overview screen in VC does not display a picture of the server in the Enclosure View. The picture can be seen on the OA web page.
- Under certain circumstances, the checkpoint status icon in the GUI persists for a long time and is not cleared. The CLI also shows a "Checkpoint Status: Invalid" status in the "show domain" output. This condition has been observed periodically after a VCSU firmware upgrade of the VC module firmware. To resolve this issue, reset VCM on the primary module, or reset the primary module using the OA.
- The SNMP Managed Status Change trap (vcProfileManagedStatusChange) for all unassigned profiles is not sent by VC when the profile status transitions to Normal state.
- In a multi-enclosure environment, if local and remote enclosures are shut down and powered back up, VC might incorrectly report that some empty I/O module bays in a remote enclosure are "NO-COMM". This error occurs if VC-FC modules are installed in the local enclosure and the corresponding bays in the remote enclosure are empty. The empty module bays should have been reported as "MISSING".
- If an adapter is inserted in a server that is incompatible with the VC module that it maps to, the SNMP Physical Server Managed Status trap (vcPhysicalServerManagedStatusChange) is not sent when this mismatch is corrected.
- In a multi-enclosure domain, the VC CLI reports an incorrect error and fails when an Ethernet uplink is enabled or disabled. This error occurs only if you try to enable or disable uplinks that are part of a VC network, and if one or more uplinks are on the remote enclosures. Use the VC GUI to enable or disable links in these instances.
- The VC CLI incorrectly allows invalid speeds to be set on the uplinks of Ethernet modules. If an invalid speed (for example, setting 100 Mb on an SFP RJ-45 pluggable module uplink) is set using the CLI, the link state is disabled. This problem does not appear in the VC GUI. Use only valid speeds when the VC CLI is being used to configure the uplinks on Ethernet modules.
- In Virtual Connect Manager 3.10 or later, when a VC domain is configured with a primary module installed in a bay other than bays 1 or 2, you must have both a primary module and a backup module. If the primary module is installed in a bay other than bay 1 or bay 2, and no backup module is installed, running Virtual Connect Support Utility results in an unconfigured domain after the upgrade and requires you to restore the domain configuration from a backup file.
- When VC is used and Integrity BL870c i2 or BL890c i2 server blades are present, after an OA is reset the OA occasionally displays factory-assigned WWNs and MAC addresses for the auxiliary blades in

a multi-blade server, even though VC-assigned values exist. This problem does not affect the operation of the server. The server blades have and operate with the correct VC-assigned WWNs and MAC addresses.

To work around this issue, do the following:

- a. Power off the server blade, if necessary.
  - b. Unassign the VC profile.
  - c. Reassign the VC profile.
  - d. Power on the server blade.
- In Virtual Connect release 3.0x, the Server Admin user is not able to modify the IGMP Snooping settings. This known issue is related to the authorizations of the Server Admin user in the security token being passed between VC software components. This issue will be fixed in a later release of Virtual Connect. To work around this issue, the Server Admin user must log in as an Administrator to change IGMP Snooping settings.

- **WWNs used by other ports**

In some circumstances, ports are shown as having WWNs that are in use by other ports. Observe the Server Profile screen to be sure which mezzanine ports are in use. This issue will be addressed in a future Virtual Connect release.

- **Multiple or unsupported versions of Adobe Flash Player cause the Firefox web browser to crash**

On some combinations of the Firefox web browser, Adobe Flash Player, and the operating system, the Adobe Flash Player causes the Firefox web browser to crash unexpectedly—especially if multiple versions or an older/unsupported version of the Flash Player (for example, Flash v8.0) is installed with Firefox, even if the older/unsupported version of the Flash plug-in is disabled. HP recommends that Virtual Connect 3.0x users install only one supported version of the Adobe Flash Player plug-in with the Firefox web browser.

Depending on the installed versions of the Firefox web browser, Adobe Flash Player, and the operating system (for example, Firefox v3.5.9 and Adobe Flash Player v9.0/v10.0 installed on GNU Linux v2.6.9), certain fix patches from Adobe for the Adobe Flash Player may be needed. For the latest information on fix patches for the Flash Player plug-in, see the Adobe website (<http://www.adobe.com/support/security/index.html#flashplayer>).

Also, users might experience problems with the Firefox web browser hanging or crashing and then showing the "failed to create MSXML object" error. This is a known issue with XSLT transformations for the Firefox web browser. For more information about downloading and installing a patch for your specific version of the Firefox web browser, see the following:

- Foundation Security Advisory 2009-12 (<http://www.mozilla.org/security/announce/2009/mfsa2009-12.html>)
  - Security Advisories for Firefox 3.0 (<http://www.mozilla.org/security/known-vulnerabilities/firefox30.html>)
- The server profile wizard is not supported by the VC GUI. This wizard will be supported in a future release.
  - Internet Explorer 8 is only supported in IE7 compatibility mode.
  - Editing the SAN fabric should not allow changes to the fabric's I/O bay. The "Add Port" menu may show incorrect menu entries instead of showing the port details only for the current or previously added bay entries. If they are selected, the SAN fabric is not updated with the current modifications.

- When multiple Internet Explorer 7 browser sessions are open to the Virtual Connect Manager application, the VC GUI might hang. To avoid this issue, add the following registry value:  
[HKLM\HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\Internet Settings] "MaxConnectionsPerServer"=dword:6
- In a double-dense domain configuration, interconnect bays 7 and 8 should not be used to create an FC fabric. The fabric should instead be created on bays 5 and 6. If a fabric is created on bays 7 or 8 using the VCM CLI, an incorrect error message might display, indicating "ERROR: Module not found" instead of "ERROR: A fabric is not allowed to be created with the specified bay for a double-sense configuration".
- When a server blade server port has multiple FlexNICs defined and one of the ports is defined as FCoE, deleting the FCoE FlexNIC does not redistribute the bandwidth to other active FlexNICs, even though the GUI indicates that this redistribution occurred.
- A user cannot create a fabric on bays 7 or 8 in double-dense mode. However, the GUI does not block the user from creating a fabric on bays 7 and 8, and also does not report an error to the user.
- If the primary VC module loses power or is removed, a Profile Status change trap is not sent as it should be. As a solution, when the primary VC module loses power or is removed, the cpqHoSWRunningStatusChangeTrap trap (defined in the cpqhost.mib MIB) is sent by the backup VC module when it becomes the primary VC module. A sample trap is shown below:

```
Enterprise Specific Trap (.11017) Uptime: 20 days, 2:54:46.44,
  SNMPv2-MIB::sysName.0 = STRING: bay2TC,
  SNMPv2-SMI::enterprises.232.11.2.11.1.0 = INTEGER: 10,
  SNMPv2-SMI::enterprises.232.11.2.6.1.1.2.1 = STRING:
  "aus-c7000-13_vc_domain",
  SNMPv2-SMI::enterprises.232.11.2.6.1.1.3.1 = STRING: "HP Virtual Connect
  Domain Manager",
  SNMPv2-SMI::enterprises.232.11.2.6.2.0 = STRING: "VCM Domain status
  trap",
  SNMPv2-SMI::enterprises.232.11.2.6.1.1.4.1 = STRING: "3.15",
  SNMPv2-SMI::enterprises.232.11.2.6.1.1.12.1 = INTEGER: 4,
  SNMPv2-SMI::enterprises.232.11.2.6.1.1.13.1 = INTEGER: 5,
  SNMPv2-SMI::enterprises.232.11.2.6.1.1.14.1 = STRING:
  "VcD_6f54796e7543",
  SNMPv2-SMI::enterprises.232.11.2.6.1.1.15.1 = INTEGER: 2
```

Analyze the following MIB OIDs in the trap:

```
enterprises.232.11.2.6.1.1.13.1
enterprises.232.11.2.6.1.1.15.1
```

These OIDs contain the following values after the backup VC module has become the primary VC module:

```
cpqHoSWRunningConfigStatus : operational(5)
cpqHoSWRunningRedundancyMode : master(2)
```

- VC allows mapping of non-supported iSCSI connections for NC522m Mezz ports 1-a and 2-a.
- The statistics for Ethernet enabled ports X1-X4 for VC FlexFabric modules might be blank. As a solution:

- Use ports X5-X8 for SFP-DAC and SFP-LR modules when possible.
- Use the SNMP capability to capture the statistics:
  - To get the switch MAC address, use the following command:
 

```
snmpwalk -c public A.B.C.D dot1dBaseBridgeAddress
```
  - To get the port number, (X2, for example), use the following command:
 

```
snmpwalk -c public A.B.C.D ifName | grep X2
```
  - To get the port statistics, (X2, for example), use the following command:
 

```
-c public A.B.C.D interfaces | grep 1018
```
- Use the GUI to view the statistics for the module. In the Uplink Port Information table on the Interconnect Bay Summary screen, the MAC address and port displays in the Connect To column. The SFP type displays in the Connector Type column.
- Some combinations of special characters, such as @@, #@@, #@\$, (\*, !@@, \$!, and @@@, within the encryption key for Configbackup might cause the CNFG write or recovery to fail. HP recommends that you only use alphanumeric characters in the encryption key until this issue is resolved.
- When the Associated Network Editor page contains mandatory text fields (such as VLAN id) that are not complete, the Apply button is enabled incorrectly. This falsely indicates that the Associated Network can be created successfully.
- If VC-Enet modules do not have assigned IP addresses (for example, the DHCP server is not responding), a configuration change that has been made to the domain but has not been successfully checkpointed to the backup VC-Enet module leaves the domain in a vulnerable state. If a VC failover occurs during this state, the new primary VC-Enet module will likely clear the configuration of all of the VC-Enet modules during recovery when the modules acquire IP addresses. Clearing the configuration of the modules causes a networking (and FCoE) outage until the module is reconfigured by VC.
 

This issue is partially corrected by the serialized recovery change added for VC 3.17. For VC 3.17, the primary VC module will not clear all of the modules at once, but will instead serialize the “left/right” side module recovery so that a customer that has configured redundant paths to networks will not experience a complete network outage.

To avoid this issue, ensure that the configuration has been checkpointed to the backup module before allowing a VC failover. The VC GUI provides an indication that the checkpoint has not been completed. A complete resolution will be provided in a future release with the “Single Command Configuration” feature, which will allow VC to reconfigure modules without clearing the existing configuration.
- When a second enclosure is added to a VCM domain, previously configured user credentials are erased. In this case, the default VC user ID and password must be used.
- After a VC module is reset due to error recovery, the VCM domain IP address might become unreachable, even though the IP address for both primary and backup VC modules is still reachable. As a solution, log in to the primary module using its IP address, uncheck the VC domain IP address, apply the change, and then immediately recheck the VC domain IP address. This procedure will restore the VCM domain IP address connectivity.
- A problem occurs when a change to a profile is made and applied through DCC, but the change cannot be written to the server BIOS until the server is in a powered off state. If you power cycle the server and attempt an additional profile change, after the server completes POST, the two updates cause the VCM module to be reset, with a potential full reset and recovery. To avoid this problem, when making a change to the profile, allow the next reboot to complete (not just to POST) before powering off the server, and do not apply a profile change to the server until it has completely rebooted (not just after POST).

- VC returns an exception when VCEM attempts to retrieve module information in a compatibility mode.
- During VC enclosure recovery (such as when communication with the OA has been lost), for HP Integrity BL870c i2 and BL890c i2 Series Server Blades, network and SAN connections can potentially be taken down and then reestablished exactly as they had been configured before the enclosure recovery. The disconnection typically lasts for less than a minute and can often be unnoticeable, but for Service Guard operations there is the potential that this will cause a heartbeat loss that triggers one of the servers (determined through a configuration priority) to shut down.

## Firmware update

There are two options available for VC firmware update:

- HP BladeSystem c-Class Virtual Connect Support Utility (VCSU)  
For this release of HP Virtual Connect, the minimum firmware requirement for VCSU is version 1.5.1. HP recommends that you always use the latest version available. For more information about VCSU, see the HP BladeSystem c-Class Virtual Connect Support Utility release notes on the HP website (<http://www.hp.com/go/bladesystem/documentation>).
- HP Smart Update Manager (HPSUM) version 4.1.0 or later  
HPSUM is part of the HP FW DVD available on the HP website (<http://www.hp.com/go/bladesystemupdates>).



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**IMPORTANT:** When upgrading the HP VC 4Gb FC firmware from version VC-FC 1.2x to version VC-FC 1.4x, the VC-FC module can drop connectivity temporarily during the activation process. A redundant customer configuration experiences a failover with no loss of application connectivity to the fabric.

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# Virtual Connect Enterprise Manager Support

- Virtual Connect Enterprise Manager (VCEM) v6.2 provides full compatibility and support for VC firmware v2.x, v2.1x, v2.3x, v3.0x, v3.10, v3.15, v3.17, and v3.18.
- For VCEM availability and full product details, visit the HP website (<http://www.hp.com/go/vcem>) or contact your HP representative.