HP BladeSystem c-Class Virtual Connect Support Utility Version 1.9.0
User Guide

Abstract

This document provides user information for the HP BladeSystem c-Class Virtual Connect Support Utility Version 1.9.0, which remotely upgrades the VC-Enet and VC-FC module firmware in HP BladeSystem c-Class c3000 and c7000 Enclosures. This document is 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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Introduction

Overview

The HP BladeSystem c-Class Virtual Connect Support Utility enables administrators to upgrade VC-Enet and VC-FC firmware, and to perform other maintenance tasks remotely on both HP BladeSystem c-Class c7000 and c3000 Enclosures using a standalone command line utility.

When the utility initiates a firmware upgrade process, VCSU performs an automatic health check, and then all modules are updated at the same time. The utility displays a message indicating that an update is in progress and the percentage completed. After the module firmware updates are complete, the utility activates all of the modules.

You can use the `-f health` parameter of the `update` command to force an update, even if the health of a module is not in a good state.

Using HP-UX

When using HP-UX, use the `swinstall` command to install the utility.

Example command line:

```
swinstall -s /tmp/download vcsu
```

where "/tmp/download" is the local directory that contains the downloaded "vcsu.depot".

Requirements

- A supported operating system must be installed on the client:
  - Microsoft Windows 7
  - Windows Server 2008 R2
  - Windows Server 2012
  - HP-UX 11.23 and 11.31
  - Linux (RHEL 5.8, RHEL 6.2, RHEL 6.3, SLES 10 SP4, SLES 11 SP2)
- To run VCSU, the minimum required, available free disk space is 600 MB per installation instance. For example, if you run VCSU three times in parallel against three different enclosures, you must have approximately 1.8 GB of available disk space.
- With VC version 4.01 and higher, a user must have the Export Support Files, Firmware Update (VCSU), and Save Domain Configuration role operations enabled to perform a firmware update.

  If the domain is managed by VCEM, configurable role operations must be delegated to one of the following roles if they are to be performed while the domain is in Maintenance Mode: Network, Storage or Domain. Administrators logging into VCM with a Server role account while the domain is in Maintenance mode will be denied access to perform delegated operations such as exporting support files, updating firmware, configuring port monitoring or saving or restoring domain configuration.

- A valid HP Virtual Connect firmware package must be available to install. Download the firmware from the HP website (http://www.hp.com/go/bladesystemupdates). View the BladeSystem for ProLiant Release Set Compatibility Table and select the appropriate download.
- Do not close the console application when a firmware update is in progress. If the application is closed before the update completes, the module firmware might not update correctly, causing the module firmware to be inoperative.
- An Onboard Administrator user account with Administrative privileges and access to all Onboard Administrators and interconnect bays must be available for use. If the enclosure is imported into a Virtual Connect domain, a Virtual Connect user account with Domain privileges is also required. For Virtual Connect version 4.01 and higher, a user account with Firmware Update (VCSU), Export Support Files, and Save Domain Configuration role operations assigned to their role permissions is required.
- Ethernet network connectivity between the client system and the enclosure Onboard Administrator is required. To validate this connectivity, open a web browser to the enclosure Onboard Administrator before running the utility.
- Ethernet network connectivity is required between the client system hosting VCSU and the VC interconnect modules in the enclosure.
- For VC 4.01 and lower, add the Virtual Connect Support Utility application to the list of exceptions for any host-based firewall on the client if you do not have a healthy Backup VC module.
- For VC 4.01 and lower, if you do not have a healthy Backup VC module, no firewalls can exist between the client system and the remote enclosure Onboard Administrator. If a firewall exists, and it is blocking ports, then the utility cannot open a connection with the remote modules to perform the update.
- Onboard Administrator firmware version 1.30 or higher is required for correct VCSU operation. Onboard Administrator firmware version 4.00 or higher is required to use IPv6.
- Only one instance of the VCSU accessing a single enclosure can be run on a single client at one time. Using multiple clients to interface remotely with the same enclosure can interrupt the firmware update process and prevent it from completing successfully.
- During firmware update operations, the VC modules are unavailable for use. Attempting to reset or remove the modules during the update process can result in a corrupted firmware image. Do not reset or update the firmware for the Onboard Administrator of the target enclosure while VC modules are being updated. These actions can interfere with the firmware update process and cause the update to fail. During the firmware update process, LAN and SAN connectivity through the VC modules, which might be hosted to servers in the enclosure, can be interrupted temporarily.
- If VCSU is interrupted or loses network connectivity during the update, reset the affected module and restart the firmware update process.
- In a multi-enclosure environment, the Onboard Administrator user name and password must be identical across the local and remote enclosures in the Virtual Connect domain. Otherwise, firmware update of the remote enclosures does not succeed.
- VCSU must be run on a management network.
- 32-bit libraries are required for VCSU to install and run on Linux 64-bit platforms.

Restrictions and limitations

- By default, the ftp service is disabled in VC. However, VCSU enables the ftp service for a short time during the firmware update process to update VC-FC modules.

- A VCSU update operation can be performed from a server blade in the same enclosure that is being updated. However, this feature is supported only when using a redundant network configuration on the server blade running the VCSU client.
- This version of VCSU supports c3000 and c7000 enclosures.
- VCSU does not update modules that are powered off, non-functional, or not physically present. A status message indicates whether any modules are in these states.
- VCSU does not update unknown or unsupported module types, including pass-thru Ethernet and FC modules.
- HTTP and HTTPS downloads are restricted to non-authenticated websites.
- FTP downloads are restricted to non-SSL/TLS, Passive Transfer Mode FTP sites.
- IP addresses that are not accessible time out within 20 seconds. IP addresses that have an active SSL-enabled web server, but not an OA, fail immediately.
- Prior to running VCSU, ensure that the maximum supported number of local user accounts for the Onboard Administrator has not been reached. For multi-enclosure domains, verify this information for each enclosure in the domain.
- VCSU does not use any root certificates to connect to OA and VC.
- VCSU does not support updating the firmware using IPv6 Link Local Addresses on Linux or HP-UX.
- VCSU does not support the Windows 2008-based IIS FTP server for downloading the firmware.

Supported modules

Module	**Supported in VCSU 1.9.0**
HP 1/10Gb Virtual Connect Ethernet Module	Yes*
HP 1/10Gb-F Virtual Connect Ethernet Module	Yes*
HP Virtual Connect Flex-10 10Gb Ethernet Module	Yes
HP Virtual Connect FlexFabric 10Gb/24-port Module	Yes
HP Virtual Connect Flex-10/10D Module	Yes**
HP 4Gb Virtual Connect Fibre Channel Module	Yes†
HP Virtual Connect 4Gb Fibre Channel Module	Yes
HP Virtual Connect 8Gb 24-Port Fibre Channel Module	Yes
HP Virtual Connect 8Gb 20-Port Fibre Channel Module	Yes

* Supported only for updates to VC version 3.60 or lower. This module is not supported for updates to VC version 3.70 or higher.
** Supported only for updates to VC 3.70 or higher. This module is not supported for updates to VC version 3.60 or lower.
† Supported only for updates to VC 4.01 or lower. This module is not supported for updates to VC version 4.10 or higher.

Command line syntax

CLI input is case-insensitive except when otherwise noted. The general CLI syntax is as follows:

```
vcsu -a <command>
```

Parameters are extensions that provide extra information required for the execution of a particular command. Whether or not a parameter is required depends on the specific action being executed.

For example, the `version` command includes parameters for IP address, username, and password. The syntax is as follows:

```
vcsu -a version -i <IP> -u <USER> -p <PWD>
```

> **NOTE:** When entering a username from a Linux command shell with the domain\username format, use quotation marks around the username (`"domain\username"`) so it is not expanded by the Linux shell.

To display all modules and their current firmware version, enter the following:

```
vcsu -a version -i 192.168.1.100 -u Administrator -p password
```

Usage

To install and run the HP BladeSystem c-Class Virtual Connect Support Utility:

1. Install the application on the client system by running the MSI file.
2. After the program is installed, click **Start>Programs>Hewlett-Packard>Virtual Connect Support Utility** to start a console.
   - To start the Virtual Connect Support Utility in interactive mode, enter `vcsu`.
   - To display the top-level help and available options, enter `vcsu -a`.
   - To display version syntax and available options, enter `vcsu -a version`.
   - To display report syntax and available options, enter `vcsu -a report`.
   - To display update syntax and available options, enter `vcsu -a update`.
   - To display discover syntax and available options, enter `vcsu -a discover`.
   - To display collect syntax and available options, enter `vcsu -a collect`.
   - To display configbackup syntax and available options, enter `vcsu -a configbackup`.
   - To display supportdump syntax and available options, enter `vcsu -a supportdump`.
   - To display healthcheck syntax and available options, enter `vcsu -a healthcheck`.
   - To display packageinfo syntax and available options, enter `vcsu -a packageinfo`.
   - To display resetvcm syntax and available options, enter `vcsu -a resetvcm`.
3. Download a valid Virtual Connect firmware package file from the HP website (http://www.hp.com/go/bladesystemupdates), and then save it to your local file system.
4. Enter the `version` command to display all of the modules in the enclosure and ensure that the required connectivity exists between the utility and the remote enclosure.

   Non-VC modules are shown as “Unknown or unsupported module.” Version information appears for supported VC modules only.
5. Enter the `report` command to display all modules in the target enclosure and which modules can be updated. The `report` command also displays the firmware package file contents and versions. To use the `report` command, a valid firmware package must be available on the local file system or supported remote server.

   Non-VC modules are shown as “Unknown or unsupported module.” Detailed information appears for supported VC modules only.
6. Enter the `update` command to update the firmware on supported VC-Enet and VC-FC modules in the enclosure. The update process takes approximately 20 minutes for VC-Enet modules and 5 minutes for VC-FC modules. These updates are performed simultaneously.

VCSU only updates supported VC modules that are able to be updated and require an update.

7. Delete or back up the following files from the client machine after the successful firmware update:
   - Support dump taken during the update
   - Configuration backup taken during the update

Password masking

For all of the commands provided by VCSU, the user name, password, and IP address of the enclosure OA must be provided. In some cases, the VC domain user name and password must also be specified.

VCSU enables the user to enter the password interactively with password masking, primarily for security reasons. To do this, enter the password as `*`. A prompt is provided that masks the input.

Example:

```
vcsu -a version -i 192.168.1.100 -u Administrator -p *
OA Password        :***********
```

From a Linux command shell, use quotation marks around the asterisk so it is not expanded by the Linux shell.

Example:

```
vcsu -a version -i 192.168.1.100 -u Administrator -p "*"
OA Password        :***********
```

Interactive mode

VCSU enters interactive mode when invoked without any parameters. Users are prompted to enter missing command line parameters.

Example:

```
No command line parameters given. Starting interactive mode.
Please enter action ("help" for list): healthcheck
Please enter Onboard Administrator IP Address: 192.168.1.100
Please enter Onboard Administrator Username: Administrator
Please enter Onboard Administrator Password: ********
```

When running the Virtual Connect Support Utility in interactive mode, do not use quotation marks around the firmware package path even if the path contains spaces. Only use quotation marks around the firmware package path when specifying the package location on the command line with the `-l` command-line parameter.

Questions

The following table provides information on interactive mode questions and requests for input.

Interactive mode question/request	Description	Reference
`Please enter action ("help\" for list):`	(required) Enter a command, or enter `help` for a list of available commands. `-a <command>`	Commands (on page 10)
`Please enter action:`	(required) Asked if `help` was entered for previous question. Enter a	Commands (on page 10)

Interactive mode question/request	Description	Reference
	command. `-a <command>`	
`Please enter Onboard Administrator IP Address:`	(required for all commands except `discover` and `packageinfo`) IP address of the active OA in the primary enclosure	Commands (on page 10) `-i <IP>`
`Please enter Onboard Administrator Username:`	(required for all commands except `discover` and `packageinfo`) User name of the active OA in the primary enclosure	Commands (on page 10) `-u <USER>`
`Please enter Onboard Administrator Password:`	(required for all commands except `discover` and `packageinfo`) Password of the active OA in the primary enclosure	Commands (on page 10) `-p <PWD>`
`Please enter starting IP address:`	(required) First IP address in the range to search	discover `-s <START IP>`
`Please enter ending address:`	(required) Ending IP address in the range to search	discover `-s <END IP>`
`Please enter firmware package location:`	(required) Full path to the Virtual Connect package on the local computer	packageinfo (on page 13) report (on page 13) update (on page 15) `-l <FILE>`
`Please enter the file location:`	(optional) Full path to the configuration backup or support dump file	configbackup supportdump `-l <FILE>`
`Please enter the Configuration backup password:`	(optional) Password for the configuration backup file	configbackup update (on page 15) `-cp <CONFIG PASS>`
`Please enter Force Update options if any (eg: version,health):`	Enter options separated by a comma.	update (on page 15) `-f <FORCE>`
`Please enter VC-Enet module activation order if any (eg: parallel or odd-even or serial or manual. Default: odd-even):`	Enter one of the following: parallel, odd-even, serial, or manual	update (on page 15) `-oe <ORDER>`
`Please enter VC-FC module activation order if any (eg: parallel or odd-even or serial or manual. Default: serial):`	Enter one of the following: parallel, odd-even, serial, or manual	update (on page 15) `-of <ORDER>`
`Please enter the time (in minutes) to wait between activating or rebooting VC-Enet modules [max 60 mins. Default: 0 mins]:`	Enter the time in minutes (maximum of 60 minutes).	update (on page 15) `-we <MINUTES>`
`Please enter the time (in minutes)to wait between activating or rebooting VC-FC modules [max 60 mins. Default: 0 mins]:`	Enter the time in minutes (maximum of 60 minutes).	update (on page 15) `-wf <MINUTES>`

Commands

collect

Contact the OA using the supplied credentials and execute a `SHOW ALL` from the OA CLI, saving the output to an "oaShowAll.txt" file in the current directory.

This support action also contacts the primary VC module using the supplied credentials and executes the following commands, saving the output to a "vcmShowAll.txt" file:

- `show enclosure *`
- `show domain`
- `show network *`
- `show fabric *`
- `show profile *`
- `show stackinglink`
- `show interconnect *`
- `show firmware`

Item	Description
Syntax	`vcsu -a collect -i <IP> -u <USER> -p <PWD> -vcu <VCM USER> -vcp <VCM PASS>`
Parameters:	
`IP`	IPv4 or IPv6 address of the active OA in the enclosure*
`USER`	Name of the OA user with privileges to access all enclosure interconnect bays. Minimum length is 1 character. Maximum length is 40 characters.**
`PWD`	Password of the OA user. Minimum length is 3 characters. Maximum length is 40 characters.**
`VCM USER`	Name of Virtual Connect user with Domain privileges. Required if an enclosure is in a Virtual Connect domain. Minimum length is 1 character. Maximum length is 31 characters.
`VCM PASS`	Password for the Virtual Connect user. Minimum length is 3 characters. Maximum length is 31 characters.

*In a multi-enclosure environment, this must be the IP address of the active OA in the primary enclosure.
**In a multi-enclosure environment, USER and PWD parameters for the Onboard Administrator must be identical across local and all remote enclosures in the Virtual Connect domain.

Example

Collect configuration information from OA and VC:

```
vcsu -a collect -i 192.168.0.100 -u Administrator -p password -vcu
Administrator -vcp password
```

discover

Locate remote OA enclosures that exist on the network within a specified address range. VCSU displays the following:

- Number of enclosures found
- List of enclosure OA IPs with enclosure type, primary OA IP, and VC domain name

This command is useful if an Administrator cannot remember the exact IP address of the OA on a certain enclosure, but knows the general IP address range.

Item	Description
Syntax	`vcsu -a discover -s <START IP> -e <END IP>`
Parameters:	
`START IP`	First IP address in the range to search
`END IP`	Last IP address in the range to search

Example

Discover an enclosure in a certain address range:

```
vcsu -a discover -s 192.168.1.100 -e 192.168.1.200
```

configbackup

Using the supplied credentials, log in to Virtual Connect and request a configuration download. VCSU saves the backup in the current directory using the file name supplied by Virtual Connect. This action requires a functioning VC domain.

Item	Description
Syntax	`vcsu -a configbackup -i <IP> -u <USER> -p <PWD> -vcu <VCM USER> -vcp <VCM PASS> [-cp <CONFIG PASS>] -l <LOCATION>`
Parameters:	
`IP`	IPv4 or IPv6 address of the active OA in the enclosure*
`USER`	Name of the OA user with privileges to access all enclosure interconnect bays. Minimum length is 1 character. Maximum length is 40 characters.**
`PWD`	Password of the OA user. Minimum length is 3 characters. Maximum length is 40 characters.**
`VCM USER`	Name of the Virtual Connect user with Domain privileges. Required if an enclosure is in a Virtual Connect domain. Minimum length is 1 character. Maximum length is 31 characters.
`VCM PASS`	Password for the Virtual Connect user. Minimum length is 3 characters. Maximum length is 31 characters.
`CONFIG PASS`	Optional. Password for the configuration backup file. Supported only for VC versions 3.00 and higher. The default is no password.
`LOCATION`	Full path, including file name, to save the configuration backup file. If not provided, VCSU saves the configuration backup file to the file name that VC provides and downloads it to the current directory.

*In a multi-enclosure environment, this must be the IP address of the active OA in the primary enclosure.
**In a multi-enclosure environment, USER and PWD parameters for the Onboard Administrator must be identical across local and all remote enclosures in the Virtual Connect domain.

Example

Request a configuration download from Virtual Connect:

```
vcsu -a configbackup -i 192.168.0.100 -u Administrator -p password -vcu
Administrator -vcp password
```

healthcheck

List the state of modules in the enclosure. This command is useful if an Administrator needs to know if performing an action, such as a failover or a VC or OA firmware upgrade, would cause an outage.

On an enclosure configured for Virtual Connect, the command displays the following:

- Onboard Administrator firmware version
- Power: On, Off, other
- Health: OK, Degraded, Failed, other
- IP Address
- Connectivity Test
- Stacking link status (connection status and redundancy status)
- For VC-Enet Modules:
  - VC Mode: Primary, Backup, Subordinate, Unintegrated
  - Module Configuration: In Sync, Not In Sync, Invalid
  - Domain Configuration (for primary or backup VC-Enet modules): In Sync, Not In Sync

The primary Virtual Connect module saves the domain configuration data to the backup module in a VC domain at a regular interval. The 'Domain configuration' state indicates whether or not this data is in sync between the two modules.

The 'Module configuration' state indicates whether all the modules in an enclosure are in sync with the primary module regarding the Virtual Connect configuration information.

If a module is being reconfigured by Virtual Connect, or is rebooting, a "Not In Sync" or "Invalid" configuration status might appear. Wait up to 2 minutes, and then execute the `healthcheck` command again.

Item	**Description**
Syntax	`vcsu -a healthcheck -i <IP> -u <USER> -p <PWD> -vcu <VCM USER> -vcp <VCM PASS>`
Parameters:	
`IP`	IPv4 or IPv6 address of the active OA in the enclosure*
`USER`	Name of the OA user with privileges to access all enclosure interconnect bays. Minimum length is 1 character. Maximum length is 40 characters.**
`PWD`	Password of the OA user. Minimum length is 3 characters. Maximum length is 40 characters.**
`VCM USER`	Name of Virtual Connect user with Domain privileges. Required if an enclosure is in a Virtual Connect domain. Minimum length is 1 character. Maximum length is 31 characters.
`VCM PASS`	Password for the Virtual Connect user. Minimum length is 3 characters. Maximum length is 31 characters.

*In a multi-enclosure environment, this must be the IP address of the active OA in the primary enclosure.
**In a multi-enclosure environment, USER and PWD parameters for the Onboard Administrator must be identical across local and all remote enclosures in the Virtual Connect domain.

Example

List the state of modules in an enclosure:

```
vcsu -a healthcheck -i 192.168.0.100 -u Administrator -p password -vcu
Administrator -vcp password
```

packageinfo

Extract the package information from the supplied package path and display the following information:

- Digital Signature Validation (for Virtual Connect firmware version 2.30 and higher)
- Package Version
- Ethernet Firmware Version Timestamp
- Ethernet Firmware Supported Hardware
- FC Firmware Version
- FC Firmware Supported Hardware
- Release Notes (extract, not display)

Item	Description
Syntax	`vcsu -a packageinfo -l <FILE>`
Parameter:	
`FILE`	Full path to the Virtual Connect package on the local computer or supported remote server

Example

Display package information from a file named VCpackage:

```
vcsu -a packageinfo -l VCpackage
```

report

Display the current running firmware version on all modules in a specific target enclosure. Also display the VC-Enet and VC-FC firmware versions provided in the specified VC package file, and whether or not the module can be updated. In addition to displaying the module firmware version and status, the report command also displays details about the VC package contents.

Because the package version details appear, you must provide a VC package file as part of the input at the command line.

Item	Description
Syntax	`vcsu -a report -i <IP> -u <USER> -p <PWD> -vcu <VCM USER> -vcp <VCM PASS> -l <FILE>`
Parameters:	
`IP`	IPv4 or IPv6 address of the active OA in the enclosure*
`USER`	Name of the OA user with privileges to access all enclosure interconnect bays. Minimum length is 1 character. Maximum length is 40 characters.**
`PWD`	Password of the OA user. Minimum length is 3 characters. Maximum length is 40 characters.**
`VCM USER`	Name of Virtual Connect user with Domain privileges. Required if an enclosure is in a Virtual Connect domain. Minimum length is 1 character. Maximum length is 31 characters.

Item	Description
VCM PASS	Password for the Virtual Connect user. Minimum length is 3 characters. Maximum length is 31 characters.
FILE	Full path to the Virtual Connect package on the local computer or supported remote server

*In a multi-enclosure environment, this must be the IP address of the active OA in the primary enclosure.
**In a multi-enclosure environment, USER and PWD parameters for the Onboard Administrator must be identical across local and all remote enclosures in the Virtual Connect domain.

Example

Display all modules in an enclosure:

```
vcsu -a report -i 192.168.1.100 -u Administrator -p password -vcu
Administrator -vcp password -l VCpackage
```

resetvcm

Log in to the specified interconnect bay and restart the Virtual Connect service. This action is equivalent to selecting the "Reset Virtual Connect Manager" option from the Tools pull-down menu on the Virtual Connect GUI.

Item	Description
Syntax	vcsu -a resetvcm -i <IP> -u <USER> -p <PWD>
Parameters:	
IP	IPv4 or IPv6 address of the active OA in the enclosure*
USER	Name of the OA user with privileges to access all enclosure interconnect bays. Minimum length is 1 character. Maximum length is 40 characters.**
PWD	Password of the OA user. Minimum length is 3 characters. Maximum length is 40 characters.**

*In a multi-enclosure environment, this must be the IP address of the active OA in the primary enclosure.
**In a multi-enclosure environment, USER and PWD parameters for the Onboard Administrator must be identical across local and all remote enclosures in the Virtual Connect domain.

Example

Reset the modules in an enclosure:

```
vcsu -a resetvcm -i 192.168.0.100 -u Administrator -p password
```

supportdump

Using the supplied credentials, log in to Virtual Connect and request a support information (debug dump) download. VCSU saves the file in the current directory using the file name supplied by Virtual Connect. This action requires a functioning VC domain.

Item	Description
Syntax	vcsu -a supportdump -i <IP> -u <USER> -p <PWD> -vcu <VCM USER> -vcp <VCM PASS> -l <LOCATION>
Parameters:	
IP	IPv4 or IPv6 address of the active OA in the enclosure*
USER	Name of the OA user with privileges to access all enclosure interconnect bays. Minimum length is 1 character. Maximum length is 40 characters.**
PWD	Password of the OA user. Minimum length is 3 characters. Maximum length is 40

Item	Description
	characters.**
VCM USER	Name of Virtual Connect user with Domain privileges. Required if an enclosure is in a Virtual Connect domain. Minimum length is 1 character. Maximum length is 31 characters.
VCM PASS	Password for the Virtual Connect user. Minimum length is 3 characters. Maximum length is 31 characters.
LOCATION	Full path, including file name, to save the support dump file. If not provided, VCSU saves the support dump file to the file name that VC provides and downloads it to the current directory.

*In a multi-enclosure environment, this must be the IP address of the active OA in the primary enclosure.
**In a multi-enclosure environment, USER and PWD parameters for the Onboard Administrator must be identical across local and all remote enclosures in the Virtual Connect domain.

Example

Save support information:

```
vcsu -a supportdump -i 192.168.0.100 -u Administrator -p password -vcu
Administrator -vcp password
```

update

Update the firmware.

You must provide the primary OA IP address, user credentials, and the package file to use for the update.

You can force a module update in the following circumstances:

- The target module contains a running firmware image that is the same version as the one in the source package.
- The target module is in a degraded or failed state.

If some of the modules are powered off, you can use the `force` option to update the modules that are powered on.

Item	Description
Syntax	`vcsu -a update -i <IP> -u <USER> -p <PWD> -l <FILE> [-f <FORCE>] -vcu <VCM USER> -vcp <VCM PASS> [-q] [-oe <ORDER>] [-of <ORDER>] [-we <MINUTES>] [-wf <MINUTES>] [-cp <CONFIG PASS>]`
Parameters:	
IP	IPv4 or IPv6 address of the active OA in the enclosure*
USER	Name of the OA user with privileges to access all enclosure interconnect bays. Minimum length is 1 character. Maximum length is 40 characters.**
PWD	Password of the OA user. Minimum length is 3 characters. Maximum length is 40 characters.**
FILE	Full path to the Virtual Connect package on the local computer or supported remote server
FORCE	Optional. Comma-separated list of force operations under certain conditions: • version—Allows an update of the same firmware version • health—Allows an update on a module with failed or degraded health
VCM USER	Name of the Virtual Connect user with Domain privileges. This command is required if an enclosure is in a Virtual Connect domain. Minimum length is 1 character. Maximum length is 31 characters.
VCM PASS	Password for the Virtual Connect user. Minimum length is 3 characters. Maximum length is 31 characters.
-q	Optional. Specifies that the firmware update does not prompt for confirmation before

Item	Description
	updating, and uses the default answer for the confirmation (YES).
`-oe`	Optional. Specifies VC-Enet module activation order. The following activation order methods are supported: • `parallel`—All modules are activated at the same time. • `odd-even`—(Default) The backup VC module is activated first. A force failover to the backup module occurs, and then the primary module is activated. The modules in odd bays are activated, and then modules in even bays are activated. • `serial`—The backup VC module is activated first. A force failover to the backup module occurs, and then the primary module is activated. A checkpoint is completed between the primary and standby module. Then the remaining modules are activated one at a time, starting with the lowest numbered bay. • `manual`—Modules are updated but not activated. Use the VC GUI or the OA GUI to activate (reboot) modules.
`-of`	Optional. Specifies VC-FC module activation order. The following activation order methods are supported: • `parallel`—All modules are activated at the same time. • `odd-even`—All modules in odd-numbered bays are activated first, and then modules in even-numbered bays are activated. • `serial`—(Default) Modules are activated one at a time, starting with the lowest numbered bay. • `manual`—Modules are updated but not activated. Use the OA GUI to activate (reboot) modules.
`-we`	Optional. Specifies the amount of time, in minutes, to wait between activating or rebooting VC-Enet modules. This command is required for some MPIO/teaming software on the server blades in the enclosure. The default is 0, or no delay. HP recommends a minimum of 5 minutes.
`-wf`	Optional. Specifies the amount of time, in minutes, to wait between activating or rebooting VC-FC modules. This command is required for some MPIO/teaming software on the server blades in the enclosure. The default is 0, or no delay. HP recommends a minimum of 5 minutes.
`-cp`	Optional. Password for the configuration backup file. Supported in VC firmware versions 3.00 and higher. The default is no password.

*In a multi-enclosure environment, this must be the IP address of the active OA in the primary enclosure.
**In a multi-enclosure environment, USER and PWD parameters for the Onboard Administrator must be identical across local and all remote enclosures in the Virtual Connect domain.

Examples

Update multiple modules in an enclosure imported into a VC domain with and IPv4 address:

```
vcsu -a update -i 192.168.1.100 -u Administrator -p password -vcu John -vcp
vcPass -l C:\images\vcfw-120.bin
```

Update multiple modules in an enclosure imported into a VC domain with and IPv6 address:

```
Vcsu -a update -i 2001:1::12 -u Administrator -p password -vcu John -vcp
vcPass -l C:\images\vcfw-120.bin
```

Perform an update and specify an activation ordering method:

```
vcsu -a update -i 192.168.1.100 -u Administrator -p password -vcu John -vcp
vcPass -l C:\images\vcfw-120.bin -oe serial -of parallel
```

Perform an update using a firmware image from a web server address:

```
vcsu -a update -i 192.168.1.100 -u Administrator -p password -l
http://www.myserver.com/vcfw-120.bin
```

Perform an update using a firmware image from an FTP server on the network with an IPv4 address:

```
vcsu –a update –i 192.168.1.100 –u Administrator –p password –l
ftp://user:password@192.168.1.10/vcfw-120.bin
```

Perform an update using a firmware image from an FTP server on the network with an IPv6 address:

```
vcsu –a update –i 2001:1::12 –u Administrator –p password –l
ftp://user:password@[2001:1:20]/vcfw-120.bin
```

Perform an update of the same firmware version on a degraded module:

```
vcsu -a update -i 192.168.1.100 -u Administrator -p password -l
C:\images\vcfc-120.bin -f version,health
```

version

Display the current running firmware version on all modules in a specific target enclosure.

Item	Description
Syntax	`vcsu -a version -i <IP> -u <USER> -p <PWD> -vcu <VCM USER> -vcp <VCM PASS>`
Parameters:	
`IP`	IPv4 or IPv6 address of the active OA in the enclosure*
`USER`	Name of the OA user with privileges to access all enclosure interconnect bays. Minimum length is 1 character. Maximum length is 40 characters.**
`PWD`	Password of the OA user. Minimum length is 3 characters. Maximum length is 40 characters.**
`VCM USER`	Name of Virtual Connect user with Domain privileges. Required if an enclosure is in a Virtual Connect domain. Minimum length is 1 character. Maximum length is 31 characters.
`VCM PASS`	Password for the Virtual Connect user. Minimum length is 3 characters. Maximum length is 31 characters.

*In a multi-enclosure environment, this must be the IP address of the active OA in the primary enclosure.
**In a multi-enclosure environment, USER and PWD parameters for the Onboard Administrator must be identical across local and all remote enclosures in the Virtual Connect domain.

Examples

Display all modules and their current firmware versions:

```
vcsu –a version –i 192.168.1.100 –u Administrator –p password –vcu
Administrator –vcp password
```

Downgrades

Overview

This feature enables you to downgrade to a previously installed and running version of VC.

The following requirements are for downgrading firmware on a VC domain without destroying the domain. Otherwise, to downgrade firmware on VC modules, you must first delete the domain and then use the `-a update` command.

Restrictions

The following restrictions apply:

- You must be running VC version 3.70 or higher to perform a downgrade.
- You cannot downgrade to a VC version lower than version 3.17.
- A previous upgrade must have been performed on the configuration using VCSU 1.7.0 or higher.
- All servers in the domain must be powered off.
- Multiple, consecutive firmware downgrades are not allowed.
- You can downgrade only to the version previously installed and running on the primary module.
- The VC configuration, including physical connections, uplink port connections, and module positions in the enclosure, must be identical to the target downgrade configuration.
- The VC credentials must be the same before and after the downgrade. After the downgrade, you cannot change the password for the account used to perform the downgrade.
- The primary E-net module must be in the lowest bay number.

Manual activation

Manual activation of VC firmware

Use the following steps for manual activation of VC firmware:

1. Determine which module is the Primary and which is Standby using the VCM CLI `show interconnect` command or by executing VCSU with the `-healthcheck` option.
2. In the base enclosure (ENC0), reset the module identified as the Standby module.
3. Wait for the checkpoint to complete. You can view this within VCM, or you can run VCSU with the `-healthcheck` option to see that the Domain configuration is "In Sync" on all the modules.
4. Force a failover of VCM from the Primary to the Standby module by selecting **Reset VCM** from the Tools pull-down menu and then selecting the checkbox to Force failover.
5. Wait for the Standby module to become Primary and for the checkpoint to complete. (See step 3 above).
6. In the base enclosure (ENC0), reset the module that was the original Primary module, but currently is the Standby module.
7. Wait for checkpoint to complete. You can view this within VCM, or you can run VCSU with the `-healthcheck` option to see that the Domain configuration is "In Sync" on all the modules.
8. After both the Primary and Standby modules are activated and are stable, reset all the modules on the odd numbered side of each enclosure. This includes the base enclosure (ENC0) Bays 3, 5, and 7 and every remote enclosure (ENC1-ENC3) Bays 1, 3, 5, and 7.
9. Wait for the checkpoint to complete. You can view this within VCM or you can run VCSU with the `-healthcheck` option to see that the Domain configuration is "In Sync" on all the modules.
10. After all the modules in the odd numbered I/O Bays are activated and are stable, reset all the modules on the even numbered side of each enclosure. This includes the base enclosure (ENC0) Bays 4, 6, and 8 and every remote enclosure (ENC1-ENC3) Bays 2, 4, 6, and 8.

Troubleshooting

VCSU error codes

Error code	Details
VCSU_SUCCESS	The operation was successful.
VCSU_ERROR_FAILED	The operation failed.
VCSU_ERROR_UNKNOWN	An unknown failure occurred.
VCSU_ERROR_ACCESS_DENIED	The user does not have the required privileges to update the firmware.
VCSU_ERROR_INVALID_PARAMETER	One or more parameters are not valid.
VCSU_ERROR_INVALID_USERNAME	The user name is not valid.
VCSU_ERROR_INVALID_PASSWORD	The password is not valid.
VCSU_ERROR_FILE_NOT_FOUND	The specified file could not be found.
VCSU_ERROR_FILE_READ_FAILED	The specified file could not be read.
VCSU_ERROR_OA_COMMUNICATION_FAILURE	Unable to communicate with the Onboard Administrator
VCSU_ERROR_VCM_COMMUNICATION_FAILURE	Unable to communicate with Virtual Connect
VCSU_ERROR_NULL_POINTER	A NULL pointer was specified.
VCSU_ERROR_PREVIOUS_UPDATE_INCOMPLETE	The previous firmware update operation did not complete.
VCSU_ERROR_AUTHENTICATION_FAILURE	An authentication failure occurred.
VCSU_ERROR_BUFFER_TOO_SMALL	The specified buffer is too small.
VCSU_ERROR_UNSUPPORTED_FIRMWARE_PACKAGE	The specified firmware package file is not currently supported.
VCSU_ERROR_UNSUPPORTED_MODULE	One or more modules are not supported.
VCSU_ERROR_PACKAGE_NOT_SUPPORTED	The specified firmware package does not support the module.
VCSU_ERROR_INVALID_URL	The specified URL is not valid.
VCSU_ERROR_URL_NOT_FOUND	The specified URL could not be found.
VCSU_ERROR_INVALID_ADDRESS	The specified address is not valid or does not exist.
VCSU_ERROR_INVALID_TARGET_FILE	The specified target file is not valid or does not exist.
VCSU_ERROR_FILE_OPEN_FAILED	The specified file could not be opened.
VCSU_ERROR_NO_WRITE_PERMISSION	The current user does not have write permission to the specified directory.
VCSU_ERROR_FILE_WRITE_FAILED	Error in writing file to disk
VCSU_ERROR_INVALID_USER_CREDENTIALS	The user credentials are not valid.
VCSU_ERROR_AUTHENTICATION_REQUIRED	User authentication is required to perform the requested operation.
VCSU_ERROR_NOT_IMPLEMENTED	The specified operation is not currently implemented.

Error code	Details
VCSU_ERROR_INVALID_TYPE	The specified type is not valid.
VCSU_ERROR_UNSUPPORTED_TYPE	The specified type is not currently supported.
VCSU_ERROR_MEMORY_ALLOCATION	Memory could not be allocated.
VCSU_ERROR_INVALID_FIRMWARE_VERSION	The firmware version is not valid.
VCSU_ERROR_SOCKET_CREATE_FAILED	Socket could not be created.
VCSU_ERROR_SOAP_INIT_FAILED	A SOAP call initialization failure occurred.
VCSU_ERROR_OBJECT_NOT_FOUND	The requested object does not exist.
VCSU_ERROR_INVALID_SYNTAX	The specified command syntax is not valid.
VCSU_ERROR_INVALID_COMPONENT_TYPE	The specified component type is not valid.
VCSU_ERROR_UNSUPPORTED_ENDPOINT_VERSION	The version of the remote endpoint is not supported.
VCSU_ERROR_UNKNOWN_ENDPOINT_TYPE	The remote endpoint is invalid or unknown.
VCSU_ERROR_TIMEOUT	Connection to the remote endpoint timed out.
VCSU_ERROR_MAINTENANCE_MODE	Maintenance mode is not set on the module.
VCSU_ERROR_CONFIGBACKUP_UNSUPPORTED	Configuration backup not supported on the target.
VCSU_ERROR_SSH_SESSION_OPEN_FAILED	Unable to open an SSH session
VCSU_ERROR_SSH_SFTP_OPEN_FAILED	Unable to open an SFTP session
VCSU_ERROR_SSH_READ_FAILED	Unable to read from the SSH channel
VCSU_ERROR_SSH_SFTP_READ_INCOMPLETE	Read from SFTP is incomplete.
VCSU_ERROR_SSH_SFTP_WRITE_FAILED	The SFTP write failed.
VCSU_ERROR_SSH_EXEC_FAILED	The specified SSH command failed.
VCSU_ERROR_SSH_INVALID_RESPONSE	An invalid SSH response was received.
VCSU_ERROR_SSH_SESSION_INIT_FAILED	Unable to establish an SSH session
VCSU_ERROR_SSH_SFTP_INIT_FAILED	Unable to establish an SFTP session
VCSU_ERROR_SSH_SESSION_CREATE_FAILED	Unable to create an SSH session
VCSU_ERROR_SSH_LOGIN_FAILED	SSH login failed. Verify that the credentials and the remote address are correct.
VCSU_ERROR_SSH_CONNECT_FAILED	Unable to connect to remote SSH endpoint
VCSU_ERROR_SSH_SESSION_NOT_ESTABLISHED	The SSH session is not established.
VCSU_ERROR_SSH_INVALID_COMMAND	Invalid SSH command
VCSU_ERROR_SFTP_SHUTDOWN_FAILED	Failed to shut down SFTP
VCSU_ERROR_INVALID_IP_ADDRESS	Invalid IP address.
VCSU_ERROR_CONNECT_FAILED	Socket or connection call to the specified IP failed.
VCSU_ERROR_OA_COMMUNICATION_FAILED	Unable to communicate using the given OA IP
VCSU_ERROR_GET_HOST_INFO_FAILED	Unable to retrieve host information from the given IP
VCSU_ERROR_INVALID_OA_USERNAME	Invalid OA user name
VCSU_ERROR_INVALID_OA_PASSWORD	Invalid OA password
VCSU_ERROR_INVALID_BAY_NUMBER	Invalid bay number
VCSU_ERROR_OA_INIT_FAILED	OA Initialization failed.
VCSU_ERROR_OA_LOGIN_FAILED	OA login failed.
VCSU_ERROR_OA_LOGOUT_FAILED	OA logout from the current user failed.

Error code	Details
VCSU_ERROR_OA_GET_NETWORK_INFO_FAILED	Could not get network information from either Onboard Administrator
VCSU_ERROR_OA_FW_VERSION_NOT_SUPPORTED	OA firmware version is not supported without force.
VCSU_ERROR_OA_FW_VERSION_SUPPORTED_WITH_ FORCE	OA firmware version is not supported without force.
VCSU_ERROR_OA_SOAP_CALL_FAILED	Communication to OA using SOAP failed.
VCSU_ERROR_VC_SOAP_CALL_FAILED	Communication to VC using SOAP failed.
VCSU_ERROR_OA_NOT_PRIMARY	The specified OA is not primary.
VCSU_ERROR_OA_GET_VCM_MODE_FAILED	Unable to retrieve OA VC mode information
VCSU_ERROR_OA_INTERNAL_PASSWD_INVALID	The OA internal password length is invalid.
VCSU_ERROR_INVALID_INFOBLOCK_FROM_OA	Invalid Info block from OA is received.
VCSU_ERROR_VCM_ACCESS_INFO_EXTRACTION_FAILED	Unable to extract VC access information
VCSU_ERROR_UNSUPPORTED_ENCLOSURE	The specified enclosure is not supported.
VCSU_ERROR_VCFC_NOT_RESPONDING	The VC FC module is not responding.
VCSU_ERROR_VENDOR_INFOBLOCK_RETURNED_ERROR	Vendor Info block returned an error.
VCSU_ERROR_BAY_INFO_RETRIEVAL_FAILED	Unable to retrieve information from the interconnect module at the specified bay
VCSU_ERROR_NOT_PRIMARY_ENCLOSURE	The specified enclosure is not primary in the domain.
VCSU_ERROR_PRIMARY_ENCLOSURE_NOT_FOUND	Failed to get Primary Enclosure information.
VCSU_ERROR_ENCLOSURE_NOT_IMPORTED	The specified enclosure is not imported in the domain.
VCSU_ERROR_PRIMARY_OA_NOT_FOUND	Unable to find the Primary OA IP
VCSU_ERROR_BAY_COMMUNICATION_FAILURE	Unable to communicate with the interconnect module in the specified bay
VCSU_ERROR_VCME_DOMAIN	VC ME domain
VCSU_ERROR_VCEM_DOMAIN	This VC domain is being managed by an external manager. See the external manager documentation for instructions on firmware updates.
VCSU_ERROR_CLI_COMMAND_FAILED	CLI command exited with non zero status.
VCSU_ERROR_WEBSERVER_NOT_RESPONDING	The web server is not responding.
VCSU_ERROR_CHECKPOINT_NOT_REDUNDANT	Checkpoint not redundant
VCSU_ERROR_CHECKPOINT_PENDING	Checkpoint pending redundancy
VCSU_ERROR_VCM_LOCKED	VC is in a locked state.
VCSU_ERROR_VCM_NOT_LOCKED	VC is not in a locked state.
VCSU_ERROR_CONFIG_PARSE_ERROR	Failed to read the VC configuration details
VCSU_ERROR_VCM_CONFIG_NOT_IN_SYNC	VC configuration is not in sync.
VCSU_ERROR_SSL_FAILED	SSL connection error
VCSU_ERROR_SSL_INIT_FAILED	SSL initialization error
VCSU_ERROR_SSL_WRITE_FAILED	SSL write error
VCSU_ERROR_SSL_READ_FAILED	SSL read error
VCSU_ERROR_SSL_OPEN_FAILED	SSL open error
VCSU_ERROR_FTP_NO_DATA	No data was received from the FTP server.

Error code	Details
VCSU_ERROR_FTP_NOT_READY	The FTP server is not ready.
VCSU_ERROR_FTP_USERNAME_NOT_VALID	The FTP username is not valid.
VCSU_ERROR_FTP_PASSWORD_INVALID	The FTP password is not valid.
VCSU_ERROR_FTP_REJECTED_PASSIVE_MODE	The FTP server rejected passive mode.
VCSU_ERROR_FTP_REJECTED_COMMAND	The FTP server rejected the command.
VCSU_ERROR_FTP_NO_RESPONSE	The FTP server is not responding.
VCSU_ERROR_FTP_RECEIVE_ERROR	An FTP receive error exists.
VCSU_ERROR_FTP_INVALID_IP	Invalid FTP server IP address
VCSU_ERROR_NO_UPDATABLE_MODULES	No target modules are found that can be updated.
VCSU_ERROR_MODULE_UPDATE_NOT_REQD	The specified module is not required to be updated.
VCSU_ERROR_MODULE_ACTIVATE_NOT_REQD	The specified module is not required to be activated.
VCSU_ERROR_MODULE_INFO_NOT_AVAILABLE	The specified module's information is not available.
VCSU_ERROR_MODULE_NOT_PRESENT	The specified module is not present.
VCSU_ERROR_MODULE_NOT_POWERED_ON	The specified module is not powered on.
VCSU_ERROR_MODULE_NOT_OPERATIONAL	The specified module is not operational.
VCSU_ERROR_ADMIN_PERMISSIONS_REQD	The admin privileges are required to upgrade specified modules.
VCSU_ERROR_CHECKPOINT_RENAME_FAILED	The checkpoint rename operation failed on the specified modules.
VCSU_ERROR_VCM_CONFIGURATION_NOT_IN_SYNC	The VC configuration is still not in sync.
VCSU_ERROR_VCM_FAILOVER_FAILED	Failover to backup module failed.
VCSU_ERROR_BAY_CONFIGURATION_FAILED	Unable to configure the bay
VCSU_ERROR_CLI_COMMAND_EXECUTION_FAILED	Unable to execute CLI command on the target module
VCSU_ERROR_MODULE_NOT_UPGRADABLE	The specified module is not upgradeable.
VCSU_ERROR_MODULE_COMMAND_FAILED	The command on the target module failed.
VCSU_ERROR_RESET_TIME_OUT	The reset on the target module timed out.
VCSU_ERROR_RESET_FAILED	The reset on the target module failed.
VCSU_ERROR_INVALID_MODULEID	The specified module ID is invalid.
VCSU_ERROR_PREVIOUS_UPDATE_NOT_COMPLETETD	A previous firmware update operation on one or more modules is not complete.
VCSU_ERROR_MULTIPLE_INSTANCE	Another firmware update is running against the specified OA.
VCSU_ERROR_FC2_FW_EXTRACTION_FAILED	The extraction of the VC FC2 firmware package failed.
VCSU_ERROR_DOWNGRADE_FROM_MULTIENCLOSURE	A downgrade from a 2.10 multi enclosure domain is not supported.
VCSU_ERROR_NOT_MULTIENCLOSURE	Invalid module IDs for single enclosure update
VCSU_ERROR_VCM_MODE_RESTORE_FAILED	Failed to restore the VC mode of primary or backup module
VCSU_ERROR_ACTIVATION_FAILED	Failed to activate one or more modules
VCSU_ERROR_UNINITIALIZED_MUTEX	Invalid mutex found

Error code	Details
VCSU_ERROR_MODULE_NOT_FOUND	The specified module is not found at remote endpoint.
VCSU_ERROR_DOWNGRADE_VCENET_VERSION	Internal Error: A downgrade from this version of Virtual Connect firmware to the target version would result in destruction of the domain. Manually delete the Virtual Connect domain and run the Virtual Connect Support Utility again.
VCSU_ERROR_UNSUPPORTED_RESET_MODE	The specified reset mode is not supported.
VCSU_ERROR_CGI_FAILED	The specified CGI operation failed. Try the operation again.
VCSU_XML_PARSING_FAILED	XML parsing of the description file failed.
VCSU_XML_FILE_EMPTY	The XML file is empty.
VCSU_XML_INVALID_FILE	The XML file format is invalid.
VCSU_ERROR_PRIMARY_VCM_IP_NOT_FOUND	Could not get the Primary VC module IP address
VCSU_ERROR_PRIMARY_VCM_NOT_FOUND	Could not find the Primary VC module
VCSU_ERROR_INVALID_HTTP_RESPONSE	Invalid HTTP response
VCSU_ERROR_UNKNOWN_HTTP_ERROR	Unknown HTTP error
VCSU_ERROR_HTTP_GET_ERROR	HTTP GET failed
VCSU_ERROR_HTTP_ERROR	The HTTP method returned an error. Check the log for error details.
VCSU_ERROR_FILE_EXTRACT_FAILED	The specified firmware file could not be extracted.
VCSU_ERROR_MODULE_IMAGE_INFO_NOT_AVAILABLE	The image information for the specified module type is not available in the package.
VCSU_ERROR_FW_SIGNATURE_VERIFICATION_FAILED	The signature verification of the specified package failed.
VCSU_ERROR_HEALTH_NOT_OK	The health of the module is not in a good state.
VCSU_ERROR_POWER_NO_OP	No Op
VCSU_ERROR_POWER_UNKNOWN	Unknown
VCSU_ERROR_POWER_OFF	Off
VCSU_ERROR_POWER_STAGED_OFF	Staged Off
VCSU_ERROR_POWER_REBOOT	Reboot
VCSU_ERROR_HEALTH_UNKNOWN	Unknown
VCSU_ERROR_HEALTH_OTHER	Other
VCSU_ERROR_HEALTH_DEGRADED	Degraded
VCSU_ERROR_HEALTH_STRESSED	Stressed
VCSU_ERROR_HEALTH_PREDICTIVE_FAILURE	Predictive Failure
VCSU_ERROR_HEALTH_ERROR	Error
VCSU_ERROR_HEALTH_NON_RECOVERABLE_ERROR	Non Recoverable Error
VCSU_ERROR_HEALTH_STARTING	Starting
VCSU_ERROR_HEALTH_STOPPING	Stopping
VCSU_ERROR_HEALTH_STOPPED	Stopped
VCSU_ERROR_HEALTH_IN_SERVICE	In Service
VCSU_ERROR_HEALTH_NO_CONTACT	No Contact
VCSU_ERROR_HEALTH_LOST_COMMUNICATION	Lost Communication

Error code	Details
VCSU_ERROR_HEALTH_ABORTED	Aborted
VCSU_ERROR_HEALTH_DORMANT	Dormant
VCSU_ERROR_HEALTH_SUPPORTING_ENTITY_IN_ERROR	Supporting Entity In Error
VCSU_ERROR_HEALTH_COMPLETED	Completed
VCSU_ERROR_HEALTH_POWER_MODE	Power Mode
VCSU_ERROR_HEALTH_DMTF_RESERVED	DMTF Reserved
VCSU_ERROR_HEALTH_VENDOR_RESERVED	Vendor Reserved
VCSU_ERROR_VLANID_NOT_SAME	Interconnect Module VLAN ID is different from OA.
VCSU_ERROR_CONNECTION_UNKNOWN_MODULE	Unknown Module in bay
VCSU_ERROR_CONNECTION_FAILED	IP connection to the module failed.
VCSU_ERROR_OPERATIONAL_MODE_UNKNOWN	Unknown operational mode of the module
VCSU_ERROR_DOMAIN_CONFIG_NOT_IN_SYNC	Domain Configuration is not in sync.
VCSU_ERROR_MODULE_CONFIG_NOT_IN_SYNC	Module Configuration is not in sync.
VCSU_ERROR_MODULE_CONFIG_FIRMWARE_ INCOMPATIBLE	Module Firmware Incompatible
VCSU_ERROR_MODULE_CONFIG_INVALID_STATE	Module Configuration is invalid.
VCSU_ERROR_UNSUPPORTED_CONFIGURATION	Enclosure or Interconnect Modules are in an unsupported configuration.
VCSU_ERROR_SIM_INIT_FAILED	VCSU Simulator initialization failed.
VCSU_ERROR_CONFIG_READ_ERROR	Error reading VCSU Simulator Configuration
VCSU_ERROR_CONFIG_ELEM_NOT_FOUND	Element information not found in the XML configuration file
VCSU_ERROR_UNSUPPORTED_VCSU_VERSION	This version of VCSU does not support the update of specified firmware package.
VCSU_ERROR_UNSUPPORTED_OA_VERSION	One or more enclosure Onboard Administrators is not running the minimum required firmware version required by the firmware package.
VCSU_ERROR_ACTIVATE_PRIMARY_BACKUP_FAILURE	Failed to activate primary/backup pair
VCSU_ERROR_VCEM_FW_MAINTENANCE_MODE	VC is locked and in firmware maintenance state
VCSU_ERROR_PRIMARY_BACKUP_HEALTH_NOT_OK	The health of primary or standby module is not OK. The update cannot proceed.
VCSU_ERROR_MIN_TARGET_VERSION_ROLLBACK_ DOWNGRADE	The target version does not support the downgrade of Virtual Connect firmware without deletion of domain configuration.
VCSU_ERROR_MIN_VCM_VERSION_ROLLBACK_ DOWNGRADE	The current version of Virtual Connect firmware does not support the downgrade without deletion of domain configuration.
VCSU_ERROR_PRIMARY_NOT_IN_LOWER_BAY_FOR_ DOWNGRADE	Presence of subordinate module on lower bay before primary module will not allow downgrade.
VCSU_ERROR_ROLLBACK_DOWNGRADE_WILL_NOT_ PROCEED_FOR_MANUAL_ENET_ACTIVATION	Rollback downgrade will not proceed for manual activation of E-net modules.
VCSU_ERROR_VCM_LOCKED_BY_VCEM_AND_FW_ MAINTENANCE_MODE	VC is locked by VCEM Firmware Maintenance mode. Downgrade will not proceed.

Error code	Details
VCSU_ERROR_ROLLBACK_DOWNGRADE_WILL_NOT_ PROCEED_FOR_SERVERPOWERON_NOSAFE	Powered ON servers or server profile migration since upgrade and performing downgrade may result in duplicate MAC/WWN in the domain. Power OFF the servers to avoid the MAC/WWN duplication and perform the downgrade.
VCSU_ERROR_ROLLBACK_FAILED_TO_ACTIVATE_ LOWEST_BAY	Failed to activate lowest E-net bay for rollback
VCSU_ERROR_ROLLBACK_FAILED_TO_ACTIVATE_ODDSIDE _MODULE	Failed to activate odd side modules for rollback
VCSU_ERROR_ROLLBACK_ACTIVATE_FAILURE	Rollback activation failed
VCSU_ERROR_ROLLBACK_ODDMODULE_MANAGED_ STATUS_NOT_NORMAL	Odd module managed status is not Normal.
VCSU_ERROR_ADD_USER_FAILED	Unable to add user
VCSU_ERROR_REMOVE_USER_FAILED	Unable to remove user
VCSU_ERROR_SET_NAME_FAILED	Unable to set the user name
VCSU_ERROR_AND_EXIT_FROM_UPDATE	Fatal error. One or more modules is preventing VCSU from continuing. Correct conditions listed above and retry.
VCSU_ERROR_MODULE_FAILOVER_FAILED	Module did not come up with proper role after failover.
VCSU_ERROR_FIRMWARE_EXTRACT_FAILED	Failed to extract the VC firmware package
VCSU_ERROR_GET_ENCLOSURE_INFORMATION_FAILED	Failed to get enclosure information
VCSU_ERROR_SET_TO_SLAVE_FAILED	Failed to set the module to subordinate state
VCSU_ERROR_SET_TO_AUTO_FAILED	Failed to set the module to auto state
VCSU_ERROR_VC_LOGIN_FAILED	Failed to log in to Virtual Connect
VCSU_ERROR_ADD_VCM_USER_FAILED	Failed to add VC user in Onboard Administrator
VCSU_ERROR_PRIMARYMODULE_BEING_IN_EVENBAY_ AND_NO_BACKUP_MODULE	Rollback will not proceed since primary module is in even bay and there is no backup module.
VCSU_ERROR_RESOLVE_HOST_INFO_FAILED	Failed to resolve the hostname
VCSU_ERROR_VCM_SKIP_FAILOVER	Virtual Connect does not have a valid Backup module. Cannot failover.
VCSU_ERROR_DISCOVER_MODULES_FAILED	Failed to discover the Virtual Connect modules
VCSU_ERROR_INVALID_OA_ADDRESS	Invalid Onboard Administrator IP Address
VCSU_ERROR_INVALID_VCM_ADDRESS	Invalid Virtual Connect Manager IP Address
VCSU_ERROR_WRITE_OPERATION_FAILED	Failed to write into the file
VCSU_ERROR_VCM_AUTHENTICATE_FAILED	Virtual Connect Manager authentication failed.
VCSU_ERROR_UNSUPPORTED_FIRMWARE_MODE	The firmware mode of the VCEM Domain Group is not supported by the firmware package.
VCSU_ERROR_DOMAIN_INVALID_CONFIGURATION	Onboard Administrator VCMODE is not correct. Log into Virtual Connect Manager and reestablish credentials, and retry Virtual Connect Support Utility.
VCSU_ERROR_NO_ENET_MODULES	There are no VC-Enet modules in the domain.
VCSU_ERROR_SSH_SCP_WRITE_FAILED	The SCP write failed
VCSU_ERROR_FC_UPDATE_FAILED	Failed to update the FC module

Error code	Details
VCSU_ERROR_IPV6_DOWNGRADE_ERROR	The current version of Virtual Connect firmware has IPv6 configuration that is not supported by the target version. Downgrade cannot be performed.
VCSU_ERROR_IPV6_DISCOVERY_NOT_SUPPORTED	VCSU does not support discovery using IPv6 addresses.
VCSU_ERROR_SAME_POWER_STATE	The power state of the specified module is already the same. The operation cannot continue.

Support and other resources

Before you contact HP

Be sure to have the following information available before you call HP:

- Active Health System log (HP ProLiant Gen8 or later products)

  Download and have available an Active Health System log for 3 days before the failure was detected. For more information, see the *HP iLO 4 User Guide* or *HP Intelligent Provisioning User Guide* on the HP website (http://www.hp.com/go/ilo/docs).
- Onboard Administrator SHOW ALL report (for HP BladeSystem products only)

  For more information on obtaining the Onboard Administrator SHOW ALL report, see the HP website (http://www.hp.com/go/OAlog).
- Technical support registration number (if applicable)
- Product serial number
- Product model name and number
- Product identification number
- Applicable error messages
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level

HP contact information

For United States and worldwide contact information, see the Contact HP website (http://www.hp.com/go/assistance).

In the United States:

- To contact HP by phone, call 1-800-334-5144. For continuous quality improvement, calls may be recorded or monitored.
- If you have purchased a Care Pack (service upgrade), see the Support & Drivers website (http://www8.hp.com/us/en/support-drivers.html). If the problem cannot be resolved at the website, call 1-800-633-3600. For more information about Care Packs, see the HP website (http://pro-aq-sama.houston.hp.com/services/cache/10950-0-0-225-121.html).

Acronyms and abbreviations

DHCP

Dynamic Host Configuration Protocol

DNS

domain name system

FC

Fibre Channel

HTTPS

hypertext transfer protocol secure sockets

OA

Onboard Administrator

SOAP

Simple Object Access Protocol

SSH

Secure Shell

SSL

Secure Sockets Layer

TLS

Transport Layer Security

VC

Virtual Connect

VCM

Virtual Connect Manager

VCSU

Virtual Connect Support Utility

Documentation feedback

HP is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (mailto:docsfeedback@hp.com). Include the document title and part number, version number, or the URL when submitting your feedback.

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