

FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Release Notes

Version Number B.11.31.0803

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This document provides information about the B.11.31.0803 release of the FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3.

FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 Overview

This release of the FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 (version B.11.31.0803) is the first release of FibrChanl-02 (fclp) on HP-UX 11i v3.

New and Changed Features in This Release

New Features

The following features are new with the B.11.31.0803 version of the FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3:

- Support is now enabled for Online Addition (OLA) and Online Replacement (OLR).



NOTE: PCI Error Recovery (PCI-ER) and Online Deletion (OLD) are **NOT** supported on the fclp driver on HP-UX 11i v3 at this time.

Known Problems Fixed in This Version

There are no known defects for this release at this time.

Known Problems and Limitations

This section provides a list of known problems and limitations as known to HP at time of publication. If workarounds are available, they are included.

- **femsutil Command Reports an Error When Run with /dev/fclpX**

The solution for this issue is to ensure that you have loaded patch PHKL_36790.

- **EFI Boot Fails with No HP-UX Partition on Boot Media Message**

```
Loading.: HP-UX Primary Boot: 0/4/0/0/0/0.8.0.20.0.3.0
Starting: HP-UX Primary Boot: 0/4/0/0/0/0.8.0.20.0.3.0
Using EFI boot partition (no HPUX partition on boot media)
```

```
(C) Copyright 1999-2006 Hewlett-Packard Development Company, L.P.
All rights reserved
```

```
HP-UX Boot Loader for IPF -- Revision 2.029
```

```
Press Any Key to interrupt Autoboot
\EFI\HPUX\AUTO ==> boot vmunix
Seconds left till autoboot - 0
AUTOBOOTING...Could not open file vmunix to check for a directory
Could not open vmunix
```

```
loading failed
```

```
HPUX>
```

This issue is addressed in system firmware version 3.01 for rx2660, rx3600, and rx6600. There are three workarounds for this issue:

1. Return to the Boot Manager, enter and exit the EFI shell a second time, and retry the boot; or,
2. Reset the system and retry the boot; or,
3. Configure the EFI driver to always map the boot devices using the `drvcfg -s` at the EFI shell prompt.

- **Fibre Channel Devices Do Not Appear in the EFI Shell**

The solution to this issue is to use the `drvcfg -s` at the EFI shell prompt, to configure the Emulex EFI driver to always map the boot devices.

1. To view the Emulex driver handle information, at the EFI shell prompt type: `Shell> drivers --` a list of drivers is displayed.
2. Write down the driver handle associated with the *Emulex SCSI Pass Thru Driver*. The first column, labelled *DRV*, lists the driver handles.
3. Enter the `drvcfg -s <driver handle>` command; for example, if the driver handle is 20 (your driver handle may be different): `Shell> drvcfg -s 20`. Information is displayed, listing all of the HBAs in your system; your listings may vary, depending upon how many HBAs are installed in your system.
4. Using the arrow keys, locate the HBA that you want to configure, select (i.e., highlight) the corresponding row, and press **Enter**.
5. Select (highlight) the *Setup Utility* option and press **Enter**.
6. Select (highlight) the *Configure Boot Parameters* option and press **Enter**.
7. Select (highlight) the *Boot Target Scan* option and press **Enter**.
8. Select one of the scanning policies from the list presented:
 - The *Boot Path from NVRAM Targets* option, which is the default option, requires additional configuration in the *Configure Boot Devices* option on the previous menu. Using this scanning policy, you can enter a list of particular targets and LUNs that you would like the EFI driver to search for potential devices.
 - Other policies, such as the *Boot Path Discovered Devices* policy, do not limit the scan to particular devices, and may take several minutes to complete, depending upon the size of the SAN.
9. After completing your scanning policy selection and configuration, use the **ESC** key to exit the EFI configuration menus.

- **Host Bus Adapters Using the fclp HP-UX Driver Stay in AWAITING LINK UP State When Connected to a DS2500 Device**

The solution to this issue is to set the speed of the adapter port to 2 Gb, by using the `drvcfg -s` command at the EFI shell prompt, to configure the port speed:

1. To view the Emulex driver handle information, type `Shell> drivers` at the EFI shell prompt -- a list of drivers is displayed.
2. Write down the driver handle associated with the *Emulex SCSI Pass Thru Driver*. The first column, labelled *DRV*, lists the driver handles.
3. Enter the `drvcfg -s <driver handle>` command; for example, if the driver handle is 20 (your driver handle may be different): `Shell> drvcfg -s 20`. Information is displayed, listing all of the HBAs in your system; your listing may vary, depending upon how many HBAs are installed in your system.
4. Using the arrow keys, locate the HBA that you want to configure, select (i.e., highlight) the corresponding row, and press **Enter**.
5. Select (highlight) the *Setup Utility* option and press **Enter**.
6. Select (highlight) the *Configure HBA Parameters* option and press **Enter**.
7. Select (highlight) the *Force Link Speed* option and press **Enter**.
8. Select (highlight) the *2Gb/s link speed* option from the list presented, and press **Enter**.

9. After completing your selection, use the **ESC** key to exit the EFI configuration menus.
- **Problems Installing VxVM with the fclp HP-UX Driver (FibrChanl-02)**
FibrChanl-02 on HP-UX 11i v3 is supported with VxVM 5.0 or later.
 - **The `o1rad` Command Reports That fclp-Based HBAs Do Not Support Online Deletion**
Online Deletion of fclp-based host bus adapters **IS NOT** supported at this time. However, Online Addition and Replacement **IS** supported.
 - **Using `ioscan` with `krm` Not Running**
When `ioscan` is run with the `-fn` or `-Fn` option, and the kernel resource monitor (`krm`) is not running, there could be stale `krm` device files in the system, which would correspond to different devices, including `fclp`, in `ioscan` output. This issue has no impact on the functionality of the Fibre Channel port; however, `ioscan` output may be confusing. This issue can impact any card accessible with `ioscan`, and is not specific to the cards supported by the `fclp` driver.
Corrective Action:The `ioscan` output can be returned to normal by either deleting the stale `krm` device files, or by starting `krm`, which will recreate the device files.

Compatibility and Installation Requirements

This section describes the compatibility information and installation requirements for this release. For specific installation instructions, refer to the installation guide specific to your to your FibreChannel card.

Operating System and Version Compatibility

The March 2008 update of HP-UX 11i v3 (B.11.31.0803) must be installed for all supported Emulex-based Fibre Channel cards.

The following software (or later versions) must be installed before installing the FibrChanl-02 (fclp) driver, version B.11.31.0803, into a system:

- HP-UX 11.31 Support Tools Bundle, March 2008 (OnlineDiag), version B.11.31.03.06
- PHKL_36790 patch (needed to enable the `fcmsutil` command to work properly with cards that use the `fclp` driver)

The following patch is required only if your system is missing the March 2008 HP-UX 11.31 Support Tools Bundle:

- PHSS_37101 (`scsi_array` patch)

Driver bundles can be downloaded from the HP Software Depot at: <http://www.software.hp.com>

Patches are available from either: <http://www.software.hp.com> or <http://itresourcecenter.hp.com>

OnlineDiag is available at <http://www.software.hp.com> in the *Enhancement releases and patch bundles* section, or on the HP-UX 11i v3 OE media. Installation instructions are available at: http://docs.hp.com/hpux/onlinedocs/diag/st/st_inst.htm

Requirements for Boot Support: AD355A, AD299A, AD221A, AD222A, AD393A, 403621-B21

To boot through the fibre channel ports on these adapters, HP recommends that you update the EFI driver and onboard firmware to the latest version. The following table lists the recommended EFI and firmware versions at the release of FibrChanl-02 (fclp) driver, version B.11.31.0803:

Table 1 Recommended Firmware/EFI Versions (March 2008)

Fibre Channel Adapter	EFI Driver Version	Firmware Version	Universal Boot Code
AD355A, AD299A	3.21A3 or later	2.70X5 or later	N/A
AD221A, AD222A, AD393A	3.21A3 or later	2.72A2 or later	N/A
403621-B21	4.00A1 or later	2.72A2 or later	6.00A5

For current recommended firmware versions, see the *HP Fibre Channel Host Bus Adapter Support Matrix* at <http://docs.hp.com/en/netcom.html#Fibre%20Channel>

If your Fibre Channel adapter is not listed in the preceding table, no updates are required to enable boot support.



NOTE: Display EFI driver and ROM firmware versions using `fcmsutil <fclp_device_file> vpd`

EFI/firmware bundles can be downloaded from www.hp.com, in the *Software and Driver Downloads* section.

Hardware Requirements

This version of the FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 runs on HP Integrity servers with the HP-UX 11i v3 (11.31) operating system. It supports Fibre Channel hardware products such as:

- AD355A PCIe Dual Port 4Gb Fibre Channel Adapter
- AD299A PCIe Single Port 4Gb Fibre Channel Adapter
- AD221A HP PCIe Single Port 4Gb Fibre Channel and Single Port 1000 BT Adapter
- AD222A HP PCIe Dual Port 4Gb Fibre Channel and Dual Port 1000BT Adapter
- AD393A HP PCIe Dual Port 4Gb Fibre Channel and Dual Port 1000SX Adapter
- 403621-B21 Emulex LPe1105-HP 4Gb Fibre Channel Adapter for HP c-Class BladeSystem



NOTE: Please note the following slot limitations on rx3600 and rx6600 servers:

- Slots 5 and 6 are the recommended slots for AD221A, AD222A, and AD393A adapters.
- Slots 3 and 4 are also supported for AD221A, AD222A, and AD393A adapters, but with the following restrictions:

I/O performance of the card may be limited.

Online Replacement is not supported.

Emulex 4Gb Fibre Channel Mezzanine (403621-B21) on HP Integrity Blade Servers

The Emulex LPe1105-HP 4Gb Fibre Channel Mezzanine Card for HP c-Class BladeSystem (Product Number 403621-B21) has been shipping on HP Proliant c-Class blades for some time. The cards have been modified to be compatible with HP Integrity c-Class blades, yet they maintain their compatibility with Proliant c-Class blades.

The new card versions are sold using the same product number as the previous versions; that is, 403621-B21, but with a new Engineering Date Code to identify the new cards as being compatible with HP Integrity BladeSystems.

It is not possible to update previous recipes/versions of the Mezzanine card to be compatible with the HP Integrity blades.

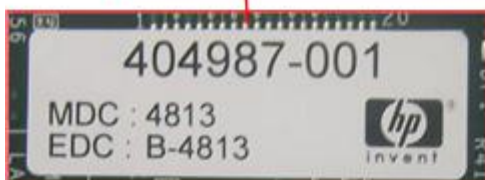
Identification

The following are the ways to identify the versions of the cards that are compatible with Integrity c-Class blades.

EDC Change

The newer cards are built with an Engineering Date Code that marks the changes required for Integrity – **Integrity-supported versions have an EDC of B-4813 or later.**

The EDC code is printed on a label on the box containing the card, on a label on the card, and is included in the Vital Products Data (VPD) that is flashed into the card during the manufacture of the part. This means that you will be able to identify a version of the card supported on Integrity both visually and electronically.



On HP-UX, the `fcmsutil /dev/fclpX vpd` command displays the VPD:

```
# fcmsutil /dev/fclp5 vpd
          V I T A L   P R O D U C T   D A T A
          -----
Product Description      : "HP BLc Emulex LPe1105-HP FC Mezz Option Kit"
Part number             : "404987-001"
Part Serial number      : "MY18071ZYV"
Engineering Date Code    : "B-4813"
```

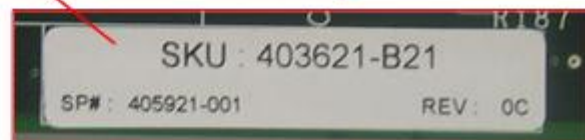
Mfd. Date : "4807"
Misc. Information : "PW=6.5W; PCIe x4 Gen1"
ROM Firmware version : "2.72A2 SLI-3 (Z3F2.72A2)"
EFI version : "ZU6.00A5"

Card Revision

Although EDC is the primary way to identify changes in recipe for Integrity systems, it is also possible to use the card "Rev", which is printed on a label on the box containing the card, and on a label on the card.



CAUTION: There are at least three different "Rev" identifiers on the card. The correct one to use is printed on the SKU label — **Integrity-supported versions have a "REV" of 0C or later.**



Firmware and EFI

HP Integrity blades require the following minimum firmware and EFI:

- Firmware: 2.72a2
- EFI: 4.00a1 (contained in Universal Boot Code 6.00a5)

Look for EFI version ZU6.00A5 or later in the `fcmsutil` output.

Related Information

The latest documentation for the FibrChanl-02 (fclp) Fibre Channel Mass Storage Driver for HP-UX 11i v3 is available at <http://www.docs.hp.com>, under the *I/O Cards and Networking Software* section in the *Fibre Channel* category. Available documents include:

- Support Guide: includes an adapter overview, installation details, adapter configuration, troubleshooting and maintenance information, additional features, and regulatory information.
- Installation Guide: includes software and hardware installation information for specific HBAs.
- Support Matrix: includes a matrix of Fibre Channel adapters, supported hardware platforms, operating systems, driver bundle versions, and minimum PDC/firmware requirements.
- White Paper: white papers can also be found in this section.

Software Availability in Native Languages

This product is available only in the English language.