



Release Notes for Cisco iSCSI Driver Version 3.3.4 for HP-UX 11.0

October 19, 2004

These release notes support Cisco iSCSI Driver version 3.3.4 for HP-UX 11.0.

For a list of software caveats that apply to version 3.3.4, see the “[Caveats](#)” section. The caveats are updated for every maintenance version and are located on [Cisco.com](#) and the Documentation CD-ROM.

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Introduction

The iSCSI Driver for HP-UX 11.0 provides an IP host with the ability to access storage through an IP network. The iSCSI driver uses the iSCSI protocol to transport SCSI requests and responses over an IP network between the IP host and a Cisco SN 5400 or MDS 9000 Series system.

Architecturally, the iSCSI driver combines with the IP host's TCP/IP stack, network drivers, and network interface cards (NICs) to provide the same functions as a SCSI or a Fibre Channel adapter driver with a host bus adapter (HBA).

The iSCSI driver provides a transport for SCSI requests and responses for storage devices; however, instead of providing a transport for directly attached devices, the driver transports the SCSI requests and responses between the IP host and a Cisco SN 5400 or MDS 9000 Series system via an IP network. The SN 5400 or MDS 9000 Series system, in turn, transports SCSI requests and responses between it and the storage devices attached to it.

Once the iSCSI driver is installed and started, the host proceeds with a discovery process for storage devices.

A more technical description of the driver's design and its features can be found in the readme file that accompanies the iSCSI driver in the downloaded driver archive file.

**Note**

The iSCSI protocol is an IETF-defined protocol for IP storage (ips). For more information about the iSCSI protocol, refer to the IETF standards for IP storage at <http://www.ietf.org>.

System Requirements

This section describes the system requirements for version 3.3.4 and includes the following information:

- [Operating System Requirements, page 2](#)
- [SN 5400 Series System Software Requirements, page 3](#)
- [MDS 9000 Series System Software Requirements, page 3](#)

Operating System Requirements

- The Cisco iSCSI Driver version 3.3.4 requires an HP computer running HP-UX 11.0. Cisco recommends installing the latest General Release patches, Hardware Enablement patches, and cumulative ARPA Transport patch in the HP system.
- The driver supports single processor and multiprocessor machines.
- The receive and transmit flow control feature of the Gigabit Ethernet driver should be enabled on all IP hosts connecting to the SN 5400 Series system.
- For better performance of the Cisco iSCSI driver, set the network interface MTU for jumbo frames, based on the IO size.
- The HP-UX System Administration Manager (SAM) does not display iSCSI devices. If you set up logical groups and volumes based on iSCSI disks, SAM will recognize the logical groups and volumes, but will notify you that it cannot obtain information about the iSCSI disks contained in the logical groups or volumes.

- The HP-UX 11.0 Logical Volume Manager (LVM) attempts to activate all the volumes listed in `/etc/lvmtab` at boot time, before Networking services are enabled. Because the iSCSI driver is not running at this stage, the iSCSI disks will not be accessible to LVM, and LVM will log error messages. However, if the `/etc/fstab.iscsi` file contains entries for filesystems on logical volumes created on iSCSI disks, the iSCSI driver start up script will attempt to activate the logical volume groups and mount the filesystems. See the readme file for additional information.
- Any device with a target ID greater than 14 and a LUN ID greater than 7 will be ignored by the iSCSI driver and will not be configured in the system.
- In HP-UX 11.0, the minor number for a SCSI device (for example, `/dev/dsk/c0t0d0`) is represented by an 8-bit instance number, a 4-bit target and a 3-bit LUN. This allows the HP-UX system to have up to 256 controller cards or instance numbers, where each card or instance can have 16 targets and each target can have 8 LUNs. The iSCSI driver version 3.3.4 takes one instance number. An instance number must be available or the iSCSI driver cannot be installed.

The iSCSI driver provides a utility (`getscsitaleinfo`) that can be used to provide information on the number of instances currently used by the system and the number of free instance numbers. See the readme file for additional details.

- On a 32-bit machine with 10/100 network interface cards, the iSCSI driver may drop and reconnect once every hour or so when subjected to a heavy I/O load. This is a problem in the HP-UX 11.0 operating system.

SN 5400 Series System Software Requirements

The iSCSI Driver version 3.3.4 for HP-UX 11.0 is interoperable with a Cisco SN 5400 Series system running software release 3.2 or later. This version of the driver is not interoperable with a Cisco SN 5400 Series system running software release 2.5 or earlier.

MDS 9000 Series System Software Requirements

The iSCSI Driver version 3.3.4 for HP-UX 11.0 is interoperable with a Cisco MDS 9000 Series system running SAN-OS Release 1.1(1) or later.

Installation Notes

This section describes how to obtain iSCSI driver software and upgrade an existing iSCSI driver installation, and includes the following information:

- [Downloading the iSCSI Driver, page 3](#)
- [Installing, Upgrading and Uninstalling iSCSI Driver Software, page 4](#)

Downloading the iSCSI Driver

Registered Cisco.com users can download the most current Cisco iSCSI drivers, readme files and release notes from Cisco.com. In addition, information about driver compatibility and other relevant driver information is available on Cisco.com. You can access software and related information by following these instructions:

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- Step 1** At <http://www.cisco.com>, log in to Cisco.com. Click **Technical Support** and **Downloads**.
- Step 2** At the Downloads web page, under Software Products & Downloads, click **Storage Networking Software**.
- Step 3** At the Storage Networking Software web page, click the appropriate link for your software.
- Step 4** At the Software Download web page, click the file that you want to download. Another software download web page will be displayed with detailed information about the download file and Cisco's Software License Agreement. Follow the instructions on that and any subsequent web pages to download the software.
- Step 5** To install and configure storage router software, see the appropriate storage router software configuration guide and release notes. To install and configure an iSCSI driver, see the readme file that accompanies the iSCSI driver (in the downloaded driver archive file) and the appropriate release notes.
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Installing, Upgrading and Uninstalling iSCSI Driver Software

For complete procedures to install and configure, upgrade, or uninstall iSCSI driver software, refer to the readme file that accompanies the iSCSI driver (in the downloaded driver archive file).

Caveats

Caveats describe unexpected behavior or defects in the specified version of the driver. Severity 1 caveats are the most serious caveats; severity 2 caveats are less serious.

This document describes open and resolved severity 1 and 2 caveats and selected caveats of other severities:

- The “[Open Caveats](#)” section lists open caveats that apply to the current version and may apply to previous versions.
- The “[Resolved Caveats](#)” section list caveats resolved in this version, but open in previous versions.

Within the sections, the caveats are sorted alphanumerically by caveat number.



Note

If you have an account with Cisco.com, you can use Bug Navigator II to find caveats of any severity for any version. You can reach Bug Navigator II on Cisco.com at Service & Support: http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl.

Open Caveats

There are no open severity 1 or 2 caveats for the iSCSI driver version 3.3.4 for HP-UX 11.0.

Resolved Caveats

- CSCee51685
While creating a vxfs filesystem on iSCSI disk, the command hangs and after some time causes a system panic.
Workaround: None. This problem is resolved in driver version 3.3.4.
- CSCin73946
File system creation on an identified iSCSI disk fails with error message.
Workaround: None. This problem is resolved in driver version 3.3.4.
- CSCin82541
A system panic may occur when I/O is in progress and the connection is lost due to a network cable pullout. The system panic indicates “callout table overflow” error.
Workaround: Increase the value of the kernel parameter *ncallout* using SAM. This value is dependent on the *nproc* and *maxusers* parameters. Refer to SAM and your HP system documentation for more details on these parameters, and how to increase their values.

Troubleshooting

Cisco iSCSI driver troubleshooting information is available on the Cisco.com web site.

You can access troubleshooting information by following these instructions:

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- Step 1** At <http://www.cisco.com>, log in to Cisco.com. Click **Products & Solutions**, and select **Storage Networking** and **SN 5400 Series Storage Routers** from the menu.
 - Step 2** At the Cisco SN 5400 Series Storage Routers web page, click **Technical Documentation**.
 - Step 3** At the Technical Documentation web page, click the **Tech Notes** link.
 - Step 4** At the Tech Notes page, click the appropriate link for your iSCSI driver.
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You can access iSCSI driver FAQs by following these instructions:

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- Step 1** At <http://www.cisco.com>, log in to Cisco.com. Click **Products & Solutions**, and select **Storage Networking** and **SN 5400 Series Storage Routers** from the menu.
 - Step 2** At the Cisco SN 5400 Series Storage Routers web page, click **Product Literature**.
 - Step 3** At the Product Literature web page, click the **Q&A** link.
 - Step 4** At the Q&A page, click the appropriate link for your iSCSI driver.
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Related Documentation

The following sections describe the related documentation available for the iSCSI Driver version 3.3.4 for HP-UX 11.0. These documents consist of the iSCSI driver release notes and readme file.

Release-Specific Documents

This Release Notes document and the readme file are the only documents specific to iSCSI Driver version 3.3.4 for HP-UX 11. The release notes document is located on Cisco.com and the Documentation CD-ROM. The iSCSI driver readme file is available in electronic format, as part of the software download package. See the “[Downloading the iSCSI Driver](#)” section on page 3 for details.

Service and Support

For service and support for a product purchased from a reseller, contact the reseller, who offers a wide variety of Cisco service and support programs described in “Service and Support” of Cisco Information Packet shipped with your product.

**Note**

If you purchased your product from a reseller, you can access Cisco.com as a guest. Cisco.com is Cisco Systems' primary real-time support channel. Your reseller offers programs that include direct access to Cisco.com services.

For service and support for a product purchased directly from Cisco, use Cisco.com.

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpck/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:
<http://www.cisco.com/go/marketplace/>
- The Cisco *Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:
<http://cisco.com/univercd/cc/td/doc/pcat/>
- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:
<http://www.cisco.com/packet>
- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:
<http://www.cisco.com/go/iqmagazine>
- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:
<http://www.cisco.com/ipj>
- World-class networking training is available from Cisco. You can view current offerings at this URL:
<http://www.cisco.com/en/US/learning/index.html>

This document is to be used in conjunction with the documents listed in the [“Related Documentation”](#) section.



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