



Release Notes for Cisco iSCSI Driver for Microsoft Windows NT Version 2.1.1

April 30, 2002



Note

You can find the most current documentation on Cisco.com. This set of electronic documents may contain updates and modifications made after the hard-copy documents were printed.

These release notes support Cisco iSCSI Driver for Microsoft Windows NT version 2.1.1.

For a list of software caveats that apply to version 2.1.1, see the “[Open 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 Microsoft Windows NT provides an IP host with the ability to access storage through an IP network. The iSCSI driver uses iSCSI protocol to transport SCSI requests and responses over an IP network between the host and a Cisco SN 5400 Series system.

Architecturally, the iSCSI driver combines with the host TCP/IP stack, network drivers, and NICs to provide the same functions as a SCSI 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 Series system via an IP network. The SN 5400 Series system, in turn, transports SCSI requests and responses between it and the storage devices attached to it.

Once the iSCSI driver is installed, the IP host will proceed with a discovery process for iSCSI storage devices as follows:

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- Step 1** The iSCSI driver requests available iSCSI targets from the SN 5400 Series system.
 - Step 2** The SN 5400 Series system sends available iSCSI target names to the IP host.
 - Step 3** The IP host logs into the iSCSI targets.
 - Step 4** The SN 5400 Series system accepts the IP host login and sends target identifiers.
 - Step 5** The IP host queries targets for device information.
 - Step 6** Targets respond with device information.
 - Step 7** The IP host creates a table of internal devices.
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The iSCSI Driver for Microsoft Windows NT provides IP access to a maximum of eight remote SCSI targets, with each target capable of supporting 255 LUNs. Remote SCSI targets can be accessed through one or more SN 5400 Series systems up to a maximum of eight SN 5400 Series systems.

**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 2.1.1 and includes the following information:

- [Operating System Requirements, page 3](#)
- [SN 5400 Series System Software Requirements, page 3](#)
- [Obtaining the iSCSI Driver and Updated SN 5400 Series System Software, page 3](#)
- [Determining the iSCSI Driver Version, page 4](#)
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Operating System Requirements

- The iSCSI Driver for Microsoft Windows NT requires Microsoft Windows NT Server (or Workstation) version 4.0 with service pack 6a or later and Microsoft hotfix Q319420. This hotfix does not appear on the Microsoft hotfix website; you must specifically request it.



Note If you are running Microsoft Windows NT Server or Workstation version 4.0 without a service pack or with a service pack less than 6a, you must upgrade to service pack 6a and apply Microsoft hotfix Q319420.

To obtain the hotfix, call Microsoft customer support at 1-800-936-4900 (or any Microsoft customer support phone number) and request the hotfix for Knowledge Base (KB) article Q319420. You will be asked to supply an e-mail address. You will receive an e-mail message with a link to an FTP site where you can download the hotfix. The e-mail message will also contain a password that you will be prompted to enter when you open the hotfix file.

For additional information about the hotfix, access the Microsoft website at <http://www.microsoft.com> and follow the support link to view KB article Q319420.

- The iSCSI Driver for Microsoft Windows NT can be run on the Japanese language-version of Microsoft Windows NT Server or Workstation. The required version, service pack and hotfix information is the same as previously described.
- The iSCSI Driver for Microsoft Windows NT supports multiple processors, and may be run on up to four multiprocessors.
- To ensure the best performance for iSCSI drivers, the extended windowing feature of TCP should be enabled on all IP hosts connecting to the SN 5400 Series system. In general, a larger window size enhances SN 5400 Series system performance.
- 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.
- If you are using a 3Com Gigabit Ethernet Server network interface card, the minimum supported revision level is “B” (3C985B-SX). Using a card with a lower revision level will decrease performance.



Note This driver will not work with computers running Microsoft Windows 2000.

SN 5400 Series System Software Requirements

The iSCSI Driver for Microsoft Windows NT version 2.1.1 can connect to a Cisco SN 5400 Series system running software release 2.1.1 or later; this driver cannot connect to a Cisco SN 5420 Storage Router running software release 1.1.x.

Obtaining the iSCSI Driver and Updated SN 5400 Series System Software

From time to time, Cisco releases updated versions of SN 5400 Series system software and iSCSI drivers. Updated versions of SN 5400 Series system software and the Cisco iSCSI drivers, accompanying readme files, release notes and example configuration file are available for download.

If you are a registered Cisco.com user, you can download SN 5400 Series system software and iSCSI drivers. If you are a non-registered Cisco.com user, you can download only iSCSI drivers.

You can access software by following these instructions:

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- Step 1** At <http://www.cisco.com> (or <http://www.cisco.com/login/cisco/>, if you are a registered Cisco.com user and logged in), under **Service & Support**, click **Software Center**.
 - Step 2** At the Software Center 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. Follow the instructions on that and any subsequent web pages to download the software.
 - Step 5** To install and configure SN 5400 Series system software, see the appropriate SN 5400 Series system 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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Determining the iSCSI Driver Version

To determine the version of the iSCSI driver software installed on the IP host, open Control Panel and double-click the iSCSI Config icon. The lower left corner of the dialog box shows the version number of the iSCSI Config program and the title bar shows the operating system it is intended for. Click **Status** to show the version information of the iSCSI driver on the top line.

You can also verify version information by checking the file versions of these files:

- iscsi.sys
- iscsicfg.cpl

Follow these steps:

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- Step 1** Use Windows Explorer to navigate to the c:\winnt\system32\drivers directory.
 - Step 2** Right-click the file iscsi.sys and then click **Properties** from the shortcut menu. The **Properties** dialog box displays.
 - Step 3** Click the **Version** tab, and check the **File version**.
 - Step 4** Navigate to the c:\winnt\system32\ directory.
 - Step 5** Right-click the file iscsicfg.cpl and then click **Properties** from the shortcut menu. The **Properties** dialog box displays.
 - Step 6** Click the **Version** tab, and check the **File version**. The file version information should be the same in both files.
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Upgrading to a New Version

If you are installing the iSCSI driver software from a floppy disk or a CD-ROM, be sure that the driver files are in the root directory. If you are installing the iSCSI driver software from a hard drive, the files can be located in a directory anywhere on the hard drive.

To upgrade to a new version of iSCSI driver software, login to the system as a user with Administrator privileges and follow these instructions:

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- Step 1** Open Control Panel and double-click the SCSI Adapters icon. The **SCSI Adapters** dialog box opens.
 - Step 2** Close Control Panel. Control Panel must be closed to ensure that all the driver files will be appropriately updated. If Control Panel is open during the remaining steps in the upgrade process, certain driver files cannot be correctly updated.
 - Step 3** At the **SCSI Adapters** dialog box, click the **Drivers** tab.
 - Step 4** Click **Add**.
 - Step 5** At the **Install Driver** dialog box, click **Have Disk**. The **Install From Disk** dialog box opens.
 - Step 6** At the **Install From Disk** dialog box, select the source location for the driver files from the **Copy manufacturer's file from** list and click **OK**. Clicking **OK** opens another **Install Driver** dialog box.
 - Step 7** At the **Install Driver** dialog box opened in the previous step, select **Iscsi Driver** and click **OK**.
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Note

If you are installing a new version of the driver over an existing one, and you are not certain that Control Panel was closed in Step 2, you must manually copy the newer version of the `iscsicfg.cpl` file from the installation source to the `c:\winnt\system32` directory. If you manually copy the newer version of the `iscsicfg.cpl` file over the older one, make sure that Control Panel is closed.

See the readme file for additional information about upgrading to a new version of iSCSI driver software.

Uninstalling iSCSI Driver Software

To uninstall iSCSI driver software, login to the system as a user with Administrator privileges and follow these instructions:

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- Step 1** Open Control Panel and double-click the SCSI Adapters icon. The **SCSI Adapters** dialog box opens.
 - Step 2** Click the **Drivers** tab and select the iSCSI driver (Iscsi Driver).
 - Step 3** Click **Remove** and **OK**.
 - Step 4** Restart the computer. If you want to reinstall the driver after removing it, you must restart the server first.
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Open Caveats

This document lists caveats for the iSCSI Driver for Microsoft Windows NT version 2.1.1. Caveats describe unexpected behavior or defects in iSCSI software versions. Severity 1 caveats are the most serious caveats; severity 2 caveats are less serious.

This document describes open severity 1 and 2 caveats and selected caveats of other severities. For a more complete list of caveats against this release, access Cisco.com as described in the section “Cisco.com” at the end of this document.



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.

- CSCdt82378

This problem occurs when a Microsoft Windows NT server is attached to LSI RAID via a Cisco SN 5420 Storage Router, and the server has both the iSCSI and RDAC drivers installed. RDAC is LSI's dual path failover driver. When the server is running both drivers, the NT Disk Administrator will see redundant paths to each LSI RAID disk when the Windows NT server is rebooted.

Workaround: Use the LSI “hot_add” utility to save boot information, instead of using the iSCSI driver's “save boot info” button. Perform the following steps:

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- Step 1** Clear boot information using the iSCSI Control Panel applet.
 - Step 2** Reboot the Windows NT host.
 - Step 3** Run the LSI “hot_add” utility.
 - Step 4** Run the LSI “SM7devices” utility and verify that the correct number of disks appear, as well as 2 UTM (access) LUNs. If no disks appear, run the “hot_add” utility again. If redundant disks appear, return to Step 1 and repeat this procedure.
 - Step 5** Run Windows NT Disk Administrator and assign drive letters to the LSI disks.
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Related Documentation

The following sections describe the related documentation available for the iSCSI Driver for Windows NT version 2.1.1 and the Cisco SN 5400 Series systems. These documents consist of the iSCSI driver release notes, readme and example configuration files, and the SN 5400 Series system hardware installation and software configuration guides.

The SN 5400 Series system hardware installation and software configuration documentation sets are available as printed manuals or electronic documents. The iSCSI driver readme file and example configuration file are available in electronic format, as part of the software download package. See the “[Obtaining the iSCSI Driver and Updated SN 5400 Series System Software](#)” section on page 3 for details.

Release-Specific Documents

This Release Notes document is the only document specific to iSCSI Driver for Microsoft Windows NT version 2.1.1. It is located on Cisco.com and the Documentation CD-ROM.

Each release of SN 5400 Series system software includes an associated Release Notes document, which is also available as an electronic document on Cisco.com and the Documentation CD-ROM.

Hardware Documents

Refer to the *Cisco SN 5420 Storage Router Hardware Installation Guide* for SN 5400 Series system hardware installation procedures. This document is available as a printed manual. It is also available as an electronic document on Cisco.com and the Documentation CD-ROM.

Software Documents

Refer to the *Cisco SN 5420 Storage Router Software Configuration Guide Release 2.1* for SN 5400 Series system software configuration information and procedures. This document is available as a printed manual. It is also available as an electronic document on Cisco.com and the Documentation CD-ROM.

For documentation on the SN 5400 Series system web-based GUI, refer to the SN 5400 Series system web-based GUI online Help system.

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.

Software Configuration Tips on the Cisco TAC Home Page

A variety of Cisco SN 5400 Series system software and iSCSI driver installation, configuration and usage tips are available on the Cisco Technical Assistance Center (TAC) Web Site.

You can access “tech tips” by following these instructions:

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- Step 1** At <http://www.cisco.com> (or <http://www.cisco.com/login/cisco/>, if you are a registered Cisco.com user and logged in), under **Products & Technologies**, select **Routers** from the drop-down list.
 - Step 2** At the Cisco Routers web page, under **Cisco SN 5420 Storage Router Software**, click **Product Support**.
 - Step 3** At the Cisco SN 5420 Storage Router Product Support web page, click the appropriate links for additional information about installing and configuring SN 5400 Series system software and iSCSI drivers.
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Obtaining Documentation

The following sections explain how to obtain documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following URL:

<http://www.cisco.com>

Translated documentation is available at the following URL:

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

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco product documentation from the Networking Products MarketPlace:
http://www.cisco.com/cgi-bin/order/order_root.pl
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

If you are reading Cisco product documentation on Cisco.com, you can submit technical comments electronically. Click **Leave Feedback** at the bottom of the Cisco Documentation home page. After you complete the form, print it out and fax it to Cisco at 408 527-0730.

You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

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

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you to

- Streamline business processes and improve productivity
- Resolve technical issues with online support

- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

You can self-register on Cisco.com to obtain customized information and service. To access Cisco.com, go to the following URL:

<http://www.cisco.com>

Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available through the Cisco TAC: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Inquiries to Cisco TAC are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

Which Cisco TAC resource you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

Cisco TAC Web Site

The Cisco TAC Web Site allows you to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to the following URL:

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

All customers, partners, and resellers who have a valid Cisco services contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to the following URL to register:

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

If you cannot resolve your technical issues by using the Cisco TAC Web Site, and you are a Cisco.com registered user, you can open a case online by using the TAC Case Open tool at the following URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, it is recommended that you open P3 and P4 cases through the Cisco TAC Web Site.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses issues that are classified as priority level 1 or priority level 2; these classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer will automatically open a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to the following URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled; for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). In addition, please have available your service agreement number and your product serial number.

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



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