



Release Notes for Cisco SN iSCSI Driver for Microsoft Windows NT Version 1.8.9

October 3, 2001



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 Storage Networking iSCSI Driver for Microsoft Windows NT version 1.8.9. The iSCSI Driver for Microsoft Windows NT version 1.8.9 supersedes version 1.8.7; there is no released iSCSI Driver for Microsoft Windows NT version 1.8.8.

For a list of software caveats that apply to version 1.8.9, 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 Cisco Storage Networking iSCSI Driver for Microsoft Windows NT provides a server 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 server and a Cisco SN 5420 Storage Router.

Architecturally, the iSCSI driver combines with the server 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 server and a Cisco SN 5420 Storage Router via an IP network. The SN 5420 Storage Router, in turn, transports SCSI requests and responses between it and the storage devices attached to it.

Once the iSCSI driver is installed, the server 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 storage router.
 - Step 2** The storage router sends available iSCSI target names to the server.
 - Step 3** The server logs into the iSCSI targets.
 - Step 4** The storage router accepts the server login and sends target identifiers.
 - Step 5** The server queries targets for device information.
 - Step 6** Targets respond with device information.
 - Step 7** The server creates table of internal devices.
-

The Cisco Storage Networking iSCSI Driver for Microsoft Windows NT provides IP access to a maximum of eight remote SCSI targets, with each target capable of supporting 32 LUNs. Remote SCSI targets can be accessed through one or more storage routers up to a maximum of eight storage routers.

**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 1.8.9 and includes the following information:

- [Operating System Requirements](#)
- [Obtaining the iSCSI Driver](#)
- [Determining the iSCSI Driver Version](#)
- [Upgrading to a New Version](#)
- [Uninstalling iSCSI Driver Software](#)

Operating System Requirements

The Cisco Storage Networking iSCSI Driver for Microsoft Windows NT requires Microsoft Windows NT Server (or Workstation) version 4.0 with service pack 6a or later. The Cisco Storage Networking iSCSI Driver for Microsoft Windows NT supports multiple processors, and may be run on up to four multiprocessors.



Note

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

Obtaining the iSCSI Driver

The Cisco Storage Networking iSCSI drivers, accompanying readme files, release notes and example configuration files are available for download to the general public and registered users of Cisco.com. Access the appropriate URL, as follows:

Access Type	URL
General public	http://www.cisco.com/pcgi-bin/tablebuild.pl/sn5420
Registered Cisco.com users	http://www.cisco.com/cgi-bin/tablebuild.pl/sn5420 (You will be prompted to enter your user name and password.)

In addition, you can check these websites for information about the availability of new drivers, updated drivers, driver compatibility, and other relevant information.



Note

URLs are subject to change without notice. If the URL changes, go to <http://www.cisco.com> and click **Software Center** at **Service & Support**. At Software Center, click **Storage Networking Software**. Then, at Storage Networking Software, click **Cisco SN 5420 Storage Router Software**. If you are a registered Cisco.com user, be sure to log in first.

Determining the iSCSI Driver Version

To determine the version of the iSCSI driver software installed on your server, 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

To upgrade to a new version of iSCSI driver software, follow these instructions:

- 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, follow these instructions:

- 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 server. If you want to reinstall the driver after removing it, you must restart the server first.
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Caveats

This document lists caveats for Cisco Storage Networking iSCSI Driver for Microsoft Windows NT version 1.8.9. 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 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

All the caveats listed in this section are open in the iSCSI driver version 1.8.9, and describe severity 1 and 2 caveats, and selected caveats of other severity levels. 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.

- 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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Resolved Caveats

All the caveats listed in this section are resolved in iSCSI driver version 1.8.9. This section describes severity 1 and 2 caveats and selected caveats of other severity levels.

- CSCdu38587

During prolonged periods of high-bandwidth iSCSI transactions, the iSCSI driver cannot free all the memory allocated for the I/O thread. This causes a blue-screen stop showing `MUST_SUCCEED_POOL_EMPTY`. The error is characterized by a steady increase in non-paged kernel memory usage during prolonged high-bandwidth iSCSI transactions prior to the stop.

Workaround: If non-paged kernel memory usage is observed to be steadily increasing, the blue-screen stop can be avoided by stopping the applications putting a heavy load on the iSCSI driver. This will allow the driver to catch up and free all of its outstanding memory allocations. If the blue-screen condition occurs, the iSCSI server must be rebooted to clear the condition.

Related Documentation

The following sections describe the related documentation available for the Cisco Storage Networking iSCSI Driver for Windows NT version 1.8.9 and the Cisco SN 5420 Storage Router. These documents consist of the iSCSI driver release notes, readme and example configuration files, and the storage router hardware installation and software configuration guides.

The storage router 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” section on page 3](#) for details.

Release-Specific Documents

This Release Notes document is the only document specific to Cisco Storage Networking iSCSI Driver for Microsoft Windows NT version 1.8.9. It is located on Cisco.com and the Documentation CD-ROM.

Each release of storage router 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 storage router 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* for storage router 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 storage router web-based GUI, refer to the SN 5420 Storage Router 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.

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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