



Release Notes for Cisco SN 5420 Storage Router Release 1.1.3

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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 SN 5420 Storage Router for Release 1.1.3.

For a list of software caveats that apply to Release 1.1.3, see the “[Open Caveats](#)” section. The caveats are updated for every maintenance release and are located on Cisco.com and the Documentation CD-ROM.

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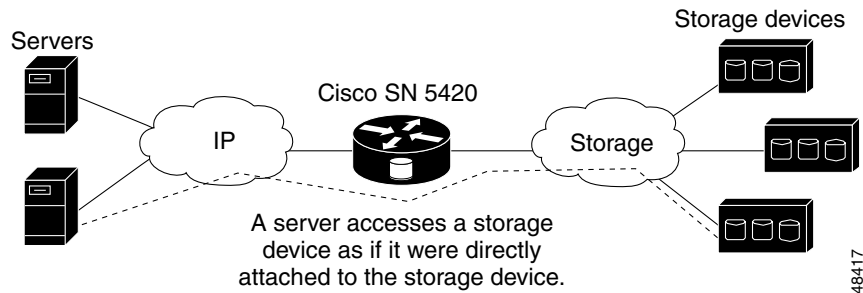
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Introduction

The SN 5420 Storage Router provides servers with IP access to storage through SCSI routing using iSCSI protocol. The iSCSI protocol is a protocol for encapsulating SCSI requests and responses over IP. With SCSI routing, servers use an IP network to access storage as if the servers were directly attached to the storage devices. (See [Figure 1](#).)

Figure 1 SN 5420 Storage Router Overview



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 Release 1.1.3 and includes the following information:

- [iSCSI Drivers](#)
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iSCSI Drivers

To access the SN 5420 Storage Router, servers must have a Cisco Storage Networking iSCSI driver installed and configured. The following iSCSI drivers are currently available:

- Cisco Storage Networking iSCSI Driver for Linux
- Cisco Storage Networking iSCSI Driver for Microsoft Windows NT
- Cisco Storage Networking iSCSI Driver for Sun Solaris

Obtaining iSCSI Drivers

To obtain the Cisco Storage Networking iSCSI drivers, accompanying readme files, and example configuration files, log in to Cisco.com and access the following URL:

<http://www.cisco.com/cgi-bin/tablebuild.pl/sn5420>

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

**Note**

This URL is subject to change without notice. If it changes, log in to Cisco.com (CCO) and click Software Center at Service & Support. At Software Center, click Storage Networking Software.

External Devices

Flow control should be turned on at the Gigabit Ethernet port that the SN 5420 Storage Router is plugged in to.

External Hosts

- To ensure the best performance for the iSCSI drivers, the extended windowing feature of TCP and the receive and transmit flow control feature of the Gigabit Ethernet driver should be enabled on all servers connecting to the SN 5420. You can use the CLI **show scsirouter connection tcp** command to display the current and maximum TCP window size for each connected host.
- 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.

Graphical User Interface

- To ensure the display of the most current SN 5420 information, disable your browser cache. If caching is enabled, use your browser Refresh or Reload button to force the current page to be reloaded from the storage router.
- To access the online Help system for the SN 5420 web-based GUI, use a browser that is compatible with HTML 3.2, such as Internet Explorer 3.0 or later, or Netscape Navigator 3.0 or later. Any browser that does not provide full support for Dynamic HTML (such as Netscape Navigator) must be enabled to support Java, JavaScript and style sheets.

These browser restrictions apply only to the online Help system. There are no browser limitations or requirements associated with the SN 5420 web-based GUI.

Determining the SN 5420 Software Version

To determine the version of SN 5420 software running on your Cisco SN 5420 Storage Router, establish a Telnet or console port session with the storage router, and change to Administrator mode. Then enter the CLI **show software** command. (See [Example 1](#).)

Example 1 Determining the Software Version

```
[SN5420-A01]# show software
Version          Boot Hash Sign Crash      Size Date
1.1.2           OK  OK   N/A    0    6.85 MB Mar  7 16:28 CST 2001
1.1.3           OK  OK   N/A    0    6.85 MB Mar 12 17:52 CST 2001
Disk Space Free: 8.50 Mbytes
  Download URL: http://10.1.11.32/~software/sn5420
  Download User: SWAdmin01
  Running Version: 1.1.3
  Will boot Version: 1.1.3
```

The last entries in the table of information displayed in response to the command show the running version (*Running Version*) and the version that the storage router will run at the next reboot (*Will boot Version*).

You can also check the version of the SN 5420 software by using the SN 5420 web-based GUI. At the web-based GUI **Monitor** page, click **Processor and SW** under the **System** menu. Clicking **Processor and SW** causes the **Processor and Software Information** table to be displayed. The **Software Version** field contains the current software version information.

Upgrading to a New Software Release

For information about upgrading to new SN 5420 software using the CLI, see the section “Installing Updated Software” in Chapter 6, “Maintaining and Managing the SN 5420” of the *SN 5420 Storage Router Software Configuration Guide*.

To upgrade to new SN 5420 software using the SN 5420 web-based GUI, follow these instructions:

-
- Step 1** Log in as Admin.
 - Step 2** Click **Download Software** in the **Maintenance** menu and follow the instructions.
 - Step 3** After you have downloaded the new version of software, click **System Reset** in the **Maintenance** menu.
 - Step 4** At **Select next boot version**, select the new software version.
 - Step 5** Click **Reset System**.
 - Step 6** After the storage router has rebooted, verify that it is running the new software. (See the [“Determining the SN 5420 Software Version”](#) section on page 4)
-

For information about upgrading to new iSCSI driver software, see the readme file for the appropriate iSCSI driver.

New and Changed Information

Release 1.1.3 is the initial release; there is no new or changed information.

Limitations and Restrictions on SN 5420 Storage Router Clusters

For this release, there are restrictions on SN 5420 Storage Router clusters as follows:

- A storage router cluster can contain up to two SN 5420 Storage Routers.
- A cluster can contain up to four instances of SCSI routing services.
- Each instance of SCSI routing services in a cluster can support up to 32 servers. (Each server connects to an instance of SCSI routing services with only one TCP/IP session. Each instance of SCSI routing services can support up to 32 TCP/IP sessions.)

Open Caveats

This section describes possibly unexpected behavior by SN 5420 Release 1.1.3. All the caveats listed in this section are open in SN 5420 Release 1.1.3, 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.



Note

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

Command Line Interface

- CSCdt38192

In some situations, the SN 5420 Fibre Channel port loop initialization may fail to complete, causing failure to discover devices on the Fibre Channel port. Consequently, the **show devices** command will not display any targets. This problem may occur when multiple devices are connected to a hub with the intention of running in an arbitrated loop topology and the SN 5420 Fibre Channel interface is configured for **ptppref** (point-to-point preferred), which is the default configuration. This behavior has been observed with an EMC CLARiiON disk array attached to a hub, however, there may be other devices that result in the same problem.

Workaround: To work around this problem configure the Fibre Channel interface according to the the Fibre Channel topology. Although the *SN 5420 Storage Router Software Configuration Guide* describes this procedure in Chapter 4 (in the section, “Configuring a Device Interface”) the setup wizard does not provide the option of setting the topology. If you choose to use the setup wizard for configuration, you must first configure the Fibre Channel port topology according to the procedure described in “Configuring a Device Interface” in Chapter 4 of the *SN 5420 Storage Router Software Configuration Guide*.

- CSCdu04360

In some situations, the user does not receive a prompt to reboot the storage router after performing initial configuration of the storage router management interface IP address. Instead of the expected “Press ENTER to reboot” message, the normal command prompt returns on the console. This is a timing issue that only occurs if the user enters the **set mgmt ipaddress** command within a few seconds after the storage router reboots.

Workaround: Reboot the storage router. As indicated in Chapter 2 (in the section “Entering the Management Interface IP Address”) and Chapter 7 (in the section “set mgmt ipaddress”) of the *SN 5420 Storage Router Software Configuration Guide*, you must reboot the storage router after setting the management IP address, before continuing with the storage router configuration. An immediate reboot is required, even if a reboot prompt is not automatically received.

High Availability

- CSCdt56378

After a stand-alone Cisco SN 5420 Storage Router is rebooted, HA communication does not start and the SCSI routing service instances are inactive, which means that no data will pass through the device. It is possible to create a new SCSI routing service instance, but the commands necessary to complete or save the instance configuration return error messages. This can occur if neither the MGMT nor HA ports are cabled. If both the MGMT and HA ports are unavailable when the storage router boots, HA communication cannot start. Since all SCSI routing services are started by HA communication, they are disabled until HA starts.

The following displays will diagnose this situation:

- The command **show scsirouter all stat** shows that all SCSI routing service instances are inactive.
- The command **show ha** shows the HA (fei1) down.

```
[SN5420-A01]# show ha
Node ID   Status  fei0/MGMT  fei1/HA
3d0703a0  down    down       down
```

- The command **show cluster** shows that HA is not running, with no heartbeats received or sent.

```
[SN5420_A01]# show cluster
Cluster Name: 3d0703a0
      HA State: NOT RUNNING
Cluster Changes: 2
      Last Change: Mon Apr 23 12:34:28 CDT 2001
```

```
Sent 0 heartbeats
Rcvd 0 heartbeats
```

- The command **show interface brief** shows both HA and management interfaces down.

```
[SN5420_A01]# show interface brief
Interface Stat IP/Netmask          MAC          Options

fei0/MGMT down 10.1.10.111/ffffff00 00017440efd0 type Ethernet
                                     mtu 1500 speed 100000000
                                     UP BRDCST RUNNING MLTCST

fei1/HA   down 10.1.20.56/ffffff00 00016440efc1 type Ethernet
                                     mtu 1500 speed 100000000
                                     UP BRDCST RUNNING MLTCST
```

Workaround: The HA and management interfaces will come up immediately if the link is up. Cable either one of the ports to any hub or switch, or cable them to each other with an Ethernet loopback cable. HA should start immediately. If any SCSI routing services are defined, an event message similar to the following will be displayed:

```
Apr 24 00:38:27:ScsiRouter::haStart:AS_NOTICE :myscsi has been started
```

Once HA communication has been initialized, the MGMT and HA cables can be disconnected with no ill effect. However, at least one port must be cabled whenever the storage router is rebooted.

iSCSI Drivers

- 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 LSI's "hot_add" utility to save boot information, instead of using the iSCSI driver's "save boot info" button. Perform the following steps:

-
- Step 1** Clear boot information using the iSCSI Control Panel applet.
 - Step 2** Reboot the Windows NT host.
 - Step 3** Run LSI's "hot_add" utility.
 - Step 4** Run LSI's "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.
-

SCSI Routing Services

- CSCdu08398

A SCSI routing service instance must be created (and thus started) on the stand-alone Cisco SN 5420 Storage Router or a storage router within a cluster before an access list can be created. When the user appropriately attempts to create or restore an access list on a stand-alone storage router (or the first storage router in the cluster), the following message appears:

```
Error: accesslist cannot currently be managed on this SN5420
```

This occurs if there are no SCSI routing service instances defined or started anywhere in the cluster. The following displays will diagnose this situation:

- The CLI **show cluster** command displays no active SCSI routing services and does not include the access list management IP address at the end of the display.
- The CLI **show scsirouter all stat** command displays no active SCSI routing services.

Workaround: Create a new SCSI routing service instance or start a restored one, and then create or restore the access list. If the restored SCSI routing service instance references an access list, it will be necessary to stop and restart the instance after the access list has been defined or restored. When a SCSI routing service instance is started and cannot find its access list, it defaults to a no-access state.

Documentation Updates

This section describes changes to the Cisco SN 5420 Storage Router documentation set.

- References to iSCSI driver CD

On pages vii, 1-1 and 1-10 of the *Cisco SN 5420 Storage Router Software Configuration Guide*, and page 1-1 of the *Cisco SN 5420 Storage Router Hardware Installation Guide*, there are references to a Cisco Storage Networking iSCSI Drivers CD. The iSCSI drivers, readme and example configuration files referenced there are currently available only through the Cisco.com website. The Cisco SN 5420 Storage Router does not currently ship with a Cisco Storage Networking iSCSI Drivers CD.

See the [“iSCSI Drivers” section on page 2](#) for details on obtaining iSCSI drivers.

- Fibre Channel Port Cabling Specifications

On page B-2 of the *Cisco SN 5420 Storage Router Hardware Installation Guide*, Table, B-2, “Fibre Channel Port Cabling Specifications,” the values in the Maximum Cable Distance column should be changed as follows:

- Row 1: Change 300 ft (91 m) to 984 ft (300 m).
- Row 2: Change 500 ft (152 m) to 1640 ft (500 m).

Related Documentation

The following sections describe the related documentation available for Cisco SN 5420 Storage Router Release 1.1.3. These documents consist of hardware installation and software configuration guides, and platform-specific readme and example configuration files for the Cisco Storage Networking iSCSI drivers.

The hardware installation and software configuration documentation sets are available as printed manuals or electronic documents.

Platform-Specific Documents

Platform-specific documents consist of the readme and example configuration files for Cisco Storage Networking iSCSI drivers. The files are currently available in electronic format only. To obtain the readme and example configuration files, log in to Cisco.com and access the following URL:

<http://www.cisco.com/cgi-bin/tablebuild.pl/sn5420>

**Note**

This URL is subject to change without notice. If it changes, log in to Cisco.com (CCO) and click Software Center at Service & Support. At Software Center, click Storage Networking Software.

Hardware Documents

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

Software Documents

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

For documentation on the SN 5420 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 provide sources for obtaining documentation from Cisco Systems.

World Wide Web

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

- <http://www.cisco.com>
- <http://www-china.cisco.com>
- <http://www-europe.cisco.com>

Documentation CD-ROM

Cisco documentation and additional literature are available in a CD-ROM package, which ships 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 as an annual subscription.

Ordering Documentation

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- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:
http://www.cisco.com/cgi-bin/order/order_root.pl
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<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, in North America, by calling 800 553-NETS(6387).

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

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<http://www.cisco.com>

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

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

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

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

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

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

Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

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

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

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

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