



# Release Notes for Cisco SN 5420 Storage Router Release 1.1.4

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June 18, 2001



**Note**

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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.

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These release notes support Cisco SN 5420 Storage Router for Release 1.1.4.

For a list of software caveats that apply to Release 1.1.4, see the “[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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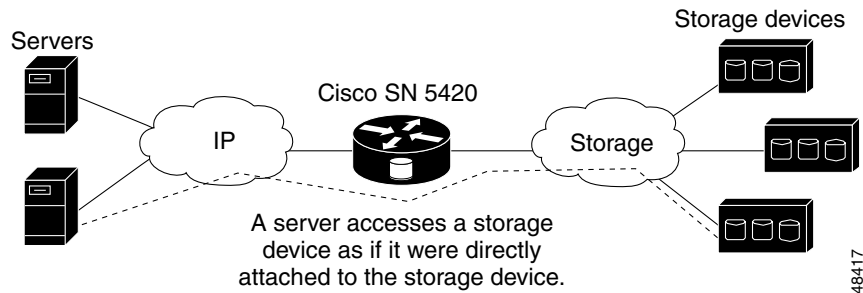
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# Introduction

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 1.1.4 and includes the following information:

- [Obtaining iSCSI Drivers](#)
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- [Graphical User Interface](#)
- [Determining the SN 5420 Software Version](#)
- [Upgrading to a New Software Release](#)
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## Obtaining iSCSI Drivers

To access the SN 5420 Storage Router, servers must have a Cisco Storage Networking iSCSI driver installed and configured. 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	<a href="http://www.cisco.com/cgi-bin/tablebuild.pl/sn5420">http://www.cisco.com/cgi-bin/tablebuild.pl/sn5420</a>
Registered Cisco.com users	<a href="http://www.cisco.com/cgi-bin/tablebuild.pl/sn5420">http://www.cisco.com/cgi-bin/tablebuild.pl/sn5420</a> (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.

## External Devices

The SN 5420 Storage Router Gigabit Ethernet interface uses a flow control mechanism for stopping and starting traffic that prevents the loss of data. Flow control should also 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 function 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
1.1.3            OK  OK   N/A    0     6.85 MB May  9 16:28 CST 2001
1.1.4            OK  OK   N/A    0     7.01 MB Jun 18 10:52 CST 2001
  Disk Space Free: 13.0 Mbytes
    Download URL: http://10.1.11.32/~software/sn5420
    Download User: SWAdmin01
    Running Version: 1.1.4
  Will boot Version: 1.1.4
```

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.

## Uninstalling an Upgrade

To return to a previous SN 5420 software release and remove the updated SN 5420 software using the CLI, follow these instructions:

	Command	Description
<b>Step 1</b>	<b>enable</b>	Enter Administrator mode.
<b>Step 2</b>	<b>show software</b>	Verify that the previous version of SN 5420 software is still available. If it is not, see the section “Installing Updated Software” in Chapter 6, “Maintaining and Managing the SN 5420” of the <i>SN 5420 Storage Router Software Configuration Guide</i> .
<b>Step 3</b>	<b>set software version v1.1.3</b>	Select the software to be booted when the system next starts; for example, boot v1.1.3 when the system restarts. This may take several minutes.
<b>Step 4</b>	<b>reboot</b>	Reboot the SN 5420 Storage Router.
<b>Step 5</b>	<b>enable</b>	Enter Administrator mode after the storage router reboots.
<b>Step 6</b>	<b>show software</b>	Verify that the storage router is now running the correct software.
<b>Step 7</b>	<b>delete software version v1.1.4</b>	(Optional) Remove the updated SN 5420 software from the storage router.

To return to a previous SN 5420 software release and remove the updated SN 5420 software using the SN 5420 web-based GUI, follow these instructions:

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- Step 1** Log in as Admin.
  - Step 2** Click **System Reset** in the **Maintenance** menu.
  - Step 3** At **Select next boot version**, select the software version to be run on the SN 5420.
  - Step 4** Click **Reset System**.
  - Step 5** After the storage router has rebooted, verify that it is running the selected software. (See the [“Determining the SN 5420 Software Version”](#) section on page 4.)
  - Step 6** (Optional) Click the **Maintenance** menu, then click the **Delete?** link to the right of the new software version to remove it from the storage router.
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For information about uninstalling updated iSCSI driver software, see the readme file for the appropriate iSCSI driver.

## New and Changed Information

There are no new features in Release 1.1.4.

## Limitations and Restrictions on SN 5420 Storage Router Clusters

For this release, there are no new limitations or restrictions on SN 5420 Storage Router clusters. The limitations and restrictions associated with SN 5420 release 1.1.3 still apply, 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.)

# Caveats

This document lists severity 1 and 2 caveats and selected severity 3 caveats for Cisco SN 5420 Storage Router Release 1.1.4. Caveats describe unexpected behavior or defects in SN 5420 software releases. 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 release and may apply to previous releases.
- The “Resolved Caveats” section list caveats resolved in a particular release, but open in previous releases.

Within the sections the caveats are sorted by technology in alphabetical order. For example, CLI caveats are listed separately from, and before, GUI caveats. The caveats are also sorted alphanumerically by caveat number.

**Note**

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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](http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl).

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## Open Caveats

There are no severity 1 or 2 caveats open against SN 5420 Release 1.1.4. 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**

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Open caveats related to iSCSI drivers are now covered in platform-specific release notes for each iSCSI driver. See the *Release Notes for Cisco SN iSCSI Driver for Microsoft Windows NT Version 1.8.7* for information about CSCdt82378, previously shown as an open caveat in SN 5420 Release 1.1.3.

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## Resolved Caveats

All the caveats listed in this section are resolved in SN 5420 Release 1.1.4. This section describes severity 1 and 2 caveats and selected caveats of other severity levels.

## 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 storage router. 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 occurs 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.

Workaround: The HA and management interfaces will start 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.

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.




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**Note** A new CLI command was added as part of the resolution of this caveat. See the **set ha configuration** command described in the [“Documentation Updates” section on page 9](#).

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## 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.

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.

## TCP/IP

- CSCdu24643

In a WAN network configuration, the host is unable to establish connection to the SN 5420 after an automatic or manual failover of one or more SCSI routing service instances, because the SN 5420 has no route to the host. The relevant static routes cannot be added to the iSCSI router table until the Gigabit Interface IP address is assigned, and this only occurs when an iSCSI routing service instance is configured. In a cluster environment, the second SN 5420 in the cluster may not have any iSCSI routing service instances configured, and therefore no relevant static routes. When the failover occurs, the SN 5420 will not know how to route the traffic.

Workaround: Before making the host connections to the SN 5420 and running traffic, start the SCSI routing services on the primary SN 5420, configure the required static routes, and save the configuration. Failover all SCSI routing service instances to the second SN 5420, and then configure the same static routes and save the configuration.




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**Note** A new parameter was added to an existing CLI command as part of the resolution of this caveat. See the updated **add route gw** command described in the [“Documentation Updates” section on page 9](#).

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# Documentation Updates

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

- CLI command **add route gw**

On page 7-6 of the *Cisco SN 5420 Storage Router Software Configuration Guide*, an **interface** keyword should be added to the **add route gw** command. This optional keyword allows a route to be associated with a specific interface, for example, the Gigabit Ethernet interface. If the interface is not specified, the storage router will try to determine the interface on its own by checking already existing routes and interface addresses. This command was enhanced to resolve caveat CSCdu24643.

If a route is added for an interface that is not yet configured with an IP address, a message displays indicating that the specified gateway is currently unreachable by the named interface, but the route will be added when the named interface is configured with a suitable IP address. To display the route before it is added to the routing table, use the new **show route** command.

The new **add route gw** command syntax is:

```
add route {A.B.C.D/bits | A.B.C.D/1.2.3.4 | default} gw E.F.G.H [interface ifname]
```

- CLI command **set ha configuration**

The **set ha configuration** command is a new command, added as part of the resolution to caveat CSCdt56378. To specify the configuration mode for the storage router, or to manually switch between modes, use the **set ha configuration** command. This is an Administrator-mode command.

```
set ha configuration {standalone | clustered}
```


Use the **standalone** keyword to configure a storage router that will not participate in a storage router cluster. A stand-alone storage router does not require the management or HA interfaces to be available in order to complete the SN 5420 configuration. The MGMT and HA ports do not need to be cabled.

Use the **clustered** keyword to configure a storage router that will participate in a storage router cluster. A clustered storage router requires the management and HA interfaces to be available in order to complete the SN 5420 configuration. The MGMT and HA ports must be correctly cabled.

Use the **save system** or **save all** CLI command to save the setting.

- First-Time Configuration

On page 2-4 of the *Cisco SN 5420 Storage Router Software Configuration Guide*, the steps in the section “Entering the Management Interface IP Address” should be changed as follows:

	Command	Description
Step 1	<b>set mgmt ipaddress</b> <i>A.B.C.D/bits</i>	<i>A.B.C.D</i> is the IP address of the SN 5420 management interface. <i>/bits</i> is the subnet mask, in CIDR style.
Step 2	<b>set ha configuration clustered</b> or <b>set ha configuration standalone</b>	Set the configuration mode for the storage router. If the storage router is to participate in a cluster, use the command <b>set ha configuration clustered</b> . The HA and MGMT cables must be connected.  If the storage router is a stand-alone system, use the command <b>set ha configuration standalone</b> . In stand-alone mode, the storage router can be configured even if the management and HA interfaces are not operational.
		 <p><b>Note</b> After completing both configuration commands, the storage router will automatically reboot.</p>



**Note** If the management IP address is set and the storage router rebooted without setting the configuration mode for the SN 5420, the storage router defaults to clustered mode.

- Failover Commands

On page 7-40, 7-41, and 7-42 of the *Cisco SN 5420 Storage Router Software Configuration Guide*, the description of failover functionality on a stand-alone system should be changed to read as follows:

If no eligible storage router is found, the SCSI routing service will start running again on the same storage router. If the SN 5420 is configured as a stand-alone system, failover is not allowed.

- CLI command **show log**

On page 7-138 of the *Cisco SN 5420 Storage Router Software Configuration Guide*, the description for the **match string** syntax should be updated as follows:

- (Optional) Display all entries that match the specified string or regular expression.

The second bullet in the “Usage Guideline” section should be updated as follows:

- Use the **match string** parameter to display messages matching the specified string or regular expression. You can search the entire log file for matching messages by using the **all** keyword, or restrict the search to the last *nn* number of messages.

- CLI command **show route**

The **show route** command is a new command, added as part of the resolution to caveat CSCdu24643. To display all routes that have been configured, including those that have not been added to the routing table because the associated interface is not yet configured, use the **show route** command. This is an Administrator-mode command.

**show route**

## Related Documentation

The following sections describe the related documentation available for Cisco SN 5420 Storage Router Release 1.1.4. These documents consist of hardware installation and software configuration guides, and platform-specific release notes, readme and example configuration files for the Cisco Storage Networking iSCSI drivers.

## Release-Specific Documents

This Release Notes document is the only document specific to SN 5420 Release 1.1.4. It is located on Cisco.com and the Documentation CD-ROM.

## Platform-Specific Documents

Platform-specific documents consist of the release notes, readme and example configuration files for Cisco Storage Networking iSCSI drivers. The files are currently available in electronic format only. See the “[Obtaining iSCSI Drivers](#)” section on page 3 for details.

## 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

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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.

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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

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](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, in North America, by calling 800 553-NETS(6387).

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Attn Document Resource Connection  
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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. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

## Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

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Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

<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.

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

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