



Release Notes for Cisco SN 5420 Storage Router Release 2.1.2

August 8, 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 SN 5420 Storage Router software release 2.1.2.

For a list of software caveats that apply to Release 2.1.2, see the “[Caveats](#)” section. The caveats are updated for every maintenance release and are located on Cisco.com and the Documentation CD-ROM.

Contents

These Release Notes describe the following topics:

- [Introduction, page 2](#)
- [System Requirements, page 3](#)
- [Upgrading from SN 5420 Software Release 1.1.8, page 7](#)
- [New and Changed Information, page 11](#)
- [Limitations and Restrictions on SN 5420 Storage Router Clusters, page 11](#)
- [Caveats, page 11](#)
- [Documentation Updates, page 13](#)
- [Related Documentation, page 18](#)
- [Service and Support, page 18](#)
- [Obtaining Documentation, page 19](#)
- [Obtaining Technical Assistance, page 20](#)



Corporate Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Copyright © 2002. Cisco Systems, Inc. All rights reserved.

Introduction

The Cisco SN 5420 Storage Router provides universal access to storage over IP networks. The storage router software controls the operation of the Cisco SN 5420 Storage Router. You can configure the software to provide one of three types of access to storage over IP networks:

- SCSI routing
- Transparent SCSI routing
- iSCSI SAN interconnect

SCSI routing provides IP hosts with access to Fibre Channel (FC) storage devices, using iSCSI protocol.

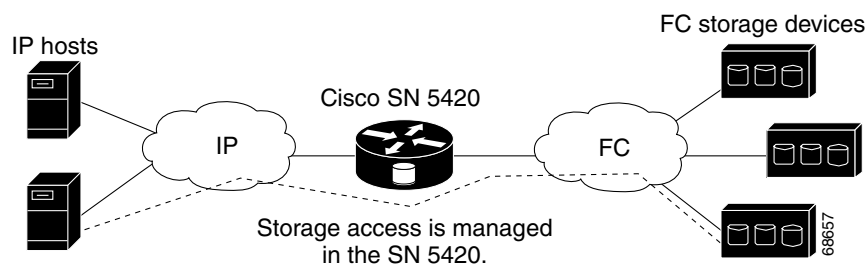


Note

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>.

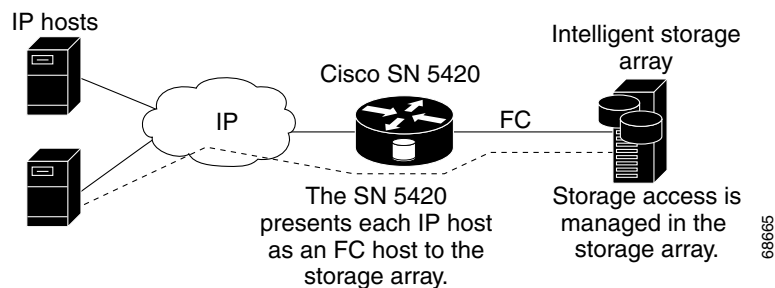
With SCSI routing, storage device access is managed primarily in the SN 5420. (See [Figure 1](#).)

Figure 1 SCSI Routing



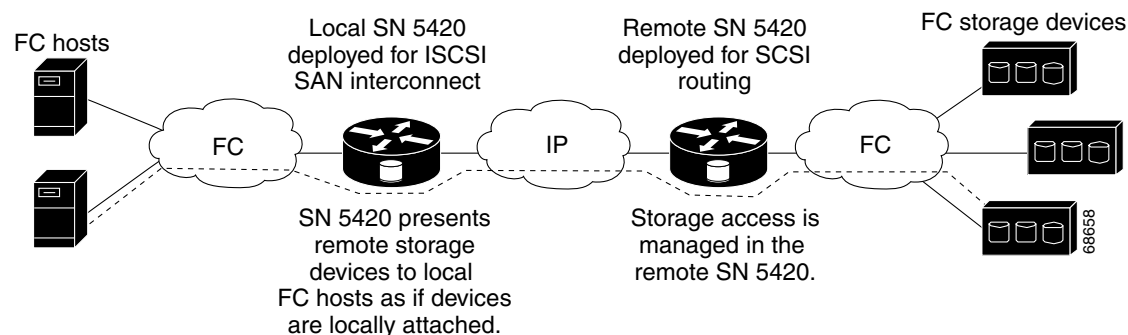
Transparent SCSI routing provides IP hosts with transparent access to intelligent storage arrays using the iSCSI protocol; that is, each IP host is presented as an FC host to an intelligent storage array. With transparent SCSI routing, availability of storage devices is managed primarily in the intelligent storage array. (See [Figure 2](#).)

Figure 2 Transparent SCSI Routing



iSCSI SAN interconnect provides FC hosts with IP access to remote FC storage devices, using the iSCSI protocol. With iSCSI SAN interconnect, storage device access is managed primarily in a remote SN 5420 Storage Router that is deployed for SCSI routing. Storage devices that are made available by a remote storage router are presented to FC hosts as if the storage devices are locally attached FC storage devices. (See [Figure 3](#).)

Figure 3 *iSCSI SAN Interconnect*



In addition to providing services for accessing storage over IP networks, the SN 5420 Storage Router software provides the following services:

- VLAN Access Control—provides IP access control to storage based on a VLAN identifier (VID) number (in addition to access control through access lists)
- Authentication—provides iSCSI authentication using AAA authentication methods
- High Availability (HA)—provides the ability to group storage routers in a cluster for failover and other cluster-related functions (for SCSI routing only)
- SNMP/MIB support—provides network management of the SN 5420 through SNMP using selected MIBs; includes access through CiscoWorks
- A command-line interface (CLI) and a web-based GUI—provides user interfaces for configuration and maintenance of an SN 5420



Note The web-based GUI is not available in SN 5420s deployed for transparent SCSI routing.

System Requirements

This section describes the system requirements for Release 2.1.2 and includes the following information:

- [Network Equipment, page 4](#)
- [IP Hosts, page 4](#)
- [Graphical User Interface, page 4](#)
- [iSCSI Driver Version Support, page 4](#)
- [Obtaining Updated Software and iSCSI Drivers, page 4](#)
- [Determining the SN 5420 Software Version, page 5](#)
- [Upgrading to a New Software Release, page 6](#)
- [Uninstalling an Upgrade, page 6](#)

Network Equipment

- The SN 5420 Storage Router's 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 router's Gigabit Ethernet interface where the SN 5420 Storage Router is connected.
- If the SN 5420 Storage Router is participating in a cluster, and the HA or management interfaces are plugged into a switch that has Spanning Tree Protocol (STP) enabled, the storage router should be considered as an end station and the affected ports on the switch should be configured appropriately. For example, set "portfast" on Cisco switches to cause the ports to immediately switch from blocking mode to forwarding mode. This helps prevent time-outs, which can cause unexpected behavior when storage routers join a cluster.

IP 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 IP hosts connecting to the SN 5420. On the SN 5420 Storage Router, you can use the CLI **show scsirouter all connection tcp** command to display the current and maximum TCP window size for each connected host.

Graphical User Interface

- If you are accessing the GUI from a browser running on a Microsoft Windows platform, Cisco recommends the use of Microsoft Internet Explorer version 5.5 with service pack 2 or Netscape Navigator 4.71, or later. Earlier versions of Microsoft Internet Explorer running on Microsoft Windows platforms may return an "Access Denied" message when attempting to restore files or make updated software available to the storage router. (This problem does not occur with Microsoft Internet Explorer version 5.0x running on UNIX or other platforms.)
- 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. This browser restriction applies only to the online Help system.

iSCSI Driver Version Support

A Cisco SN 5420 Storage Router running software release 2.1.2 or later is compatible with an IP host running any Cisco iSCSI driver version 2.1.1 or later; it is not compatible with an IP host running any Cisco iSCSI driver version 1.8.x.

Obtaining Updated Software and iSCSI Drivers

From time to time, Cisco releases updated versions of SN 5420 Storage Router software and iSCSI drivers. Updated versions of storage router software and the Cisco iSCSI drivers, accompanying readme files, release notes and example configuration files are available for download.

You must be a registered Cisco.com user to download Cisco SN 5420 Storage Router software and iSCSI drivers.

You can access software by following these instructions:

-
- Step 1** At <http://www.cisco.com>, log in to Cisco.com. 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 link for the software that you want to download. Clicking the link will cause another web page to be displayed. 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.
-

Determining the SN 5420 Software Version

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

Example 1 *Determining the Software Version*

```
[SN5420-A01]$ show version

CISCO SN 5420 Storage Router

Operating System Software Ver: 2.1.2
→ System Bootstrap Ver: 2.1.2
→ Application Software Ver: 2.1.2
CLI Version 2.1

Copyright (c) 1986-2001 by Cisco Systems, Inc
```

The *Application Software* field displays the version of software currently running on the storage router. The *System Bootstrap* field displays the software version that will run the next time the storage router is restarted.

If the storage router is deployed for SCSI routing or iSCSI SAN interconnect, you can also check the version of the SN 5420 software by using the SN 5420 web-based GUI. Log in as Monitor to display the **Processor and Software Information** table, or click **Processor and SW** (under **System**) in the **Monitor** dynamic menu list in the left frame. The **Software Version** field contains the current software version information.

Upgrading to a New Software Release


Note

If you are running any 1.1.x version of SN 5420 software, follow the procedures in the [“Upgrading from SN 5420 Software Release 1.1.8” section on page 7.](#)

For information about upgrading to new SN 5420 software using the CLI, see the section “Installing Updated Software” in Chapter 10, “Maintaining and Managing the Storage Router,” of the *Cisco SN 5420 Storage Router Software Configuration Guide, Release 2.1.*

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 **Maintenance** to view information about the software versions currently available to the storage router. If multiple versions of software are available, delete all versions except the currently running version.
 - Step 3** (Optional) Click the appropriate link in the Upgrade section of the **Maintenance** dynamic menu list in the left frame to download a list of currently available software versions. Use this list to determine the software version you want to download.
 - Step 4** Click the appropriate link in the Upgrade section of the **Maintenance** dynamic menu list to download the desired version of software.
 - Step 5** After you have downloaded the new version of software, click **Reset** in the System section of the **Maintenance** dynamic menu list.
 - Step 6** At **Select next boot version**, select the new software version. If you have made configuration changes to the storage router that have not been saved, click the **Save unsaved changes?** checkbox to save any configuration changes that have been made but not saved to the storage router’s bootable configuration.
 - Step 7** Click **Reset System**.
 - Step 8** 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 5.](#))
-

For information about upgrading to new iSCSI driver software, see the Release Notes and 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
Step 1	enable	Enter Administrator mode
Step 2	show software version all	Verify that the previous version of SN 5420 software is still available. If it is not, see the section “Installing Updated Software” in Chapter 10, “Maintaining and Managing the Storage Router” of the Cisco SN 5420 Storage Router Software Configuration Guide, Release 2.1.

	Command	Description
Step 3	software version 2.1.1	Select the software to be booted when the system next starts; for example, boot version 2.1.1 when the system restarts. This may take several minutes.
Step 4	reboot	Reboot the SN 5420 Storage Router.
Step 5	enable	Enter Administrator mode after the SN 5420 reboots.
Step 6	show version	Verify that the SN 5420 Storage Router is now running the correct software.
Step 7	delete software version 2.1.2	(Optional) Remove the updated software from the SN 5420 Storage Router.

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

-
- Step 1** Log in as Admin.
- Step 2** Click **Maintenance** to display the dynamic Maintenance menu list in the left frame.
- Step 3** Click **Reset** from the dynamic Maintenance menu list.
- Step 4** Select the version of software to be run when the SN 5420 reboots from the **Select next boot version:** select box.
- Step 5** (Optional) To save configuration changes before rebooting, click the **Save unsaved changes?** checkbox. If the checkbox is not checked, any unsaved configuration changes will be lost.
- Step 6** Click **Reset System**.
- Step 7** After the SN 5420 reboots, verify that it is running the selected software. (See [“Determining the SN 5420 Software Version”](#) section on page 5).
- Step 8** (Optional) Click **Maintenance** and then click the **Delete?** link to the right of the updated software in the Show SN 5420 Software table to remove it from the SN 5420 Storage Router.
-

Upgrading from SN 5420 Software Release 1.1.8

This section describes the procedures to follow when upgrading a Cisco SN 5420 Storage Router from release 1.1.8 to release 2.1.x and includes the following information:

- [Prerequisite Tasks, page 8](#)
- [Upgrading a Standalone Storage Router, page 8](#)
- [Upgrading a Storage Router in a Cluster, page 9](#)
- [Uninstalling an Upgrade, page 10](#)

If you have questions or concerns about the upgrade process, see the [“Obtaining Technical Assistance”](#) section on page 20.

Prerequisite Tasks

- Before upgrading to release 2.1.x, the storage router must be running software release 1.1.8 (or later). Follow the procedures in the section “Installing Updated Software” in Chapter 6, “Maintaining and Managing the SN 5420,” of the *Cisco SN 5420 Storage Router Software Configuration Guide Release 1.1*.
- As a best practice, Cisco recommends that you back up the storage router configuration before beginning the upgrade process. Follow the procedures in the section “Backing Up System Configuration” in Chapter 6, “Maintaining and Managing the SN 5420,” of the *Cisco SN 5420 Storage Router Software Configuration Guide Release 1.1*.
- Schedule a planned system downtime. The upgrade process from release 1.1.x software requires downtime because the SN 5420 and all IP hosts must be upgraded at the same time. The length of the system downtime depends on the number of storage routers and IP hosts to be upgraded.



Note

Upgrading to release 2.1.x software automatically deploys the storage router for SCSI routing. If you want to choose another deployment option, use the **clear conf** command after a successful upgrade process to delete the existing storage router configuration. You will then be able to select another deployment option when the initial configuration script runs after the storage router is rebooted.

Upgrading a Standalone Storage Router

Follow these procedures to upgrade a standalone Cisco SN 5420 Storage Router running software release 1.1.8 (or later) to software release 2.1.x:

-
- Step 1** Be sure there are no active connections from IP hosts to the storage router. For example, use the following command to display current connection activity:
- ```
show scsirouter all connection
```
- Step 2** Download the appropriate software release to the storage router. See the [“Obtaining Updated Software and iSCSI Drivers” section on page 4](#) for details.
- Step 3** Verify the software download and set the downloaded software as the version to be run when the storage router reboots. Follow the procedures in the section “Installing Updated Software” in Chapter 6, “Maintaining and Managing the SN 5420,” of the *Cisco SN 5420 Storage Router Software Configuration Guide Release 1.1*.

- Step 4** Reboot the storage router. For example, use the following command:

```
reboot
```



**Note** If the storage router did not have a system name, you will be prompted to add that information when the storage router restarts. A system name is now required, not optional.

- Step 5** Verify that the appropriate software is running and that the SCSI routing instances are active. For example, enter the following commands:

```
show software version all
show cluster
```

- Step 6** (Optional) If zoning by WWPN or WWNN is active on the fabric network, you must change zoning configuration to reflect the new WWPN or WWNN presented by the SN 5420 Storage Router. The WWPN format for the Fibre Channel interface was changed from IEEE format (0x1) to IEEE extended format (0x2). WWNN format also changed from “0x2” to “0x1”. The SN 5420 Storage Router running software release 2.1.1 presents WWPNs as “0x2” and WWNNs as “0x1”.
- Step 7** Download the appropriate iSCSI driver software for the IP hosts that access the storage router. See the [“Obtaining Updated Software and iSCSI Drivers” section on page 4](#) for details.
- Step 8** Follow the procedures in the iSCSI driver readme files and the associated online Release Notes documents to complete the upgrade of the iSCSI driver software in the IP hosts. Once the new iSCSI driver is active on the IP host, iSCSI connections will be established and storage devices will become visible.



**Note** Beginning with release 2.1.1, the port number used for iSCSI traffic has been changed to 3260. This port number has been officially assigned by IANA. The port number 5003, previously used in release 1.1.8, is no longer accepted.

## Upgrading a Storage Router in a Cluster

Follow these procedures to upgrade a high availability cluster of SN 5420 Storage Routers running software release 1.1.8 (or later) to software release 2.1.x. The second storage router to join the cluster is removed from the cluster and upgraded. The remaining storage router and IP hosts are upgraded, and then the storage routers are returned to a clustered configuration.

These steps use the example storage router names *SN5420A* and *SN5420B*. The storage router named *SN5420A* is the first storage router in the cluster.

- Step 1** *SN5420B* will be updated first. Use the **set cluster** command on *SN5420B* to change the cluster name, effectively removing the storage router from the existing cluster. When prompted to merge or delete, select the “delete” option. The storage router will reboot.
- Step 2** After *SN5420B* reboots, download the appropriate software release to the storage router. See the [“Obtaining Updated Software and iSCSI Drivers” section on page 4](#) for details.
- Step 3** Reboot *SN5420B*. For example, use the following command:
- ```
reboot
```
- Step 4** Verify that the appropriate software is running. For example, use the following command on *SN5420B*:

```
show software version all
```

Step 5 Upgrade *SN5420A* by following the steps for upgrading a standalone storage router in the [“Upgrading a Standalone Storage Router” section on page 8](#).

Step 6 Add *SN5420B* back into the original cluster. For example, use the following command:

```
setup cluster
```

When prompted for HA configuration, select “clustered.” When prompted for cluster name, enter the original cluster name. When prompted to retain or delete configuration information, select “delete.” The storage router will reboot.

Step 7 When *SN 5420B* reboots, verify that it is now a member of the original cluster. For example, use the following command:

```
show cluster
```

Step 8 If necessary, failover one or more SCSI routing instances from *SN 5420A* to *SN 5420B* to return to the original cluster configuration.



Note Any SCSI routing instance that had previously used the primary attribute to assign a preferred storage router for the instance must be modified. The primary attribute now requires a storage router system name, rather than an IP address. See the **scsirouter primary** command in Chapter 11, “Command Line Interface Reference,” of the *Cisco SN 5420 Storage Router Software Configuration Guide Release 2.1*.

Uninstalling an Upgrade

Schedule a planned system downtime. The uninstall process requires downtime because the software on the SN 5420 Storage Router and all IP hosts must be changed at the same time. The length of the system downtime depends on the number of storage routers and IP hosts involved.

To return to Cisco SN 5420 Storage Router software release 1.1.8 (or later) and remove the updated SN 5420 software release 2.1.x using the CLI, follow these instructions:

Step 1 Verify that release 1.1.8 (or later) of SN 5420 software is still available on the storage router. If it is not, see the section “Installing Updated Software” in Chapter 10, “Maintaining and Managing the SN 5420” of the *Cisco SN 5420 Storage Router Software Configuration Guide Release 2.1*.

Step 2 Verify that there are no active connections from IP hosts to the storage router. For example, use the following command to display current connection activity:

```
show scsirouter all connection
```

Step 3 Set release 1.1.8 as the version to be run when the storage router reboots. For example, use the following command:

```
software version 1.1.8
```

Step 4 Reboot the storage router. For example, use the following command:

```
reboot
```

Step 5 Verify that release 1.1.8 software is running and that the SCSI routing instances are active. For example, enter the following commands:

```
show software
show cluster
```

Step 6 (Optional) If zoning by WWPN or WWNN (world-wide node name) is active on the fabric network, you must change zoning configuration to reflect the original WWPN or WWNN format presented by the SN 5420 Storage Router. The SN 5420 Storage Router running software release 1.1.8 presents WWPNs as “0x1” and WWNNs as “0x2”.

- Step 7** Follow the procedures in the iSCSI driver readme files and the associated online Release Notes documents to uninstall the upgrade of iSCSI driver software in the IP hosts. Once the previous iSCSI driver is active on the IP host, iSCSI connections will be established and storage devices will become visible.



Note In release 1.1.8, the port number used for iSCSI traffic will be 5003.

New and Changed Information

The failover algorithm for SCSI routing instances running in a high availability cluster has changed in Release 2.1.2. In Release 2.1.1, a SCSI routing instance only fails over if the server interface (Gigabit Ethernet interface) or the device interface (Fibre Channel interface) is down.

In Release 2.1.2, a SCSI routing instance fails over if either the server interface or the device interface is down, or if all of its targets are unavailable. If the device interface is up but some targets are available and others are not, the SCSI routing instance will not automatically fail over.

Limitations and Restrictions on SN 5420 Storage Router Clusters

- A storage router cluster can contain up to four SN 5420 Storage Routers.
- A cluster can contain up to 12 SCSI routing instances.
- A cluster can support up to 100 iSCSI targets.

Caveats

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 caveats that are open in the current release and may be open in previous releases.
- The “[Resolved Caveats](#)” section list caveats resolved in this release, but open in previous releases.

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 release. 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 Cisco SN 5420 Storage Router software release 2.1.2.

Resolved Caveats

All of the caveats listed in this section are resolved in SN 5420 software release 2.1.2.

FC Driver

- CSCdw78442

If a target gets logged out and rejects a SCSI command with a Logout Extended Link Service frame (LOGO), host traffic to that target is rejected and the **show devices** CLI command does not display the target information. This problem may occur as a result of a Fibre Channel loop initialization.

Workaround: Use the **show devices rediscover** CLI command to initiate device rediscovery, or disconnect the target from the Fibre Channel hub or fabric network and reconnect it.

- CSCdw85013

When the SN 5420 Fibre Channel interface topology is set to point-to-point (ptp) and it is connected to a fabric switch, the Fibre Channel link may fail to come up. The results of the **show interface fc?** command shows a firmware status of WAIT_LOGIN.

Workaround: Set the SN 5420 Fibre Channel interface topology to loop preferred using the **interface fc? topology looppref** command.

GUI

- CSCdx10370

The GUI allows LUN and target mapping to the same device from a single target.

Workaround: Select a single mapping methodology for each device and target combination. If necessary, perform the mapping actions using the CLI.

HA

- CSCdw79917

Using the CLI command **delete scsirouter all** may cause the HA application monitor task to suspend with a data exception error. This results from a synchronization problem between the HA application control task and the HA monitor task, which causes the HA monitor task to try accessing structures for a SCSI routing instance that no longer exists. The SN 5420 Storage Router will have to reboot to recover from this state.

Workaround: Instead of using the **delete scsirouter all** command, delete each SCSI routing instance individually.



Note

This caveat was originally opened and documented as a SCSI component problem. It was changed to an HA component problem during analysis and resolution.

iSCSI Server

- CSCdw91045
If an IP host terminates a connection to a target device before all session commands have been complete and a command remains on the queue to be sent out, the response command could be hung.
Workaround: Do not terminate IP host connections before all commands have completed.
- CSCdx04962
A session being terminated may not get removed because it has outstanding commands that could not be aborted. A new login with same sessionID will not proceed because the old session could not be cleaned up.
Workaround: None.
- CSCdx13898
Under heavy traffic with sessions being removed and added, the scsiTcptask may take an assertion as the number of command records available for pre-allocation goes negative.
Workaround: None.

SCSI

- CSCdx07776
SCSI REPORT_LUNs commands that are sent to LUN-mapped targets on a SN 542x device may repeatedly fail, depending on the size of command buffer the SCSI initiator uses when sending the command. If this occurs, some LUNs that do exist may not be correctly detected and made available to the IP host operating system. Typically, the SCSI initiator will give up using the REPORT_LUNS command and will resort to scanning LUNS 0-7 with INQUIRY commands. LUNs 8 and above may be ignored. The problem only affects LUN-mapped targets, and only affects SCSI initiators that use a large command response buffer size for the REPORT_LUNS command.
Workaround: None.

VLAN

- CSCdw74461
The Cisco SN 5420 Storage Router does not obtain the VLAN domain information via VTP from a directly connected Cisco Cat4K switch that is running the Catalyst OS software. The problem only occurs when the VTP mode setting in the switch is set to Client.
Workaround: Change the VTP mode setting in the switch to VTP server.

Documentation Updates

This section describes changes to the Cisco SN 5420 Storage Router documentation set since initial publication, and includes the following information:

- [Corrections, page 14](#)
- [CLI Command Changes, page 15](#)
- [New CLI Commands, page 16](#)

Corrections

- 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).

- References to iSCSI driver CD

On page 1-1 of the *Cisco SN 5420 Storage Router Hardware Installation Guide* and on page xi of the *Cisco SN 5420 Storage Router Software Configuration Guide Release 2.1*, there is a reference 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 [“Obtaining Updated Software and iSCSI Drivers” section on page 4](#) for details on obtaining iSCSI drivers.

- Reference to hardware flow control requirement for terminal emulation software

On page 2-12 of the *Cisco SN 5420 Storage Router Hardware Installation Guide*, the first step in the process of connecting to the RS-232 management port incorrectly indicates that your PC terminal emulation software must be configured to communicate via hardware flow control. The correct configuration requires no flow control.

To connect to the RS-232 management port, configure the PC terminal emulation program to match these console port defaults:

- 9600 baud
- Eight data bits
- One stop bit
- No parity
- No flow control (“none”)

For additional information about this correction, see caveat CSCdx87713.

- Incorrect syntax shown for the **save scsirouter** command

On page 10-22 of the *Cisco SN 5420 Storage Router Software Configuration Guide Release 2.1*, the command shown in Step 4 of the first table is incorrect. The description of the command is correct as stated.

The command should be updated to read as follows:

```
save scsirouter scsi2 bootconfig
```

CLI Command Changes

The commands or the displays described in this section have been changed in Cisco SN 5420 Storage Router software release 2.1.2.

- CLI command **show cdp neighbor**

On page 11-236 of the *Cisco SN 5420 Software Configuration Guide Release 2.1*, the following example should replace the existing display in the “Example” section:

```
[SN5420A]# show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater
Device-ID          Capability Platform      Remote Port
-----
TRC04480162(lab-sn5420a.mla TSI      WS-C6509      7/48
JAZ05140GZD(lab-z4-sw1-msp4 TS        WS-C2948      2/37
00016410efc0(sn54201)      R         SN5420        fe11
```

If a CDP hold time is configured for the device, the results will display a Holdtime field between the Device-ID and the Capability field, as shown below:

```
[SN5420C]# show cdp neighbors
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater
Device-ID          Holdtime Capability Platform      Remote Port
-----
JAZ05140GZD(lab-z4-sw1-msp4 00045678 TS        WS-C2948      2/37
```

On page 11-237 of the *Cisco SN 5420 Software Configuration Guide Release 2.1*, the Table 11-11 should be updated as follows:

- The Local-Port field and description should be removed.
- The description of the Device-ID field should be updated to indicate that the field is truncated after 27 characters.
- An optional Holdtime field should be added. If present, the Holdtime field indicates the CDP hold time associated with this device. This is the amount of time the SN 5420 and other receiving devices should hold the CDP packet from the associated device before discarding it.
- The description of the Capability field should be updated to indicate “r” for Repeater.
- The description of the Platform field should be updated to indicate that the field is truncated after 21 characters.
- The Port-ID field should be removed.
- The Remote Port field should be added. The Report Port field is the port number of the remote device.

- CLI command **delete scsirouter**

On page 11-49 of the *Cisco SN 5420 Software Configuration Guide Release 2.1*, the following sentences should be inserted into the “Usage Guidelines” section before the first paragraph:

If the **delete scsirouter** command is issued with the **target** keyword from an SN 5420 deployed for transparent SCSI routing, the targets will be recreated if the user issues a **show devices rediscover** command or when a Fibre Channel event occurs that causes the SN 5420 to perform the discovery process (such as a Fibre Channel “restart”).

- CLI command **show scsirouter**

The **show scsirouter** command results have been modified to display the TCP port number and LUN reset information.

```
[SN5420A]# show scsi zeus all
zeus description "(not set)"
zeus authenticate "none"
zeus primary "none"
zeus proxy server disabled
zeus failover primary "none"
zeus failover secondary "none"
→ zeus lun reset no
zeus target naming authority "none"
zeus target log level is "notification"
→ zeus serverif ge2 10.1.0.45/24, TCP port:3260
zeus deviceif fc1
. . .
```

If the SN 5420 is deployed for transparent SCSI routing, the **show scsirouter** command also displays the CDB retry count value.

```
[SN5420B]# show scsirouter transparent
transparent description "(not set)"
transparent authenticate "none"
transparent lun reset no
→ transparent cdb retry counter 16
transparent target naming authority "none"
. . .
```

- CLI command **show scsirouter** with the **target table** keywords

The **show scsirouter** command with the **target table** keywords now displays the current target information associated with the SCSI routing instance, rather than the target information from the SN 5420's bootable configuration. The results also display the IP addresses in the access list associated with the target, rather than the name of the access list.

New CLI Commands

The commands described in this section have been added to the CLI in Cisco SN 5420 Storage Router software release 2.1.2.

- CLI command **debug cmd**

The **debug cmd** is a new command, added to the SN 5420 for troubleshooting purposes. To run any operating system command with up to five arguments from the CLI, use the **debug cmd**. This is an Administrator-mode command.

debug cmd *os-command* [*parameters*]

Use this command to issue any operating system command. Do not invoke interactive functions. You can specify up to five command parameters.

The **debug cmd** command is designed for debug purposes and should be used under the guidance of a Cisco Technical Support professional.

- CLI command **scsirouter cdbretrycount**

The **scsirouter cdbretrycount** command is a new command, added as part of the resolution to caveat CSCdx19922. To specify the number of times a failed command should be retried before returning an error on the CDB, use the **scsirouter cdbretrycount** command. This command is only valid for SN 5420s deployed for transparent SCSI routing and is an Administrator-mode command.

scsirouter name cdbretrycount nn

The CDB retry count value is an integer between 0 and 512. The default value is 16.

Use this command to change the number of times a failed CDB will be retried by the SN 5420 before returning an error on the CDB. Retries occur every second. For example, with the default retry count value of 16, it would take 16 seconds before a failed command would be returned with an error.

If an intelligent storage array included multiple paths between hosts and storage, lowering the CDB retry count value could change the triggering of failover situations.

Use the **show scsirouter** command to display the CDB retry count value.

```
[SN5420B]# show scsirouter transparent
transparent description "(not set)"
transparent authenticate "none"
transparent lun reset no
→ transparent cdb retry counter 16
transparent target naming authority "none"
. . .
```

- CLI command **setup iport**

The **setup iport** command is a new wizard, added as part of the resolution to caveat CSCdw13869. To change the default listening port used for iSCSI traffic, use the **setup iport** wizard. The default listening port used for iSCSI traffic is 3260. This is the port number assigned by IANA. The **setup iport** wizard is an Administrator-mode command.

If you change the listening port used for iSCSI traffic on the SN 5420, you must make corresponding changes to the IP hosts sending iSCSI traffic to the SN 5420. For example, on a UNIX system, you must update the /etc/services file.

After selecting a new port for iSCSI traffic, the SN 5420 Storage Router will be rebooted. Use the **show scsirouter** command to display the configured TCP port information, shown after the server interface address.

```
[SN5420A]# show scsi zeus all
zeus description "(not set)"
zeus authenticate "none"
zeus primary "none"
zeus proxy server disabled
zeus failover primary "none"
zeus failover secondary "none"
zeus lun reset no
zeus target naming authority "none"
zeus target log level is "notification"
→ zeus serverif ge2 10.1.0.45/24, TCP port:3260
zeus deviceif fcl
. . .
```

Related Documentation

The following sections describe the related documentation available for Cisco SN 5420 Storage Router Release 2.1.2. These documents consist of hardware installation and software configuration guides, and platform-specific release notes, readme and example configuration files for the Cisco iSCSI drivers.

Release-Specific Documents

This Release Notes document is the only document specific to SN 5420 Release 2.1.2. It is only available as an electronic document 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 iSCSI drivers, version 2.1.x. The files are currently available in electronic format only. See the [“Obtaining Updated Software and iSCSI Drivers”](#) section on page 4 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 Cisco.com and the Documentation CD-ROM.

Software Documents

Refer to the *Cisco SN 5420 Storage Router Software Configuration Guide Release 2.1* for 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 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.

Software Configuration Tips on the Cisco TAC Home Page

A variety of Cisco SN 5420 Storage Router software 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:

-
- 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 5400 Series Storage Routers**, click the **SN 5420 Product Support** link.
 - Step 3** At the Cisco SN 5420 Storage Router Product Support web page, click the appropriate links for additional information about installing and configuring storage router software.
-

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.com users (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 the **Fax** or **Email** option under the “Leave Feedback” at the bottom of the Cisco Documentation home page.

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, 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.



Copyright © 2002, Cisco Systems, Inc.
All rights reserved.