



Release Notes for TopspinOS Release 2.9.0 Update 2

Release Date: Aug 15, 2007
Part Number: OL-9388-07

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Introduction

These release notes describe the features and known issues for the Topspin and Cisco SFS Series Product Family operating system 2.9.0 Update 2 (build 170) and Element Manager 2.9.0.10 software releases.



Note

These release notes apply to the Cisco 4x InfiniBand Switch Module for IBM BladeCenter, Cisco InfiniBand Switch Module for IBM BladeCenter, Topspin 120, Topspin 270, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 7000P, Cisco SFS 7008P, and Cisco SFS 7000D switches that run TopspinOS 2.9.0 software.



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System Requirements

This section describes the system requirements for this software release.

Determining the Software Version

To determine the version of the operating system that you are running on the switch, log in to the CLI and enter the **show version** EXEC command.

```
SFS-7000D> show version
=====
                        System Version Information
=====
system-version : SFS-7000D TopspinOS 2.9.0 releng #170 ...
contact : tac@cisco.com
name : SFS-7000D
```

Upgrading to a New Software Release

To verify that you are running the latest available release, compare your version against the latest version on the Cisco support website at <http://www.cisco.com/cgi-bin/tablebuild.pl/sfs-7000> (<http://www.cisco.com/cgi-bin/tablebuild.pl/sfs-bladecenter> for BladeCenter). After registering your product, you should have received a username and password that grant you access to this site.

Switch software and Linux host drivers are now released and packaged separately. Switch software is also now packaged and released separately for the following products:

- Cisco SFS 7000, 7000P, 7000D, 7008, and 7008P chassis — 2.9.0 Update 2
- Topspin 120 and 270 chassis — 2.9.0 Update 2
- 4X InfiniBand Switch Module for IBM BladeCenter H — 2.9.0 Update 2
- 1X InfiniBand Switch Module for IBM BladeCenter — 2.9.0 Update 2
- Cisco SFS 3001 and 3012 I/O chassis — 2.8.0 Update 1
- Topspin 90 and 360 I/O chassis — 2.8.0 Update 1

Old and new TopspinOS releases can be used in the same InfiniBand fabric, although InfiniBand subnet manager synchronization will not occur between TopspinOS 2.9.0 and older releases.

Switches should be upgraded before the InfiniBand hosts. The CLI **install** command will prevent an incompatible software image from being installed. To upgrade Element Manager (EM) GUI, first uninstall the older version and then install software release 2.9.0.

For general information about upgrading to a new software release, see the Installing Software Images section in the *Cisco SFS Product Family Element Manager User Guide* and the *Cisco 4x InfiniBand Switch Module for IBM BladeCenter User Guide*.

New and Changed Information

TopspinOS 2.9.0 is a major release that introduces significant new features and documentation. It includes the following changes:

- Support for SFS 7000D InfiniBand switch
- Support for ConnectX HCA
- Full configuration and management of 20 Gbps InfiniBand Double Data Rate links
- Ability to disable IPoIB on an InfiniBand partition for improved security
- Improved syslog and CLI compatibility with other Cisco products
- Ability to route around InfiniBand components that need maintenance
- Many bug fixes

Changes From Release 2.9.0 Update 1 (build 163) to 2.9.0 Update 2 (build 170)

This section describes the new features and resolved caveats since the 2.9.0 Update 1 (build 163) release.



Note

The ID number from the Cisco Defect Tracking System, if applicable, is included with this format: CSCxxxxxxx. The current status of all issues is available online at http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl. Contact Cisco Technical Support for more information.

InfiniBand

- CSCsi81933
Support has been added for the new Mellanox ConnectX DDR IB HCAs. Note that ConnectX HCAs will function with previous TopspinOS releases, but will only function at SDR, not DDR.
- CSCsh89714
A problem has been fixed where the path MTU and rate returned in a PathRecord query could be set incorrectly, resulting in low throughput, especially for paths traversing DDR IB links.
- CSCsi31350
A problem has been fixed where user configured IPoIB multicast groups were not saved and restored correctly if the multicast group was first automatically created by IPoIB.
- CSCsi27775
A problem has been fixed where the IB Performance Management feature would not work with the High-Performance Subnet Manager (HSM) running on OFED.
- CSCsj04088
A problem has been fixed where the SFS 7008P, SFS 7008, and Topspin 270 chassis GUIDs would not get assigned correctly and the IB SM would not function.

Management

- CSCsg79959

A problem has been fixed where user account settings would not be saved correctly when the configuration was saved from a GUI.

Changes From Release 2.9.0 FCS (build 147) to 2.9.0 Update 1 (build 163)

This section describes the new features and resolved caveats since the 2.9.0 FCS (build 147) release.

InfiniBand

- CSCse94345

A problem has been fixed where the IB Subnet Manager would fail and the chassis would reboot, due to a deadlock caused by a temporary InfiniBand packet credit loop while rerouting a network. The solution was to change the default packet lifetime from infinite (never discard) to approximately one second.

- CSCsg15550

A problem has been fixed where the CLI **show ib sm neighbor** command could show incorrect information.

- CSCsg82721

A problem has been fixed where the Element Manager GUI did not correctly display DDR/SDR speed information in the InfiniBand Topology View.

- CSCsh48444

A problem has been fixed where the IB Subnet Manager did not always set the Attribute Offset in GetTable Response IB protocol messages.

Management

- CSCse77902

A problem has been fixed where snmpwalk of all MIBs failed on BladeCenter H in the tsDevGlobal MIB.

- CSCsf21538

A problem has been fixed where scp file transfers would complete but would not update the progress meter.

- CSCtp01498

A problem has been fixed where after executing the **delete** or **clock set** CLI commands, the **reload** CLI command would unnecessarily prompt if you wish to save changes.

- CSCsg55840

The InfiniBand subnet manager **max-hops** value can now be set to 0 from the CLI.

- CSCsg55898

Several errors were fixed in the GUI online help.

- CSCsh35987

A problem has been fixed on BladeCenter H where a powered IB interface overcurrent event was not indicated to the BladeCenter H Management Module.

Changes From Release 2.7.0 FCS (build 14) to 2.9.0 FCS (build 147)

This section describes the new features and resolved caveats since the 2.7.0 FCS (build 14) release.

InfiniBand

- CSCse96660, CSCse52949

Support has been added for configuration and management of 20 Gbps InfiniBand Double Data Rate links. All CLI, SNMP, and GUI areas support DDR. Note that the longest DDR copper IB cable supported at this time is 8 meters.

- CSCse95216

Support has been added for disabling IPoIB on an InfiniBand partition. This feature can be used to increase security on the default IB partition FFFF. Note that in 2.9.0 the mgmt-ib management InfiniBand interface cannot be used with a non-default IB partition.

- CSCsd83004

Support has been added for routing around InfiniBand components that need maintenance. This feature adds a new **route-around** IB CLI command that isolates the component without disrupting traffic.

- CSCse38656

Support has been added for automatically determining the maximum number of hops (depth) that the InfiniBand subnet manager has to search when configuring the InfiniBand fabric. This feature adds a new value 0 to the **max-hops** IB CLI configure command, which will cause the Subnet Manager to optimize IB paths for shortest distance.

Management

- CSCse39952

TopspinOS 2.9.0 is the first release to support the SFS 7000D chassis. The management Ethernet port on the 7000D defaults to using DHCP to obtain an IP address.

- CSCtp01063

Support has been added for clearing InfiniBand switch port counters with the new **clear** CLI command.

- CSCse39550

A problem has been fixed where CLI SSH logins would not authenticate with RADIUS or TACACS+.

- CSCse38550

A problem has been fixed where CLI logins would authenticate using local passwords after RADIUS or TACACS+ authentication failed.

- CSCse54928

Syslog message format is now more consistent with other Cisco products.

- CSCse88972, CSCsf24942, CSCtp01362
CLI error handling for incorrect commands is now more consistent with other Cisco products.
- CSCsg31514
A problem has been fixed where command editing did not work properly in CLI SSH logins.
- CSCse36832
A problem has been fixed where the CLI **copy** command would fail with symbolic links on a remote FTP server.
- CSCtp06939
A problem has been fixed where the CLI **copy** command would fail with filenames longer than 128 characters.
- CSCtp06599, CSCtp06538, CSCsg15998
Several problems were fixed in the CLI diagnostic test commands.

Changes From Release 2.5.0 Update 1 (build 251) to 2.7.0 FCS (build 14)

This section describes the new features and resolved caveats since the 2.5.0 Update 1 (build 251) release.

InfiniBand

- CSCsd86736, CSCsd56088, CSCse18870
On SFS 7000P and SFS 7008P, power to an InfiniBand-powered interface is now turned off when the port is shut down. Power status is now displayed along with other port status values.
- CSCsd57775
Added support for viewing the InfiniBand Linear Forwarding Table (LFT) and Multicast Forwarding Table (MFT) to SNMP, Element Manager GUI, and CLI.
- CSCsd55622
Added support for configuring several more InfiniBand Subnet Manager parameters.

Management

- CSCsd43751
Added support for viewing Cisco-standard Unique Device Identifier Information with the new **show inventory** CLI command.
- CSCsd57699
Added support for authentication with TACACS+.
- CSCsd54558
Added support for secondary syslog server.
- CSCsd73467
Added support for up to three RADIUS servers.
- CSCsd89599
Added support for displaying a CLI login banner through the optional **config:login-banner** file.

- CSCtp05680
The **show card-inventory** CLI command now displays uptime (number of seconds since booting) for each card.
- CSCtp02078, CSCsd68686, CSCsd68674, CSCse00615, CSCse08205, CSCse08216
Several problems were fixed in hardware fault error reporting.

Caveats

This section describes temporary limitations of this release. These restrictions will be resolved in a future release of this product.

InfiniBand

- CSCtp05858
In autonegotiation mode, it is possible for an unconnected InfiniBand port to report errors if the port is part of a cluster of three ports, where at least one of the other ports is connected.

Management

- CSCsg27834
On Windows Internet Explorer, the Chassis Manager web interface may pop up in front of all other windows. This condition is due to a bug in the Sun JVM and is fixed in the latest Sun release, which can be downloaded at http://www.java.com/en/download/windows_ie.jsp.
- CSCtp06068
The addr-option value for the BladeCenter InfiniBand switch module Ethernet management interface should always be dynamic. Setting addr-option to static or dhcp will cause the BladeCenter Management Module to lose communication with the Switch Module.
- CSCsg55985
An InfiniBand subnet manager **max-hops** value of 0 is not persistent across chassis reboots.
Workaround: Set **max-hops** to 0 each time the chassis is rebooted.
- CSCtp06432
The Topspin 270, Cisco SFS 7008, and Cisco SFS 7008P Management Interface Module firmware is not automatically upgraded on hotplug (hotswap). If a new Management Interface Module is inserted into the chassis, the chassis should be rebooted or power-cycled to ensure that the firmware is upgraded.
- CSCtp04462, CSCtp05567, CSCtp05620
The **diagnostic interface ib** commands are not supported.
- CSCtp05299
Diagnostic tests should not be run during a Topspin 270, Cisco SFS 7008, and Cisco SFS 7008P controller hot standby failover. The diagnostic commands should not be run until all cards are up and running.

- CSCtp05446
If a power cycle is performed on a Topspin 270, Cisco SFS 7008, and Cisco SFS 7008P after a software upgrade, rather than performing a **reload** command, it is possible that the core fabric in slot 12 can become the master after the power cycle.
- CSCtp05816
It is possible for POST to detect a fan that is not completely plugged in, but the error does not show up in the **show diag post** or **show diag fru-error** command output. The error is reported in the hwif_log.
- CSCtp04365
The Topspin 270, Cisco SFS 7008, and Cisco SFS 7008P incorrectly attempts to boot when no Management Interface Modules are present.
- The output of the CLI **show power-supply** command will have blank Power-supply Seeprom fields for some Topspin 270, Cisco SFS 7008, and Cisco SFS 7008P power supplies.
- CSCtp00587
The Ethernet management port (interface mgmt-ethernet) 100Base-T supports only full-duplex connectivity.
- CSCtp01801
If a firmware upgrade fails, the CLI does not report why the failure occurred.
Workaround: Use the **show logging end** command to review the failure.
- CSCtp02078
The error messages in the **show logging** command for environmental monitoring failures, such as failed power supplies, are cryptic.
- CSCtp00813
The CLI does not provide any diagnostics if the NTP server(s) is not responding.
- CSCtp02196
The EM GUI will not install if there is not sufficient temporary space in /tmp.
- CSCtp01285
The Serial/Mgmt-Ethernet and Maintenance->System Info windows in the GUI may not display if the GUI has been running for a while.
- CSCtp01977
The ALT-TAB icon for the Element Manager GUI is blank on Linux.

Related Documentation

The following list describes the documentation available with TopspinOS 2.9.0, which is available in electronic form and printed form upon request.



Note

Documentation is included on the TopspinOS 2.9.0 Server Switch CD Image.

You can download the latest documentation updates on the Cisco support site at http://www.cisco.com/en/US/partner/products/ps6418/tsd_products_support_category_home.html.

- *InfiniBand Hardware Installation and Cabling Guide*
- *Cisco SFS 7000P InfiniBand Server Switch Installation and Configuration Note*
- *Cisco SFS 7000D InfiniBand Server Switch Installation and Configuration Note*
- *Cisco SFS 7000P and SFS 7000D InfiniBand Server Switches Hardware Installation Guide*
- *Cisco SFS 7008P InfiniBand Server Switch Installation and Configuration Note*
- *Cisco SFS 7008P InfiniBand Server Switch Hardware Installation Guide*
- *Cisco 4x InfiniBand Switch Module for IBM BladeCenter User Guide*
- *Release Notes for TopspinOS Release 2.9.0*
- *Cisco SFS Product Family Chassis Manager User Guide*
- *Cisco SFS Product Family Element Manager User Guide*
- *Cisco SFS Product Family Command Reference Guide*

Service and Support

For additional support, you must first register your product at <http://www.cisco.com>. After registering, you may contact your supplier for support, or Cisco directly.

Refer to the “[Obtaining Documentation, Obtaining Support, and Security Guidelines](#)” section on [page 10](#) in this document.

When you call Cisco Technical Support or use the Cisco Technical Support website at <http://www.cisco.com>, be prepared to provide the following information to support personnel:

General Information

- Technical Support registration number, if applicable
- Error messages received
- Detailed description of the problem and specific questions
- Description of any troubleshooting steps already performed and results

Server Configuration

- Type of server, chip set, CPU, amount of RAM, and number of nodes
- Attached storage devices (output from `cat /proc/scsi/scsi`)
- InfiniBand configuration (output from `/usr/local/topspin/sbin/hca_self_test`)

Chassis Configuration

- Chassis model
- Output from the **show running-status all** command

Chassis Serial Number

The chassis serial number and corresponding bar code are provided on the serial number label, as shown in this example:

Model: TS360**SN UST323XXXXXXXXX**

This chassis serial number can be found on the bottom of the chassis or the outside of the chassis box packaging. It can also be found in the output of the **show backplane** command.

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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

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