



# Cisco MDS 9000 Series Release Notes, Release 9.2(1)

This document describes the features, issues, and deployment guidelines for the Cisco MDS NX-OS software for the use on the Cisco MDS 9000 Series Switches.

**Note:** The documentation set for this product strives to use bias-free language. For the purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

**Note:** Release notes are updated on an as needed basis with new information on restrictions and issues. Refer to the following website for the most recent version of the [Cisco MDS 9000 Series Release Notes](#).

Date	Description
November 06, 2023	Added <a href="#">CSCv93277</a> in the Resolved Issues section.
July 03, 2023	Added <a href="#">CSCwe08911</a> in the Open Issues section.
June 16, 2023	Add restriction for over subscription caused by FPIN notifications.
March 16, 2023	Added <a href="#">CSCwb48133</a> in the Open Issues section.
August 8, 2022	Added <a href="#">CSCwa86129</a> in the Open Issues section.
May 12, 2022	Added <a href="#">CSCv91665</a> in the Open Issues section.
March 23, 2022	Added <a href="#">CSCwb14523</a> in the Open Issues section.
March 2, 2022	Added <a href="#">CSCwb07996</a> in the Open Issues section.
January 28, 2022	Added upgrading guideline for Cisco MDS 48-Port 64-Gbps Fibre Channel Switching Module (DS-X9748-3072K9).
December 15, 2021	Added <a href="#">CSCv76123</a> in the Open Issues section.
September 29, 2021	Added <a href="#">CSCvz65820</a> in the Open Issues section.
September 20, 2021	Added <a href="#">CSCvz09012</a> in the Open Issues section.
September 8, 2021	Added <a href="#">CSCvz32361</a> in the Resolved Issues section.
August 25, 2021	Release 9.2(1) became available.

## Introduction

The Cisco MDS 9000 Series of Multilayer Directors and Fabric Switches provide best-in-class high availability, scalability, security, and management, that enables to deploy high-performance storage-area networks. Layering a rich set of intelligent features onto a high-performance switch fabric, the Cisco MDS 9000 Series addresses the stringent requirements of large data center storage environments: high availability, security, scalability, ease of management, and seamless integration of new technologies.

---

## About Software Images

The Cisco MDS NX-OS operating system is shipped with the Cisco MDS 9000 Series Switches. The Cisco MDS NX-OS software consists of two images: the kickstart image and the system image. These images can be upgraded or downgraded to different versions. The versions of both images must match for the system to boot.

Each model of Cisco MDS switch has unique kickstart and system images. For more information on the image names for each Cisco MDS switch, see the [Cisco MDS 9000 NX-OS Software Upgrade and Downgrade Guide, Release 9.x](#).

To download new Cisco MDS 9000 Series software, including Cisco MDS NX-OS and Cisco DCNM management software, go to the Storage Networking Software download website at <https://software.cisco.com/download/home>.

## Choosing Between Cisco MDS NX-OS Open Systems Releases

Cisco uses release numbering to indicate the maturity of a Cisco MDS NX-OS release train. Cisco MDS NX-OS major versions are incremented when significant software features or hardware support are added. Because of the focus on new features and hardware, all defects may not yet have been fixed. After an initial release, minor version numbers of the train are incremented, and only security patches and defect fixes are added, providing better stability to the new features and updated security.

For information about other releases, refer to the Release Notes on the [Cisco MDS 9000 NX-OS and SAN-OS Software](#) documentation page. For Cisco recommended MDS NX-OS releases for each type of hardware, see [Recommended Releases for Cisco MDS 9000 Series Switches](#).

## Components Supported

For information on supported software and hardware components, see [Cisco MDS 9000 Series Compatibility Matrix](#).

## FICON

Cisco MDS NX-OS Release 9.2(1) is not IBM FICON qualified. For more information on releases that are IBM FICON qualified, see <http://www.cisco.com/c/en/us/support/storage-networking/mds-9000-nx-os-san-os-software/products-release-notes-list.html>.

## Upgrading Cisco MDS NX-OS Software Image

This section lists the guidelines recommended for upgrading Cisco MDS NX-OS software image and includes the following topics:

- [General Upgrading Guidelines](#)
- [Open Systems Nondisruptive Upgrade Paths](#)

For detailed instructions for performing a software upgrade using Cisco DCNM, see the [Cisco DCNM Release Notes](#).

## General Upgrading Guidelines

This section lists the general guidelines for performing a software upgrade:

- Install and configure dual supervisor modules before the upgrade.

- Issue the **show install all impact upgrade-image** command to determine if the upgrade will be nondisruptive.
- Some features are impacted whether an upgrade is disruptive or nondisruptive:
  - **Fibre Channel Ports:** Fibre Channel ports can be nondisruptively upgraded without affecting traffic on the ports. See [Open Systems Nondisruptive Upgrade Paths](#) for all MDS NX-OS releases.
  - **Fibre Channel over Ethernet (FCoE) Ports:** FCoE ports can be nondisruptively upgraded without affecting traffic on the ports. See [Open Systems Nondisruptive Upgrade Paths](#) for all MDS NX-OS releases.
  - **IP Storage (IPS) Ports:** Traffic on IPS ports on Cisco MDS 9220i and Cisco MDS 24/10-Port SAN Extension Modules is disrupted during an upgrade or downgrade. Nodes that are members of VSANs traversing an FCIP ISL are impacted, and a fabric reconfiguration may occur. If supported, iSCSI initiators connected to the IPS ports lose connectivity to iSCSI targets while the upgrade is in progress.

**Note:** In addition to these guidelines, review the information in the [Limitations and Restrictions](#) section before a software upgrade to determine if a feature may possibly behave differently following the upgrade.

- To upgrade or downgrade to a Cisco MDS NX-OS release version, the same release version of the kickstart and system images in the install all command must be used.
- If you are upgrading Cisco MDS 9700 Series Directors from Cisco MDS NX-OS Release 8.3(1), Release 8.3(2), Release 8.4(1), or Release 8.4(1a) to Release 8.4(2) or later, ensure that you perform a switchover before upgrading. For more information, see [CSCvt87216](#).
- If you are upgrading from a release prior to Cisco MDS NX-OS Release 9.2(1), ensure that you use the **clear logging onboard txwait** command after upgrading. Otherwise, the file will be automatically deleted and recreated at the new file size when the file size exceeds 512 KB. For more information, see the [Cisco MDS 9000 Series Interfaces Configuration Guide, Release 9.x](#).
- If you are upgrading from Cisco MDS NX-OS Release 8.5(1) to Release 9.2(1), ensure that you disable the Fabric Performance Monitor (FPM) feature using the **no feature fpm** command before upgrading.
- We recommend that if all of the following conditions are true that the Cisco MDS 48-Port 64-Gbps Fibre Channel Switching Module (DS-X9748-3072K9) NOT be inserted in the chassis:
  - Cisco MDS 9706, MDS 9710, or MDS 9718
  - Cisco MDS NX-OS Release 9.2(1)
  - Non-default FCoE FCMAP is configured. This can be checked by issuing the **show fcoe | i FC-MAP** command. The default value of FCMAP is 0x0e:fc:00.

Also, for the switches running Release 9.2(1) and equipped with Cisco MDS 48-Port 64-Gbps Fibre Channel Switching Module (DS-X9748-3072K9), the FCMAP should NOT be changed to non-default value. However, after the switch has been upgraded to Release 9.2(2) or later, the FCoE FCMAP can be configured to a non-default value. For more information, see [CSCwa34016](#).

## Open Systems Nondisruptive Upgrade Paths

The software upgrade information in this section applies only to Fibre Channel switching traffic. Upgrading system software disrupts IP traffic and intelligent services traffic.

**Table 1.** Nondisruptive Upgrade Paths to Cisco MDS NX-OS Release 9.2(1)

Current Release	Nondisruptive Upgrade Paths and Ordered Upgrade Steps
8.1(x) and above releases <sup>1</sup>	Upgrade directly to MDS NX-OS Release 9.2(1)
All 7.3(x) releases	<b>Step 1.</b> Upgrade directly to MDS NX-OS Release 8.1(1b) <b>Step 2.</b> Upgrade to MDS NX-OS Release 9.2(1)
6.2(29) and above releases	<b>Step 1.</b> Upgrade directly to MDS NX-OS Release 8.4(2c) <b>Step 2.</b> Upgrade to MDS NX-OS Release 9.2(1)
6.2(13a) until 6.2(27)	<b>Step 1.</b> Upgrade directly to MDS NX-OS Release 6.2(29) <b>Step 2.</b> Upgrade to MDS NX-OS Release 8.4(2c) <b>Step 3.</b> Upgrade to MDS NX-OS Release 9.2(1)
All 6.2(x) releases prior to 6.2(13a)	<b>Step 1.</b> Upgrade directly to MDS NX-OS Release 6.2(13a) <b>Step 2.</b> Upgrade to MDS NX-OS Release 6.2(29) <b>Step 3.</b> Upgrade to MDS NX-OS Release 8.4(2c) <b>Step 4.</b> Upgrade to MDS NX-OS Release 9.2(1)

## Downgrading Cisco MDS NX-OS Software Image

This section lists the guidelines recommended for ISSD of Cisco MDS NX-OS software image and includes the following topics:

- [General Downgrading Guidelines](#)
- [Open Systems Nondisruptive Downgrade Paths](#)

### General Downgrading Guidelines

Follow these general guidelines before performing a software downgrade:

- Disable all features that are not supported by the downgrade release. Use the **show incompatibility system downgrade-image** command to determine the features that needs to be disabled.
- Use the **show install all impact downgrade-image** command to determine if the downgrade is nondisruptive.
- Some features are impacted whether a downgrade is disruptive or nondisruptive:
  - **Fibre Channel Ports:** Fibre Channel ports can be nondisruptively downgraded without affecting traffic on the ports. See [Open Systems Nondisruptive Downgrade Paths](#) for all MDS NX-OS releases.

---

<sup>1</sup> If the SAN Analytics feature is enabled, then disable the SAN Analytics feature using the **no feature analytics** command before upgrading from Cisco MDS NX-OS 8.2(x) or Cisco MDS NX-OS 8.3(x) to Cisco MDS NX-OS Release 9.2(1). However, you can upgrade from Cisco MDS NX-OS Release 8.4(1) and above releases to Cisco MDS NX-OS Release 9.2(1) without disabling the feature.

- **Fibre Channel over Ethernet (FCoE) Ports:** FCoE ports can be nondisruptively downgraded without affecting traffic on the ports. See [Open Systems Nondisruptive Downgrade Paths](#) for all MDS NX-OS releases.
- **IPStorage Ports:** Traffic on IPS ports on Cisco MDS 9220i and Cisco MDS 24/10-Port SAN Extension Modules is disrupted during an upgrade or downgrade. Nodes that are members of VSANs traversing an FCIP ISL are impacted, and a fabric reconfiguration may occur. If supported, iSCSI initiators connected to the IPS ports lose connectivity to iSCSI targets while the upgrade is in progress.
- **I/O Acceleration:** Traffic that uses I/O Acceleration is disrupted during a downgrade.
- If you are downgrading from this release to a release before Cisco MDS NX-OS Release 9.2(1), ensure that you run the **clear logging onboard txwait** command after the downgrade is complete. Otherwise, logging to the OBFL TxWait file may cease with an error. For more information, see the [Cisco MDS 9000 Series Interfaces Configuration Guide, Release 9.x](#).
- Any hardware that is not supported by the downgrade release version will be powered down when the downgrade release starts running. Power off and or remove any unsupported components before downgrading. For more information about supported hardware see [Cisco MDS 9000 Series Compatibility Matrix](#).

## Open Systems Nondisruptive Downgrade Paths

**Table 2.** Nondisruptive Downgrade Paths from NX-OS Release 9.2(1)

Target Release	Nondisruptive Downgrade Paths and Ordered Downgrade Steps
8.1(x) and above releases	Downgrade to the target release
All 7.3(x) releases	<b>Step 1.</b> Downgrade directly to MDS NX-OS Release 8.1(1b) <b>Step 2.</b> Downgrade to the target release
6.2(29) and above releases	<b>Step 1.</b> Downgrade directly to MDS NX-OS Release 8.4(2c) <b>Step 2.</b> Downgrade to the target release
6.2(13a) until 6.2(27)	<b>Step 1.</b> Downgrade directly to MDS NX-OS Release 8.1(1b) <b>Step 2.</b> Downgrade to the target release
All 6.2(x) releases prior to 6.2(13a)	<b>Step 1.</b> Downgrade directly to MDS NX-OS Release 8.1(1b) <b>Step 2.</b> Downgrade to MDS NX-OS Release 6.2(13a) <b>Step 3.</b> Downgrade to the target release

## New Hardware Features

### Cisco MDS 48 Port 64 Gbps Fibre Channel Switching Module

The Cisco MDS 48-Port 64-Gbps Fibre Channel Switching Module (DS-X9748-3072K9) is supported on Cisco MDS 9700 Series Multilayer Directors. This module delivers predictable performance, scalability, and innovative features to support private and virtualized data centers.

For more information about this module, see *Product Overview* chapter in [Cisco MDS 9700 Series Hardware Installation Guide](#).

---

## New Software Features

### Secure Syslog

The ability to log syslogs securely to a remote syslog server was added. This feature allows you to securely log system messages to a configured remote logging server using TLS. The **trustpoint client-identity** option was added to the **logging server** command.

For more information, see [Cisco MDS 9000 Series System Management Configuration Guide, Release 9.x](#).

### VMID Analytics

The allocation of the VMIS field in the CS\_CTL FC header field has changed. The range 1 - 15 is reserved for ER\_RDY use and 16 - 255 for VMID use.

The **vmis range range vsan id** command was modified.

For more information, see [Cisco MDS 9000 Series Fabric Configuration Guide, Release 9.x](#).

### Standby Supervisor mgmt0 Status

The ability to check the standby supervisor mgmt0 interface was added. A warning message and syslog are generated to alert the user if the standby supervisor Ethernet management port is disconnected or down before performing an In-Service Software Upgrade (ISSU) or system switchover.

The **show interface mgmt number standby** command was also introduced to display the status of the standby supervisor mgmt0 interface.

Upgrading (ISSU) or downgrading (ISSD) from Cisco MDS NX-OS Release 9.2(1) or later releases will also check the status of the standby supervisor mgmt0 interface. If the interface is not up, a message will be printed in the same group of messages that indicate if the upgrade or downgrade will be hitless or not.

The **system switchover** command has been enhanced to not allow a switchover to the standby supervisor and displays a message when the standby supervisor mgmt0 interface is not up. To bypass this check, the **bypass-standby-mgmt0** parameter was added to the **system switchover** command.

For more information, see [Cisco MDS 9000 Series High Availability Configuration Guide, Release 9.x](#).

### Secure Remote System Message Logging

The ability to log syslogs securely to a remote syslog server was added. This feature allows you to securely log system messages to a configured remote logging server using TLS. The **secure** and **trustpoint client-identity** options were added to the **logging server** command.

For more information, see [Cisco MDS 9000 Series System Management Configuration Guide, Release 9.x](#).

### MIB Support for Standby Supervisor mgmt0 Status for Device Manager

The *CISCO-ENTITY-DISPLAY-MIB* is updated to add support for standby supervisor mgmt0 status. For downloading MIBs, see <ftp://ftp.cisco.com/pub/mibs/>.

### On-board Failure Logging

The log size for TXWait counter in OBFL was changed from 512 KB to 8 MB. After upgrading or downgrading from Cisco MDS NX-OS Release 9.2(1) or later releases, the TxWait OBFL will need to be cleared manually via the **clear logging onboard txwait** command.

For more information, see [Cisco MDS 9000 Series Interfaces Configuration Guide, Release 9.x](#).

---

## Fabric Notifications

The Fabric Notification – FPIN and Congestion Signal feature is out of the preview (beta) status and can be used in the production environment.

For more information, see *Congestion Management* chapter in [Cisco MDS 9000 Series Interfaces Configuration Guide, Release 9.x](#).

## Unsupported Features

### Data Mobility Manager

From Cisco MDS NX-OS Release 8.1(1), the Cisco MDS Data Mobility Manager is not supported on Cisco MDS 9000 Series Switches.

### Zoning Features

LUN zoning, read-only zones, and broadcast zones are no longer supported.

If these features are already configured, completely remove all the configurations that include these features before attempting to bring up these modules. In addition, you cannot configure these features after you bring up these modules.

### XRC Acceleration License

From Cisco MDS NX-OS Release 8.1(1a), the Cisco Extended Remote Copy (XRC) acceleration license is obsoleted on Cisco MDS 9000 Series Switches due to improvements in the mainframe XRC feature.

### Virtual Router Redundancy Protocol (VRRP)

From Cisco MDS NX-OS Release 8.3(1) and later, the VRRP feature is not supported on Cisco MDS 9000 Series Switches.

### Data Encryption Standard (DES) Encryption for SNMP

From Cisco MDS NX-OS Release 8.5(1), AES-128 is the default encryption mechanism for SNMPv3. DES encryption for SNMP is supported only for DES users who upgrade from previous releases to Cisco MDS NX-OS Release 8.5(1). Ensure that you delete all the SNMPv3 users configured with DES encryption before upgrading to Cisco MDS NX-OS Release 8.5(1) and later releases. Any downgrades from Cisco MDS NX-OS Release 8.5(1) will be restricted if any of the SNMPv3 users have DES encryption configured as the privacy protocol. All such users will either need to be deleted or reconfigured to use no privacy protocol or AES128 encryption before downgrading.

For more information, see [Cisco MDS 9000 Series System Management Configuration Guide, Release 9.x](#).

## Limitations and Restrictions

### SAN Extension Tuner

San Extension Tuner (SET) is not supported on Cisco MDS 9220i switches in Cisco MDS NX-OS Release 9.2(1).

### Fibre Channel Read Diagnostic Parameters

Fibre Channel RDP querying is not supported on NP, Port Channel, or FCoE links.



---

## Slow Drain Detection and Congestion Isolation Enhancements

ER\_RDY is not supported on FC interfaces running at 10 Gbps.

## DIRL and FPIN

DIRL and FPIN are not supported on switches that are operating in the Cisco NPV mode.

## FPIN Notifications

FPIN Notification for oversubscription-based congestion is not supported.

## FCIP Support

- In Cisco MDS NX-OS Release 9.2(1) or later releases, FCIP Write Acceleration is not supported between 24/10 San Extension Module and Cisco 18+4 MSM module and between 24/10 San Extension Module and Cisco SSN16 module.
- In Cisco MDS NX-OS Release 9.2(1) or later releases, FCIP Write Acceleration along with IVR is not supported on FCIP tunnels configured on Cisco MDS 9700 Series switches.
- FCIP tunnels using Cisco MDS 24/10 Port SAN Extension Module cannot be used across FSPF equal cost paths.
- On Cisco MDS 9220i switches, the maximum throughput on a single FCIP tunnel is 7 Gbps. On the 40 Gbps IPS port, the maximum throughput is 28.5 Gbps when 4 FCIP tunnels are created on separate 802.1q VLAN interfaces.
- On Cisco MDS 24/10 Port SAN Extension Module, configuring multiple ECMP port channels with FCIP members in the same VSAN is not a valid configuration. If this is configured, then the traffic will flow through only one of the port channels.

## iSCSI Support

iSCSI is not supported on Cisco MDS 9700 Directors with Cisco MDS 24/10 port SAN Extension Modules and Cisco MDS 9220i Fabric Switch.

## HVDC PSU Support

The Cisco MDS 9700 HVDC PSU (DS-CHV-3.5KW) is not supported in Cisco MDS NX-OS Releases 8.1(1) and 8.1(1a). Do not attempt to load these releases on devices equipped with these PSUs or the systems will fail to power up.

## Cisco TrustSec FC Link Encryption

Cisco TrustSec FC Link Encryption support is available only on certain ports for the following modules:

- 48-Port 64-Gbps Fibre Channel Switching Module (DS-X9748-3072K9)
- 48-port 4/8/16/32-Gbps Fibre Channel switching module (DS-X9648-1536K9)
- 48-port 32-Gbps Fibre Channel Switching Module (DS-X9648-1536K9)
- 48-port 2/4/8/16-Gbps Fibre Channel switching module (DS-X9448-768K9)
- Cisco MDS 9000 24/10-Port SAN Extension Module (DS-X9334-K9)
- Cisco MDS 9132T 32-Gbps 32-Port Fibre Channel Fabric Switch
- Cisco MDS 9148T 32-Gbps 48-Port Fibre Channel Fabric Switch

- Cisco MDS 9396T 32-Gbps 96-Port Fibre Channel Fabric Switch
- Cisco MDS 9220i Fabric Switch

For more information, see [Cisco MDS 9000 Series Security Configuration Guide, Release 9.x](#).

## Resolved Issues

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvg20988</a>	ISSU/system switchover to check the viability of the standby sup's mgmt0 connection.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvj20982</a>	Enhancement to add TxWait and Transitions to Zero functionality to ER_RDY ISLs.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvk36805</a>	F32_TMM_PORT_FRAME_DROP, F16_TMM_PORT_FRM_DROP_CNT not logged in OBFL.	8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvk41398</a>	Memory leak in 16 Gbps driver causes director module or fabric switch reload.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvo75187</a>	'Link failure Link Reset failed nonempty rcv queue' during ISSU to 8.3(2).	8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvr82522</a>	Increase capacity of show logging onboard txwait buffer.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvs02855</a>	Need command to display standby supervisor mgmt0 interface status.	8.5(1) 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvs34401</a>	Port-monitor generates txwait random falling-threshold alerts with constant R-RDY delay.	8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2)
<a href="#">CSCvs86312</a>	MDS 9396S switch reboots with f16_mac_usd or f16_que_usd crash.	8.4(2)
<a href="#">CSCvu69869</a>	Configuring " vpc role preempt" will cause vPCs with port-type network to go into BKN state.	8.5(1) 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvv42842</a>	Need to include cctrl error logs in 'show tech detail' and 'show tech module'.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvv93277</a>	Interface CRCs not incrementing on MDS 32G modules/switches.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvw93541</a>	F32_MAC_KLM_CNTR_RX_FEC_UNCORRECTED_BLOCKS not being recorded in OBFL error-stats counter-stats.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvw67941</a>	User is prompted to validate SSH server key again after switchover.	8.4(1), 8.4(1a) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1a), 8.1(1b)
<a href="#">CSCvw75655</a>	MDS 9710 FCNS GA_NXT reply missing zoned members.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2)
<a href="#">CSCvx06226</a>	DIRL events (logs) from previous active not visible after switchover.	8.5(1)
<a href="#">CSCvx11676</a>	Congested device pWWN does not get removed from database after changing its logical type.	8.5(1)
<a href="#">CSCvx19452</a>	MDS DS-X9648-1536K9 ports moved to notConnected state after many port flaps.	8.5(1)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvx20461</a>	PMON disable not removing the ports under quarantine.	8.5(1)
<a href="#">CSCvx22763</a>	No SSH or telnet login prompt after upgrade to 8.4.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvx37367</a>	MDS9220I - IPS 40G port beacon function, port LED blinking as amber instead of green color.	8.5(1)
<a href="#">CSCvx37747</a>	MDS supervisor reloads due to usb-storage timeout.	8.5(1) 8.4(1a)
<a href="#">CSCvx43070</a>	MDS 9396S reloads due to Fatal Module Error, Service: System Manager when f16_mac_usd crashes.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvx45711</a>	9220i: FCIP-ECMP PC traffic is not flowing after bringing down one PC with "no use-profile".	8.5(1)
<a href="#">CSCvx47078</a>	Port 0 Port mode not valid errors floods under fcmac event-history.	8.5(1)
<a href="#">CSCvx47195</a>	Device Manager (DM) doesn't support IBM 8977-R16.	8.5(1)
<a href="#">CSCvx49403</a>	Port-Channel with Cisco switch OUI 0xDC774C does not come up or trunk.	8.5(1) 8.4(2b)
<a href="#">CSCvx50421</a>	RSCN sent to device that is not part of IVR zone update.	8.5(1) 8.4(2b)
<a href="#">CSCvx52194</a>	MDS 9396T, 9148T reloads during ISSU or internal switching errors or some ports fail loop back tests.	8.5(1) 8.4(2b)
<a href="#">CSCvx53098</a>	16G FICON port going into bad state and losing path with FEC enabled on 32G module.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1b)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvx55525</a>	ISSU upgrade from 8.2.2 to 8.4.1a resulted in a switch 9250i reboot (fcns crash).	8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvx56588</a>	'copy scp:' doesn't work on MDS switches from kickstart prompt.	8.5(1)
<a href="#">CSCvx62467</a>	DS-X9448-768K9 ports should be put in hwfailure status after logging parity errors.	8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvx67356</a>	Post ISSU/reload Service "snmpd" (PID xxxx) hasn't caught signal 11 (core will be saved).	8.4(2a), 8.4(2b)
<a href="#">CSCvx69774</a>	No longer able to log in with passwordless SSH after upgrade to NX-OS 8.5(1).	8.5(1)
<a href="#">CSCvx76468</a>	Reloading switch for a remote authenticated via LDAP causes CLI error.	8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvx86830</a>	"port-security" crash on MDS 9500.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1) 8.2(2), 8.2(1) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvx97022</a>	'ishow core backtrace': not working with valid pid + unable to SCP core files after invalid pid.	8.5(1) 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvx97700</a>	SSH service does not dump core file when it crashes.	8.5(1)
<a href="#">CSCvy01176</a>	%PORT-5-IF_DOWN_HW_FAILURE: %\$VSAN 100%\$ Interface fcx/y is down (Hardware Failure).	8.5(1)
<a href="#">CSCvy01192</a>	Remove most FIB and RIB info from show tech slowdrain in NX-OS 8.5(1).	8.5(1)
<a href="#">CSCvy01878</a>	FCIP throughput for some routes through MDS9700 24/10 FCIP module reduced after replacing the module.	8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvy03206</a>	SYSMGR-2-SERVICE_CRASHED: Service "snmpd" .	8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvy07442</a>	port-monitor tx-datarate-burst entries with rate values greater than 100%.	8.5(1)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvy13812</a>	MDS zoneset activate fails: Device-alias enhanced zone member unsupported in device-alias basic mode.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1) 8.2(2), 8.2(1) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvy16321</a>	FCNS crash caused by IPFC.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvy17223</a>	Debugging for 'the output may not have all the roles' warning nonfunctional.	8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvy22928</a>	MDS 8.5(1) snmp-server user priv password not updated when same username password is changed.	8.5(1)
<a href="#">CSCvy23094</a>	Unable to ISSD from NX-OS 8.5(1) with 'snmp-server user' with 'des' parameter in running-config.	8.5(1)
<a href="#">CSCvy26841</a>	Port Channel output discards after single member link failure with in-order-guarantee configured.	8.5(1) 8.4(2a), 8.4(2b)
<a href="#">CSCvy27979</a>	Copy/auto-copy for Kernel core doesn't work unless "show cores" is executed.	8.4(2c)
<a href="#">CSCvy35652</a>	BA_ACC sent by remote FCIP-peer MDS may not set 'end sequence' to 1.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2)
<a href="#">CSCvy43400</a>	XBAR initialization failure message indicates 'not enough memory' when PCIe bus failure.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1) 8.2(2), 8.2(1) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvy48254</a>	show ips internal eth-trace-all prints duplicate info for each ips port.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1) 8.2(2), 8.2(1) 8.1(1), 8.1(1a), 8.1(1b)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvy59564</a>	Zone service crashed with signal 6 on MDS 9148S.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2)
<a href="#">CSCvy59725</a>	IPS port of MDS 9220i link is up without cable.	8.5(1)
<a href="#">CSCvy62135</a>	snmp-server host port automatically changes.	8.5(1) 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvy65685</a>	Tx/Rx datarate-burst rising/falling syslog messages when datarate-burst is not active.	8.5(1)
<a href="#">CSCvy69011</a>	PMON False Alarms reported for a "core type " port-channel, but PMON configured only for Edge ports.	8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvy72687</a>	FSPF " Error in processing interface timer event" msg and switch becomes isolated from fabric.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1)
<a href="#">CSCvy79464</a>	" show system internal rib up-unicast" table shows stale and junk entries when ExitIntf is changed.	8.5(1)
<a href="#">CSCvy81672</a>	'show system internal fcoe_mgr info global' defaults to detailed output.	8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1) 8.2(2), 8.2(1) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvy88216</a>	Parity error in TCAM may lead to traffic disruption.	8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvy90825</a>	MDS 9220i : FIB crash seen during ISSU from 8.5 to 9.x.	8.5(1)
<a href="#">CSCvy94178</a>	vshd hap reset.	8.5(1) 8.4(2a), 8.4(2b)
<a href="#">CSCvy98450</a>	" show system internal rib up-unicast" not getting updated for ISL churn after rib process kill.	8.5(1)
<a href="#">CSCvz32361</a>	SNMP crash seen during ISSD.	8.5(1)

## Open Issues

Bug ID	Description	Known Impacted Releases
<a href="#">CSCuv76123</a>	fcdomain for VSAN hung in "Principal Switch Selection ongoing" .	9.2(1) 8.x 7.x 6.x
<a href="#">CSCvf08416</a>	M9132T, M9396S MDS9148T: pam_ftp(ftp:auth): conversation failed syslog is displayed in the show tech details.	9.2(1) 8.5(1) 8.4(1), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1) 8.2(2), 8.2(1)
<a href="#">CSCvj93031</a>	"show system login failures" does not display IPv6 addresses.	9.2(1) 8.5(1) 8.4(1), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1)
<a href="#">CSCvo13212</a>	Running snmpwalk IPv6 displays error Received source port is zero" .	9.2(1) 8.5(1) 8.4(1), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvo22835</a>	While moving IOA flow between 2 clusters, all flows are briefly suspended.	9.2(1) 8.5(1) 8.4(1), 8.4(2), 8.4(2a), 8.4(2b) 8.3(2), 8.3(1) 8.2(2), 8.2(1) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvp48050</a>	MDS 9700 Control Plane Packet drop seen when switch comes up.	9.2(1) 8.5(1) 8.4(1), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvp70681</a>	SAN telemetry: Receiver stays in "idle", no streaming to one receiver, and single threaded telemetry.	9.2(1) 8.5(1) 8.4(1), 8.4(2), 8.4(2a), 8.4(2b)



Bug ID	Description	Known Impacted Releases
<a href="#">CSCvs15569</a>	IKE negotiation fails when configured with authentication type to rsa-signature.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvs23106</a>	SCSI target discovery running even after removal of last DS-X9334-K9 module from switch.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvs83114</a>	aclqos crashed when Cisco MDS 24/10-Port SAN Extension Module with FCIP config removed out and inserted.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2)
<a href="#">CSCvt15096</a>	MDS 9250i/MDS 9148s port goes to not-connected state after cable pull.	9.2(1) 8.5(1) 8.4(2b)
<a href="#">CSCvt15761</a>	Non-disruptive reload cmd is causing reinitializing of the error disabled ports on other line cards.	9.2(1) 8.5(1) 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvt22913</a>	FCIP Links flaps with IOA traffic while adding few more links.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2)
<a href="#">CSCvt64521</a>	IPSec enabled FCIP tunnels don't come up after switch or module reload if tunnels are more than 18.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.2(1), 8.2(2) 8.1(1), 8.1(1a), 8.1(1b)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvt70406</a>	Certificate for Device Manager HTTPS download from switch is self signed.	9.2(1) 8.5(1) 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvw00538</a>	Remove misleading merge failed message for ficonstat in non-FICON VSAN.	9.2(1) 8.5(1) 8.4(2b)
<a href="#">CSCvw27832</a>	MDS:Kernel panic on DS-X97-SF4-K9 model supervisor.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvw98829</a>	97xx Chassis information missing and logging error message %PLATFORM-2-PS_UNSUPPORTED.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvw99177</a>	MDS 9220i/DS-X9748-3072K9: Stack trace not logging to obfl after kernel panic hit.	9.2(1) 8.5(1)
<a href="#">CSCvw03816</a>	Port Speed detected as 8G when connecting 16G Brocade AG to MDS 9250i/9148s switches.	9.2(1) 8.5(1) 8.4(2a), 8.4(2b)
<a href="#">CSCvw35209</a>	MDS9132T: EXT3-fs error seen continuously post copy r s and reload.	9.2(1) 8.5(1)
<a href="#">CSCvw64733</a>	M9220I- 40G CSR4 and LR40G optics link length and nominal bitrate values are incorrect.	9.2(1) 8.5(1)
<a href="#">CSCvw91963</a>	M9220i: IPS interface stuck in license not available state after MTU change to 1500bytes.	9.2(1) 8.5(1)
<a href="#">CSCvx24216</a>	MDS 9718 with Supervisor1 panics with 'general protection fault'.	9.2(1) 8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvx31119</a>	Supervisors crashed within secs one after other with warning Service: port hap reset.	9.2(1) 8.5(1) 8.4(1a)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvx37657</a>	Need to log nonvolatile logs about BIOS programming errors.	9.2(1) 8.5(1) 8.3(2)
<a href="#">CSCvx47587</a>	"Some klm entries are missing" logs when collecting tech-support in M9710.	9.2(1) 8.5(1)
<a href="#">CSCvy28230</a>	Add 'show fib internal logs' from each module to 'show tech-support details'.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2) 8.1(1), 8.1(1a), 8.1(1b)
<a href="#">CSCvy30360</a>	Interop: QLE2742 with ESX port take around 2 mins to come up after shut/no shut at 32G/auto speed.	9.2(1)
<a href="#">CSCvy72945</a>	FCIP engine crash during async replication with Huawei storage.	9.2(1) 8.5(1)
<a href="#">CSCwy79918</a>	Port beaconing is not turning off when external loopback is removed between two FC ports.	9.2(1)
<a href="#">CSCvy91504</a>	GOLD portLoopback test failing on FCSP enabled ports.	9.2(1)
<a href="#">CSCvy92200</a>	Interop - ATTO HBA connected to DS-X9648-3072K9 goes into offline with traffic during cable pull.	9.2(1)
<a href="#">CSCvy95168</a>	VMIS default range(16-255) changes to (1-255) after ISSD from 9.2(1) to 851.	9.2(1)
<a href="#">CSCvz05041</a>	LIOD : End to End drops are seen due to SSE delay between fib and queuing driver.	9.2(1)
<a href="#">CSCvz06987</a>	M9220i - switchport beacon disable, turning off link LED to off state.	9.2(1)
<a href="#">CSCvz08698</a>	QSFP-40G-SR4 beacons test fails.	9.2(1)
<a href="#">CSCvz09012</a>	End device ports go errored or not responding after Fabric switch ISSU.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvz10558</a>	RIB process die during booting up of module DS-X9648-1536K9.	9.2(1) 8.5(1) 8.4(2a), 8.4(2b)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCvz12727</a>	MDS ISSU fails, Detected Stalls on CPUs.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvz16644</a>	'system auto-collect tech-support' missing from cfg, command completion/inline help not working.	9.2(1) 8.5(1) 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvz23127</a>	Interop: IBM XIV Gen3 - DS-X9648-3072K9 link up time is long for speed test and shut/no shut.	9.2(1)
<a href="#">CSCvz26393</a>	IPStorage interface input error counters not incrementing.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCvz27021</a>	New device continues to receive FPIN even after slow device recovery.	9.2(1)
<a href="#">CSCvz29938</a>	Some interfaces of 32G FC Module DS-X9648-1536K9 cannot be configured for analytics.	9.2(1) 8.5(1) 8.4(2a), 8.4(2b)
<a href="#">CSCvz37953</a>	MDS 9710 switch does not allow /31 mask in IPS storage interface.	9.2(1) 8.5(1) 8.4(1), 8.4(1a), 8.4(2), 8.4(2a), 8.4(2b) 8.3(1), 8.3(2)
<a href="#">CSCvz43407</a>	FPM DURL devices does not recover after switchover.	9.2(1)
<a href="#">CSCvz65820</a>	VIC sending ABTS due to wrong MAC seen in the PLOGI ACC frame.	9.2(1)
<a href="#">CSCwb07996</a>	port-monitor not triggering on err-pkt-to-xbar and err-pkt-from-xbar on NX-OS 8.5(1) and later.	9.2(1) 8.5(1)
<a href="#">CSCwb14523</a>	Service "zone" (PID XXXX) hasn't caught signal 6 (core will be saved).	9.2(1), 9.2(2) 8.4(2), 8.4(2a), 8.4(2b), 8.4(2c), 8.4(2d)
<a href="#">CSCvw91665</a>	MDS crashes with "Anon_Resident_Mem 0 KB being killed due to lack of memory"	9.2(1), 9.2(2) 8.4(2), 8.4(2a), 8.4(2b)
<a href="#">CSCwa86129</a>	Inserting 64G Line Card into chassis with Sup-1(DS-X97-SF1-K9) causes switch to continuously reboot	9.2(1)

Bug ID	Description	Known Impacted Releases
<a href="#">CSCwb48133</a>	MDS 9250i Interface IPStorage1/2 is transmitting with IPStorage1/1's MAC address	9.2(1), 9.2(1a), 9.2(2) 8.5(1)
<a href="#">CSCwe08911</a>	Sending clear FPIN to end device, immediately after congestion clear	9.3(2a), 9.3(2), 9.3(1), 9.2(2), 9.2(1a), 9.2(1) 8.5(1)

## Related Documentation

The documentation set for the Cisco MDS 9000 Series includes the documents listed in this section. To find a document online, access the following URL:

[http://www.cisco.com/en/US/products/ps5989/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps5989/tsd_products_support_series_home.html)

The documentation set for Cisco Nexus Dashboard Fabric Controller is available from the following URL:

[http://www.cisco.com/en/US/products/ps9369/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps9369/tsd_products_support_series_home.html)

### Release Notes

<http://www.cisco.com/c/en/us/support/storage-networking/mds-9000-nx-os-san-os-software/products-release-notes-list.html>

### Licensing Information

[https://www.cisco.com/c/en/us/td/docs/switches/datacenter/mds9000/sw/8\\_x/config/licensing/cisco\\_mds9000\\_licensing\\_guide\\_8x.html](https://www.cisco.com/c/en/us/td/docs/switches/datacenter/mds9000/sw/8_x/config/licensing/cisco_mds9000_licensing_guide_8x.html)

### Regulatory Compliance and Safety Information

<http://www.cisco.com/c/en/us/td/docs/switches/datacenter/mds9000/hw/regulatory/compliance/RCSI.html>

### Compatibility Information

<http://www.cisco.com/c/en/us/support/storage-networking/mds-9000-nx-os-san-os-software/products-device-support-tables-list.html>

### Installation and Upgrade

<http://www.cisco.com/c/en/us/support/storage-networking/mds-9000-nx-os-san-os-software/products-installation-guides-list.html>

### Configuration Guides

<http://www.cisco.com/c/en/us/support/storage-networking/mds-9000-nx-os-san-os-software/products-installation-and-configuration-guides-list.html>

### Command-Line Interface

<http://www.cisco.com/c/en/us/support/storage-networking/mds-9000-nx-os-san-os-software/products-command-reference-list.html>

---

## Troubleshooting and Reference

<http://www.cisco.com/c/en/us/support/storage-networking/mds-9000-nx-os-san-os-software/tsd-products-support-troubleshoot-and-alerts.html>

## Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, send your comments to [mds-docfeedback@cisco.com](mailto:mds-docfeedback@cisco.com). We appreciate your feedback.

## Legal Information

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: [www.cisco.com/go/trademarks](http://www.cisco.com/go/trademarks). Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1721R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

© 2021–2023 Cisco Systems, Inc. All rights reserved.