

# Cisco MDS 9000 Series Release Notes

Release 9.3(2a)

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 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
August 29, 2025	Upgrading and Downgrading Cisco MDS NX-OS Software Image sections are moved to Cisco MDS 9000 NX-OS Software Upgrade and Downgrade Guide, Release 9.x.
August 21, 2025	Added <a href="#">CSCwn10124</a> to the Open Issues section.
August 18, 2025	Added <a href="#">CSCwo00133</a> to the Open Issues section.
March 25, 2025	Added <a href="#">CSCwo03706</a> to the Open Issues section.
December 22, 2023	Added <a href="#">CSCwi36075</a> to the Open Issues section. Added <a href="#">CSCwf85545</a> to the Open Issues section.
November 06, 2023	Added <a href="#">CSCvv93277</a> to the Resolved Issues section.
July 03, 2023	Added <a href="#">CSCwe08911</a> to the Open Issues section.
June 16, 2023	Add restriction for over subscription caused by FPIN notifications.
May 17, 2023	Initial release.

## 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 has the flexibility to fit small deployments as well as to addresses the stringent requirements of large data center storage environments: high availability, security, scalability, ease of management, and seamless integration of new technologies.

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

## 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.

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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 NDFC management software, go to the Storage Networking Software download website at <https://software.cisco.com/download/find/MDS>.

## Upgrade and Downgrade Paths

Cisco MDS NX-OS Release 9.3(2a) supports non-disruptive upgrade and downgrade to other Cisco MDS NX-OS Releases. For upgrade and downgrade paths, and guidelines that are recommended for upgrading or downgrading Cisco MDS NX-OS software images, see [Cisco MDS 9000 NX-OS Software Upgrade and Downgrade Guide, Release 9.x](#).

**Note:** If you have the SAN analytics feature enabled, ensure that you disable the SAN analytics feature using the **no feature analytics** command before upgrading. For detailed instructions, see *Preventing SAN Analytics Corruption during ISSU* section in the [Cisco MDS 9000 NX-OS Software Upgrade and Downgrade Guide, Release 9.x](#).

## 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.

Details about the new features and hardware supported by Cisco MDS NX-OS Release 9.3(2a) can be found in the [New Hardware and Software Features](#) section. 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 the [Recommended Releases for Cisco MDS 9000 Series Switches](#) document.

## Components Supported

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

## IBM FICON Qualification Status

Cisco MDS NX-OS Release 9.3(2a) is not IBM FICON qualified.

## Cisco TrustSec FC Link Encryption

For more information about which set of interfaces on each module support FC-SP, see the [Configuring Cisco TrustSec Fibre Channel Link Encryption](#) chapter of the *Cisco MDS 9000 Series Security Configuration Guide, Release 9.x*.

## New Hardware and Software Features

- [New Hardware Features](#)
- [New Software Features](#)
- [Unsupported Features for all Releases](#)

## New Hardware Features

There are no new hardware features introduced in Cisco MDS NX-OS Release 9.3(2a).

## New Software Features

Product	Feature	Description
Security	LDAP parameter limit is increased to 512 characters.	LDAP search-filter, rootDN and BaseDN character limit is increased to 512 from 128 characters.  For more information, see the <a href="#">Cisco MDS NX-OS Security Configuration Guide, Release 9.x</a> .

## Unsupported Features for all Releases

### SDV feature

Cisco MDS NX-OS Release 9.3(2) and/or later does not support Cisco SAN device virtualization (SDV).

### Traditional and Smart Licensing Version 1.0 Licenses

Cisco MDS NX-OS Release 9.2(2) and/or later does not support installation of Product Authorization Key (PAK) or Smart Licensing version 1.0 licenses.

For more information such as how to migrate licenses software updates, see the “Smart Licensing Using Policy” chapter in the [Cisco MDS 9000 Series Licensing Guide, Release 9.x](#).

### Python 2

Support for Python 2 is deprecated from Cisco MDS NX-OS Release 9.2(2). Python 3 continues to be supported instead. Python 2 scripts should be checked for compatibility with Python 3 to ensure they continue to function as expected.

For more information, see the 'Python API' chapter in the [Cisco MDS 9000 Series Programmability Guide, Release 9.x](#).

### 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 boot any module. In addition, you cannot configure these features after you bring up any module.

### 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

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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 8.5(1) or later.

### **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**

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

### **FPIN**

FPIN is not supported on switches that are operating in NPV mode.

FPIN Notification for oversubscription-based congestion is not supported.

### **FCIP Support**

- In Cisco MDS NX-OS Release 9.2(2) 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(2) or later releases, simultaneous use of IVR and FCIP Write Acceleration features 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 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 releases prior to Cisco MDS NX-OS Release 8.1(1a). Do not attempt to load these releases on devices equipped with these PSUs or the systems will fail to power up.

## Resolved Issues

### Severity 2 (Severe) Issues

Defect ID	Headline	Known Impacted Releases
<a href="#">CSCwd63288</a>	"Ldap Daemon" crashes on MDS 9000 due to heartbeat failure.	8.5(1) 8.1(1)

### Severity 3 (Moderate) Issues

Defect ID	Headline	Known Impacted Releases
<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="#">CSCwd54301</a>	ips port stuck in init with switch reload multiple iterations	9.3(1)
<a href="#">CSCwe46073</a>	'show tech-support details' command hangs and doesn't print any output	9.3(2), 9.3(1) 8.4(2e)

### Severity 6 (Enhancement) Issues

Defect ID	Headline	Known Impacted Releases
<a href="#">CSCvk14774</a>	LDAP search-filter character limit should be increased to at least 512 characters	8.3(2) 8.2(2)
<a href="#">CSCwe35699</a>	sudo message from "show logging onboard migration status" output should be suppressed	9.3(2)
<a href="#">CSCwe35689</a>	sudo message from "show hardware internal cpu-mac eobc registers" output should be suppressed	9.3(2)

## Open Issues

### Severity 1 (Catastrophic) Issues

Bug ID	Headline	Known Impacted Releases
<a href="#">CSCwo03706</a>	An FC interface will not come up / switch to soft zoning	9.3(2a), 9.3(2), 9.3(1) 9.2(2), 9.2(1a), 9.2(1) 8.5(1)

## Severity 2 (Severe) Issues

Defect ID	Headline	Known Impacted Releases
<a href="#">CSCwf22337</a>	FCIP performance impact caused by RED packet drops	9.3(2), 9.3(2a)
<a href="#">CSCwn10124</a>	Device unable to log into fabric due to maximum FLOGIs already on the port	9.4(3), 9.4(2a), 9.4(2), 9.4(1a), 9.4(1) 9.3(1) 9.2(1) 8.5(1) 8.4(1) 8.3(1) 8.2(1) 8.1(1)
<a href="#">CSCwo00133</a>	"analytics" service crashes	9.3(2a) 8.4(2c)

## Severity 3 (Moderate) Issues

Defect ID	Headline	Known Impacted Releases
<a href="#">CSCwf85545</a>	"port" service crash	9.3(2a), 9.3(2), 9.3(1) 9.2(2), 9.2(1a) 8.4(2f), 8.4(2e)
<a href="#">CSCwi36075</a>	Interfaces stuck in offline status after storage processor upgrade	9.4(1a), 9.4(1) 9.3(2a), 9.3(2), 9.3(1)

## Severity 4 (Minor) Issues

Defect ID	Headline	Known Impacted Releases
<a href="#">CSCwd74002</a>	CISCO-ACCELINK DS-SFP-FC64G-SW SFPs reporting high Rx/Tx power warnings when operating at 16G speed	9.3(2)

## Severity 5 (Cosmetic) Issues

Defect ID	Headline	Known Impacted Releases
<a href="#">CSCvs67788</a>	"rmon event 5" displays as PMON@INFO instead of NOTIFICATION(5) owner PMON@NOTIFICATION	8.4(1)

## Severity 6 (Enhancement) Issues

Defect ID	Headline	Known Impacted Releases
<a href="#">CSCvw77444</a>	Need to automatically sync bootflash:/scripts directory between active and standby sups	8.1(1a)
<a href="#">CSCwa89654</a>	Enhancement: Upgrade MDS 9000 nginx to >= 1.20.1	8.4(2c)

Defect ID	Headline	Known Impacted Releases
<a href="#">CSCwb13413</a>	Repeated sync loss does not bring down crossbar.	8.4(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 Prime Data Center Network Manager 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/dcn/mds9000/sw/9x/configuration/licensing/cisco-mds-9000-nx-os-licensing-guide-9x.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>



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## 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

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