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# Cisco MDS 9000 Family Release Notes for Storage Services Interface Image Release 4.2(1a)

**Release Date:** September 25, 2009

**Text Part Number:** OL-20651-01

This document describes the caveats and limitations for the Storage Service Interface (SSI) software for the various Cisco MDS Services Modules (SSM, MSM-18/4, and MDS 9222i module). Use this document in conjunction with the documents listed in the “[Related Documentation](#)” section on [page 9](#).



**Note**

Release notes are sometimes updated with new information on restrictions and caveats. Refer to the following website for the most recent version of the *Cisco MDS 9000 Family Release Notes*:  
[http://www.cisco.com/en/US/products/ps5989/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps5989/prod_release_notes_list.html)

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## Introduction

The SSI interface provides the following features:



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- Network-based volume management (EMC Invista, Incipient iNSP)
- Network-assisted storage applications using SANTap
- Fibre Channel Write Acceleration (FC-WA) and SCSI flow statistics
- Network-Accelerated Serverless Backup (NASB)
- Data Mobility Manager (DMM)
- Secure Data Erase


**Note**

As of NX-OS Release 4.1(1b), SAN-OS has been changed to NX-OS. References to SAN-OS releases before 4.1(1b) still apply.

## System Requirements

This section describes the system requirements for Cisco MDS NX-OS Release 4.1(3) and includes the following topics:

- [Components Supported, page 2](#)
- [Determining the Software Version, page 7](#)

## Components Supported

[Table 1](#) lists the software and hardware components supported by the Cisco MDS 9000 Family.

**Table 1 Cisco MDS 9000 Family Supported Software and Hardware Components**

| Component     | Part Number    | Description                                              | Applicable Product    |
|---------------|----------------|----------------------------------------------------------|-----------------------|
| Software      | M95S2K9-4.2.1a | MDS 9500 Supervisor/Fabric-2, NX-OS software.            | MDS 9500 Series only  |
|               | M92S2K9-4.2.1a | MDS 9222 Supervisor/Fabric-2, NX-OS software.            | MDS 9200 Series only  |
|               | M92S1K9-4.2.1a | MDS 9216 Supervisor/Fabric-I, NX-OS software.            | MDS 9216i only        |
|               | M91S2K9-4.2.1a | MDS 9100 Supervisor/Fabric-2, NX-OS software.            | MDS 9100 Series only  |
| SSI Interface | SSI-M9K9-421a  | Storage Services Interface for NX-OS Release 4.2.(1a)    | MDS 9000 Family       |
| Licenses      | M9500SSE184K9  | Storage Services Enabler License for one MSM-18/4 module | MDS 9500 Series only  |
|               | M9222ISSE1K9   | Storage Services Enabler License                         | MDS 9222i Switch only |
|               | M9200SSE184K9  | Storage Services Enabler License for one MSM-18/4 module | MDS 9200 Series only  |
|               | M95DMM184K9    | Data Mobility Manager License for one MSM-18/4 module    | MDS 9500 Series only  |
|               | M9222IDMMK9    | Data Mobility Manager License for Cisco MDS 9222i        | MDS 9222i Switch      |

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**Table 1 Cisco MDS 9000 Family Supported Software and Hardware Components (continued)**

| Component               | Part Number     | Description                                                                                                                                                                                                                                           | Applicable Product    |
|-------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Licenses<br>(continued) | M92DMM184K9     | Data Mobility Manager License for one MSM-18/4 module                                                                                                                                                                                                 | MDS 9200 Series only  |
|                         | M95DMM184TSK9   | Data Mobility Manager for one MSM-18/4 module — Time limited to 180 days only                                                                                                                                                                         | MDS 9500 Series only  |
|                         | M9222IDMMTSK9   | Data Mobility Manager — Time limited to 180 days only                                                                                                                                                                                                 | MDS 9222i Switch only |
|                         | M92DMM184TSK9   | Data Mobility Manager for one MSM-18/4 module — Time limited to 180 days only                                                                                                                                                                         | MDS 9200 Series only  |
| Chassis                 | DS-C9513        | Cisco MDS 9513 Multilayer Director (13-slot multilayer director with 2 slots for Supervisor-2 modules, with 11 slots available for switching modules — SFPs sold separately)                                                                          | MDS 9513 Switch       |
|                         | DS-C9509        | Cisco MDS 9509 Multilayer Director (9-slot multilayer director with 2 slots for Supervisor modules, with 7 slots available for switching modules — SFPs sold separately)                                                                              | MDS 9509 Switch       |
|                         | DS-C9506        | Cisco MDS 9506 Multilayer Director (6-slot multilayer director with 2 slots for Supervisor modules, with 4 slots available for switching modules — SFPs sold separately)                                                                              | MDS 9506 Switch       |
|                         | DS-C9222i-K9    | Cisco MDS 9222i Multilayer Fabric Switch (3-rack-unit (3RU) semimodular multilayer fabric switch with 18 4-Gbps Fibre Channel ports, 4 Gigabit Ethernet ports, and a modular expansion slot for Cisco MDS 9000 Family Switching and Services modules) | MDS 9222i Switch      |
|                         | DS-C9216i-K9    | Cisco MDS 9216i Multilayer Fabric Switch (3RU semi-modular multilayer fabric switch with 14 2-Gbps Fibre Channel ports, 2 Gigabit Ethernet ports, and a modular expansion slot for Cisco MDS 9000 Family Switching and Services modules)              | MDS 9216i Switch      |
|                         | DS-C9134-K9     | Cisco MDS 9134 34-Port Multilayer Fabric Switch (1RU fixed-configuration multilayer fabric switch with 32 4-Gbps and 2 10-Gbps Fibre Channel ports)                                                                                                   | MDS 9134 Switch       |
|                         | DS-C9124-K9     | Cisco MDS 9124 24-Port Multilayer Fabric Switch (1RU fixed-configuration multilayer fabric switch with 24 4-Gbps Fibre Channel ports)                                                                                                                 | MDS 9124 Switch       |
| Supervisor Modules      | DS-X9530-SF2-K9 | Cisco MDS 9500 Series Supervisor-2 Module                                                                                                                                                                                                             | MDS 9500 Series       |

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**Table 1 Cisco MDS 9000 Family Supported Software and Hardware Components (continued)**

| Component                | Part Number   | Description                                                                                                                                                                                                           | Applicable Product                  |
|--------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Switching Modules        | DS-X9016      | Cisco MDS 9000 16-Port Fibre Channel Switching Module with Small Form-Factor Pluggable (SFP) LC (16-port, 2-Gbps Fibre Channel switching module with SFP LC connectors for Cisco MDS 9216i and Cisco MDS 9500 Series) | MDS 9500 Series<br>MDS 9216i Switch |
|                          | DS-X9032      | Cisco MDS 9000 32-Port 2-Gbps Fibre Channel Switching Module with SFP LC connectors                                                                                                                                   | MDS 9500 Series<br>MDS 9216i Switch |
|                          | DS-X9112      | Cisco MDS 9000 12-port 4-Gbps Fibre Channel Switching Module with SFP LC connectors                                                                                                                                   | MDS 9500 Series<br>MDS 9200 Series  |
|                          | DS-X9124      | Cisco 24-port 4-Gbps Fibre Channel Switching Module with SFP LC connectors                                                                                                                                            | MDS 9500 Series<br>MDS 9200 Series  |
|                          | DS-X9148      | Cisco MDS 9000 48-port 4-Gbps Fibre Channel Switching Module with SFP LC                                                                                                                                              | MDS 9500 Series<br>MDS 9200 Series  |
|                          | DS-X9704      | Cisco MDS 9000 Family 4-Port 10-Gbps Fibre Channel Switching Module with SFP LC                                                                                                                                       | MDS 9500 Series<br>MDS 9200 Series  |
|                          | DS-X9224-96K9 | Cisco MDS 9000 24-Port 8-Gbps Fibre Channel Switching Module with SFP and SFP+ LC connectors                                                                                                                          | MDS 9500 Series                     |
|                          | DS-X9248-96K9 | Cisco MDS 9000 48-Port 8-Gbps Fibre Channel Switching Module with SFP and SFP+ LC connectors                                                                                                                          | MDS 9500 Series                     |
|                          | DS-X9248-48K9 | Cisco MDS 9000 4/44-Port Host-Optimized 8-Gbps Fibre Channel Switching Module with SFP and SFP+ LC connectors                                                                                                         | MDS 9500 Series<br>MDS 9222i Switch |
| Services Modules         | DS-X9304-18K9 | Cisco MDS 9000 18/4-Port Multiprotocol Services Module (MSM-18/4) — 18-port, 4-Gbps Fibre Channel plus 4-port Gigabit Ethernet IP services and switching module with SFP LC connectors                                | MDS 9500 Series<br>MDS 9200 Series  |
|                          | DS-X9302-14K9 | Cisco MDS 9000 14/2-Port Multiprotocol Services Module — 14-port, 2-Gbps Fibre Channel plus 2-port Gigabit Ethernet IP services and switching module with SFP LC connectors                                           | MDS 9500 Series<br>MDS 9216i Switch |
|                          | DS-X9032-SSM  | Cisco MDS 9000 32-Port Storage Services Module — 32-port, 2-Gbps storage services module with SFP LC connectors                                                                                                       | MDS 9500 Series<br>MDS 9200 Series  |
| External crossbar module | DS-13SLT-FAB1 | Cisco MDS 9513 Switching Fabric1 Module                                                                                                                                                                               | MDS 9513 Switch                     |
|                          | DS-13SLT-FAB2 | Cisco MDS 9513 Switching Fabric2 Module                                                                                                                                                                               | MDS 9513 Switch                     |

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**Table 1 Cisco MDS 9000 Family Supported Software and Hardware Components (continued)**

| Component                     | Part Number     | Description                                                                                                                                                            | Applicable Product                                   |
|-------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Optics                        | DS-X2-FC10G-SR  | X2 SC optics, 10-Gbps Fibre Channel for short reach                                                                                                                    | MDS 9500 Series<br>MDS 9200 Series                   |
|                               | DS-X2-FC10G-LR  | X2 SC optics, 10-Gbps Fibre Channel for long reach (10 km)                                                                                                             | MDS 9500 Series<br>MDS 9200 Series                   |
|                               | DS-X2-FC10G-ER  | X2 SC optics, 10-Gbps Fibre Channel for extended reach (40 km)                                                                                                         | MDS 9500 Series<br>MDS 9200 Series                   |
|                               | DS-X2-FC10G-CX4 | X2 SC optics, 10-Gbps Fibre Channel over copper                                                                                                                        | MDS 9500 Series<br>MDS 9200 Series                   |
|                               | DS-X2-E10G-SR   | X2 SC optics, 10-Gbps Ethernet for short reach                                                                                                                         | MDS 9500 Series<br>MDS 9200 Series                   |
| LC-type<br>fiber-optic<br>SFP | DS-SFP-FC8G-SW  | SFP+ optics (LC type) for 2-, 4-, or 8-Gbps Fibre Channel for shortwave mode                                                                                           | MDS DS-X9200 Series<br>switching modules             |
|                               | DS-SFP-FC8G-LW  | SFP+ optics (LC type) for 2-, 4-, or 8-Gbps Fibre Channel for longwave mode; supports distances up to 10 km                                                            | MDS DS-X9200 Series<br>switching modules             |
|                               | DS-SFP-FC4G-SW  | SFP optics (LC type) for 1-, 2-, or 4-Gbps Fibre Channel for shortwave mode                                                                                            | MDS 9124 and<br>DS-X9100 Series<br>switching modules |
|                               | DS-SFP-FC4G-MR  | SFP optics (LC type) for 1-, 2-, or 4-Gbps Fibre Channel for longwave mode; supports distances up to 4 km                                                              | MDS 9124 and<br>DS-X9100 Series<br>switching modules |
|                               | DS-SFP-FC4G-LW  | SFP optics (LC type) for 1-, 2-, or 4-Gbps Fibre Channel for longwave mode; supports distances up to 10 km                                                             | MDS 9124 and<br>DS-X9100 Series<br>switching modules |
|                               | DS-SFP-FC-2G-SW | SFP optics (LC type) for 1- or 2-Gbps Fibre Channel for shortwave mode; not supported for use in 4-Gbps-capable ports                                                  | MDS 9000 Series                                      |
|                               | DS-SFP-FC-2G-LW | SFP optics (LC type) for 1- or 2-Gbps Fibre Channel for longwave mode for Cisco MDS 9500, MDS 9200, and MDS 9100 Series; not supported for use in 4-Gbps-capable ports | MDS 9000 Series                                      |
|                               | DS-SFP-FCGE-SW  | SFP optics (LC type) for 1-Gbps Ethernet and 1- or 2-Gbps Fibre Channel for shortwave mode; not supported for use in 4-Gbps-capable ports                              | MDS 9000 Series                                      |
|                               | DS-SFP-FCGE-LW  | SFP optics (LC type) for 1-Gbps Ethernet and 1- or 2-Gbps Fibre Channel for longwave mode; not supported for use in 4-Gbps-capable ports                               | MDS 9000 Series                                      |
|                               | DS-SFP-GE-T     | SFP (RJ-45 connector) for Gigabit Ethernet over copper                                                                                                                 | MDS 9000 Series                                      |

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**Table 1 Cisco MDS 9000 Family Supported Software and Hardware Components (continued)**

| Component                                            | Part Number      | Description                                                                                                                                                                                                                                                                                                                                                                       | Applicable Product                 |
|------------------------------------------------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Cisco Coarse Wavelength-Division Multiplexing (CWDM) | DS-CWDM-xxxx     | CWDM Gigabit Ethernet and 1- or 2-Gbps Fibre Channel SFP LC type, where product number xxxx = 1470, 1490, 1510, 1530, 1550, 1570, 1590, or 1610 nm                                                                                                                                                                                                                                | MDS 9000 Family                    |
|                                                      | DS-CWDM4Gxxxx    | CWDM 4-Gbps Fibre Channel SFP LC type, where product number xxxx = 1470, 1490, 1510, 1530, 1550, 1570, 1590, or 1610 nm                                                                                                                                                                                                                                                           | MDS 9000 Family                    |
| Dense Wavelength-Division Multiplexing (DWDM)        | DWDM-X2-xx.xx    | DWDM X2 SC optics for 10-Gbps Fibre Channel connectivity to an existing Ethernet DWDM infrastructure, with 15xx.xx nm wavelength, where xx.xx = 60.61, 59.79, 58.98, 58.17, 56.55, 55.75, 54.94, 54.13, 52.52, 51.72, 50.92, 50.12, 48.51, 47.72, 46.92, 46.12, 44.53, 43.73, 42.94, 42.14, 40.56, 39.77, 38.98, 38.19, 36.61, 35.82, 35.04, 34.25, 32.68, 31.90, 31.12, or 30.33 | MDS 9500 Series<br>MDS 9200 Series |
|                                                      | DWDM-SFP-xxxx    | DWDM Gigabit Ethernet and 1- or 2-Gbps Fibre Channel SFP LC type, where product number xxxx = 3033, 3112, 3190, 3268, 3425, 3504, 3582, 3661, 3819, 3898, 3977, 4056, 4214, 4294, 4373, 4453, 4612, 4692, 4772, 4851, 5012, 5092, 5172, 5252, 5413, 5494, 5575, 5655, 5817, 5898, 5979, or 6061nm                                                                                 | MDS 9000 Family                    |
| Add/Drop Multiplexer (ADM)                           | DS-CWDMOADM4A    | 4-channel CWDM optical ADM (OADM) module (Cisco CWDM 1470, 1490, 1510, or 1530 NM Add/Drop Module)                                                                                                                                                                                                                                                                                | MDS 9000 Family                    |
|                                                      | DS-CWDMOADM4B    | 4-channel CWDM OADM module (Cisco CWDM 1550, 1570, 1590, or 1610 NM Add/Drop Module)                                                                                                                                                                                                                                                                                              | MDS 9000 Family                    |
|                                                      | DS-CWDM-MUX8A    | ADM for 8 CWDM wavelengths                                                                                                                                                                                                                                                                                                                                                        | MDS 9000 Family                    |
| CWDM Multiplexer Chassis                             | DS-CWDMCHASSIS   | 2-slot chassis for CWDM ADMs                                                                                                                                                                                                                                                                                                                                                      | MDS 9000 Family                    |
| Power Supplies                                       | DS-CAC-300W      | 300W AC power supply                                                                                                                                                                                                                                                                                                                                                              | MDS 9100 Series                    |
|                                                      | DS-C24-300AC     | 300W AC power supply                                                                                                                                                                                                                                                                                                                                                              | MDS 9124 Switch                    |
|                                                      | DS-CAC-845W      | 845W AC power supply for Cisco MDS 9200 Series                                                                                                                                                                                                                                                                                                                                    | MDS9200 Series                     |
|                                                      | DS-CAC-3000W     | 3000W AC power supply for Cisco MDS 9509                                                                                                                                                                                                                                                                                                                                          | MDS 9509 Switch                    |
|                                                      | DS-CAC-6000W     | 6000W AC power supply for Cisco MDS 9513                                                                                                                                                                                                                                                                                                                                          | MDS 9513 Switch                    |
|                                                      | DS-CAC-1900W     | 1900W AC power supply for Cisco MDS 9506                                                                                                                                                                                                                                                                                                                                          | MDS 9506 Switch                    |
| CompactFlash                                         | MEM-MDS-FLD512M  | External 512-MB CompactFlash memory for supervisor module                                                                                                                                                                                                                                                                                                                         | MDS 9500 Series                    |
| Port Analyzer Adapter                                | DS-PAA-2, DS-PAA | A standalone Fibre Channel-to-Ethernet adapter that allows for simple, transparent analysis of Fibre Channel traffic in a switched fabric                                                                                                                                                                                                                                         | MDS 9000 Family                    |
| Smart Card Reader                                    | DS-SCR-K9        | Storage Media Encryption (SME) Smart Card Reader                                                                                                                                                                                                                                                                                                                                  | MDS 9000 Family                    |

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**Table 1** Cisco MDS 9000 Family Supported Software and Hardware Components (continued)

| Component  | Part Number  | Description                                                                                                  | Applicable Product |
|------------|--------------|--------------------------------------------------------------------------------------------------------------|--------------------|
| Smart Card | DS-SC-K9     | SME Smart Card                                                                                               | MDS 9000 Family    |
| CD-ROM     | M90FM-CD-441 | Cisco MDS 9000 Management Software and Documentation CD-ROM for Cisco MDS 9000 NX-OS Software Release 4.1(3) | MDS 9000 Family    |

## Determining the Software Version



### Note

Use the latest available software release supported by your vendor for all Cisco MDS 9000 Family products.

To determine the version of the Cisco NX-OS software currently running on a Cisco MDS 9000 Family switch using the CLI, log into the switch and enter the **show version** command.

To determine the version of the Cisco NX-OS software currently running on a Cisco MDS 9000 Family switch using the Fabric Manager, from the Switches tab in the information pane, locate the switch using the IP address, logical name, or WWN, and then check its version in the Release column.

## Downloading Software

To download the latest Cisco software, access the Software Center at this URL:

<http://www.cisco.com/public/sw-center>



### Note

If you would like to request code to be provided under the terms of either GNU General Public License (GPL) or the GNU Lesser General Public License (LGPL), contact [mds-software-disclosure@cisco.com](mailto:mds-software-disclosure@cisco.com).

If SSMs are present in a Cisco MDS 9000 Family switch, these upgrades may be performed as required:

- Upgrading a previously provided package
- Upgrading the SAN-OS image
- Reformatting the SSM add-on image

If you need additional information about installing or upgrading the SSM, refer to the *Cisco MDS 9000 Family Storage Services Module Software Installation and Upgrade Guide*.

## New Features

This section describes the new features introduced in this release. For more information about the features listed, see the documentation set listed in the “[Obtaining Documentation and Submitting a Service Request](#)” section on page 11.

The SSI Release 4.2(1a) image is compatible with the Cisco MDS NX-OS Release 4.2(1a) image.

There are no new features in this release.

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## Limitations

This sections lists limitations or restrictions associated with this release.

### Configuring SSM Ports in Auto Mode

Starting with Cisco MDS SAN-OS Release 3.0(1), the SSM front panel ports can no longer be configured in auto mode. Because auto mode is the default for releases prior to Release 3.0(1), you should modify the configuration of the ports before upgrading the SAN-OS software image to NX-OS Release 4.2(1a) to avoid any traffic disruption.

For information on how to reconfigure the SSM ports, refer to the “Reconfiguring SSM Ports Before Upgrading to NX-OS Release 4.2(1a)” section of the [Cisco MDS 9000 Family Release Notes for Cisco MDS NX-OS Release 4.2\(1a\)](#).

## Compatibility Matrix

Before upgrading your SSI image, refer to the [Cisco MDS NX-OS Release Compatibility Matrix for Storage Service Interface Images](#), and to Table 11 in the [MDS 9000 Family Release Notes for NX-OS Release 4.2\(1a\)](#). Use Table 11 to determine your nondisruptive upgrade path to Cisco MDS NX-OS Release 4.2(1a).

## Caveats

This section lists the open and resolved caveats for this release. Use [Table 2](#) to determine the status of a particular caveat. In the table, “O” indicates an open caveat and “R” indicates a resolved caveat.

**Table 2**      **Open and Resolved Caveats for Cisco MDS SSI Release (4.1(3i))**

| DDTS Number                | Status |
|----------------------------|--------|
| <b>Severity 2</b>          |        |
| <a href="#">CSCsz19597</a> | R      |
| <b>Severity 3</b>          |        |
| <a href="#">CSCta39343</a> | R      |

### Resolved Caveats

- CSCsz19597

**Symptom:** iSAPI unquiesce calls are not protected by a lock in the data path processor code in the MSM-18/4. Under a rare race condition, a list might become corrupted, which will cause the data path processor to fail. As a consequence, the module will reload.

**Workaround:** This issue is resolved.

- CSCta39343

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**Symptom:** On an MDS 9222i switch, you can configure the supervisor module to upload the data path processor (DPP) core files in case the DPP fails. The upload can be partial, resulting in 3 files, or full, resulting in 32 files. If a partial core upload is configured and a critical error occurs on the supervisor module while the files are uploading, the switch might reload before the core files are completely uploaded to the TFTP server. As of SSI Release 4.1(3i), both full and partial core uploads to the TFTP server are supported. Previously, only the full core upload configuration was supported.

**Workaround:** This issue is resolved.

## Related Documentation

The documentation set for NX-OS for the Cisco MDS 9000 Family includes the following documents. To find a document online, access the following web site:

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

The documentation set for Cisco Fabric Manager appears in the *Cisco Fabric Manager Release Notes for Release 4.2(1a)*, which is available from the following website:

[http://www.cisco.com/en/US/partner/products/ps10495/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/partner/products/ps10495/prod_release_notes_list.html)

## Release Notes

- *Cisco MDS 9000 Family Release Notes for Cisco MDS NX-OS Releases*
- *Cisco MDS 9000 Family Release Notes for MDS SAN-OS Releases*
- *Cisco MDS 9000 Family Release Notes for Storage Services Interface Images*
- *Cisco MDS 9000 Family Release Notes for Cisco MDS 9000 EPLD Images*

## Regulatory Compliance and Safety Information

- *Regulatory Compliance and Safety Information for the Cisco MDS 9000 Family*

## Compatibility Information

- *Cisco Data Center Interoperability Support Matrix*
- *Cisco MDS 9000 NX-OS Hardware and Software Compatibility Information and Feature Lists*
- *Cisco MDS NX-OS Release Compatibility Matrix for Storage Service Interface Images*
- *Cisco MDS 9000 Family Switch-to-Switch Interoperability Configuration Guide*
- *Cisco MDS NX-OS Release Compatibility Matrix for IBM SAN Volume Controller Software for Cisco MDS 9000*
- *Cisco MDS SAN-OS Release Compatibility Matrix for VERITAS Storage Foundation for Networks Software*

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## Hardware Installation

- *Cisco MDS 9500 Series Hardware Installation Guide*
- *Cisco MDS 9200 Series Hardware Installation Guide*
- *Cisco MDS 9100 Series Hardware Installation Guide*
- *Cisco MDS 9124 and Cisco MDS 9134 Multilayer Fabric Switch Quick Start Guide*

## Software Installation and Upgrade

- *Cisco MDS 9000 NX-OS Release 4.1(x) and SAN-OS 3(x) Software Upgrade and Downgrade Guide*
- *Cisco MDS 9000 Family Storage Services Interface Image Install and Upgrade Guide*
- *Cisco MDS 9000 Family Storage Services Module Software Installation and Upgrade Guide*

## Cisco NX-OS

- *Cisco MDS 9000 Family NX-OS Licensing Guide*
- *Cisco MDS 9000 Family NX-OS Fundamentals Configuration Guide*
- *Cisco MDS 9000 Family NX-OS System Management Configuration Guide*
- *Cisco MDS 9000 Family NX-OS Interfaces Configuration Guide*
- *Cisco MDS 9000 Family NX-OS Fabric Configuration Guide*
- *Cisco MDS 9000 Family NX-OS Quality of Service Configuration Guide*
- *Cisco MDS 9000 Family NX-OS Security Configuration Guide*
- *Cisco MDS 9000 Family NX-OS IP Services Configuration Guide*
- *Cisco MDS 9000 Family NX-OS Intelligent Storage Services Configuration Guide*
- *Cisco MDS 9000 Family NX-OS High Availability and Redundancy Configuration Guide*
- *Cisco MDS 9000 Family NX-OS Inter-VSAN Routing Configuration Guide*

## Command-Line Interface

- *Cisco MDS 9000 Family Command Reference*

## Intelligent Storage Networking Services Configuration Guides

- *Cisco MDS 9000 I/O Acceleration Configuration Guide*
- *Cisco MDS 9000 Family SANTap Deployment Guide*
- *Cisco MDS 9000 Family Data Mobility Manager Configuration Guide*
- *Cisco MDS 9000 Family Storage Media Encryption Configuration Guide*
- *Cisco MDS 9000 Family Secure Erase Configuration Guide*
- *Cisco MDS 9000 Family Cookbook for Cisco MDS SAN-OS*

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## Troubleshooting and Reference

- *Cisco NX-OS System Messages Reference*
- *Cisco MDS 9000 Family NX-OS Troubleshooting Guide*
- *Cisco MDS 9000 Family NX-OS MIB Quick Reference*
- *Cisco MDS 9000 Family NX-OS SMI-S Programming Reference*

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, 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>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

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

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