



Preface

This preface describes the audience, organization, and conventions of the *Cisco MDS 9000 Series NX-OS IP Services Configuration Guide*. It also provides information on how to obtain related documentation.

Audience

This guide is for experienced network administrators who are responsible for configuring and maintaining the Cisco MDS 9000 Series of multilayer directors and fabric switches.

Organization

This guide is organized as follows:

Chapter	Title	Description
Chapter 1	IP Services Overview	Provides an overview of the Intelligent Storage Services supported by the Cisco MDS 9000 NX-OS software.
Chapter 2	Configuring Fibre Channel over IP	Describes how the switch allows IP hosts to access Fibre Channel storage using the iSCSI protocol.
Chapter 3	Configuring the SAN Extension Tuner	Explains the SAN extension tuner (SET) feature that optimizes FCIP performance.
Chapter 4	Configuring Internet Small Computer Systems Interface	Describes the iSCSI feature that is specific to the Fibre Channel module with IPS ports and is available in the Cisco MDS 9200 Switches or Cisco MDS 9500 Directors.
Chapter 5	Configuring IP Services	Provides details on IP over Fibre Channel (IPFC) services and provides configuring IPFC, virtual router, and DNS server configuration information.
Chapter 6	Configuring IPStorage Services	Provides details on extending the reach of Fibre Channel SANs by connecting separated SAN islands together through IP networks using FCIP, and allowing IP hosts to access FC storage using the iSCSI protocol.

Chapter	Title	Description
Chapter 7	Configuring IPv4 for Gigabit Ethernet Interfaces	Describes the IPv4 protocol support provided by Cisco MDS 9000 Family switches.
Chapter 8	Configuring IPv6 for Gigabit Ethernet Interfaces	Describes the IPv6 protocol support provided by Cisco MDS 9000 Family switches.

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Chapter 8	Configuring IPv6 for Gigabit Ethernet Interfaces	Describes the IPv6 protocol support provided by Cisco MDS 9000 Family switches.

Document Conventions

Command descriptions use these conventions:

boldface font	Commands and keywords are in boldface.
<i>italic font</i>	Arguments for which you supply values are in italics.
[]	Elements in square brackets are optional.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.

Screen examples use these conventions:

screen font	Terminal sessions and information the switch displays are in screen font.
boldface screen font	Information you must enter is in boldface screen font.
<i>italic screen font</i>	Arguments for which you supply values are in italic screen font.
< >	Nonprinting characters, such as passwords, are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

This document uses the following conventions:



Note

Means reader *take note*. Notes contain helpful suggestions or references to material not covered in the manual.



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Related Documentation

The documentation set for the Cisco MDS 9000 Family includes the following documents. To find a document online, use the Cisco MDS NX-OS Documentation Locator at:

http://www.cisco.com/en/US/docs/storage/san_switches/mds9000/roadmaps/doclocator.htm

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*

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 MDS 9000 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 Reference

- *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*

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 *What's New in Cisco Product Documentation* at:
<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>.

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