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## Preface

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This preface describes the audience, organization, and conventions of the *Cisco MDS 9000 Family Command Reference*. It also provides information on how to obtain related documentation.

## Audience

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

## Organization

This guide is organized as follows:

Chapter	Title	Description
Chapter 1	CLI Overview	Describes the CLI (command-line interface).
Chapter 2	A Commands	Describes all commands beginning with the letter “a.”
Chapter 3	B Commands	Describes all commands beginning with the letter “b.”
Chapter 4	C Commands	Describes all commands beginning with the letter “c.”
Chapter 5	D Commands	Describes all commands beginning with the letter “d.”
Chapter 6	E Commands	Describes all commands beginning with the letter “e.”
Chapter 7	F Commands	Describes all commands beginning with the letter “f.”
Chapter 8	I Commands	Describes all commands beginning with the letter “i.”
Chapter 9	L Commands	Describes all commands beginning with the letter “l.”
Chapter 10	M Commands	Describes all commands beginning with the letter “m.”
Chapter 11	N Commands	Describes all commands beginning with the letter “n.”
Chapter 12	P Commands	Describes all commands beginning with the letter “p.”
Chapter 13	Q Commands	Describes all commands beginning with the letter “q.”
Chapter 14	R Commands	Describes all commands beginning with the letter “r.”
Chapter 15	S Commands	Describes all commands beginning with the letter “s” except for the <b>show</b> commands.

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Chapter	Title	Description
Chapter 16	Show Commands	Describes all the <b>show</b> commands.
Chapter 17	T Commands	Describes all commands beginning with the letter “t.”
Chapter 18	U Commands	Describes all commands beginning with the letter “u.”
Chapter 19	V Commands	Describes all commands beginning with the letter “v.”
Chapter 20	W Commands	Describes all commands beginning with the letter “w.”
Chapter 21	Z Commands	Describes all commands beginning with the letter “z.”

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## Document Conventions

Command descriptions use these conventions:

<b>boldface font</b>	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 }	Required alternative keywords are grouped in braces and separated by vertical bars.
[ x   y   z ]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Screen examples use these conventions:

screen font	Terminal sessions and information the switch displays are in <i>screen font</i> .
<b>boldface screen font</b>	Information you must enter is in <b>boldface screen font</b> .
<i>italic screen font</i>	Arguments for which you supply values are in <i>italic screen font</i> .
< >	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.

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## Related Documentation

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

*Quick Start Guide for the Cisco MDS 9000 Family*

*Cisco MDS 9200 Series Hardware Installation Guide*

*Cisco MDS 9500 Series Hardware Installation Guide*

*Cisco MDS 9000 Family Configuration Guide*

*Cisco MDS 9000 Family Fabric Manager User Guide*

*Cisco MDS 9000 Family Troubleshooting Guide*

*Cisco MDS 9000 Family System Messages Guide*

*Cisco MDS 9000 Family MIB Reference Guide*

## Obtaining Documentation

The following sections explain how to obtain documentation from Cisco Systems.

### World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following URL:

<http://www.cisco.com>

### Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

### Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products Marketplace:  
[http://www.cisco.com/cgi-bin/order/order\\_root.pl](http://www.cisco.com/cgi-bin/order/order_root.pl)
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:  
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

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To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Cisco Systems  
Attn: Document Resource Connection  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

## Cisco.com

Cisco.com is the foundation of a suite of interactive, network services that provides immediate, open access to Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you to

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

You can self-register on Cisco.com to obtain customized information and service. To access Cisco.com, go to the following URL:

<http://www.cisco.com>

## Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available through the Cisco TAC: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

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Inquiries to Cisco TAC are categorized according to the urgency of the issue:

- Priority level 4 (P4) —You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3) —Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2) —Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1) —Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

Which Cisco TAC resource you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

## Cisco TAC Web Site

The Cisco TAC Web Site allows you to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to the following URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco services contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to the following URL to register:

<http://www.cisco.com/register/>

If you cannot resolve your technical issues by using the Cisco TAC Web Site, and you are a Cisco.com registered user, you can open a case online by using the TAC Case Open tool at the following URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, it is recommended that you open P3 and P4 cases through the Cisco TAC Web Site.

## Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses issues that are classified as priority level 1 or priority level 2; these classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a case is automatically opened.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to the following URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled; for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). In addition, please have available your service agreement number and your product serial number.