



## Preface

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### Audience

This guide is for the networking professional managing a Catalyst 2950 switch (hereafter referred to as the 2950 switch), from the Cisco IOS command-line interface (CLI). Before using this guide, you should have experience working with Cisco IOS and be familiar with the concepts and terminology of Ethernet and local area networking.

### Purpose

This guide provides detailed information about the commands that have been created or changed specifically for the Catalyst 2950 switches. Some of these commands require that you have the enhanced software image installed on your switch.

The enhanced software image supports these switches:

- Catalyst 2950C-24
- Catalyst 2950G-12-EI
- Catalyst 2950G-24-EI
- Catalyst 2950G-24-EI-DC
- Catalyst 2950G-48-EI
- Catalyst 2950T-24

The standard software image supports these switches:

- Catalyst 2950-12
- Catalyst 2950-24

Use this guide with other Catalyst 2950 documents for these topics:

- Software configuration guide—For concepts and procedures for configuring and troubleshooting a switch or switch clusters. It includes descriptions of the management interface options and the features supported by the software.
- Release notes—For the hardware and software requirements and cluster compatibility requirements. For information and procedures for assigning switch IP information and passwords by using the setup program. For information about Cluster Management Suite (CMS) requirements and the procedures for browser configuration and accessing CMS.

- Cluster Management Suite (CMS) online help—For CMS field-level window descriptions and procedures, refer to the CMS online help.
- Standard Cisco IOS Release 12.1 commands available from the Cisco.com home page at **Service and Support > Technical Documents**. On the Cisco Product Documentation home page, select **Release 12.1** from the Cisco IOS Software drop-down list.
- Cisco IOS Release 12.1 documentation on Cisco.com.

## Organization

This guide is organized into these chapters:

[Chapter 1, “Using the Command-Line Interface,”](#) describes how to access the command modes and use the switch CLI to configure software features. It also lists the commands that have the same function but different syntax in software releases earlier than Release 12.1(6)EA2 and in Release 12.1(6)EA2 or later.

[Chapter 2, “Cisco IOS Commands,”](#) describes the Cisco IOS commands changed or customized for the switches.

[Appendix A, “Debug Commands,”](#) describes the **debug** privileged EXEC commands. Debug commands are helpful in diagnosing and resolving internetworking problems.

## Conventions

This guide uses these conventions to convey instructions and information:

Command descriptions use these conventions:

- Commands and keywords are in **boldface** text.
- Arguments for which you supply values are in *italic*.
- Square brackets ( [ ] ) mean optional elements.
- Braces ( { } ) group required choices, and vertical bars ( | ) separate the alternative elements.
- Braces and vertical bars within square brackets ( [ { | } ] ) mean a required choice within an optional element.

Interactive examples use these conventions:

- Terminal sessions and system displays are in `screen font`.
- Information you enter is in **boldface screen font**.
- Nonprinting characters, such as passwords or tabs, are in angle brackets (<>).

Notes, cautions, and tips use these conventions and symbols:



**Note**

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Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

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**Caution**

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

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**Tip**

Means *the following will help you solve a problem*. The tips information might not be troubleshooting or even an action but could be useful information.

## Related Publications

These documents provide complete information about the switch and are available from this URL:

<http://www.cisco.com/univercd/cc/td/doc/product/lan/cat2950/index.htm>

You can order printed copies of documents with a DOC-xxxxxx= number from the Cisco.com sites and from the telephone numbers listed in the “[Obtaining Documentation](#)” section on page xi.

- *Release Notes for the Catalyst 2950 Desktop Switch*, (not orderable but is available on Cisco.com)

**Note**

Switch requirements and procedures for initial configurations and software upgrades tend to change and therefore appear only in the release notes. Before installing, configuring, or upgrading the switch, refer to the release notes on Cisco.com for the latest information.

- *Catalyst 2950 Desktop Switch Software Configuration Guide* (order number DOC-7811380=)
- This *Catalyst 2950 Desktop Switch Command Reference* (order number DOC-7811381=)
- *Catalyst 2950 Desktop Switch Hardware Installation Guide* (order number DOC-7811157=)
- *Catalyst GigaStack Gigabit Interface Converter Hardware Installation Guide* (order number DOC-786460=)
- Cluster Management Suite (CMS) online help (available only from the switch CMS software)

## 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 URLs:

<http://www.cisco.com>

Translated documentation is available at the following URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### 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 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).

## Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can send us your comments by completing the online survey. When you display the document listing for this platform, click **Give Us Your Feedback**. After you display the survey, select the manual that you wish to comment on. Click **Submit** to send your comments to the Cisco documentation group.

You can e-mail your comments to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

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, networked 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.

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 Cisco TAC engineer will automatically open a case.

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.