



Preface

Audience

This guide is for the networking professional using the Cisco IOS command-line interface (CLI) to manage the Catalyst 2950 and the Catalyst 2955 switches, hereafter referred to as *the switches*. Before using this guide, you should have experience working with the Cisco IOS and be familiar with the concepts and terminology of Ethernet and local area networking.

Purpose

The Catalyst 2950 switch is supported by either the standard software image (SI) or the enhanced software image (EI). The Catalyst 2955 and the Catalyst 2950 Long-Reach Ethernet (LRE) switches are supported only by the EI. The EI provides a richer set of features, including access control lists (ACLs), enhanced quality of service (QoS) features, extended-range VLANs, the IEEE 802.1S Multiple STP, Remote Switched Port Analyzer (RSPAN), and unicast MAC address filtering.

The Catalyst 2950 and Catalyst 2955 software supports the switches listed in the release notes and in this table:

Switch	Software Image
Catalyst 2950-12	SI
Catalyst 2950-24	SI
Catalyst 2950C-24	EI
Catalyst 2950G-12-EI	EI
Catalyst 2950G-24-EI	EI
Catalyst 2950G-24-EI-DC	EI
Catalyst 2950G-48-EI	EI
Catalyst 2950ST-8 LRE	EI
Catalyst 2950ST-24 LRE	EI
Catalyst 2950ST-24 LRE 997	EI
Catalyst 2950SX-24	SI
Catalyst 2950SX-48-SI	SI
Catalyst 2950T-24	EI

Switch	Software Image
Catalyst 2950T-48-SI	SI
Catalyst 2955C-12	EI
Catalyst 2955S-12	EI
Catalyst 2955T-12	EI

This guide provides the information you need about the CLI commands that have been created or changed for use with the Catalyst 2950 family of switches. For information about the standard Cisco IOS Release 12.1 commands, refer to the Cisco IOS documentation set available from the Cisco.com home page by selecting **Service and Support > Technical Documents**. On the Cisco Product Documentation home page, select **Release 12.1** from the Cisco IOS Software drop-down list.

This guide does not provide procedures for configuring your switch. For detailed configuration procedures, refer to the *Catalyst 2950 and Catalyst 2955 Switch Software Configuration Guide* for this release.

This guide does not describe system messages you might encounter. For more information, refer to the *Catalyst 2950 and Catalyst 2955 Switch System Message Guide* for this release.

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

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



Caution

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

**Timesaver**

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 xvii.

- *Release Notes for the Catalyst 2950 and Catalyst 2955 Switches* (not orderable but 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.

For hardware information for the Catalyst 2950 and Catalyst 2955 switches, refer to these documents:

- *Catalyst 2950 Desktop Switch Hardware Installation Guide* (order number DOC-7811157=)
- *Catalyst 2955 Hardware Installation Guide* (order number DOC-7814944=)

For software information about the Catalyst 2950 and Catalyst 2955 switches, refer to these documents:

- *Catalyst 2950 and Catalyst 2955 Switch Software Configuration Guide* (order number DOC-7811380=)
- *Catalyst 2950 and Catalyst 2955 Switch Command Reference* (order number DOC-7811381=)
- *Catalyst 2950 and Catalyst 2955 Switch System Message Guide* (order number DOC-7814233=)

For other information about related products, refer to these documents:

- *Catalyst GigaStack Gigabit Interface Converter Hardware Installation Guide* (order number DOC-786460=)
- Cisco Small Form-Factor Pluggable Modules Installation Notes (order number DOC-7815160=)
- Cluster Management Suite (CMS) online help (available only from the switch CMS software)
- *CWDM Passive Optical System Installation Note* (not orderable but is available on Cisco.com)
- *1000BASE-T Gigabit Interface Converter Installation Notes* (not orderable but is available on Cisco.com)

Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

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

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

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 may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html

All users can order annual or quarterly subscriptions through the online Subscription Store:

<http://www.cisco.com/go/subscription>

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpk/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:
<http://www.cisco.com/en/US/partner/ordering/index.shtml>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

You can submit comments electronically on Cisco.com. On the Cisco Documentation home page, click **Feedback** at the top of the page.

You can send your comments in e-mail to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

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

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance.

Cisco TAC Website

The Cisco TAC website (<http://www.cisco.com/tac>) provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year.

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

Opening a TAC Case

The online TAC Case Open Tool (<http://www.cisco.com/tac/caseopen>) is the fastest way to open P3 and P4 cases. (Your network is minimally impaired or you require product information). After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using these recommendations, your case will be assigned to a Cisco TAC engineer.

For P1 or P2 cases (your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

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

TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The Cisco Product Catalog describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:
http://www.cisco.com/en/US/products/products_catalog_links_launch.html
- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: Internetworking Terms and Acronyms Dictionary, Internetworking Technology Handbook, Internetworking Troubleshooting Guide, and the Internetworking Design Guide. For current Cisco Press titles and other information, go to Cisco Press online at this URL:
<http://www.ciscopress.com>
- Packet magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:
<http://www.cisco.com/go/packet>
- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:
<http://www.cisco.com/go/iqmagazine>
- Internet Protocol Journal is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:
http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html
- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:
<http://www.cisco.com/en/US/learning/index.html>