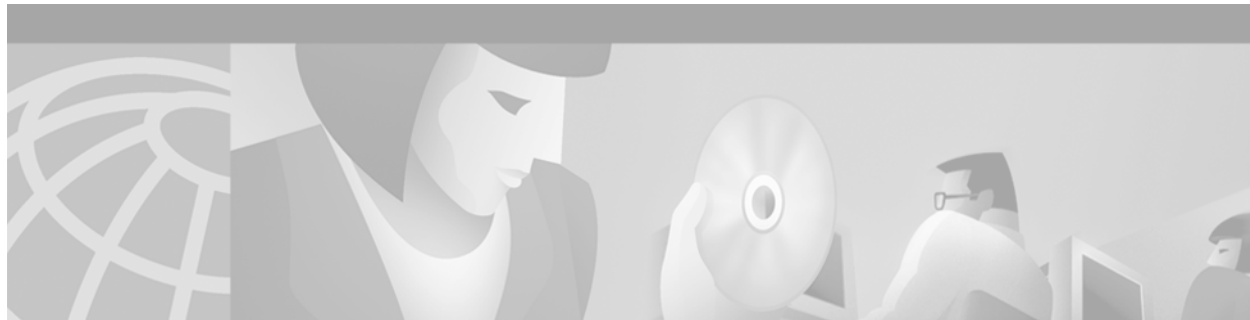




Preface

This preface describes the audience, organization, and conventions of the *Catalyst 2948G-L3 and Catalyst 4908G-L3 Switch Router Software Feature and Configuration Guide* and provides information on how to obtain related documentation. This preface includes the following topics:

- Audience, page ix
- Organization, page x
- Related Documentation, page xi
- Conventions, page xii
- Obtaining Documentation, page xiii

Audience

This guide is written for the following users who will configure the Layer 3 switch router:

- System administrators who are responsible for installing and configuring internetworking equipment, who are familiar with the fundamentals of router-based internetworking, and who are familiar with Cisco IOS software and Cisco products
- System administrators who are familiar with the fundamentals of router-based internetworking and who are responsible for installing and configuring internetworking equipment, but who might not be familiar with the specifics of Cisco products or the routing protocols supported by Cisco products
- Customers with technical networking background and experience

Organization

This guide is organized as follows:

Chapter	Title	Description
Chapter 1	Overview	Gives an overview of Layer 3 switching, shows how the Layer 3 switch routers fit into the network, lists the types of interfaces used in Layer 3 switching, and lists Layer 3 software features.
Chapter 2	Before You Begin	Describes Cisco IOS command modes, lists the information you need to have available before you begin configuring your switch router, and gives you a suggested process to follow.
Chapter 3	Initial Layer 3 Switch Router Configurations	Describes the initial configuration of the Layer 3 switch routers, including passwords, console port, management port, and host name. This chapter also describes how to use a boot flash memory SIMM for various system administration tasks.
Chapter 4	Configuring Interfaces	Describes general interface configuration for Fast Ethernet and Gigabit Ethernet interfaces.
Chapter 5	Configuring Virtual LAN Encapsulation	Describes how to configure VLAN frame encapsulation using ISL and 802.1Q protocols.
Chapter 6	Configuring Networking Protocols	Describes how to configure networking and routing protocols for Layer 3 switching.
Chapter 7	Configuring Bridging	Describes how to configure transparent bridging for Ethernet, and Integrated Routing and Bridging (IRB).
Chapter 8	Configuring EtherChannel	Describes how to configure EtherChannel and assign individual interfaces to the EtherChannel.
Chapter 9	Configuring Quality of Service	Describes Layer 3 switching quality of service (QoS) features and provides information to help you fine tune QoS on your system.
Chapter 10	Configuring Switching Database Manager	Describes the switching database manager (SDM) and explains how to configure SDM regions.
Chapter 11	Configuring Access Control List	Describes access control list (ACL) features built into the Layer 3 switch router and explains how to configure ACLs.
Appendix A	Command Reference	Lists and describes commands unique to Layer 3 switching.

Chapter	Title	Description
Appendix B	System Error Messages	Provides an overview of system error messages and lists error messages for the Layer 3 switch routers.
Appendix C	Configuration Examples	Provides configuration examples for the Layer 3 switch routers.
Appendix D	Cisco IOS Commands Not Supported in Layer 3 Switching Software	Lists the commands not supported in Layer 3 switching.
Appendix E	Using Technical Support	Lists information the Technical Assistance Center (TAC) requires to troubleshoot a problem and tells you how to contact TAC.

Related Documentation

This guide explains how to configure the Catalyst 2948G-L3 and the Catalyst 4908G-L3 switch routers. More detailed information about Layer 3 switching software features can be found in the Cisco IOS configuration guides and command reference publications.

For the latest information about the software, including new features added since the documentation was printed and additional caveats about using the software, refer to the release notes that accompany the software.

For hardware installation information and complete descriptions of the Catalyst 2948G-L3 and the Catalyst 4908G-L3 switch routers, refer to the following:

- *Catalyst 2948G-L3 Hardware Installation Guide*
- *Catalyst 4908-L3 Hardware Installation Guide*

For additional information on Cisco IOS software and configuring your Layer 3-switch router, refer to the following documentation:

- *Cisco IOS Bridging and IBM Networking Configuration Guide*
- *Cisco IOS Bridging and IBM Networking Command Reference Vol I*
- *Cisco IOS Bridging and IBM Networking Command Reference Vol II*
- *Cisco IOS Configuration Fundamentals Configuration Guide*
- *Cisco IOS Configuration Fundamentals Command Reference*
- *Cisco IOS Interface Configuration Guide*
- *Cisco IOS Interface Command Reference*
- *Cisco IOS IP and IP Routing Configuration Guide*
- *Cisco IOS IP and IP Routing Command Reference*
- *Cisco IOS Quality of Service Solutions Configuration Guide*
- *Cisco IOS Quality of Service Solutions Command Reference*
- *Cisco IOS Switching Services Configuration Guide*
- *Cisco IOS Switching Services Command Reference*
- For information about MIBs, refer to:
<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

Conventions

This document uses the following conventions:

Convention	Description
boldface font	Commands and keywords are in boldface .
<i>italic</i> font	Arguments for which you supply values are in <i>italics</i> .
[]	Elements in square brackets are optional.
{x y z}	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 font	Terminal sessions and information the system displays are in <code>screen</code> font.
boldface screen font	Information you must enter is in boldface screen font.
<i>italic screen</i> font	Arguments for which you supply values are in <i>italic screen</i> font.
^	The symbol ^ represents the key labeled Control—for example, the key combination ^D in a screen display means hold down the Control key while you press the D key.
< >	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.

Notes use the following conventions:



Note

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

Timesavers use the following conventions:



Timesaver

Means *the described action saves time*. You can save time by performing the action described in the paragraph.

Tips use the following conventions:



Tips

Means *the following are useful tips*.

Cautions use the following conventions:



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

Obtaining Documentation

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at <http://www.cisco.com>, <http://www-china.cisco.com>, or <http://www-europe.cisco.com>.

Documentation CD-ROM

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

Ordering Documentation

Registered CCO users can order the Documentation CD-ROM and other Cisco Product documentation through our online Subscription Services at <http://www.cisco.com/cgi-bin/subcat/kaojump.cgi>.

Nonregistered CCO users can order documentation through a local account representative by calling Cisco's corporate headquarters (California, USA) at 408 526-4000 or, in North America, call 800 553-NETS (6387).

Obtaining Technical Assistance

Cisco provides Cisco Connection Online (CCO) as a starting point for all technical assistance. Warranty or maintenance contract customers can use the Technical Assistance Center. All customers can submit technical feedback on Cisco documentation using the web, e-mail, a self-addressed stamped response card included in many printed docs, or by sending mail to Cisco.

Cisco Connection Online

Cisco continues to revolutionize how business is done on the Internet. Cisco Connection Online is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

CCO's broad range of features and services helps customers and partners to streamline business processes and improve productivity. Through CCO, you will find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online support services, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on CCO to obtain additional personalized information and services. Registered users may order products, check on the status of an order and view benefits specific to their relationships with Cisco.

You can access CCO in the following ways:

- WWW: www.cisco.com
- Telnet: cco.cisco.com
- Modem using standard connection rates and the following terminal settings: VT100 emulation; 8 data bits; no parity; and 1 stop bit.
 - From North America, call 408 526-8070
 - From Europe, call 33 1 64 46 40 82

You can e-mail questions about using CCO to cco-team@cisco.com.

Technical Assistance Center

The Cisco Technical Assistance Center (TAC) is available to warranty or maintenance contract customers who need technical assistance with a Cisco product that is under warranty or covered by a maintenance contract.

To display the TAC web site that includes links to technical support information and software upgrades and for requesting TAC support, use www.cisco.com/techsupport.

To contact by e-mail, use one of the following:

Language	E-mail Address
English	tac@cisco.com
Hanzi (Chinese)	chinese-tac@cisco.com
Kanji (Japanese)	japan-tac@cisco.com
Hangul (Korean)	korea-tac@cisco.com
Spanish	tac@cisco.com
Thai	thai-tac@cisco.com

In North America, TAC can be reached at 800 553-2447 or 408 526-7209. For other telephone numbers and TAC e-mail addresses worldwide, consult the following web site:
<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>.

Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit technical comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco.

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

To submit your comments by mail, for your convenience many documents contain a response card behind the front cover. Otherwise, you can mail your comments to the following address:

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

We appreciate and value your comments.

