



## Preface

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This preface describes who should read the *Software Configuration Guide*, how it is organized, and its document conventions.

## Audience

This guide is for experienced network administrators who are responsible for configuring and maintaining Catalyst 6000 family switches.

## Organization

This guide is organized as follows:

Chapter	Title	Description
Chapter 1	Product Overview	Presents an overview of the Catalyst 6000 family switches.
Chapter 2	Command-Line Interfaces	Describes how to use the command-line interface (CLI).
Chapter 3	Configuring the Switch IP Address and Default Gateway	Describes how to perform a baseline configuration of the switch.
Chapter 4	Configuring Ethernet, Fast Ethernet, and Gigabit Ethernet Switching	Describes how to configure Ethernet, Fast Ethernet, and Gigabit Ethernet switching.
Chapter 5	Configuring EtherChannel	Describes how to configure Fast EtherChannel and Gigabit EtherChannel port bundles.
Chapter 6	Configuring Spanning Tree	Describes how to configure the Spanning Tree Protocol and explains how spanning tree works.
Chapter 7	Configuring Spanning Tree PortFast, UplinkFast, and BackboneFast	Describes how to configure the spanning tree PortFast, UplinkFast, and BackboneFast features.
Chapter 8	Configuring VTP	Describes how to configure VLAN Trunk Protocol (VTP) on the switch.

Chapter	Title	Description
Chapter 9	Configuring VLANs	Describes how to configure VLANs on the switch.
Chapter 10	Configuring Ethernet VLAN Trunks	Describes how to configure Inter-Switch Link (ISL) and IEEE 802.1Q VLAN trunks on Fast Ethernet and Gigabit Ethernet ports.
Chapter 11	Configuring GVRP	Describes how to configure GARP VLAN Registration Protocol (GVRP) on the switch.
Chapter 12	Configuring Dynamic Port VLAN Membership with VMPS	Describes how to configure dynamic port VLAN membership on the switch using the VLAN Management Policy Server (VMPS).
Chapter 13	Checking Port Status and Connectivity	Describes how to display information about modules and switch ports and how to check connectivity using ping, Telnet, and IP traceroute.
Chapter 14	Administering the Switch	Describes how to set the system name, create a login banner, and perform other administrative tasks on the switch.
Chapter 15	Switch Access: Using Authentication, Authorization and Accounting	Describes how to configure authentication, authorization, and accounting (AAA) to monitor and control access to the CLI.
Chapter 16	Configuring Redundant Supervisor Engines	Describes how to install and configure redundant supervisor engines in the Catalyst 6000 family switches.
Chapter 17	Modifying the Switch Boot Configuration	Describes how to modify the switch boot configuration, including the BOOT environment variable and the configuration register.
Chapter 18	Working With the Flash File System	Describes how to work with the Flash file system.
Chapter 19	Working with System Software Images	Describes how to download and upload system software images.
Chapter 20	Working with Configuration Files	Describes how to create, download, and upload switch configuration files.
Chapter 21	Configuring System Message Logging	Describes how to configure system message logging (syslog).
Chapter 22	Configuring DNS	Describes how to configure Domain Name System (DNS).
Chapter 23	Configuring CDP	Describes how to configure Cisco Discovery Protocol (CDP).
Chapter 24	Configuring UDLD	Describes how to configure the UniDirectional Link Detection (UDLD) protocol.
Chapter 25	Configuring NTP	Describes how to configure Network Time Protocol (NTP).
Chapter 26	Configuring Broadcast Suppression	Describes how to configure hardware and software broadcast suppression.
Chapter 27	Configuring Layer 3 Protocol Filtering	Describes how to configure protocol filtering on Ethernet, Fast Ethernet, and Gigabit Ethernet ports.

Chapter	Title	Description
Chapter 28	Configuring IP Permit List	Describes how to configure the IP permit list.
Chapter 29	Configuring Port Security	Describes how to configure secure port filtering.
Chapter 30	Configuring SNMP	Describes how to configure SNMP.
Chapter 31	Configuring RMON	Describes how to configure Remote Monitoring (RMON).
Chapter 32	Configuring SPAN and RSPAN	Describes how to configure the Switch Port Analyzer (SPAN) and Remote SPAN (RSPAN).
Chapter 33	Using Switch TopN Reports	Describes how to generate switch TopN reports.
Chapter 34	Configuring Multicast Services	Describes how to configure Internet Group Management Protocol (IGMP) snooping, GARP Multicast Registration Protocol (GMRP), and Router Group Management Protocol (RGMP).
Chapter 35	Configuring Quality of Service	Describes how to configure QoS.
Chapter 36	Configuring a Voice-over-IP Network	Describes how to configure a voice-over-IP network.

## Related Documentation

The following publications are available for the Catalyst 6000 family switches:

- *Catalyst 6000 Family Quick Software Configuration*
- *Catalyst 6000 Family Module Installation Guide*
- *Catalyst 6000 Family Command Reference*
- *Catalyst 6000 Family Multilayer Switch Feature Card and Policy Feature Card Configuration Guide*
- *ATM Software Configuration and Command Reference—Catalyst 5000 Family and Catalyst 6000 Family Switches*
- *System Message Guide—Catalyst 6000 Family, Catalyst 5000 Family, and Catalyst 4000 Family, Catalyst 2926G Series, Catalyst 2948G, and Catalyst 2980G*
- *Release Notes for Catalyst 6000 and 6500 Series Software Release 5.x*
- Cisco IOS Configuration Guides and Command References—Use these publications to help you configure the Cisco IOS software that runs on the MSFC and on the MSM and ATM modules.
- 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
<b>boldface font</b>	Commands and keywords are in <b>boldface</b> .
<i>italic font</i>	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 screen font.
<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> .
→	This pointer highlights an important line of text in an example.
^	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.

Notes use the following conventions:



## Note

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

Cautions use the following conventions:



## Caution

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](http://www.cisco.com)
- Telnet: [cco.cisco.com](http://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](mailto: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](http://www.cisco.com/techsupport).

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

Language	E-mail Address
English	<a href="mailto:tac@cisco.com">tac@cisco.com</a>
Hanzi (Chinese)	<a href="mailto:chinese-tac@cisco.com">chinese-tac@cisco.com</a>
Kanji (Japanese)	<a href="mailto:japan-tac@cisco.com">japan-tac@cisco.com</a>
Hangul (Korean)	<a href="mailto:korea-tac@cisco.com">korea-tac@cisco.com</a>
Spanish	<a href="mailto:tac@cisco.com">tac@cisco.com</a>
Thai	<a href="mailto:thai-tac@cisco.com">thai-tac@cisco.com</a>

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

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