



## Preface

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This preface describes who should read this document, how it is organized, and its conventions. The book also tells you how to obtain Cisco documents as well as how to obtain technical assistance.

## Audience

This guide is for experienced network administrators who are responsible for configuring and maintaining Catalyst 4500 series switches.

## Organization

This guide is organized into the following chapters:

Chapter	Title	Description
Chapter 1	<a href="#">Product Overview</a>	Presents an overview of the Cisco IOS software for the Catalyst 4500 series switches
Chapter 2	<a href="#">Command-Line Interfaces</a>	Describes how to use the CLI
Chapter 3	<a href="#">Configuring the Switch for the First Time</a>	Describes how to perform a baseline configuration of the switch
Chapter 4	<a href="#">Configuring Interfaces</a>	Describes how to configure non-layer-specific features on Fast Ethernet and Gigabit Ethernet interfaces
Chapter 5	<a href="#">Checking Port Status and Connectivity</a>	Describes how to check module and interface status
Chapter 6	<a href="#">Configuring Layer 2 Ethernet Interfaces</a>	Describes how to configure interfaces to support Layer 2 features, including VLAN trunks
Chapter 7	<a href="#">Configuring Unidirectional Ethernet</a>	Describes how to configure unidirectional Ethernet
Chapter 8	<a href="#">Understanding and Configuring VLANs</a>	Describes how to set up and modify VLANs
Chapter 9	<a href="#">Configuring Dynamic VLAN Membership</a>	Describes how to configure dynamic VLAN membership

Chapter	Title	Description
Chapter 10	<a href="#">Configuring Private VLANs</a>	Describes how to set up and modify private VLANs
Chapter 11	<a href="#">Understanding and Configuring VTP</a>	Describes how to configure the VLAN Trunking Protocol
Chapter 12	<a href="#">Understanding and Configuring STP</a>	Describes how to configure the Spanning Tree Protocol (STP) and explains how spanning tree works
Chapter 13	<a href="#">Configuring STP Features</a>	Describes how to configure the spanning-tree PortFast, UplinkFast, BackboneFast, and other STP features
Chapter 14	<a href="#">Configuring 802.1Q and Layer 2 Protocol Tunneling</a>	Describes how to configure 802.1Q and Layer 2 protocol Tunneling
Chapter 15	<a href="#">Understanding and Configuring Multiple Spanning Trees</a>	Describes how to configure the Multiple Spanning Tree (MST) protocol and explains how it works
Chapter 16	<a href="#">Configuring IGMP Snooping and Filtering</a>	Describes how to configure Internet Group Management Protocol (IGMP) snooping
Chapter 17	<a href="#">Understanding and Configuring CDP</a>	Describes how to configure the Cisco Discovery Protocol (CDP)
Chapter 18	<a href="#">Understanding and Configuring EtherChannel</a>	Describes how to configure Layer 2 and Layer 3 EtherChannel port bundles
Chapter 19	<a href="#">Configuring UDLD</a>	Describes how to configure the UniDirectional Link Detection (UDLD) protocol
Chapter 20	<a href="#">Configuring DHCP Snooping and IP Source Guard</a>	Describes how to configure DHCP snooping and display DHCP snooping information
Chapter 21	<a href="#">Configuring Layer 3 Interfaces</a>	Describes how to configure interfaces to support Layer 3 features
Chapter 22	<a href="#">Configuring Cisco Express Forwarding</a>	Describes how to configure Cisco Express Forwarding (CEF) for IP unicast traffic
Chapter 23	<a href="#">Configuring VRF-lite</a>	Describes how to configure multiple VPN routing/forwarding (multi-VRF) instances in customer edge (CE) devices
Chapter 24	<a href="#">Configuring Policy-Based Routing</a>	Describes how to configure policy-based routing
Chapter 25	<a href="#">Understanding and Configuring IP Multicast</a>	Describes how to configure IP Multicast Multilayer Switching (MMLS)
Chapter 26	<a href="#">Configuring Network Security with ACLs</a>	Describes how to configure ACLs, VACLs, and MACLS
Chapter 27	<a href="#">Configuring Port Security</a>	Describes how to configure the port security feature
Chapter 28	<a href="#">Understanding and Configuring 802.1x Port-Based Authentication</a>	Describes how to configure 802.1x port-based authentication
Chapter 29	<a href="#">Understanding and Configuring Dynamic ARP Inspection</a>	Describes how to configure Dynamic ARP Inspection
Chapter 30	<a href="#">Port Unicast and Multicast Flood Blocking</a>	Describes how to configure unicast flood blocking on the Catalyst 4000 family switches

Chapter	Title	Description
Chapter 31	<a href="#">Configuring Port-Based Traffic Control</a>	Describes how to configure storm control suppression on the Catalyst 4500 series switches
Chapter 32	<a href="#">Configuring QoS</a>	Describes how to configure quality of service (QoS)
Chapter 33	<a href="#">Configuring NetFlow Statistics Collection</a>	Describes how to configure NetFlow statistics gathering
Chapter 30	<a href="#">Port Unicast and Multicast Flood Blocking</a>	Describes how to configure unicast flood blocking on the Catalyst 4000 family switches
Chapter 34	<a href="#">Configuring SPAN and RSPAN</a>	Describes how to configure the Switched Port Analyzer (SPAN)
Chapter 35	<a href="#">Environmental Monitoring and Power Management</a>	Describes how to configure environmental monitoring, power redundancy, and inline power features
Chapter 36	<a href="#">Configuring Supervisor Engine Redundancy on the Catalyst 4507R and 4510R Switches</a>	Describes how to configure RPR on the Catalyst 4507R and 4510R series switches
Chapter 37	<a href="#">Configuring Voice Interfaces</a>	Describes how to configure multi-VLAN access ports for use with Cisco IP phones
Chapter 38	<a href="#">Configuring SmartPort Macros</a>	Describes how to configure SmartPort macros
Appendix A	<a href="#">Acronyms</a>	Defines acronyms used in this book

## Related Documentation

The following publications are available for the Catalyst 4000 family and Catalyst 4500 series switches:

- *Catalyst 4000 Series Switch Cisco IOS Installation Guide*
- *Catalyst 4500 Series Switch Cisco IOS Installation Guide*
- *Catalyst 4500 Series Switch Cisco IOS Module Installation Guide*
- *Catalyst 4500 Series Switch Cisco IOS Command Reference*
- *Catalyst 4500 Series Switch Cisco IOS System Message Guide*
- Release Notes for the Catalyst 4500 Series
- Cisco IOS configuration guides and command references—Use these publications to help you configure Cisco IOS software features not described in the preceding publications:
  - *Configuration Fundamentals Configuration Guide*
  - *Configuration Fundamentals Command Reference*
  - *Interface Configuration Guide*
  - *Interface Command Reference*
  - *Network Protocols Configuration Guide*, Part 1, 2, and 3
  - *Network Protocols Command Reference*, Part 1, 2, and 3
  - *Security Configuration Guide*
  - *Security Command Reference*

- *Switching Services Configuration Guide*
- *Switching Services Command Reference*
- *Voice, Video, and Fax Applications Configuration Guide*
- *Voice, Video, and Fax Applications Command Reference*
- *Cisco IOS IP Configuration Guide*
- *Cisco IOS IP 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 typographical conventions:

Convention	Description
<b>boldface font</b>	Commands, command options, and keywords are in <b>boldface</b> .
<i>italic font</i>	Command arguments for which you supply values are in <i>italics</i> .
[ ]	Command elements in square brackets are optional.
{ x   y   z }	Alternative keywords in command lines 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 because the string will include the quotation marks.
screen font	System displays are in screen font.
<b>boldface screen font</b>	Information you must enter verbatim 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.
^	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**

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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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## Commands in Task Tables

Commands listed in task tables show only the relevant information for completing the task and not all available options for the command. For a complete description of a command, refer to the command in the *Catalyst 4500 Series Switch Cisco IOS Command Reference*.

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

