



INDEX

Symbols

- \$ matches the end of a string **1-7**
- () in commands **1-10**
- * matches 0 or more sequences of a pattern **1-7**
- + matches 1 or more sequences of a pattern **1-7**
- . matches any single character **1-7**
- ? command **1-1**
- ? matches 0 or 1 occurrence of a pattern **1-7**
- ^ matches the beginning of a string **1-7**
- _ matches a comma (,), left brace ({), left parenthesis **1-7**
- " **1-10**

Numerics

- 10-Gigabit Ethernet uplink
 - selecting **2-107**
 - showing the mode **2-299**
- 802.1Q trunk ports and native VLANs **2-541**
- 802.1Q tunnel ports
 - configuring **2-500**
- 802.1S Multiple Spanning Tree
 - see MST
- 802.1X Port Based Authentication
 - allowing multiple hosts on a port **2-88**
 - debugging 802.1X Port Based Authentication **2-50**
 - displaying port based authentication **2-285**
 - enabling accounting for authentication sessions **2-3**
 - enabling authentication on the system **2-93**
 - enabling guest VLAN **2-83**
 - enabling guest VLAN supplicant **2-84**
 - enabling manual control of auth state **2-89**
 - enabling periodic re-authentication of the client **2-92**

- initializing re-authentication of dot1x ports **2-91**
- initializing state machines **2-85**
- receive session termination message upon reboot **2-4**
- setting maximum number for EAP requests **2-87**
- setting the reauthentication timer **2-94**

A

- abbreviating commands
- context-sensitive help **1-1**
- Access Gateway Module
 - connecting to a module **2-11**
 - connecting to a remote module **2-250**
 - connecting to a specific remote module **2-258**
- access-group
 - displaying mac interface **2-372**
 - show mode interface **2-261**
- access groups
 - IP **2-5**
- access lists
 - clearing an access template **2-27**
 - defining ARP **2-10**
 - displaying ARP information **2-264**
 - See also ACLs, MAC ACLs, and VACLs
- access maps
 - applying with VLAN filter **2-542**
- ACLS
 - access-group mode **2-5**
 - determining ACL hardware programming **2-6**
 - displaying mac access-group interface **2-372**
 - using ACL naming conventions for MAC ACLs **2-174**
- action clause
 - specifying drop or forward action in a VACL **2-8**

addresses, configuring a maximum [2-221](#)
 adjacency
 debugging the adjacency table [2-44](#)
 disabling the debug facility [2-44](#)
 displaying information about the adjacency table [2-262](#)
 displaying IPC table entries [2-44](#)
 aggregate policer
 displaying information [2-407](#)
 aging time
 displaying MAC address aging time [2-375](#)
 MAC address table [2-177](#)
 alarms
 displaying operational status [2-288](#)
 alternation
 description [1-9](#)
 anchoring
 description [1-10](#)
 ARP
 access list, displaying detailed information [2-264](#)
 defining access-lists [2-10](#)
 ARP inspection
 enforce certain types of checking [2-124](#)
 ARP packet
 deny based on DHCP bindings [2-80](#)
 permit based on DHCP bindings [2-207](#)
 authentication
 setting username [2-532](#)
 using an MD5-type encryption method [2-532](#)
 verifying MD5 signature [2-533](#)
 verifying the checksum for Flash memory [2-533](#)
 authorization state
 enabling manual control [2-89](#)
 authorization state of a controlled port [2-89](#)
 automatic installation
 displaying status [2-265](#)
 auto-negotiate interface speed
 example [2-491](#)
 auto-QoS
 configuring for VoIP [2-12](#)

displaying configuration [2-266](#)

B

baby giants
 displaying the system MTU setting [2-431](#)
 setting the maximum Layer 2 payload size [2-517](#)
 BackboneFast
 displaying debugging messages [2-69](#)
 displaying spanning tree status [2-423](#)
 enabling debugging [2-69](#)
 bindings
 store for DHCP snooping [2-133](#)
 BOOT environment variable
 displaying information [2-270](#)
 bootflash
 displaying information [2-268](#)
 BPDU
 debugging spanning tree activities [2-68](#)
 bridge protocol data units
 See BPDU
 broadcast suppression level
 configuring [2-492, 2-494](#)
 enabling [2-492, 2-494](#)

C

Catalyst 4507R [2-217](#)
 power redundancy mode [2-222](#)
 CDP
 configuring tunneling encapsulation rate [2-170](#)
 displaying
 neighbor information [2-271](#)
 enabling protocol tunneling for [2-166](#)
 set drop threshold for [2-168](#)
 CEF
 displaying next-hop information [2-332](#)
 displaying VLAN configuration information [2-332](#)

- cisco-desktop
 macro apply **2-183**
- Cisco Express Forwarding
 See CEF
- cisco-phone
 macro apply **2-185**
- cisco-router
 macro apply **2-187**
- cisco-switch
 macro apply **2-189**
- clear commands
 clearing Gigabit Ethernet interfaces **2-25**
 clearing IGMP group cache entries **2-32**
 clearing interface counters **2-22**
 clearing IP access lists **2-27, 2-28**
 clearing IP ARP inspection statistics VLAN **2-29**
 clearing IP DHCP snooping database **2-30**
 clearing IP DHCP snooping database statistics **2-31**
 clearing MFIB counters and routes **2-35**
 clearing MFIB fastdrop entries **2-36**
 clearing PAgP channel information **2-39**
 clearing QoS aggregate counters **2-41**
 clearing VLAN interfaces **2-26**
- CLI string search
 anchoring **1-10**
 expressions **1-7**
 filtering **1-6**
 multiple-character patterns **1-8**
 multipliers **1-9**
 parentheses for recall **1-10**
 searching outputs **1-6**
 single-character patterns **1-7**
 using **1-6**
- command modes
 accessing privileged EXEC mode **1-4**
 exiting **1-4**
 understanding user EXEC and configuration modes **1-4**
- condition interface
 debugging interface-related activities **2-46**
- condition vlan
 debugging VLAN output **2-49**
- configuration, saving **1-11**
- configuring
 root as secondary **2-475**
- configuring a SPAN session to monitor
 limit SPAN source traffic **2-199**
- configuring forward delay **2-471**
- configuring root as primary **2-475**
- CoS
 assigning to Layer 2 protocol packets **2-167**
- CoS QoS default
 defining value on an interface **2-235**
- Cost of Service
 See QoS CoS
- counters
 clearing interface counters **2-22**
-
- D**
- DAI
 clear statistics **2-29**
- DBL
 displaying qos dbl **2-408**
 enabling DBL globally on the switch **2-236**
- debug commands
 debugging backup events **2-45**
 debugging DHCP snooping events **2-55**
 debugging DHCP snooping messages **2-56**
 debugging EtherChannel/PAgP/shim **2-51**
 debugging IPC activity **2-54**
 debugging IP DHCP snooping security messages **2-57**
 debugging NVRAM activities **2-60**
 debugging PAgP activities **2-61**
 debugging port manager activities **2-64**
 debugging software MAC filter updates **2-67**
 debugging spanning tree activities **2-68**
 debugging spanning tree backbonefast **2-69**
 debugging spanning tree UplinkFast **2-72**

- debugging supervisor redundancy **2-66**
 debugging VLAN manager activities **2-73**
 displaying monitor activity **2-59**
 displaying the adjacency table **2-44**
 enabling debug dot1x **2-50**
 enabling debugging messages for ISL VLAN IDs **2-75**
 enabling debugging messages for VTP **2-76**
 enabling debugging of UDLD activity **2-77**
 enabling switch shim debugging **2-70**
 enabling VLAN manager file system error tests **2-74**
 limiting debugging output for VLANs **2-49**
 limiting interface debugging output **2-46**
 limiting output for debugging standby state changes **2-47**
 shortcut to the debug condition interface **2-53**
- debugging
 activity monitoring **2-59**
 DHCP snooping events **2-55**
 DHCP snooping packets **2-56**
 IPC activities **2-54**
 IP DHCP snooping security packets **2-57**
 NVRAM activities **2-60**
 PAgP activities **2-61**
 PAgP shim **2-51**
 PM activities **2-64**
 SMF address insertions and deletions **2-67**
 spanning tree BackboneFast events **2-69**
 spanning tree switch shim **2-70**
 spanning tree UplinkFast events **2-72**
 VLAN manager activities **2-73**
 VLAN manager IOS file system error tests **2-74**
 VTP protocol debug messages **2-76**
 debug spanning tree switch **2-70**
 debug sw-vlan vtp **2-76**
 default CoS value **2-235**
 default form of a command, using **1-6**
 defining egress DSCP-to-CoS mapping **2-240**
 DHCP
 clearing database statistics **2-31**
- DHCP bindings
 configuring bindings **2-132**
 deny ARP packet based on matches **2-80**
 permit ARP packet based on matches **2-207**
 DHCP snooping
 clearing database **2-30**
 displaying binding table **2-334**
 displaying configuration information **2-333**
 displaying status of DHCP database **2-337**
 displaying status of error detection **2-291**
 enabling DHCP globally **2-131**
 enabling IP source guard **2-164**
 enabling on a VLAN **2-139**
 enabling option 82 **2-135, 2-136**
 enabling rate limiting on an interface **2-137**
 enabling trust on an interface **2-138**
 establishing binding configuration **2-132**
 renew binding database **2-252**
 store generated bindings **2-133**
- diagnostic test
 displaying attributes **2-275**
 display module-based results **2-277**
 displaying error disable recovery **2-292**
 displaying inline power status **2-402**
 displaying monitoring activity **2-59**
 displaying EEPROM information
 GBIC **2-300**
 displaying SPAN session information **2-430, 2-493**
 document conventions **xvi**
 document organization **xv**
 DOS attack
 protecting system's resources **2-119**
 drop threshold, Layer 2 protocol tunneling **2-168**
 DSCP rewrite for IP packets
 enable **2-243**
 dual-capable port
 selecting a connector **2-196**
 duplex mode
 configuring autonegotiation on an interface **2-96**

configuring full duplex on an interface **2-96**

configuring half duplex on an interface **2-96**

dynamic ARP inspection

 preventing **2-119**

Dynamic Buffer Limiting

 See DBL

Dynamic Host Configuration Protocol

 See DHCP

E

EAP

 restarting authentication process **2-87**

enabling

 debugging for UDLD **2-77**

 voice VLANs **2-495**

environmental

 alarms **2-288**

 displaying information **2-288**

 status **2-288**

 temperature **2-288**

error disable detection

 enabling error disable detection **2-98**

error-disabled state

 displaying **2-318**

error disable recovery

 configuring recovery mechanism variables **2-100**

 displaying recovery timer information **2-292**

 enabling ARP inspection timeout **2-100**

 specifying recovery cause **2-100**

EtherChannel

 assigning interfaces to EtherChannel groups **2-16**

 debugging EtherChannel **2-51**

 debugging PAgP shim **2-51**

 debugging spanning tree activities **2-68**

 displaying information for a channel **2-293**

 removing interfaces from EtherChannel groups **2-16**

EtherChannel guard

 detecting STP misconfiguration **2-462**

Explicit Host Tracking

 clearing the database **2-34**

 enabling per-VLAN **2-151**

expressions

 matching multiple expression occurrences **1-9**

 multiple-character patterns **1-8**

 multiplying pattern occurrence **1-10**

 single-character patterns **1-7**

Extensible Authentication Protocol

 See EAP

F

field replaceable unit (FRU)

 displaying status information **2-288**

Flash memory file system

 displaying file system information **2-268**

 verifying checksum **2-533**

flow control

 configuring a gigabit interface for pause frames **2-103**

 displaying per-interface statistics for flow control **2-297**

G

GBIC

 displaying EEPROM information **2-300**

Gigabit Ethernet interface

 clearing the hardware logic **2-25**

Gigabit Ethernet uplink

 selecting **2-107**

 showing the mode **2-299**

global configuration mode

 using **1-5**

H

hardware module

 resetting a module by toggling the power **2-106**

hardware uplink
 selecting the mode **2-107**
 showing the mode **2-299**
 helper addresses, IP **2-351**
 hot standby protocol
 debugging **2-47**
 disabling debugging **2-47**
 limiting output **2-47**

I

IDPROMs
 displaying SEEPPROM information
 chassis **2-300**
 clock module **2-300**
 fan trays **2-300**
 module **2-300**
 mux buffer **2-300**
 power supplies **2-300**
 supervisor engine **2-300**

ifIndex persistence
 clearing SNMP ifIndex commands **2-451**
 compress SNMP ifIndex table format **2-456**
 disabling globally **2-455**
 disabling on an interface **2-452**
 enabling globally **2-455**
 enabling on an interface **2-452**

IGMP
 applying filters for host joining on Layer 2 interfaces **2-141**
 clearing IGMP group cache entries **2-32**
 configuring frequency for IGMP host-query messages **2-144**
 creating an IGMP profile **2-143**
 displaying IGMP interface configuration information **2-339**
 displaying profiles **2-341**
 setting maximum group numbers **2-142**

IGMP profiles
 displaying **2-341**

IGMP snooping
 clearing the EHT database **2-34**
 configuring a Layer 2 interface as a group member **2-155**
 configuring a Layer 2 interface as a multicast router **2-153**
 configuring a static VLAN interface **2-155**
 displaying multicast information **2-348**
 displaying VLAN information **2-342, 2-346, 2-349**
 enabling **2-146**
 enabling immediate-leave processing **2-152**
 enabling on a VLAN **2-150**
 enabling per-VLAN Explicit Host Tracking **2-151**

informs
 enabling **2-453**

inline power
 displaying inline power status **2-402**

inspection log
 clearing log buffer **2-28**

interface
 displaying suppressed multicast bytes **2-312**

interface capabilities
 displaying **2-309**

interface configuration mode
 summary **1-5**

interface link
 display cable disconnect time **2-315**

interfaces
 configuring dot1q tunnel ports **2-500**
 creating an interface-range macro **2-79**
 debugging output of interface related activities **2-46**
 displaying description **2-314**
 displaying error-disabled state **2-318**
 displaying information when tunneling is enabled **2-366**
 displaying status **2-314**
 displaying traffic for a specific interface **2-306**
 entering interface configuration mode **2-111**

executing a command on multiple ports in a range **2-114**
 selecting an interface to configure **2-111**
 setting a CoS value for Layer 2 packets **2-167**
 setting drop threshold for Layer 2 packets **2-168**
 setting the interface type **2-500**

interface speed
 configuring interface speed **2-489**
 interface transceiver
 displaying diagnostic data **2-321**

internal VLAN allocation
 configuring **2-543**
 default setting **2-543**
 displaying allocation information **2-442**

Internet Group Management Protocol
 See IGMP

IP ARP
 applying ARP ACL to VLAN **2-117**
 clearing inspection statistics **2-29**
 clearing status of log buffer **2-28**
 controlling packet logging **2-127**
 enabling dynamic inspection **2-126**
 limit rate of incoming requests **2-119**
 set per-port config trust state **2-123**
 showing status of dynamic ARP inspection **2-328**
 showing status of log buffer **2-331**

IPC
 debugging IPC activities **2-54**

IP DHCP Snooping
 See DHCP snooping

IP header validation
 disabling **2-163**
 enabling **2-163**
 IP interfaces
 displaying usability status **2-350**
 IP multicast
 displaying multicast routing table information **2-356**
 IP packets
 enable DSCP rewrite **2-243**

IP phone and standard desktop
 enabling Cisco-recommended features **2-185**
 IP source binding
 adding or deleting **2-160**
 displaying bindingstaging **2-361**
 IP source guard
 debugging messages **2-57**
 displaying configuration and filters **2-362**
 enabling on DHCP snooping **2-164**

J

Jumbo frames
 enabling jumbo frames **2-203**

L

LACP
 deselecting channeling protocol **2-18**
 enabling LACP on an interface **2-18**
 setting channeling protocol **2-18**
 Layer 2
 displaying ACL configuration **2-372**
 Layer 2 interface type
 specifying a nontrunking, nontagged single VLAN interface **2-500**
 specifying a trunking VLAN interface **2-500**
 Layer 2 protocol ports
 displaying **2-366**
 Layer 2 protocol tunneling error recovery **2-170**
 Layer 2 switching
 enabling voice VLANs **2-495**
 modifying switching characteristics **2-495**
 Layer 2 traceroute
 IP addresses **2-521**
 Layer 3 switching
 displaying information about an adjacency table **2-262**
 displaying port status **2-319**
 displaying status of native VLAN tagging **2-319**

log buffer
 show status [2-331](#)
 logging
 controlling IP ARP packets [2-127](#)

M

MAC Access Control Lists

See MAC ACLs

MAC ACLs

defining extended MAC access list [2-174](#)
 displaying MAC ACL information [2-439](#)
 naming an ACL [2-174](#)

MAC address filtering

configuring [2-181](#)
 disabling [2-181](#)
 enabling [2-181](#)

MAC address table

adding static entries [2-191](#)
 clearing dynamic entries [2-38](#)
 configuring aging time [2-177](#)
 displaying dynamic table entry information [2-377](#)
 displaying entry count [2-376](#)
 displaying information [2-373](#)
 displaying interface-based information [2-379](#)
 displaying multicast information [2-381](#)
 displaying protocol-based information [2-383](#)
 displaying static table entry information [2-385](#)
 displaying the MAC address aging time [2-375](#)
 displaying VLAN-based information [2-387](#)
 learning in the protocol buckets [2-178](#)
 removing static entries [2-191](#)

MAC address tables

adding static entries [2-181](#)
 deleting secure or specific addresses [2-40](#)
 disabling IGMP snooping on static MAC
 addresses [2-181](#)
 removing static entries [2-181](#)
 mac-address-table static [2-181](#)

MAC address unicast filtering
 dropping unicast traffic [2-181](#)
 macro keywords
 help strings [2-2](#)
 mapping secondary VLANs to MST instance [2-227](#)
 mapping VLAN(s) to an MST instance [2-109](#)
 match subcommand

accessing [2-20](#)
 maximum transmission unit (MTU)
 displaying the system MTU setting [2-431](#)
 setting the maximum Layer 2 payload size [2-517](#)

MD5

verifying MD5 signature [2-533](#)

message digest 5

See MD5

MFIB

clearing ip mfib counters [2-35](#)
 clearing ip mfib fastdrop [2-36](#)
 displaying all active MFIB routes [2-353](#)
 displaying MFIB fastdrop table entries [2-355](#)
 enabling IP MFIB fastdrops [2-157](#)

modes

access-group [2-5](#)
 show access-group interface [2-261](#)
 switching between PVST+, MST, and Rapid
 PVST [2-467](#)
 See also command modes

module password clearing [2-24](#)

module reset

resetting a module by toggling the power [2-106](#)

--More-- prompt

filter [1-6](#)
 search [1-7](#)

MST

designating the primary and secondary root [2-475](#)
 displaying MST protocol information [2-427](#)
 displaying region configuration information [2-427](#)
 displaying spanning tree information [2-427](#)
 entering MST configuration submode [2-469](#)

setting configuration revision number **2-254**
 setting path cost and port priority for instances **2-468**
 setting the forward delay timer for all instances **2-471**
 setting the hello-time delay timer for all instances **2-472**
 setting the max-age timer for all instances **2-473**
 setting the MST region name **2-204**
 specifying the maximum number of hops **2-474**
 switching between PVST+ and Rapid PVST **2-467**
 using the MST configuration submode revision command **2-254**
 using the submode name command **2-204**

MTU

displaying global MTU settings **2-431**

multicast

enabling storm control **2-494**

multicast/unicast packets

prevent forwarding **2-499**

Multicast Forwarding Information Base

See MFIB

multiple-character patterns **1-8****multiple hosts on authorized port** **2-88****Multiple Spanning Tree**

See MST

N**native VLAN**

controlling tagging of traffic **2-513**
 displaying ports eligible for native tagging **2-441**
 displaying ports eligible for tagging **2-441**
 enabling tagging on 802.1Q trunk ports **2-541**
 specifying the tagging of traffic **2-514**

NetFlow

enabling NetFlow statistics **2-158**
 including infer fields in routing statistics **2-158**

next-hop

displaying CEF VLAN information **2-332**

no form of a command, using **1-6****NVRAM**

debugging NVRAM activities **2-60**

O**output**

pattern searches **1-7**

P**packet forwarding**

prevent unknown packets **2-499**

packet memory failure

direct switch action upon detection **2-82**

packet memory test

bootup, displaying results **2-281**

ongoing, displaying results **2-283**

PACL

access-group mode **2-5**

paging prompt

see --More-- prompt

PAgP

clearing port channel information **2-39**

debugging PAgP activity **2-61**

deselecting channeling protocol **2-18**

displaying port channel information **2-393**

hot standby mode

returning to defaults **2-206**

selecting ports **2-206**

input interface of incoming packets

learning **2-205**

returning to defaults **2-205**

setting channeling protocol **2-18**

parentheses **1-10****password**

clearing on an intelligent line module **2-24**

establishing enhanced password security **2-532**

setting username **2-532**

- PBR
 - displaying route maps **xvi**
 - redistributing route maps **xvi**
- PM activities
 - debugging **2-64**
 - disabling debugging **2-64**
- Policy Based Routing
 - See PBR
- port, dual-capable
 - selecting the connector **2-196**
- Port Aggregation Protocol
 - See PAgP
- port-based authentication
 - displaying debug messages **2-50**
 - displaying statistics and status **2-285**
 - enabling 802.1X **2-89**
 - manual control of authorization state **2-89**
 - multiple hosts on authorized port **2-88**
 - periodic re-authentication
 - enabling **2-92**
 - re-authenticating 802.1X-enabled ports **2-91**
 - switch-to-client frame-retransmission number **2-87**
- port channel
 - accessing **2-113**
 - creating **2-113**
 - displaying information **2-393**
 - load distribution method
 - resetting to defaults **2-211**
 - setting **2-211**
- port range
 - executing **2-114**
- port security
 - debugging ports security **2-65**
 - deleting secure or specific addresses **2-40**
 - displaying settings for an interface or switch **2-399**
 - enabling **2-502**
 - filter source IP and MAC addresses **2-164**
 - setting action upon security violation **2-502**
 - setting the rate limit for bad packets **2-502**
- sticky port **2-502**
- Port Trust Device
 - displaying **2-409**
- power status
 - displaying inline power **2-402**
 - displaying power status **2-402**
- power supply
 - configuring combined and redundant power on the Catalyst 4507R **2-217**
 - configuring inline power **2-214**
 - configuring power consumption **2-216**
 - configuring power redundancy on the Catalyst 4507R **2-222**
 - displaying the SEEPROM **2-300**
 - setting inline power state **2-213**
- Private VLAN
 - See PVLANS
- privileged EXEC mode, summary **1-5**
- prompts
 - system **1-5**
- protocol tunneling
 - configuring encapsulation rate **2-170**
 - disabling **2-166**
 - displaying port information **2-366**
 - enabling **2-166**
 - setting a CoS value for Layer 2 packets **2-167**
 - setting a drop threshold for Layer 2 packets **2-168**
- PVLANS
 - configuring isolated, primary, and community PVLANS **2-223**
 - controlling tagging of native VLAN traffic **2-513**
 - disabling sticky-ARP **2-161**
 - displaying map information for VLAN SVIs **2-317**
 - displaying PVLAN information **2-444**
 - enabling interface configuration mode **2-500**
 - enabling sticky-ARP **2-161**
 - mapping VLANs to the same SVI **2-225**
 - specifying host ports **2-500**
 - specifying promiscuous ports **2-500**

PVST+

switching between PVST and MST **2-467**

Q

QoS

account Layer 2 encapsulation **2-230**

attaching a policy-map to an interface **2-255**

automatic configuration **2-12**

clearing aggregate counters **2-41**

configuring a QoS policy map **2-209**

configuring auto **2-12**

defining a named aggregate policer **2-232**

defining default CoS value **2-235**

defining ingress CoS-to-DSCP mapping **2-239**

displaying aggregate policer information **2-407**

displaying auto configuration **2-266**

displaying class maps information **2-274**

displaying configuration information **2-266**

displaying configurations of policies **2-396**

displaying policy map information **2-395, 2-398**

displaying QoS information **2-406**

displaying QoS map information **2-410**

enabling global configuration mode **2-228**

enabling per-VLAN QoS for a Layer 2 interface **2-246**

enabling QoS on an interface **2-229**

mapping DSCP values to transmit queues **2-240**

mapping egress DSCP-to-CoS **2-240**

mapping the DSCP-to-CoS value **2-240**

setting the mapping of policed DSCP values **2-242**

setting the trust state **2-244**

specifying flow-based match criteria **2-193**

QoS CoS

configuring for tunneled Layer 2 protocol packets **2-167**

defining default CoS value **2-235**

qos dbl **2-236**question command **1-1**

queueing information

displaying **2-409**

R

Rapid PVST

switching between PVST and MST **2-467**

re-authenticating 802.1X-enabled ports **2-91**

re-authentication

periodic **2-92**

set the time **2-94**

reboots

restoring bindings across **2-132**

redundancy

accessing the main CPU **2-247**

changing from active to standby supervisor engine **2-248**

displaying information **2-412**

displaying redundancy facility information **2-412**

displaying RF client list **2-412**

displaying RF operational counters **2-412**

displaying RF states **2-412**

enabling automatic synchronization **2-15**

forcing switchover to standby supervisor engine **2-248**

set the mode **2-197**

synchronizing the route processor configurations **2-191**

related documentation **xv**

remote SPAN

See RSPAN

renew commands

ip dhcp snooping database **2-252**

resetting PVLAN trunk

setting switchport to trunk **2-500**

rj45 connector, selecting the connector **2-196**

ROM monitor mode

summary **1-6**

Route Processor Redundancy

See redundancy

RPR

set the redundancy mode **2-197**

RSPAN

- converting VLAN to RSPAN VLAN [2-251](#)
- displaying list [2-446](#)

Ssaving configuration changes [1-11](#)secure address, configuring [2-219](#)secure ports, limitations [2-503](#)set the redundancy mode [2-197](#)sfp connector, selecting the connector [2-196](#)

show commands

- filtering parameters [1-7](#)

- searching and filtering [1-6](#)

- show platform commands [1-11](#)

Simple Network Management Protocol

See SNMP

single-character patterns

- special characters [1-7](#)

slaveslot0

- displaying information on the standby supervisor [2-419](#)

slot0

- displaying information about the system [2-421](#)

SMF

- debugging address insertions and deletions [2-67](#)

SNMP

- debugging spanning tree activities [2-68](#)

ifIndex persistence

- clearing SNMP ifIndex commands [2-451](#)

- compress SNMP ifIndex table format [2-456](#)

- disabling globally [2-455](#)

- disabling on an interface [2-452](#)

- enabling globally [2-455](#)

- enabling on an interface [2-452](#)

informs

- disabling [2-453](#)

- enabling [2-453](#)

traps

- configuring to send when storm occurs [2-492](#)

disabling [2-453](#)enabling [2-453](#)

software MAC filter

See SMF

SPAN commands

- configuring a SPAN session to monitor [2-199](#)

- displaying SPAN session information [2-430, 2-493](#)

SPAN enhancements

- displaying status [2-391](#)

Spanning Tree Protocol

See STP

SPAN session

- displaying session information [2-391](#)

- filter ACLs [2-199](#)

- specify encapsulation type [2-199](#)

- turn off host learning based on ingress packets [2-199](#)

special characters

- anchoring, table [1-10](#)

SSO [2-197](#)

standard desktop

- enabling Cisco-recommended features [2-183](#)

standard desktop and Cisco IP phone

- enabling Cisco-recommended features [2-185](#)

sticky address, configuring [2-220](#)

sticky-ARP

- disabling on PVLANS [2-161](#)

- enabling on PVLANS [2-161](#)

sticky port

- deleting [2-40](#)

- enabling security [2-502](#)

storm control

- configuring for action when storm occurs [2-492](#)

- disabling suppression mode [2-291](#)

- displaying settings [2-429](#)

- enabling [2-492](#)

- enabling broadcast [2-492, 2-494](#)

- enabling multicast [2-492, 2-494](#)

- enabling suppression mode [2-291](#)

- enabling timer to recover from error disable [2-100](#)

- enabling unicast **2-492, 2-494**
 multicast, enabling **2-494**
 setting high and low levels **2-492**
 setting suppression level **2-291**
- STP
 configuring link type for a port **2-465**
 configuring tunneling encapsulation rate **2-170**
 debugging all activities **2-68**
 debugging spanning tree activities **2-68**
 debugging spanning tree BackboneFast events **2-69**
 debugging spanning tree UplinkFast **2-72**
 detecting misconfiguration **2-462**
 displaying active interfaces only **2-423**
 displaying BackboneFast status **2-423**
 displaying bridge status and configuration **2-423**
 displaying spanning tree debug messages **2-68**
 displaying summary of interface information **2-423**
 enabling BPDU filtering by default on all PortFast ports **2-480**
 enabling BPDU filtering on an interface **2-458**
 enabling BPDU guard by default on all PortFast ports **2-482**
 enabling BPDU guard on an interface **2-460**
 enabling extended system ID **2-463**
 enabling loop guard as a default on all ports **2-466**
 enabling PortFast by default on all access ports **2-483**
 enabling PortFast mode **2-478**
 enabling protocol tunneling for **2-166**
 enabling root guard **2-464**
 enabling spanning tree BackboneFast **2-457**
 enabling spanning tree on a per VLAN basis **2-487**
 enabling spanning tree UplinkFast **2-485**
 setting an interface priority **2-484**
 setting drop threshold for **2-168**
 setting pathcost **2-461**
 setting the default pathcost calculation method **2-477**
 subinterface configuration mode, summary **1-6**
- SVI
 creating a Layer 3 interface on a VLAN **2-116**
- switchport **2-514**
 switchport interfaces
 displaying status of Layer 3 port **2-319**
 displaying status of native VLAN tagging **2-319**
- switch shim
 debugging **2-70**
 disabling debugging **2-70**
- switch to router connection
 enabling Cisco-recommended features **2-187**
- switch to switch connection
 enabling Cisco-recommended features **2-189**
- switch virtual interface
 See SVI
- sw-vlan **2-73**
- system prompts **1-5**
-
- T**
- Tab key
 command completion **1-1**
- tables
 characters with special meaning **1-7**
 mac access-list extended subcommands **2-174**
 match syntax description **2-21**
 multipliers **1-9**
 relationship between duplex and speed commands **2-490**
 show cdp neighbors detail field descriptions **2-273**
 show cdp neighbors field descriptions **2-272**
 show ip interface field descriptions **2-351**
 show vlan command output fields **2-445**
 show vtp command output fields **2-449**
 special characters **1-9**
 special characters used for anchoring **1-10**
 speed command options **2-193, 2-490**
 valid interface types **2-111**
- TAC
 displaying information useful to TAC **2-432**

TCAM

- debugging spanning tree activities [2-68](#)
- temperature readings
 - displaying information [2-288](#)
 - timer information [2-292](#)
- traffic shaping
 - enable on an interface [2-259](#)
 - traps, enabling [2-453](#)
 - trunk encapsulation
 - setting format [2-514](#)
 - trunk interfaces
 - displaying trunk interfaces information [2-326](#)
 - trust state
 - setting [2-123](#)
 - tunnel ports
 - displaying information about Layer 2 protocol [2-366](#)
 - TX queues
 - allocating bandwidth [2-524](#)
 - returning to default values [2-524](#)
 - setting priority to high [2-524](#)
 - specifying burst size [2-524](#)
 - specifying traffic rate [2-524](#)

U

UDLD

- displaying administrative and operational status [2-434](#)
- enabling by default on all fiber interfaces [2-526](#)
- enabling on an individual interface [2-528](#)
- preventing a fiber interface from being enabled [2-528](#)
- resetting all shutdown ports [2-530](#)
- setting the message timer [2-526](#)

Unidirectional Link Detection

See UDLD

- unknown multicast traffic, preventing [2-499](#)
- unknown unicast traffic, preventing [2-499](#)
- user EXEC mode, summary [1-5](#)
- username
 - setting password and privilege level [2-532](#)

V

VACLs

- access-group mode [2-5](#)
- applying VLAN access maps [2-542](#)
- displaying VLAN access map information [2-439](#)
- specifying an action in a VLAN access map [2-8](#)
- specifying the match clause for a VLAN access-map sequence [2-192](#)
- using a VLAN filter [2-542](#)

VLAN

- applying an ARP ACL [2-117](#)
- configuring [2-535](#)
- converting to RSPAN VLAN [2-251](#)
- displaying CEF information [2-332](#)
- displaying CEF next-hop information [2-332](#)
- displaying information on switch interfaces [2-342, 2-346](#)
- displaying information on VLAN switch interfaces [2-349](#)
- displaying information sorted by group IP address [2-342, 2-346](#)
- displaying IP address and version information [2-342, 2-346](#)
- displaying Layer 2 VLAN information [2-436](#)
- displaying statistical information [2-389](#)
- displaying VLAN information [2-438](#)
- enabling dynamic ARP inspection [2-126](#)
- enabling Explicit Host Tracking [2-151](#)
- enabling guest per-port [2-83](#)
- enabling guest VLAN supplicant [2-84](#)
- entering VLAN configuration mode [2-539](#)
- native frames
 - enabling tagging on all 802.1Q trunk ports [2-541](#)
- pruning the list for VTP [2-514](#)
- setting the list of allowed [2-514](#)

VLAN Access Control Lists

See VACLs

VLAN access map

See VACLs

- VLAN database
 resetting **2-253**
- VLAN debugging
 limiting output **2-49**
- VLAN manager
 debugging **2-73**
 disabling debugging **2-73**
- IOS file system error tests
 debugging **2-74**
 disabling debugging **2-74**
- VLAN Query Protocol
 See VQP
- VLAN query protocol (VQPC)
 debugging **2-78**
- VLANS
 clearing
 counters **2-42**
 clearing hardware logic **2-26**
 configuring
 internal allocation scheme **2-543**
 displaying
 internal VLAN allocation information **2-442**
 RSPAN VLANs **2-446**
 entering VLAN configuration mode **2-539**
- VMPS
 configuring servers **2-547**
 reconfirming dynamic VLAN assignments **2-545**
- voice VLANs
 enabling **2-495**
- VoIP
 configuring auto-QoS **2-12**
- VQP
 per-server retry count **2-546**
 reconfirming dynamic VLAN assignments **2-545**
- VTP
 configuring the administrative domain name **2-551**
 configuring the device in VTP client mode **2-550**
 configuring the device in VTP server mode **2-554**
 configuring the device in VTP transparent mode **2-555**

