

Index

Numerics

802.1x See port authentication
802.2, Ethernet encapsulation 11-8

A

AARP. See AppleTalk Address Resolution Protocol (AARP)
abort LPD job 63-12
ACC. See Asynchronous Call Control (ACC)
Access Control List 8-39
access control, encryption 43-6
access mode, MIB object 55-7
accounting
 firewall 48-52
 RADIUS 20-6
ACL 8-39
actions, IPsec policies 49-15
ACTIVATE ACC CALL command 20-16
ACTIVATE FLASH COMPACTION command 6-9
ACTIVATE IPSEC CONVERTOLDSA command 49-48
ACTIVATE ISDN CALL command 12-59
ACTIVATE L2TP CALL command 21-18
ACTIVATE MIOX CIRCUIT command 14-37
activate mstp migrationcheck port 9-28
ACTIVATE MSTP MIGRATIONCHECK PORTcommand 9-28
ACTIVATE PORTAUTH PORT REAUTHENTICATE command 45-23
ACTIVATE PPP command 16-47
ACTIVATE Q931 ASPID command 12-60 to 12-61
ACTIVATE SCRIPT command 59-7
ACTIVATE SWITCH PORT command 8-49
ACTIVATE TRIGGER command 60-6
activating
 asynchronous calls 20-8, 20-16
adaptive learning 8-29
add 8-65
ADD ACC CALL command 20-17
ADD ACC DOMAINNAME command 20-20
ADD ACC SCRIPT command 20-21
ADD ALIAS command 2-12, 6-10, 6-13, 6-23
ADD APPLE CIRCUIT command 37-21
ADD APPLE DLCI command 37-22
ADD APPLE PACKETFILTER command 37-23
ADD APPLE PORT command 37-15, 37-25

ADD APPLE ROUTE command 37-15, 37-27
ADD APPLE ROUTEFILTER command 37-28
ADD APPLE ZONE command 37-29
ADD APPLE ZONEFILTER command 37-30
ADD BGP AGGREGATE command 30-48, 56-16 to 56-17
ADD BGP CONFEDERATIONPEER command 30-50
ADD BGP IMPORT command 30-51
ADD BGP NETWORK command 30-52
ADD BGP PEER command 30-53
ADD BOOTP RELAY command 24-10
ADD BRIDGE FILTER command 17-11
ADD BRIDGE PORT command 17-14
ADD BRIDGE STATION command 17-15
ADD DHCP POLICY command 24-13
ADD DHCP RANGE command 24-19
ADD DVMRP INTERFACE command 27-48
ADD FIREWALL POLICY APPRULE command 48-65
ADD FIREWALL POLICY DYNAMIC command 48-67
ADD FIREWALL POLICY INTERFACE command 48-71
ADD FIREWALL POLICY LIST command 48-75
ADD FIREWALL POLICY NAT command 48-76
ADD FIREWALL POLICY PROXY command 48-79, 48-81
ADD FIREWALL POLICY RULE command 48-81
ADD FIREWALL POLICY SPAMSOURCES command 48-95
ADD FRAMERELAY DLC command 15-26
ADD FRAMERELAY LI 15-27
ADD GRE command 33-11
ADD IGMP FILTER command 27-49
ADD IGMP Snooping ROUTERADDRESS command 27-50
ADD IP ARP command 23-61
ADD IP ASPATHLIST command 31-40
ADD IP COMMUNITYLIST command 31-42
ADD IP FILTER command 23-65
ADD IP HELPER command 23-72
ADD IP HOST command 23-73
ADD IP INTERFACE command 23-74, 33-4
ADD IP MVR command 27-53
ADD IP RIP command 28-7
ADD IP ROUTE command 23-80
ADD IP ROUTE FILTER command 31-46
ADD IP ROUTE TEMPLATE command 23-83
ADD IP ROUTEMAP command 31-49
ADD IP SA command 23-200, 31-49
ADD IP TRUSTED command 28-11



ADD IPV6 FILTER command 34-36
 ADD IPV6 HOST command 34-41
 ADD IPV6 INTERFACE command 34-42
 ADD IPV6 RIP command 34-47
 ADD IPV6 ROUTE command 34-48
 ADD IPV6 TUNNEL command 34-49
 ADD IPX CIRCUIT command 38-31
 ADD IPX EXCLUSION command 38-35
 ADD IPX INCLUSION command 38-36
 ADD IPX RIP command 38-37
 ADD IPX ROUTE command 38-38
 ADD IPX SAP command 38-39
 ADD IPX SERVICE command 38-40
 ADD ISDN CALL command 12-62
 ADD ISDN CLILIST command 12-68
 ADD ISDN DOMAINNAME command 12-68
 ADD L2TP CALL command 21-19
 ADD L2TP IP command 21-22
 ADD L2TP USER command 21-24, 21-30
 ADD LAPD command 12-108
 ADD LAPD TEI command 12-69
 ADD LAPD XSPID command 12-69
 ADD LAPD XTEI command 12-70
 ADD LOADBALANCER RESOURCE command 52-21
 ADD LOADBALANCER RESPOOL command 52-23
 ADD LOADBALANCER VIRTUALBALANCER command 52-24
 ADD LOADBALANCER VIRTUALBALANCER HTTPERROR-CODE command 52-27
 ADD LOG OUTPUT command 61-13
 ADD LOG RECEIVE command 61-16
 ADD MIOX CIRCUIT command 14-39
 ADD NTP PEER command 57-8
 ADD OSPF AREA command 29-28
 ADD OSPF HOST command 29-30
 ADD OSPF INTERFACE command 29-31
 ADD OSPF NEIGHBOUR command 29-36
 ADD OSPF RANGE command 29-37
 ADD OSPF STUB command 29-40
 ADD OSPF SUMMARYADDRESS command 29-41
 ADD PIM BSR CANDIDATE command 27-54
 ADD PIM INTERFACE command 27-55
 ADD PIM RPCANDIDATE command 27-57
 ADD PIM6 BSR CANDIDATE command 36-26
 ADD PIM6 INTERFACE command 36-27
 ADD PIM6 RPCANDIDATE command 36-29
 ADD PING POLL command 54-9
 ADD PKI CERTIFICATE command 50-16
 ADD PKI CRL command 50-18
 ADD PKI LDAPREPOSITORY command 50-20
 ADD PPP ACSERVICE command 16-53
 ADD PPP command 16-49
 ADD QOS FLOWGROUP command 40-17
 ADD QOS POLICY command 40-18
 ADD QOS TRAFFICCLASS command 40-19
 ADD RADIUS SERVER command 43-30
 ADD SA MEMBER command 49-49
 ADD SCRIPT command 59-8
 ADD SNMP COMMUNITY command 55-25
 ADD SNMP GROUP command 55-27

ADD SNMP TARGETADDR command 55-28
 ADD SNMP TARGETPARAMS command 55-29
 ADD SNMP USER command 55-30
 ADD SSH USER command 46-11
 add stack interface command 58-18
 ADD STP VLAN command 9-30
 ADD STREAM command 64-5
 ADD STT command 18-5
 ADD SWITCH FILTER command 8-52
 ADD SWITCH L3FILTER ENTRY command 8-56
 ADD SWITCH L3FILTER MATCH command 8-59
 ADD SWITCH TRUNK command 8-62
 ADD TACACS SERVER command 43-31
 ADD TDM command 13-8
 ADD TPAD command 19-17
 ADD TRIGGER command 60-7
 ADD USER command 43-33
 ADD USER RSO command 43-36
 ADD VLAN BRIDGE command 9-31, 17-16
 ADD VLAN PORT command 8-63
 ADD VLANRELAY command 8-65
 ADD VRRP IP command 53-12
 ADD VRRP MONITOREDINTERFACE command 53-13
 ADD X25C DTEADDRESS command 14-41
 ADD X25C HUNTGROUP command 14-42
 ADD X25C ROUTE command 14-43
 ADD X25T CPAR command 14-44
 adding
 access lists, firewall 48-14, 48-75, 48-81
 aliases 2-12, 6-10, 6-13, 6-23
 Certificate Revocation Lists 50-18
 domain name 12-42, 12-68, 20-10, 20-20
 firewall rules 48-81
 Frame Relay DLCs 15-26
 Frame Relay logical interfaces 15-27
 interfaces to firewall 48-6, 48-71
 members to Security Associations 49-49
 NAT translations, firewall 48-24, 48-27 to 48-28, 48-76
 NTP peer 57-8
 physical links to PPP interfaces 16-49
 PKI certificates 50-16
 PKI LDAP Repositories 50-20
 ports to TPAD 19-6, 19-17
 route templates 23-83
 stream ports 64-5
 synchronous tunnel 18-5
 adding LPD queues 63-10
 address pools, IP 23-47
 creating 23-86
 destroying 23-96
 displaying 23-190
 Address Resolution Protocol (ARP) 23-13
 adding entries 23-13, 23-61
 changing entries 23-127
 deleting entries 23-87
 displaying entries 23-50, 23-165
 Frame Relay 15-18
 modifying entries 23-127
 proxy 23-17
 setting entries 23-127



address translation group, MIB-II MIB C-29

addresses

Frame Relay DLCIs 15-6, 15-26, 15-31, 15-34, 15-40, 15-45, 15-49, 15-61

Internet Protocol (IP) 23-5

address pools 23-47, 23-86, 23-96, 23-190

classes 23-7

format 23-7

source 23-5

subnet 23-8

IP, for asynchronous ports 20-4

IPX

MAC 38-4

network 38-4

station 38-4

subnet 23-8

X.25 DTE 14-7, 14-12, 14-41, 14-54, 14-90

addressing, LAPD 12-27

addressless interfaces, OSPF 29-10, 29-22, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66

adjacency, OSPF 29-5 to 29-6

administrator name

displaying 4-54

setting 4-31

Adopt VRRP IP address 53-7

affinity table

definition 52-4

ageing timer 8-29

switch

disabling 8-78

enabling 8-86

setting 8-97

Aggregation Port Debug group, Link Aggregation MIB C-41

Aggregation Port group, Link Aggregation MIB C-41

Aggregation Port Statistics group, Link Aggregation MIB C-41

aggregation, PPP links 16-36

Aggregator group, Link Aggregation MIB C-41

aging timer, bridging 17-21

aging, OSPF 29-5, 29-91, 29-93

Alarm group, RMON MIB C-45 to C-46

aliases

adding 2-12, 6-10, 6-13, 6-23

deleting 2-13

displaying 2-15 to 2-16, 6-29

alliedTelesis MIB object C-4

Always On/Dynamic ISDN (AODI) 12-42 to 12-46

components 12-43

configuration example 12-44

AODI. See Always On/Dynamic ISDN (AODI)

AppleTalk 37-1 to 37-64

AARP. See *AppleTalk: AppleTalk Address Resolution Protocol (AARP)* 37-6

adding

circuits 37-11, 37-21, 37-25

DLCI 37-22, 37-25

interfaces 37-11

ports 37-11, 37-21 to 37-22, 37-25

routes 37-15, 37-27

zones 37-11, 37-29

Address Mapping Table (AMT) 37-6

displaying 37-12, 37-48

address translation 37-6

AppleTalk Address Resolution Protocol (AARP) 37-6

AARP Probe packet 37-6

AARP Request packet 37-6

AARP Response packet 37-6

displaying cache 37-12

dynamic address assignment 37-6

architecture 37-3

circuits

adding 37-11, 37-21, 37-25

debugging 37-16

deleting 37-11, 37-31, 37-33

displaying 37-11, 37-49

commands

ADD APPLE CIRCUIT 37-21

ADD APPLE DLCI 37-22

ADD APPLE PORT 37-15, 37-25

ADD APPLE ROUTE 37-15, 37-27

ADD APPLE ZONE 37-29

DELETE APPLE CIRCUIT 37-31

DELETE APPLE DLCI 37-32

DELETE APPLE PORT 37-33

DELETE APPLE ROUTE 37-16, 37-34

DELETE APPLE ZONE 37-35

DISABLE APPLE 37-36

DISABLE APPLE DEBUG 37-37

ENABLE APPLE 37-37

ENABLE APPLE DEBUG 37-37

PURGE APPLE 37-38

RESET APPLE 37-38

SET APPLE PORT 37-15, 37-41

SET APPLE ROUTECONVERT 37-43

SET APPLE ZONE 37-45

SHOW APPLE 37-47

SHOW APPLE AARP 37-48

SHOW APPLE CIRCUIT 37-49

SHOW APPLE COUNTER 37-50

SHOW APPLE DLCI 37-56

SHOW APPLE PORT 37-59

SHOW APPLE ROUTE 37-16, 37-61

SHOW APPLE ZONE 37-63

configuration example 37-16

counters

displaying 37-50

Datagram Delivery Protocol (DDP) 37-7

datagrams 37-7

DDP or packet filtering 37-12

DDP. See *AppleTalk: Datagram Delivery Protocol (DDP)*

debugging 37-16, 37-37

deleting

circuits 37-11, 37-31, 37-33

DLCI 37-32 to 37-33

interfaces 37-11

ports 37-11, 37-31 to 37-33

routes 37-16, 37-34

zones 37-11, 37-35

dial-on-demand 37-15, 37-25, 37-41



disabling debugging 37-37
 disabling routing 37-11, 37-36
 displaying

- AARP cache 37-12, 37-48
- circuits 37-11, 37-49
- counters 37-50
- DLCI 37-56
- MIB 37-50
- ports 37-11, 37-59
- RTMP routing table 37-12, 37-61
- status 37-11, 37-47
- zones 37-11, 37-63

DLCI

- adding 37-22, 37-25
- deleting 37-32 to 37-33
- displaying 37-56

dynamic address assignment 37-6 to 37-7

dynamic ID assignment

- EtherTalk 37-5
- LocalTalk 37-4
- TokenTalk 37-5

ELAP. See AppleTalk: EtherTalk Link Access Protocol (ELAP)

enabling debugging 37-37

enabling routing 37-11, 37-37

entity name 37-9

EtherTalk 37-5

- dynamic ID assignment 37-5

EtherTalk Link Access Protocol (ELAP) 37-5

hop count 37-8

interface

- adding 37-11
- deleting 37-11

internet 37-4

internet socket address 37-7

LLAP. See AppleTalk: LocalTalk Link Access Protocol (LLAP)

LocalTalk 37-4

- dynamic ID assignment 37-4
- LLAP Acknowledge control packet 37-4
- LLAP Enquiry control packet 37-4
- node ID 37-4

LocalTalk Link Access Protocol (LLAP) 37-4

MIB

- displaying 37-50

modifying

- ports 37-41
- zones 37-45

Name Binding Protocol (NBP) 37-9

- NBP Broadcast Request packet 37-10
- NBP Forward Request packet 37-10
- NBP Lookup packet 37-10
- NBP Lookup Reply packet 37-10

name information socket (NIS) 37-9

name lookup 37-10

names table 37-9

NBP Broadcast Request 37-10

NBP Forward Request 37-10

NBP Lookup packet 37-10

NBP Lookup Reply packet 37-10

NBP. See AppleTalk: Name Binding Protocol (NBP)
 network 37-4

network number 37-6 to 37-7

network-visible entity (NVE) 37-7

NIS. See AppleTalk: name information socket (NIS)

node 37-4

node ID 37-4 to 37-6

node ID classes 37-4

notify neighbour, RTMP 37-9

NVE. See AppleTalk: network-visible entity (NVE)

ping 37-16

port 37-8

- adding 37-11, 37-21 to 37-22, 37-25

- deleting 37-11, 37-31 to 37-33

- displaying 37-11, 37-59

- modifying 37-41

protocol address 37-6

- assignment 37-5

protocols 37-3

purging configuration 37-38

resetting 37-38

routes

- adding 37-15, 37-27

- deleting 37-16, 37-34

Routing Table Maintenance Protocol (RTMP)
 37-7 to 37-8

- displaying 37-12, 37-61

- notify neighbour 37-9

- RTMP Data packet 37-8

- validity timer 37-8

RTMP or Routing Update filtering 37-13

RTMP. See AppleTalk: Routing Table Maintenance Protocol (RTMP)

seed router 37-9, 37-11, 37-25, 37-33, 37-41

socket 37-7

socket number 37-7

split horizon 37-8

static routes 37-15, 37-27, 37-34

status 37-11, 37-47

TLAP. See AppleTalk: TokenTalk Link Access Protocol (TLAP)

TokenTalk 37-5

- dynamic ID assignment 37-5

TokenTalk Link Access Protocol (TLAP) 37-5

validity timer 37-8

ZIP. See AppleTalk: Zone Information Protocol (ZIP)

ZIT. See AppleTalk: zone information table (ZIT)

Zone Information Protocol (ZIP) 37-10, 37-29, 37-35,
 37-45, 37-63

zone information table (ZIT) 37-10

- displaying 37-63

zone list 37-10, 37-29, 37-35, 37-45, 37-63

zone name 37-10

- adding 37-11, 37-29

- deleting 37-11, 37-35

- displaying 37-11, 37-63

- modifying 37-45

zone or ZIP filtering 37-14

AppleTalk Filtering 37-12

application gateway 48-4



Applications

- disabling 10-8
- arBoardIndex MIB object C-17
- arBoardMaxIndex MIB object C-17
- arBoardTable MIB object C-17 to C-18, C-20
- area
 - OSPF 29-3, 29-28, 29-37, 29-42, 29-45, 29-63, 29-71, 29-79
- area border router, OSPF 29-4
- arIfXIndex MIB object C-17
- arIfXTable MIB object C-17
- arInterfaceBoardIndex MIB object C-17
- arInterfacePosition MIB object C-17
- arInterfaces Group, Allied Telesis Enterprise MIB C-17
- arInterfaces MIB object C-9
- arInterfaceTable MIB object C-17
- arSlotBoardIndex MIB object C-17
- arSlotSlotIndex MIB object C-17
- arSlotTable MIB object C-17
- Assert message, PIM Sparse Mode 27-15
- asymmetric keys 50-2
- asymmetrical encryption algorithms 44-6
- asynchronous
 - call control 20-2
 - call definitions 20-2 to 20-3, 20-17
 - calls, activating 20-8, 20-16
 - calls, authenticating 20-5
 - calls, bidirectional 20-9
 - calls, CHAP authentication 20-5
 - calls, configuring 20-10
 - calls, creating 20-2, 20-17
 - calls, CSLIP 11-21, 20-4
 - calls, deactivating 20-8, 20-22
 - calls, deleting 20-3, 20-23
 - calls, disabling 20-3, 20-24
 - calls, disabling debugging 20-25
 - calls, displaying 20-3, 20-34 to 20-35
 - calls, enabling 20-3, 20-25
 - calls, enabling debugging 20-26
 - calls, encapsulation 11-21, 20-4
 - calls, incoming 20-2
 - calls, login name 20-4
 - calls, modifying 20-3, 20-28, 20-31
 - calls, outgoing 20-2
 - calls, PAP authentication 20-5
 - calls, password 20-4
 - calls, purging 20-26
 - calls, SLIP 11-21, 20-4
 - CSLIP encapsulation 11-21, 20-4
 - modems 20-2
 - ports
 - configuration 11-22, 11-31 to 11-32, 11-41 to 11-44
 - connecting to 11-31
 - disabling ports 11-32
 - enabling ports 11-41
 - resetting counters 11-43
 - resetting history 11-44
 - resetting ports 11-42
 - setting port characteristics 11-22, 11-48

PPP

- See also Asynchronous Call Control (ACC)
- encapsulation 20-4
- PPP encapsulation 11-21
- SLIP encapsulation 11-21, 20-4
- Asynchronous Call Control (ACC) 20-1 to 20-39
- See also User Authentication Facility (UAF)
- accounting, RADIUS 20-6
- activating calls 20-8, 20-16
- adding domain name 20-10, 20-20
- adding ports 20-3, 20-17
- authenticating calls 20-5
- authenticating calls using CHAP 20-5
- authenticating calls using PAP 20-5
- bidirectional calls 20-9
- call definitions 20-2
- calls, activating 20-8, 20-16
- calls, authenticating with CHAP 20-5
- calls, authenticating with PAP 20-5
- calls, bidirectional 20-9
- calls, CHAP authentication 20-5
- calls, creating 20-2, 20-17
- calls, deactivating 20-8, 20-22
- calls, deleting 20-3, 20-23
- calls, disabling 20-3, 20-24
- calls, disabling debugging 20-25
- calls, displaying 20-3, 20-34 to 20-35
- calls, enabling 20-3, 20-25
- calls, enabling debugging 20-26
- calls, incoming 20-2
- calls, login name 20-4
- calls, modifying 20-3, 20-28, 20-31
- calls, outgoing 20-2
- calls, PAP authentication 20-5
- calls, password 20-4
- calls, purging 20-26
- CHAP authentication 20-5
- commands
 - ACTIVATE ACC CALL 20-16
 - ADD ACC CALL 20-17
 - ADD ACC DOMAINNAME 20-20
 - ADD ACC SCRIPT 20-21
 - DEACTIVATE ACC CALL 20-22
 - DELETE ACC CALL 20-23
 - DELETE ACC DOMAINNAME 20-23
 - DELETE ACC SCRIPT 20-24
 - DISABLE ACC CALL 20-24
 - DISABLE ACC CALL DEBUG 20-25
 - ENABLE ACC CALL 20-25
 - ENABLE ACC CALL DEBUG 20-26
 - PURGE ACC 20-26
 - PURGE ACC SCRIPT 20-27
 - SET ACC CALL 20-28
 - SET ACC CALL PORT 20-31
 - SET ACC SCRIPT 20-32
 - SHOW ACC 20-34
 - SHOW ACC CALL 20-35
 - SHOW ACC DOMAINNAME 20-38
 - SHOW ACC SCRIPT 20-39
- configuration examples 20-10



- configuring ports 20-3
- creating call definitions 20-2, 20-17
- creating modem scripts 20-21
- CSLIP encapsulation 11-21, 20-4
- deactivating calls 20-8, 20-22
- deleting call definitions 20-3, 20-23
- deleting domain name 20-10, 20-23
- deleting modem scripts 20-7, 20-24, 20-27
- dial-in IPX 20-13
- disabling call debugging 20-25
- disabling call definitions 20-3, 20-24
- displaying call definitions 20-3, 20-35
- displaying domain name 20-10, 20-38
- displaying modem scripts 20-8, 20-34, 20-39
- domain name 16-27, 20-4, 20-10, 23-47
 - adding 20-10, 20-20
 - deleting 20-10, 20-23
 - displaying 20-10, 20-38
- enabling call debugging 20-26
- enabling call definitions 20-3, 20-25
- encapsulation, CSLIP 11-21, 20-4
- encapsulation, PPP 11-21, 20-4
- encapsulation, SLIP 11-21, 20-4
- example configurations 20-10
- incoming calls 20-2
- IP address, asynchronous ports 20-4, 20-12
- login name 20-4
 - authenticating with CHAP 20-5
 - authenticating with PAP 20-5
- modem scripts 20-6, 20-21, 20-24, 20-27, 20-32, 20-34, 20-39
 - deleting 20-7
 - displaying 20-8
 - modifying 20-7
- modifying call definitions 20-3, 20-28, 20-31
- modifying modem scripts 20-7, 20-32
- MTU, asynchronous ports 20-4
- outgoing calls 20-2
- PAP authentication 20-5
- password 20-4
 - authenticating with CHAP 20-5
 - authenticating with PAP 20-5
- ports, adding 20-3, 20-17
- ports, configuring 20-3
- PPP encapsulation 11-21, 20-4
- purging call definitions 20-26
- RADIUS accounting 20-6
- RADIUS authentication 20-5
- SLIP encapsulation 11-21, 20-4
- Asynchronous Control Character Map (ACCM) Option, LCP 16-6
- asynchronous port security 43-12
- asynchronous ports 11-21
 - adding to asynchronous calls 20-3, 20-17
 - as network interfaces 20-2
 - authenticating calls 20-5
 - CHAP 20-5
 - PAP 20-5
 - configuring 20-3
 - CSLIP encapsulation 11-21, 20-4
 - encapsulation 11-21
 - encapsulation, CSLIP 11-21, 20-4
 - encapsulation, PPP 11-21, 20-4
 - encapsulation, SLIP 11-21, 20-4
 - IP address 20-4
 - logging in 20-4
 - maximum transmission unit 20-4
 - PPP encapsulation 11-21, 20-4
 - SLIP encapsulation 11-21, 20-4
 - at-8624PoE MIB object C-8
 - at-8624T2M MIB object C-8
 - at-8624XL-80 MIB object C-7
 - at-8648-2SP MIB object C-8
 - at-8724MLB MIB object C-8
 - at-8724XL MIB object C-7
 - at-8724XLDC MIB object C-7
 - at-8724XL-DC-NEBS MIB object C-8
 - at-8748XL MIB object C-7
 - at-8748XL-80 MIB object C-7
 - at-8748XLDC MIB object C-7
 - at-8824 MIB object C-7
 - at-8824-DC MIB object C-7
 - at-8848 MIB object C-7
 - at-8848-DC MIB object C-7
 - at-8948EX MIB object C-7
 - at-8948i MIB object C-8
 - at-8948i-N MIB object C-8
 - at-9812T MIB object C-7
 - at-9812T-DC MIB object C-7
 - at-9812TF MIB object C-7
 - at-9816GB MIB object C-7
 - at-9816GB-DC MIB object C-7
 - at-9816GF MIB object C-7
 - at-9924SP MIB object C-8
 - at-9924SPi MIB object C-8
 - at-9924SPsi MIB object C-8
 - at-9924T MIB object C-8
 - at-9924T-4SP MIB object C-8
 - at-9924TEMC MIB object C-8
 - at-9924Ti MIB object C-8
 - at-9924Ts MIB object C-8
 - at-9924Tsi MIB object C-8
 - at-9924Tsi-N MIB object C-8
 - atAgents MIB object C-9
 - at-AR410Router MIB object C-5
 - at-AR410v2Router MIB object C-5
 - at-AR410v3Router MIB object C-5
 - at-AR415SRouter MIB object C-6
 - at-AR415SRouterDC MIB object C-6
 - at-AR420Router MIB object C-6
 - at-AR440Router MIB object C-6
 - at-AR441Router MIB object C-6
 - at-AR442Router MIB object C-6
 - at-AR443Router MIB object C-6
 - at-AR444Router MIB object C-6
 - at-AR450DualRouter MIB object C-5
 - at-AR450Router MIB object C-5
 - at-AR550Router MIB object C-6
 - at-AR550SRouterDP MIB object C-6
 - at-AR551Router MIB object C-6



at-AR552Router MIB object C-6
 at-AR570Router MIB object C-6
 at-AR725Router MIB object C-5
 at-AR725RouterDC MIB object C-5
 at-AR740RouterDC MIB object C-5
 at-AR745Router MIB object C-5
 at-AR745RouterDC MIB object C-5
 at-AR770Router MIB object C-6
 atContactDetails MIB object C-16
 atIfIndex MIB object C-30
 atNetAddress MIB object C-30
 atPhysAddress MIB object C-30
 at-Rapier16fMT MIB object C-6
 at-Rapier16fMTi MIB object C-6
 at-Rapier16fSC MIB object C-6
 at-Rapier16fSCi MIB object C-7
 at-rapier16fVF MIB object C-6
 at-Rapier24 MIB object C-6
 at-Rapier24i MIB object C-7
 at-Rapier24i-DC-NEBS MIB object C-8
 at-Rapier48 MIB object C-6
 at-Rapier48i MIB object C-7
 at-Rapier48w MIB object C-8
 at-Rapier8fMT MIB object C-6
 at-Rapier8fMTi MIB object C-6
 at-Rapier8fSC MIB object C-6
 at-Rapier8fSCi MIB object C-6
 at-Rapier8t8fMT MIB object C-6
 at-Rapier8t8fMTi MIB object C-6
 at-Rapier8t8fSC MIB object C-6
 at-Rapier8t8fSCi MIB object C-6
 at-RapierG6 MIB object C-6
 at-RapierG6LX MIB object C-6
 at-RapierG6MT MIB object C-6
 at-RapierG6SX MIB object C-6
 atrDot1xAuthConfigTable MIB object C-26
 atrDot1xAuthenticated trap message C-26
 atrDot1XAuthGuestVlan MIB object C-25
 atrDot1xAuthLastAuthReason MIB object C-25
 atrDot1XAuthMibReset MIB object C-25
 atrDot1xAuthPostAuthVlan MIB object C-25
 atrDot1xAuthPreAuthVlan MIB object C-25
 atrDot1XAuthSecureVlan MIB object C-25
 atrDot1xAuthStatsTable MIB object C-26
 atrDot1XAuthTrap MIB object C-25
 atrDot1XAuthVlanAssignment MIB object C-25
 atrDot1xFailedAuth trap message C-26
 atrDot1xPaePortNumber MIB object C-26
 atrDot1xPaePortSuppMacAddress MIB object C-26
 atrDot1xPaePortTable MIB object C-26
 atrDot1xUnAuthenticated trap message C-26
 atrMacBasedAuthAuthenticated trap message C-26
 atrMacBasedAuthConfigTable MIB object C-26
 atrMacBasedAuthFailedAuth trap message C-26
 atrMacBasedAuthPaePortTable MIB object C-26
 atrMacBasedAuthUnAuthenticated trap message C-26
 atRouter MIB object C-9
 atRouter sub-tree, Allied Telesis Enterprise MIB C-9
 atrPaeMib MIB object C-25
 at-Switchblade4AC MIB object C-7

at-Switchblade4DC MIB object C-7
 at-Switchblade8AC MIB object C-7
 at-Switchblade8DC MIB object C-7
 Authentication
 asynchronous calls 20-5
 CHAP 20-5
 PAP 20-5
 authentication
 Dynamic Host Configuration Protocol for IPv6 (DHCP6)
 35-6, 35-11, 35-17, 35-22
 OSPF 29-3, 29-28, 29-42, 29-63
 RADIUS 20-5
 SNMPv1 and v2 55-17
 using RADIUS servers 43-9, 43-15, 43-30, 43-37, 43-62
 using TACACS servers 43-9, 43-18, 43-31, 43-38,
 43-67
 using User Authentication Database 43-9 to 43-10,
 43-33, 43-39, 43-43, 43-48, 43-50 to 43-52,
 43-58, 43-72
 Authentication Header (AH) protocol 49-4
 Authentication Protocol Option, LCP 16-6
 authentication protocols, PPP 16-22 to 16-27
 authentication, IPsec 49-9
 auto-bauding 11-27
 autonegotiation
 duplex 8-7
 port speed 8-7
 autonomous systems 29-3
 setting AS number 30-111

B

backbone, OSPF 29-23, 29-28, 29-42, 29-63
 backup, leased line 16-40
 BACP. See Bandwidth Allocation Control Protocol
 Bandwidth Allocation Control Protocol (BACP) 16-9
 Bandwidth Allocation Protocol (BAP) 16-9
 bandwidth on demand, PPP 16-12, 16-42, 16-44
 BAP. See Bandwidth Allocation Protocol
 base hardware serial number
 displaying 4-58
 Basic Rate Access
 configuring 12-15
 Basic Rate Access, ISDN 12-4 to 12-7
 bbrNvs MIB object C-16
 bgp MIB object C-56
 BGP Peer table, Border Gateway Protocol version 4 (BGP-4)
 MIB C-56
 BGP Received Path Attribute table, Border Gateway Proto-
 col version 4 (BGP-4) MIB C-56
 BGP-4 Received Path Attribute table, Border Gateway Pro-
 tocol version 4 (BGP-4) MIB C-56
 bgp4PathAttrTable MIB object C-56
 bgpBackwardTransition trap message C-56
 bgpEstablished trap message C-56
 bgpIdentifier MIB object C-56
 bgpLocalAs MIB object C-56
 bgpPeerTable MIB object C-56
 bgpRcvdPathAttrTable MIB object C-56
 bgpVersion MIB object C-56
 bidirectional calls, asynchronous 20-9



- boards MIB object C-9
- boot script
 - commands not allowed in 51-11
- BOOT.CFG 59-2
- booting the router 4-9, 5-37
- BOOTP relay agent 24-4 to 24-5
- bootstrap router, PIM Sparse Mode 27-13
 - adding PIM BSR candidate, IPv4 27-17, 27-54, 36-10
 - adding PIM BSR candidate, IPv6 36-26
 - deleting PIM BSR candidate, IPv4 27-17, 27-66, 36-10
 - deleting PIM BSR candidate, IPv6 36-30
 - setting PIM BSR candidate parameters, IPv6 36-42
 - setting PIM BSR candidate preference, IPv4 27-96
- Border Gateway Protocol version 4 (BGP-4)
 - commands
 - ADD BGP AGGREGATE 30-48, 56-16 to 56-17
 - ADD BGP CONFEDERATIONPEER 30-50
 - ADD BGP IMPORT 30-51
 - ADD BGP NETWORK 30-52
 - ADD BGP PEER 30-53
 - DELETE BGP AGGREGATE 30-68
 - DELETE BGP CONFEDERATIONPEER 30-69
 - DELETE BGP IMPORT 30-69
 - DELETE BGP NETWORK 30-70
 - DELETE BGP PEER 30-70
 - DISABLE BGP DEBUG 30-75
 - DISABLE BGP PEER 30-76
 - ENABLE BGP DEBUG 30-80
 - ENABLE BGP PEER 30-82
 - RESET BGP PEER 30-83
 - SET BGP 30-85
 - SET BGP AGGREGATE 30-87
 - SET BGP IMPORT 30-91
 - SET BGP PEER 30-93
 - SHOW BGP 30-112
 - SHOW BGP AGGREGATE 30-114
 - SHOW BGP CONFEDERATION 30-115
 - SHOW BGP IMPORT 30-125
 - SHOW BGP NETWORK 30-130
 - SHOW BGP PEER 30-131
 - SHOW BGP ROUTE 30-138
- Border Gateway Protocol version 4 (BGP-4) MIB C-56
- BRI group, Allied Telesis Enterprise MIB C-20
- bri MIB object C-20
- BRI physical layer 12-15
- briChanTable MIB object C-20
- Bridge MIB C-37
- bridgeRouter MIB object C-5
- bridging 17-1 to 17-36
 - adding
 - filters 17-11
 - ports 17-14
 - stations 17-15
 - aging timer 17-21
 - blocking 17-4
 - commands
 - ADD BRIDGE FILTER 17-11
 - ADD BRIDGE PORT 17-14
 - ADD BRIDGE STATION 17-15
 - DELETE BRIDGE FILTER 17-17
 - DELETE BRIDGE PORT 17-17
 - DELETE BRIDGE STATION 17-18
 - DISABLE BRIDGE 17-19
 - DISABLE BRIDGE LEARNING 17-19
 - ENABLE BRIDGE 17-20
 - ENABLE BRIDGE LEARNING 17-20
 - PURGE BRIDGE 17-21
 - RESET BRIDGE 17-21
 - SET BRIDGE AGEINGTIMER 17-21
 - SET BRIDGE FILTER 17-22
 - SET BRIDGE PORT 17-24
 - SHOW BRIDGE 17-25
 - SHOW BRIDGE PORT 17-33
 - SHOW BRIDGE STATION 17-35
 - configuration 17-9 to 17-11
 - displaying 17-25
 - deleting
 - filters 17-17
 - ports 17-17
 - stations 17-18
 - disabled 17-4
 - disabling 17-19
 - learning 17-19
 - displaying
 - configuration 17-25
 - ports 17-33
 - stations 17-35
 - enabling 17-20
 - learning 17-20
 - filters
 - adding 17-11
 - deleting 17-17
 - modifying 17-22
 - forwarding 17-4
 - learning 17-4, 17-19 to 17-20
 - listening 17-4
 - modifying
 - filters 17-22
 - ports 17-24
 - on demand 17-4
 - ports
 - adding 17-14
 - deleting 17-17
 - displaying 17-33
 - modifying 17-24
 - purging configuration 17-21
 - resetting 17-21
 - stations
 - adding 17-15
 - deleting 17-18
 - displaying 17-35
 - support 17-2
- brlntTable MIB object C-20
- Broadband MAU Basic Group, MAU MIB C-35 to C-36
- Broadband MAU Basic MIB table, MAU MIB C-35
- broadcast
 - NTP entity 57-2
- broadcast forwarding 23-42 to 23-45
 - to a broadcast address 23-44
 - to a unicast address 23-43



broadcast packet limiting 8-12
 broadMauBasicTable object C-35
 BSR. See bootstrap router

C

CA. See Certificate Authority (CA)

cached sessions 47-4

call

definition, asynchronous 20-2, 20-17

call control

asynchronous 20-2

call control, ISDN 12-37

call logging, ISDN 12-41

calls

activating, asynchronous 20-8, 20-16

authenticating, asynchronous 20-5

authenticating, with CHAP 20-5

authenticating, with PAP 20-5

bidirectional, asynchronous 20-9

CHAP authentication 20-5

configuring, asynchronous 20-10

creating, asynchronous 20-2, 20-17

deactivating, asynchronous 20-8, 20-22

debugging, asynchronous 20-25 to 20-26

debugging, disabling 20-25

debugging, enabling 20-26

definition, asynchronous 20-2 to 20-3

definition, creating 20-2, 20-17

definition, deleting 20-3, 20-23

definition, disabling 20-3, 20-24

definition, displaying 20-3, 20-35

definition, enabling 20-3, 20-25

definition, modifying 20-3, 20-28, 20-31

definition, purging 20-26

deleting, asynchronous 20-3, 20-23

disabling, asynchronous 20-3, 20-24

displaying, asynchronous 20-3, 20-34 to 20-35

enabling, asynchronous 20-3, 20-25

encapsulation 11-21, 20-4

encapsulation, CSLIP 11-21, 20-4

encapsulation, SLIP 11-21, 20-4

incoming, asynchronous 20-2

modifying, asynchronous 20-3, 20-28, 20-31

outgoing, asynchronous 20-2

PAP authentication 20-5

purging, asynchronous 20-26

cc MIB object C-19

ccActiveCallTable MIB object C-19

ccAttachmentTable MIB object C-19

ccBchannelTable MIB object C-19

ccCallLogTable MIB object C-19

ccCliListTable MIB object C-19

ccDetailsTable MIB object C-19

centreCOM-AR120Router MIB object C-5

centreCOM-AR130SRouter MIB object C-5

centreCOM-AR130URouter MIB object C-5

centreCOM-AR140SRouter MIB object C-5

centreCOM-AR140URouter MIB object C-5

centreCOM-AR160Router MIB object C-5

centreCOM-AR300 MIB object C-5

centreCOM-AR300L MIB object C-5

centreCOM-AR300LU MIB object C-5

centreCOM-AR300U MIB object C-5

centreCOM-AR310 MIB object C-5

centreCOM-AR310U MIB object C-5

centreCOM-AR320Router MIB object C-5

centreCOM-AR330 MIB object C-5

centreCOM-AR350 MIB object C-5

centreCOM-AR370 MIB object C-5

centreCOM-AR370U MIB object C-5

centreCOM-AR390 MIB object C-5

centreCOM-AR395 MIB object C-5

centreCOM-AR720 MIB object C-5

centreCOM-AR740Router MIB object C-5

Certificate Authority (CA) 50-5

root 50-6, 50-8

Certificate Management Protocol (CMP) 50-9

Certificate Revocation List (CRL) 50-9

CRL Database 50-9

certificates 47-4, 50-3

Certificate Database 50-7

chains 50-6

deleting 50-24

destroying requests 50-25

requesting 50-9, 50-22

updating keypairs 50-10

validating 50-5, 50-8

X.509 50-3

Challenge Handshake Authentication Protocol (CHAP)

20-5

Challenge-Handshake Authentication Protocol (CHAP)

16-23 to 16-24

changing

synchronous tunnel 18-7

CHAP. See Challenge-Handshake Authentication Protocol

(CHAP)

chip68020Cpu MIB object C-15

chip68302Cpu MIB object C-15

chip68340Cpu MIB object C-15

chip68360Cpu MIB object C-15

chip860TCpu MIB object C-15

chipFlash1mb MIB object C-16

chipFlash2mb MIB object C-16

chipFlash3mb MIB object C-16

chipFlash4mb MIB object C-16

chipFlash6mb MIB object C-16

chipFlash8mb MIB object C-16

chipPem MIB object C-16

chipRam12mb MIB object C-15

chipRam16mb MIB object C-15

chipRam1mb MIB object C-15

chipRam20mb MIB object C-15

chipRam2mb MIB object C-15

chipRam32mb MIB object C-15

chipRam3mb MIB object C-15

chipRam4mb MIB object C-15

chipRam6mb MIB object C-15

chipRam8mb MIB object C-15

chipRtc1 MIB object C-15

chipRtc2 MIB object C-15



- chipRtc3 MIB object *C-15*
- chipRtc4 MIB object *C-15*
- chips MIB object *C-15*
- cipher *47-4*
- cipher suite
 - definition *47-4*
- cipher text *44-5*
- circuit
 - Frame Relay *15-3, 15-26, 15-31, 15-34 to 15-35, 15-40 to 15-41, 15-45, 15-49, 15-61*
- circuits
 - adding
 - IPX *38-31*
 - deleting
 - IPX *38-42*
 - disabling
 - IPX *38-48*
 - displaying
 - IPX *38-63*
 - enabling
 - IPX *38-49*
 - IPX *38-5*
 - adding *38-31*
 - deleting *38-42*
 - disabling *38-48*
 - displaying *38-63*
 - enabling *38-49*
 - setting *38-51*
 - setting
 - IPX *38-51*
- Classifier Module
 - commands
 - DESTROY CLASSIFIER *39-17*
- CLEAR FLASH TOTALLY command *6-11*
- CLEAR NVS TOTALLY command *6-11*
- clearing NVS memory *6-11*
- client
 - NTP entity *57-2, 57-4*
- clock
 - displaying *4-59*
 - setting *4-35*
- clocks, synchronous lines *11-9*
- clocks. See Network Time Protocol (NTP)
- CMOT group, MIB-II MIB *C-29*
- combined notation *55-6*
- command
 - editing *2-4*
 - history *2-4*
 - prompt *2-4*
- command reference *52-21*
- commands *5-58*
 - ACTIVATE ACC CALL *20-16*
 - ACTIVATE FLASH COMPACTION *6-9*
 - ACTIVATE IPSEC CONVERTOLDSA *49-48*
 - ACTIVATE ISDN CALL *12-59, 12-146*
 - ACTIVATE L2TP CALL *21-18*
 - ACTIVATE MIOX CIRCUIT *14-37*
 - ACTIVATE MSTP MIGRATIONCHECK PORT *9-28*
 - ACTIVATE PORTAUTH PORT REAUTHENTICATE *45-23*
 - ACTIVATE PPP *16-47*
 - ACTIVATE Q931 ASPID *12-60 to 12-61*
 - ACTIVATE SCRIPT *59-7*
 - ACTIVATE SWITCH PORT *8-49*
 - ACTIVATE TRIGGER *60-6*
 - ADD ACC CALL *20-17*
 - ADD ACC DOMAINNAME *20-20*
 - ADD ACC SCRIPT *20-21*
 - ADD ALIAS *2-12, 6-10, 6-13, 6-23*
 - ADD APPLE CIRCUIT *37-21*
 - ADD APPLE DLCI *37-22*
 - ADD APPLE PORT *37-15, 37-25*
 - ADD APPLE ROUTE *37-15, 37-27*
 - ADD APPLE ZONE *37-29*
 - ADD BGP AGGREGATE *30-48, 56-16 to 56-17*
 - ADD BGP CONFEDERATIONPEER *30-50*
 - ADD BGP IMPORT *30-51*
 - ADD BGP NETWORK *30-52*
 - ADD BGP PEER *30-53*
 - ADD BOOTP RELAY *24-10*
 - ADD BRIDGE FILTER *17-11*
 - ADD BRIDGE PORT *17-14*
 - ADD BRIDGE STATION *17-15*
 - ADD DHCP POLICY *24-13*
 - ADD DHCP RANGE *24-19*
 - ADD DVMRP INTERFACE *27-48*
 - ADD FIREWALL POLICY APPRULE *48-65*
 - ADD FIREWALL POLICY DYNAMIC *48-67*
 - ADD FIREWALL POLICY INTERFACE *48-71*
 - ADD FIREWALL POLICY LIST *48-75*
 - ADD FIREWALL POLICY NAT *48-76*
 - ADD FIREWALL POLICY PROXY *48-81*
 - ADD FIREWALL POLICY RULE *48-81*
 - ADD FIREWALL POLICY SPAMSOURCES *48-95*
 - ADD FIREWALL PROXY *48-79*
 - ADD FRAMERELAY DLC *15-26*
 - ADD FRAMERELAY LI *15-27*
 - ADD GRE *33-11*
 - ADD IGMP FILTER *27-49*
 - ADD IGMP Snooping ROUTERADDRESS *27-50*
 - ADD IP ARP *23-61*
 - ADD IP FILTER *23-65*
 - ADD IP HELPER *23-72, 23-89*
 - ADD IP HOST *23-73*
 - ADD IP INTERFACE *23-74, 33-4*
 - ADD IP LOCAL *23-79*
 - ADD IP MVR *27-53*
 - ADD IP RIP *28-7*
 - ADD IP ROUTE *23-80*
 - ADD IP ROUTE FILTER *31-46*
 - ADD IP ROUTE TEMPLATE *23-83*
 - ADD IP SA *23-200, 31-49*
 - ADD IP TRUSTED *28-11*
 - ADD IPV6 FILTER *34-36*
 - ADD IPV6 HOST *34-41*
 - ADD IPV6 INTERFACE *34-42*
 - ADD IPV6 RIP *34-47*
 - ADD IPV6 ROUTE *34-48*
 - ADD IPV6 TUNNEL *34-49*
 - ADD IPX CIRCUIT *38-31*
 - ADD IPX EXCLUSION *38-35*



- ADD IPX INCLUSION 38-36
- ADD IPX RIP 38-37
- ADD IPX ROUTE 38-38
- ADD IPX SAP 38-39
- ADD IPX SERVICE 38-40
- ADD ISDN CALL 12-62
- ADD ISDN CLILIST 12-68
- ADD ISDN DOMAINNAME 12-68
- ADD L2TP CALL 21-19
- ADD L2TP IP 21-22
- ADD L2TP USER 21-24, 21-30
- ADD LAPD 12-108
- ADD LAPD TEI 12-69
- ADD LAPD XSPID 12-69
- ADD LAPD XTEI 12-70
- ADD LOADBALANCER RESOURCE 52-21
- ADD LOADBALANCER RESPOOL 52-23
- ADD LOADBALANCER VIRTUALBALANCER 52-24
- ADD LOADBALANCER VIRTUALBALANCER HTTPERROR-CODE 52-27
- ADD LOG OUTPUT 61-13
- ADD LOG RECEIVE 61-16
- ADD MIOX CIRCUIT 14-39
- ADD NTP PEER 57-8
- ADD OSPF AREA 29-28
- ADD OSPF HOST 29-30
- ADD OSPF INTERFACE 29-31
- ADD OSPF NEIGHBOUR 29-36
- ADD OSPF RANGE 29-37
- ADD OSPF STUB 29-40
- ADD OSPF SUMMARYADDRESS 29-41
- ADD PIM BSR CANDIDATE 27-54
- ADD PIM INTERFACE 27-55
- ADD PIM RPCANDIDATE 27-57
- ADD PIM6 BSR CANDIDATE 36-26
- ADD PIM6 INTERFACE 36-27
- ADD PIM6 RPCANDIDATE 36-29
- ADD PING POLL 54-9
- ADD PKI CERTIFICATE 50-16
- ADD PKI CRL 50-18
- ADD PKI LDAPREPOSITORY 50-20
- ADD PPP 16-49
- ADD QOS FLOWGROUP 40-17
- ADD QOS POLICY 40-18
- ADD QOS TRAFFICCLASS 40-19
- ADD RADIUS SERVER 43-30
- ADD SA MEMBER command 49-49
- ADD SCRIPT 59-8
- ADD SNMP COMMUNITY 55-25
- ADD SNMP GROUP 55-27
- ADD SNMP TARGETADDR 55-28
- ADD SNMP TARGETPARAMS 55-29
- ADD SNMP USER 55-30
- ADD SSH USER 46-11
- add stack interface 58-18
- ADD STP VLAN 9-30
- ADD STREAM 64-5
- ADD STT 18-5
- ADD SWITCH FILTER 8-52
- ADD SWITCH L3FILTER ENTRY 8-56
- ADD SWITCH L3FILTER MATCH 8-59
- ADD SWITCH TRUNK 8-62
- ADD TACACS SERVER 43-31
- ADD TDM 13-8
- ADD TPAD 19-17
- ADD TRIGGER 60-7
- ADD USER 43-33
- ADD USER RSO 43-36
- ADD VLAN BRIDGE 9-31, 17-16
- ADD VLAN PORT 8-63
- ADD VLANRELAY 8-65
- ADD VRRP IP 53-12
- ADD VRRP MONITOREDINTERFACE 53-13
- ADD X25C DTEADDRESS 14-41
- ADD X25C HUNTGROUP 14-42
- ADD X25C ROUTE 14-43
- ADD X25T CPAR 14-44
- CLEAR FLASH TOTALLY 6-11
- CLEAR NVS TOTALLY 6-11
- CONNECT 62-14
- CONNECT ASYN 11-31
- CONNECT PORT 11-31
- CREATE CONFIG 5-22
- CREATE DHCP POLICY 24-20
- CREATE DHCP RANGE 24-21, 24-47
- CREATE ENCO KEY 44-19
- CREATE FIREWALL POLICY 48-97
- CREATE FIREWALL POLICY DYNAMIC 48-98
- CREATE FRAMERELAY 15-28
- CREATE H323 32-25
- CREATE H323 ENTRY 32-27
- CREATE IGMP FILTER 27-59
- CREATE IP MVR 27-61
- CREATE IP POOL 23-86
- CREATE IPSEC BUNDLESPECIFICATION 49-50
- CREATE IPSEC POLICY 49-52
- CREATE IPSEC SASPECIFICATION 49-60
- CREATE IPV6 INTERFACE 34-50
- CREATE ISAKMP POLICY 49-63
- CREATE LAPB 14-45
- CREATE LOG OUTPUT 61-18
- CREATE LPD 63-10
- CREATE PKI ENROLLMENTREQUEST 50-22
- CREATE PKI KEYUPDATEREQUEST 50-23
- CREATE PPP 16-53
- CREATE PPP TEMPLATE 16-62
- CREATE QOS FLOWGROUP 40-20
- CREATE QOS POLICY 40-21
- CREATE QOS TRAFFICCLASS 40-22
- CREATE RSVP PROXY 42-9
- CREATE SA 49-71
- CREATE SERVICE 62-15
- CREATE SIP 32-28
- CREATE SNMP COMMUNITY 55-33, 55-35 to 55-36
- CREATE STAR 51-12
- CREATE STP 9-33
- CREATE SWITCH TRUNK 8-66
- CREATE TDM 13-9
- CREATE TPAD 19-18
- CREATE TRIGGER 60-8



CREATE VLAN 8-68
 CREATE VLANRELAY 8-69
 CREATE VRRP 53-14
 CREATE X25C 14-47
 CREATE X25C HUNTGROUP 14-49
 CREATE X25T 14-50
 DEACTIVATE ACC CALL 20-22
 DEACTIVATE ISDN CALL 12-71
 DEACTIVATE L2TP CALL 21-28
 DEACTIVATE MIOX CIRCUIT 14-52
 DEACTIVATE SCRIPT 59-9
 DELETE ACC CALL 20-23
 DELETE ACC DOMAINNAME 20-23
 DELETE ACC SCRIPT 20-24
 DELETE ALIAS 2-13
 DELETE APPLE CIRCUIT 37-31
 DELETE APPLE DLCI 37-32
 DELETE APPLE PORT 37-33
 DELETE APPLE ROUTE 37-16, 37-34
 DELETE APPLE ZONE 37-35
 DELETE BGP AGGREGATE 30-68
 DELETE BGP CONFEDERATIONPEER 30-69
 DELETE BGP IMPORT 30-69
 DELETE BGP NETWORK 30-70
 DELETE BGP PEER 30-70
 DELETE BOOTP RELAY 24-22
 DELETE BRIDGE FILTER 17-17
 DELETE BRIDGE PORT 17-17
 DELETE BRIDGE STATION 17-18
 DELETE DHCP POLICY 24-24
 DELETE DHCP RANGE 24-28
 DELETE DVMRP INTERFACE 27-62
 DELETE FILE 6-14
 DELETE FIREWALL POLICY APPRULE 48-99
 DELETE FIREWALL POLICY DYNAMIC 48-100
 DELETE FIREWALL POLICY INTERFACE 48-102
 DELETE FIREWALL POLICY LIST 48-104
 DELETE FIREWALL POLICY NAT 48-105
 DELETE FIREWALL POLICY RULE 48-108
 DELETE FIREWALL SESSION 48-110
 DELETE FRAMERELAY DLC 15-31
 DELETE FRAMERELAY LI 15-31
 DELETE GRE 33-4, 33-14
 DELETE IGMP FILTER 27-63
 DELETE IGMP Snooping ROUTERADDRESS 27-63
 DELETE INSTALL 5-23
 DELETE IP ARP 23-87
 DELETE IP FILTER 23-88
 DELETE IP HOST 23-90
 DELETE IP INTERFACE 23-91
 DELETE IP LOCAL 23-92
 DELETE IP MVR 27-66
 DELETE IP RIP 28-12
 DELETE IP ROUTE 23-93
 DELETE IP ROUTE FILTER 31-58
 DELETE IP ROUTE TEMPLATE 23-94
 DELETE IP SA 23-95
 DELETE IP TRUSTED 28-13
 DELETE IPV6 FILTER 34-51
 DELETE IPV6 HOST 34-52

DELETE IPV6 INTERFACE 34-52
 DELETE IPV6 RIP 34-56
 DELETE IPV6 ROUTE 34-57
 DELETE IPV6 TUNNEL 34-58
 DELETE IPX CIRCUIT 38-42
 DELETE IPX EXCLUSION 38-43
 DELETE IPX INCLUSION 38-44
 DELETE IPX RIP 38-45
 DELETE IPX ROUTE 38-45
 DELETE IPX SAP 38-46
 DELETE IPX SERVICE 38-47
 DELETE ISDN CALL 12-71
 DELETE ISDN CLILIST 12-72
 DELETE ISDN DOMAINNAME 12-72
 DELETE L2TP CALL 21-28
 DELETE L2TP IP 21-29
 DELETE L2TP USER 21-31
 DELETE LACP PORT 8-70
 DELETE LAPD TEI 12-73
 DELETE LAPD XSPID 12-74
 DELETE LAPD XTEI 12-75
 DELETE LOADBALANCER RESOURCE 52-28
 DELETE LOADBALANCER RESPOOL 52-28
 DELETE LOADBALANCER VIRTUALBALANCER 52-29
 DELETE LOADBALANCER VIRTUALBALANCER HTTPPER-
 RORCODE 52-30
 DELETE LOG OUTPUT 61-22
 DELETE LOG RECEIVE 61-22
 DELETE MAIL 4-17
 DELETE MIOX CIRCUIT 14-53
 DELETE NTP PEER 57-8
 DELETE NVS 6-15
 DELETE OSPF AREA 29-42
 DELETE OSPF HOST 29-42
 DELETE OSPF INTERFACE 29-43
 DELETE OSPF NEIGHBOUR 29-45
 DELETE OSPF RANGE 29-45
 DELETE OSPF STUB 29-47
 DELETE OSPF SUMMARYADDRESS 29-48
 DELETE PIM BSRCANDIDATE 27-66
 DELETE PIM INTERFACE 27-67
 DELETE PIM RPCANDIDATE 27-68
 DELETE PIM6 BSRCANDIDATE 36-30
 DELETE PIM6 INTERFACE 36-30
 DELETE PIM6 RPCANDIDATE 36-31
 DELETE PING POLL 54-11
 DELETE PKI CERTIFICATE 50-24
 DELETE PKI CRL 50-24
 DELETE PKI LDAPREPOSITORY 50-25
 DELETE PPP 16-69
 DELETE QOS FLOWGROUP 40-24
 DELETE QOS POLICY 40-25
 DELETE QOS TRAFFICCLASS 40-26
 DELETE RADIUS SERVER 43-37
 DELETE SA MEMBER 49-72
 DELETE SCRIPT 59-10
 DELETE SNMP COMMUNITY 55-35
 DELETE SNMP GROUP 55-36
 DELETE SNMP TARGETADDR 55-36
 DELETE SNMP TARGETPARAMS 55-37



DELETE SNMP USER 55-37
 DELETE SNMP VIEW 55-38
 DELETE SSH USER 46-13
 delete stack interface 58-18
 DELETE STP VLAN 9-35
 DELETE STREAM 64-6
 DELETE STT 18-6
 DELETE SWITCH FILTER 8-71, 9-36
 DELETE SWITCH L3FILTER 8-72, 9-36
 DELETE SWITCH L3FILTER ENTRY 8-72, 9-36
 DELETE SWITCH TRUNK 8-73, 9-36
 DELETE TACACS SERVER 43-38
 DELETE TCP 23-96
 DELETE TDM 13-10
 DELETE TPAD 19-20
 DELETE TRIGGER 60-15
 DELETE USER 43-39
 DELETE USER RSO 43-40
 DELETE VLAN BRIDGE 9-36, 17-18
 DELETE VLAN PORT 8-74, 9-36
 DELETE VLANRELAY 8-75
 DELETE VRRP IP 53-17
 DELETE VRRP MONITOREDINTERFACE 53-18
 DELETE X25C DTEADDRESS 14-54
 DELETE X25C HUNTGROU 14-55
 DELETE X25C ROUTE 14-56
 DELETE X25T CPAR 14-56
 DESTROY CLASSIFIER 39-17
 DESTROY DHCP POLICY 24-29
 DESTROY DHCP RANGE 24-29
 DESTROY ENCO KEY 44-21
 DESTROY FIREWALL POLICY 48-111
 DESTROY FIREWALL POLICY DYNAMIC 48-111
 DESTROY FRAMERELAY 15-32
 DESTROY H323 32-30
 DESTROY H323 ENTRY 32-31
 DESTROY IGMP FILTER 27-69
 DESTROY IP MVR 27-70
 DESTROY IP POOL 23-96
 DESTROY IPSEC BUNDLESPECIFICATION 49-72
 DESTROY IPSEC POLICY 49-73
 DESTROY IPSEC SASPECIFICATION 49-74
 DESTROY IPV6 INTERFACE 34-59
 DESTROY ISAKMP POLICY 49-74
 DESTROY LAPB 14-57
 DESTROY LOG OUTPUT 61-23
 DESTROY LPD 63-11
 DESTROY PKI ENROLLMENTREQUEST 50-25
 DESTROY PKI KEYUPDATEREQUEST 50-26
 DESTROY PPP 16-70
 DESTROY PPP TEMPLATE 16-71
 DESTROY QOS FLOWGROUP 40-27
 DESTROY QOS POLICY 40-28
 DESTROY QOS TRAFFICCLASS 40-29
 DESTROY RSVP PROXY 42-12
 DESTROY SA 49-75
 DESTROY SERVICE 62-16
 DESTROY SIP 32-32
 DESTROY SNMP COMMUNITY 55-39
 DESTROY STAR 51-13

DESTROY STP 9-37
 DESTROY SWITCH TRUNK 8-76
 DESTROY TDM 13-11
 DESTROY TPAD 19-20
 DESTROY TRIGGER 60-15
 DESTROY VLAN 8-77
 DESTROY VLANRELAY 8-77
 DESTROY VRRP 53-19
 DESTROY X25C 14-57
 DESTROY X25C HUNTGROU 14-58
 DESTROY X25T 14-58
 DISABLE ACC CALL 20-24
 DISABLE ACC CALL DEBUG 20-25
 DISABLE APPLE 37-36
 DISABLE APPLE DEBUG 37-37
 DISABLE ASYN 11-32
 DISABLE BGP DEBUG 30-75
 DISABLE BGP PEER 30-76
 DISABLE BOOTP RELAY 24-30
 DISABLE BRI CTEST 12-75
 DISABLE BRI DEBUG 12-76
 DISABLE BRI TEST 12-76
 DISABLE BRIDGE 17-19
 DISABLE BRIDGE LEARNING 17-19
 DISABLE DS3 DEBUG 11-32
 DISABLE DS3 TEST 11-33
 DISABLE DVMRP 27-70
 DISABLE DVMRP DEBUG 27-71
 DISABLE ENCO COMPSTATISTICS 44-22
 DISABLE ENCO DEBUGGING 44-22
 DISABLE FEATURE 5-24
 DISABLE FIREWALL 48-112
 DISABLE FIREWALL NOTIFY 48-113
 DISABLE FIREWALL POLICY 48-114
 DISABLE FIREWALL POLICY IDENTPROXY 48-119
 DISABLE FRAMERELAY 15-32
 DISABLE FRAMERELAY CONGESTIONCONTROL 15-33
 DISABLE FRAMERELAY DEBUG 15-33
 DISABLE FRAMERELAY DLC 15-34
 DISABLE FRAMERELAY DLC DEBUG 15-35
 DISABLE FRAMERELAY LI DEBUG 15-36, 15-43
 DISABLE FRAMERELAY SLOWSTART 15-37
 DISABLE GARP 10-8
 DISABLE GARP DEBUG 10-10
 DISABLE GARP GIP 10-11
 DISABLE GRE 33-15
 DISABLE GUI 5-25
 DISABLE HTTP DEBUG 5-25
 DISABLE HTTP SERVER 5-25
 DISABLE IGMP SNOOPING 27-72
 DISABLE INTERFACE 11-34
 DISABLE IP 23-97
 DISABLE IP DEBUG 23-98
 DISABLE IP DNSRELAY 23-98
 DISABLE IP ECHOREPLY 23-99
 DISABLE IP FOFILTER 23-100
 DISABLE IP FORWARDING 23-101
 DISABLE IP HELPER 23-101
 DISABLE IP IGMP 27-72
 DISABLE IP IGMP INTERFACE 27-74



DISABLE IP INTERFACE 23-103
 DISABLE IP MULTICASTSWITCHING 27-74
 DISABLE IP MVR 27-75
 DISABLE IP MVR DEBUG 27-75
 DISABLE IP REMOTEASSIGN 23-104
 DISABLE IP ROUTE 23-105
 DISABLE IP SRCROUTE 23-106
 DISABLE IPSEC 49-75
 DISABLE IPSEC OLDSA 49-76
 DISABLE IPSEC POLICY DEBUGGING 49-77
 DISABLE IPV6 34-59
 DISABLE IPV6 ADV 34-60
 DISABLE IPV6 DEBUG 34-60
 DISABLE IPV6 MLD 36-31
 DISABLE IPV6 MLD DEBUG 36-32
 DISABLE IPV6 MLD INTERFACE 36-32
 DISABLE IPV6 RIP 34-61
 DISABLE IPX 38-47
 DISABLE IPX CIRCUIT 38-48
 DISABLE ISAKMP 49-79
 DISABLE ISAKMP DEBUGGING 49-80
 DISABLE ISDN CALL 12-77
 DISABLE ISDN LOG 12-77
 DISABLE L2TP 21-32
 DISABLE L2TP DEBUG 21-33
 DISABLE L2TP SERVER 21-34
 DISABLE LACP 8-78
 DISABLE LACP DEBUG 8-78
 DISABLE LOADBALANCER 52-30
 DISABLE LOADBALANCER DEBUG 52-31
 DISABLE LOADBALANCER HEALTHPINGS 52-31
 DISABLE LOADBALANCER REDUNDANCY 52-32
 DISABLE LOADBALANCER RESOURCE 52-33
 DISABLE LOADBALANCER VIRTUALBALANCER 52-34
 DISABLE LOG 61-23
 DISABLE LOG GENERATION 61-23
 DISABLE LOG OUTPUT 61-24
 DISABLE LOG RECEPTION 61-24
 DISABLE LPD 63-11
 DISABLE MAIL DEBUG 4-18
 DISABLE MIOX CIRCUIT 14-59
 DISABLE MLDSNOOPING 36-33
 DISABLE MLDSNOOPING DEBUG 36-33
 DISABLE MSTP 9-46
 DISABLE NTP 57-9
 DISABLE OSPF 29-48
 DISABLE OSPF DEBUG 29-49
 DISABLE OSPF INTERFACE 29-50
 DISABLE OSPF LOG 29-50
 DISABLE PIM 27-75
 DISABLE PIM DEBUG 27-76
 DISABLE PIM6 36-33
 DISABLE PIM6 DEBUG 36-34
 DISABLE PING POLL 54-12
 DISABLE PING POLL DEBUG 54-12
 DISABLE PKI DEBUG 50-26
 DISABLE PORT 11-32
 DISABLE PORTAUTH 45-24
 DISABLE PORTAUTH DEBUG PORT 45-25
 DISABLE PORTAUTH PORT 45-26
 DISABLE PPP 16-72
 DISABLE PPP DEBUG 16-72
 DISABLE PPP TEMPLATE DEBUG 16-74
 DISABLE PRI CTEST 12-78
 DISABLE PRI DEBUG 12-78
 DISABLE PRI TEST 12-79
 DISABLE Q931 DEBUG 12-80
 DISABLE QOS DEBUG 40-29
 DISABLE RELEASE 5-26
 DISABLE RSVP 42-12
 DISABLE RSVP DEBUG 42-13
 DISABLE RSVP INTERFACE 42-14
 DISABLE RSVP PROXY 42-15
 DISABLE SA DEBUGGING 49-81
 DISABLE SNMP 55-39
 DISABLE SNMP AUTHENTICATE_TRAP 55-39
 DISABLE SNMP COMMUNITY 55-40
 DISABLE SSH SERVER 46-14, 46-19
 DISABLE SSH USER 46-15
 DISABLE SSL DEBUG 47-10
 disable stack 58-19
 disable stack debug 58-20
 DISABLE STAR DEBUGGING 51-13
 DISABLE STP 9-42
 DISABLE STP DEBUG 9-43
 DISABLE STP PORT 9-45
 DISABLE SWITCH AGEINGTIMER 8-78
 DISABLE SWITCH DEBUG 8-79
 DISABLE SWITCH L3FILTER 8-81
 DISABLE SWITCH LEARNING 8-81
 DISABLE SWITCH MIRROR 8-82
 DISABLE SWITCH PORT 8-82
 DISABLE SYN 11-35
 DISABLE SYN DEBUG 11-35
 DISABLE SYSTEM SECURITY_MODE 43-41
 DISABLE TELNET SERVER 23-107
 DISABLE TEST INTERFACE 65-10
 DISABLE TPAD 19-21
 DISABLE TPAD DEBUG 19-21
 DISABLE TRIGGER 60-16
 DISABLE USER 43-43
 DISABLE USER RSO 43-43
 DISABLE VLAN DEBUG 8-83
 DISABLE VLANRELAY 8-84, 9-46
 DISABLE VLANRELAY DEBUG 8-84, 9-46
 DISABLE VOIP 32-32
 DISABLE VOIP DEBUG 32-33
 DISABLE VRRP 53-19
 DISABLE VRRP DEBUG 53-20
 DISABLE X25C DEBUG 14-59
 DISCONNECT 62-18
 DUMP 4-20
 DUMP NVS 6-16
 EDIT 6-17, 59-3
 ENABLE ACC CALL 20-25
 ENABLE ACC CALL DEBUG 20-26
 ENABLE APPLE 37-37
 ENABLE APPLE DEBUG 37-37
 ENABLE BGP DEBUG 30-80
 ENABLE BGP PEER 30-82



- ENABLE BOOTP RELAY 24-32
- ENABLE BRI CTEST 12-82
- ENABLE BRI DEBUG 12-83
- ENABLE BRI TEST 12-84
- ENABLE BRIDGE 17-20
- ENABLE BRIDGE LEARNING 17-20
- ENABLE DVMRP 27-77
- ENABLE DVMRP DEBUG 27-78
- ENABLE ENCO COMPSTATISTICS 44-22
- ENABLE ENCO DEBUGGING 44-23
- ENABLE FEATURE 5-27
- ENABLE FIREWALL 48-122
- ENABLE FIREWALL NOTIFY 48-123
- ENABLE FIREWALL POLICY 48-124, 48-126
- ENABLE FIREWALL POLICY IDENTPROXY 48-128
- ENABLE FRAMERELAY 15-37
- ENABLE FRAMERELAY CONGESTIONCONTROL 15-38
- ENABLE FRAMERELAY DEBUG 15-39
- ENABLE FRAMERELAY DLC 15-40
- ENABLE FRAMERELAY DLC DEBUG 15-41
- ENABLE FRAMERELAY SLOWSTART 15-43
- ENABLE GARP 10-12
- ENABLE GARP DEBUG 10-13
- ENABLE GARP GIP 10-15
- ENABLE GRE 33-15
- ENABLE GUI 3-20
- ENABLE HTTP DEBUG 5-28, 46-14 to 46-15, 46-18
- ENABLE HTTP SERVER 5-28
- ENABLE IGMP SNOOPING 27-79
- ENABLE INTERFACE LINKTRAP 11-40
- ENABLE IP 23-108
- ENABLE IP DEBUG 23-110
- ENABLE IP DNSRELAY 23-111
- ENABLE IP ECHOREPLY 23-111
- ENABLE IP FOFILTER 23-112
- ENABLE IP FORWARDING 23-113
- ENABLE IP HELPER 23-113
- ENABLE IP IGMP 27-79
- ENABLE IP IGMP INTERFACE 27-81
- ENABLE IP INTERFACE 23-115
- ENABLE IP MULTICASTSWITCHING 27-81
- ENABLE IP MVR 27-82
- ENABLE IP MVR DEBUG 27-82
- ENABLE IP REMOTEASSIGN 23-117
- ENABLE IP ROUTE 23-117
- ENABLE IP SRCROUTE 23-105, 23-107, 23-118 to 23-119
- ENABLE IPSEC 49-81
- ENABLE IPSEC OLDSA 49-82
- ENABLE IPSEC POLICY DEBUGGING 49-83
- ENABLE IPV6 34-61
- ENABLE IPV6 ADV 34-62
- ENABLE IPV6 DEBUG 34-62
- ENABLE IPV6 MLD 36-34
- ENABLE IPV6 MLD DEBUG 36-34, 36-50
- ENABLE IPV6 MLD INTERFACE 36-35
- ENABLE IPV6 RIP 34-63
- ENABLE IPX 38-48
- ENABLE IPX CIRCUIT 38-49
- ENABLE ISAKMP 49-86
- ENABLE ISAKMP DEBUGGING 49-88
- ENABLE ISDN CALL 12-86
- ENABLE ISDN LOG 12-86
- ENABLE L2TP 21-34
- ENABLE L2TP DEBUG 21-35
- ENABLE L2TP SERVER 21-39
- ENABLE LOADBALANCER 52-35
- ENABLE LOADBALANCER DEBUG 52-35
- ENABLE LOADBALANCER HEALTHPINGS 52-36
- ENABLE LOADBALANCER REDUNDANCY 52-37
- ENABLE LOADBALANCER RESOURCE 52-38
- ENABLE LOADBALANCER VIRTUALBALANCER 52-38
- ENABLE LOG 61-25
- ENABLE LOG GENERATION 61-25
- ENABLE LOG OUTPUT 61-26
- ENABLE LOG RECEPTION 61-26
- ENABLE LPD 63-12
- ENABLE MAIL DEBUG 4-23
- ENABLE MIOX CIRCUIT 14-60
- ENABLE MLDSNOOPING 36-36
- ENABLE MLDSNOOPING DEBUG 36-36
- ENABLE MSTP CIST PORT 9-47
- ENABLE NTP 57-9
- ENABLE OSPF 29-51
- ENABLE OSPF DEBUG 29-51
- ENABLE OSPF INTERFACE 29-53
- ENABLE OSPF LOG 29-54
- ENABLE PIM 27-76, 27-83
- ENABLE PIM DEBUG 27-84
- ENABLE PIM6 36-36
- ENABLE PIM6 DEBUG 36-37
- ENABLE PING POLL 54-13
- ENABLE PING POLL DEBUG 54-13
- ENABLE PKI DEBUG 50-27
- ENABLE PORT 11-41
- ENABLE PORTAUTH 45-27
- ENABLE PORTAUTH DEBUG PORT 45-28
- ENABLE PPP 16-75
- ENABLE PPP DEBUG 16-76
- ENABLE PPP TEMPLATE DEBUG 16-79
- ENABLE PRI CTEST 12-87
- ENABLE PRI DEBUG 12-88
- ENABLE PRI TEST 12-89
- ENABLE Q931 ASPID 12-90
- ENABLE Q931 DEBUG 12-91
- ENABLE QOS DEBUG 40-30
- ENABLE RELEASE 5-30
- ENABLE RSVP 42-15
- ENABLE RSVP DEBUG 42-16
- ENABLE RSVP INTERFACE 42-17
- ENABLE RSVP PROXY 42-18
- ENABLE SA DEBUGGING 49-89
- ENABLE SNMP 55-40
- ENABLE SNMP AUTHENTICATE_TRAP 55-41
- ENABLE SNMP COMMUNITY 55-41
- ENABLE SSH SERVER 46-16
- ENABLE SSH USER 46-17
- ENABLE SSL DEBUG 47-10
- enable stack 58-21
- enable stack debug 58-22



ENABLE STAR DEBUGGING 51-14
 ENABLE STAR MKTTRANSFER 51-14
 ENABLE STP 9-52
 ENABLE STP DEBUG 9-53
 ENABLE STP PORT 9-55
 ENABLE SWITCH AGEINGTIMER 8-86
 ENABLE SWITCH BIST 8-87
 ENABLE SWITCH DEBUG 8-88
 ENABLE SWITCH L3FILTER 8-90
 ENABLE SWITCH LEARNING 8-90
 ENABLE SWITCH MIRROR 8-90
 ENABLE SWITCH PORT 8-91
 ENABLE SYN 11-41
 ENABLE SYN DEBUG 11-41
 ENABLE SYSTEM SECURITY_MODE 43-46
 ENABLE TELNET SERVER 23-119
 ENABLE TEST INTERFACE 65-11
 ENABLE TPAD 19-22
 ENABLE TPAD DEBUG 19-22
 ENABLE TRIGGER 60-17
 ENABLE USER 43-48
 ENABLE USER RSO 43-49
 ENABLE VLAN DEBUG 8-92
 ENABLE VLANRELAY 8-93
 ENABLE VLANRELAY DEBUG 8-93, 9-56
 ENABLE VOIP 32-33
 ENABLE VOIP DEBUG 32-34
 ENABLE VRRP 53-20
 ENABLE VRRP DEBUG 53-21
 ENABLE X25C DEBUG 14-60
 ENABLEDS3 DEBUG 11-36
 ENABLEDS3 TEST 11-37
 FINGER 23-120
 FLUSH LOG OUTPUT 61-27
 Frame Relay 15-25
 HELP 2-13
 host-directed commands (HDC) 58-17
 interfaces 15-25
 Internet Protocol (IP) 23-59 to 23-214, 28-7
 Line Printer Daemon (LPD) 63-9
 LOAD 5-31, 59-3 to 59-4
 LOGIN 43-50
 LOGOFF 43-51
 MAIL 4-24
 MODIFY 4-26
 MODIFY NVS 6-20
 not allowed in boot script 51-11
 permanent assignments 63-9
 PING 23-121
 Point-to-Point Protocol (PPP) 15-25, 16-47
 PURGE ACC 20-26
 PURGE ACC SCRIPT 20-27
 PURGE APPLE 37-38
 PURGE ASYN 11-42
 PURGE BOOTP RELAY 24-34
 PURGE BRIDGE 17-21
 PURGE DVMRP 27-84
 PURGE GRE 33-16
 PURGE IP 23-123
 PURGE IPSEC 49-89
 PURGE IPX 38-49
 PURGE LOG 61-27
 PURGE NTP 57-9
 PURGE OSPF 29-55
 PURGE PIM 27-85
 PURGE PIM6 36-38
 PURGE PKI 50-28
 PURGE PORTAUTH PORT 45-35
 PURGE PPP 16-80
 PURGE QOS 40-30
 PURGE SNMP 55-42
 PURGE STP 9-57
 PURGE TDM 13-11
 PURGE TRIGGER 60-17
 PURGE USER 43-51
 RECONNECT 62-20
 RENAME 6-22
 RESET APPLE 37-38
 RESET BGP PEER 30-83
 RESET BRI 12-95
 RESET BRI COUNTERS 12-96
 RESET BRIDGE 17-21
 RESET CPU UTILISATION 4-27
 RESET DS3 11-44
 RESET DS3 COUNTERS 11-45
 RESET DVMRP INTERFACE 27-85
 RESET ENCO COUNTERS 44-24
 RESET FRAMERELAY 15-44
 RESET FRAMERELAY DLC 15-45
 RESET GARP 10-16
 RESET GRE 33-17
 RESET HTTP SERVER 5-36
 RESET INTERFACE COUNTER 11-46
 RESET IP 23-124
 RESET IP INTERFACE 23-125
 RESET IPSEC COUNTERS 49-90
 RESET IPSEC POLICY COUNTERS 49-91
 RESET IPSEC SA COUNTERS 49-92
 RESET IPX 38-50
 RESET ISAKMP COUNTERS 49-93
 RESET LACP PORT COUNTER 8-94, 9-58
 RESET LAPB 14-61
 RESET LOADBALANCER 52-39
 RESET LOADER 5-36
 RESET LPD 63-12
 RESET MSTP COUNTER PORT 9-58
 RESET NTP 57-10
 RESET OSPF 29-55
 RESET OSPF COUNTER 29-56
 RESET OSPF INTERFACE 29-57
 RESET OSPF SPF 29-58
 RESET PIM INTERFACE 27-86
 RESET PIM6 INTERFACE 36-38
 RESET PING POLL 54-14
 RESET PORT 11-42
 RESET PORT COUNTERS 11-43
 RESET PORT HISTORY 11-44
 RESET PORTAUTH PORT MULTIMIB 45-37
 RESET PPP 16-81
 RESET PRI 12-96



- RESET PRI COUNTERS 12-97
- RESET Q931 12-98
- RESET RSVP PROXY 42-19
- RESET STP 9-58
- RESET STREAM 64-6
- RESET STT 18-6
- RESET SWITCH 8-94, 9-58
- RESET SWITCH PORT 8-95, 9-58
- RESET SYN 11-46
- RESET SYN COUNTERS 11-47
- RESET TEST INTERFACE 65-12
- RESET TPAD 19-23
- RESET USER 43-52
- RESET VOIP 32-35
- RESET X25T 14-61
- RESTART 5-37
- SET ACC CALL 20-28
- SET ACC CALL PORT 20-31
- SET ACC SCRIPT 20-32
- SET APPLE PORT 37-15, 37-41
- SET APPLE ROUTECONVERT 37-43
- SET APPLE ZONE 37-45
- SET ASYN 11-48
- SET BGP 30-85
- SET BGP AGGREGATE 30-87
- SET BGP IMPORT 30-91
- SET BGP PEER 30-93
- SET BOOTP MAXHOPS 24-35
- SET BRI 12-99
- SET BRIDGE AGEINGTIMER 17-21
- SET BRIDGE FILTER 17-22
- SET BRIDGE PORT 17-24
- SET CONFIG 5-38
- SET DHCP POLICY 24-41
- SET DVMRP INTERFACE 27-87
- SET ENCO DHPADDING 44-25
- SET ENCO DHPRIORITY 44-25
- SET ENCO KEY 44-26
- SET ENCO SW 44-27
- SET FIREWALL POLICY 48-136, 48-138
- SET FIREWALL POLICY ATTACK 48-138
- SET FIREWALL POLICY DOMAIN 48-147
- SET FIREWALL POLICY RULE 48-142
- SET FRAMERELAY 15-46
- SET FRAMERELAY DLC 15-49
- SET GARP PORT 10-17
- SET GARP TIMER 10-19
- SET GRE 33-18
- SET H323 32-36
- SET H323 ENTRY 32-37
- SET H323 GATEWAY 32-38
- SET HELP 2-15
- SET HTTP SERVER 5-39
- SET IGMP FILTER 27-88
- SET IGMP Snooping FASTLEAVE 27-89
- SET IGMP Snooping ROUTERMODE 27-90
- SET INSTALL 5-40
- SET INTERFACE MTU 11-55
- SET INTERFACE TRAPLIMIT 11-57
- SET IP ARP 23-127
- SET IP ARP TIMEOUT 23-128 to 23-129
- SET IP AUTONOMOUS 30-111
- SET IP DNSRELAY 23-134
- SET IP FILTER 23-135
- SET IP HOST 23-139
- SET IP IGMP 27-91
- SET IP IGMP INTERFACE 27-92
- SET IP INTERFACE 23-140, 33-4 to 33-5
- SET IP LOCAL 23-145
- SET IP NAMESERVER 23-147
- SET IP RIP 28-14
- SET IP RIPTIMER 28-18
- SET IP ROUTE 23-148
- SET IP ROUTE FILTER 31-63
- SET IP ROUTE TEMPLATE 23-152
- SET IP SECONDARYNAMESERVER 23-153
- SET IPSEC BUNDLESPECIFICATION 49-95
- SET IPSEC POLICY 49-96
- SET IPSEC SASPECIFICATION 49-104
- SET IPSEC UDPPORT 49-106
- SET IPV6 FILTER 34-65
- SET IPV6 INTERFACE 34-68
- SET IPV6 MLD 36-39
- SET IPV6 MLD INTERFACE 36-40
- SET IPV6 MTU 34-69
- SET IPX CIRCUIT 38-51
- SET IPX GRIP|GSAP 38-54
- SET IPX RIP 38-55
- SET IPX SAP 38-56
- SET ISAKMP POLICY 49-107
- SET ISDN CALL 12-101
- SET ISDN DOMAINNAME 12-107
- SET ISDN LOG 12-107
- SET L2TP CALL 21-40
- SET L2TP CHECKSUM 21-43
- SET L2TP FILTER 21-43
- SET L2TP PASSWORD 21-44
- SET L2TP USER 21-45
- SET LACP PRIORITY 8-97, 9-59
- SET LAPB 14-62
- SET LOADBALANCER 52-40
- SET LOADBALANCER REDUNDANCY 52-41
- SET LOADBALANCER RESOURCE 52-43
- SET LOADBALANCER RESPOOL 52-44
- SET LOADBALANCER VIRTUALBALANCER 52-45
- SET LOADER 5-42
- SET LOG OUTPUT 61-28
- SET LOG RECEIVE 61-34
- SET LOG UTCOFFSET 61-35
- SET LPD 63-13
- SET MAIL 4-28
- SET MANAGER PORT 43-53
- SET MIOX 14-63
- SET MIOX CIRCUIT 14-64
- SET NTP UTCOFFSET 57-10
- SET OSPF 29-59
- SET OSPF AREA 29-63
- SET OSPF HOST 29-65
- SET OSPF INTERFACE 29-66
- SET OSPF NEIGHBOUR 29-70



SET OSPF RANGE 29-71
 SET OSPF STUB 29-74
 SET OSPF SUMMARYADDRESS 29-75
 SET PASSWORD 43-54 to 43-55
 SET PIM 27-94
 SET PIM BSR CANDIDATE 27-96
 SET PIM INTERFACE 27-97
 SET PIM RPCANDIDATE 27-99
 SET PIM6 36-41
 SET PIM6 BSR CANDIDATE 36-42
 SET PIM6 INTERFACE 36-43
 SET PIM6 RPCANDIDATE 36-44
 SET PING 23-154
 SET PING POLL 54-15
 SET PKI 50-29
 SET PKI CERTIFICATE 50-30
 SET PKI CRL 50-31
 SET PKI LDAPREPOSITORY 50-32
 SET PORT 11-48
 SET PORTAUTH PORT 45-38
 SET PORTAUTH PORT SUPPLICANTMAC 45-44
 SET PORTAUTH USERNAME 45-48
 SET PPP 16-82
 SET PPP TEMPLATE 16-90
 SET PRI 12-110
 SET Q931 12-114
 SET QOS FLOWGROUP 40-31
 SET QOS POLICY 40-34
 SET QOS PORT 40-35
 SET QOS TRAFFICCLASS 40-36
 SET QOS VLANREMAP 40-33
 SET RSVP INTERFACE 42-20
 SET RSVP PROXY 42-21
 SET SA 49-115
 SET SCRIPT 59-12
 SET SERVICE 62-21
 SET SIP 32-39
 SET SIP GATEWAY 32-41
 SET SNMP COMMUNITY 55-42, 55-52
 SET SNMP ENGINEID 55-43
 SET SNMP GROUP 55-44
 SET SNMP LOCAL 55-45
 SET SNMP TARGETADDR 55-46
 SET SNMP TARGETPARAMS command 55-47
 SET SNMP USER 55-48
 SET SSH USER 46-21
 SET SSL 47-11
 set stack authentication 58-23
 set stack stackid 58-24
 SET STAR 51-15
 SET STP 9-67
 SET STP PORT 9-70
 SET STREAM 64-7
 SET STT 18-7
 SET SWITCH AGEINGTIMER 8-97
 SET SWITCH L3FILTER ENTRY 8-103
 SET SWITCH L3FILTER MATCH 8-106
 SET SWITCH MIRROR 8-108
 SET SWITCH PORT 8-109
 SET SWITCH QOS 8-114

SET SWITCH TRUNK 8-116
 SET SYN 11-58
 SET SYSTEM CONTACT 4-31
 SET SYSTEM LOCATION 4-32
 SET SYSTEM NAME 4-33
 SET SYSTEM RPSMONITOR 4-34
 SET SYSTEM TERRITORY 12-20, 12-31, 12-47, 12-49, 12-117
 SET TELNET 62-23
 SET TIME 4-35
 SET TPAD 19-24
 SET TRACE 23-157
 SET TRIGGER 60-18
 SET TTY 62-24
 SET USER 43-58
 SET VLAN PORT 8-117
 SET VOIP 32-42
 SET VOIP BOOTCODE 32-43
 SET VOIP FILE 32-45
 SET VOIP PHONE 32-46
 SET VOIP PUBLIC INTERFACE 32-53
 SET VRRP 53-22
 SET X25C 14-66
 SET X25C HUNTGROU 14-68
 SET X25T 14-70
 SET X25T CPAR 14-72
 SHOW ACC 20-34
 SHOW ACC CALL 20-35
 SHOW ACC DOMAINNAME 20-38
 SHOW ACC SCRIPT 20-39
 SHOW ALIAS 2-15 to 2-16, 6-29
 SHOW APPLE 37-47
 SHOW APPLE AARP 37-48
 SHOW APPLE CIRCUIT 37-49
 SHOW APPLE COUNTER 37-50
 SHOW APPLE DLCI 37-56
 SHOW APPLE PORT 37-59
 SHOW APPLE ROUTE 37-16, 37-61
 SHOW APPLE ZONE 37-63
 SHOW BGP 30-112
 SHOW BGP AGGREGATE 30-114
 SHOW BGP CONFEDERATION 30-115
 SHOW BGP IMPORT 30-125
 SHOW BGP NETWORK 30-130
 SHOW BGP PEER 30-131
 SHOW BGP ROUTE 30-138
 SHOW BOOTP RELAY 24-48
 SHOW BRI CONFIGURATION 12-118
 SHOW BRI COUNTERS 12-120
 SHOW BRI CTEST 12-127
 SHOW BRI DEBUG 12-128
 SHOW BRI STATE 12-129
 SHOW BRI TEST 12-133
 SHOW BRIDGE 17-25
 SHOW BRIDGE PORT 17-33
 SHOW BRIDGE STATION 17-35
 SHOW BUFFER 4-37
 SHOW CONFIG 5-46
 SHOW CPU 4-41
 SHOW DEBUG 4-43



SHOW DHCP 24-51
 SHOW DHCP CLIENT 24-53
 SHOW DHCP POLICY 24-55
 SHOW DHCP RANGE 24-57
 SHOW DS3 CMTCE 11-69
 SHOW DS3 CONFIGURATION 11-71
 SHOW DS3 COUNTERS 11-72
 SHOW DS3 DEBUG 11-80
 SHOW DS3 STATE 11-81
 SHOW DS3 TEST 11-85
 SHOW DVMRP 27-100
 SHOW DVMRP COUNTERS 27-101
 SHOW DVMRP DEBUG 27-102
 SHOW DVMRP FORWARDING 27-103
 SHOW DVMRP INTERFACE 27-104
 SHOW DVMRP NEIGHBOUR 27-105
 SHOW DVMRP ROUTE 27-106
 SHOW ENCO CHANNEL 44-31
 SHOW ENCO COUNTERS 44-37
 SHOW ENCO KEY 44-52 to 44-53
 SHOW EXCEPTION 4-50
 SHOW FEATURE 5-48
 SHOW FFILE 6-24, 6-26
 SHOW FIREWALL 48-151
 SHOW FIREWALL ACCOUNTING 48-154
 SHOW FIREWALL ARP 48-156
 SHOW FIREWALL EVENT 48-158
 SHOW FIREWALL POLICY SESSION 48-189
 SHOW FLASH 6-30
 SHOW FLASH PHYSICAL 6-32
 SHOW FRAMERELAY 15-51
 SHOW FRAMERELAY DLC 15-61
 SHOW FRAMERELAY LI 15-69
 SHOW GARP 10-21
 SHOW GARP COUNTER 10-23
 SHOW GARP DB 10-26
 SHOW GARP DEBUG 10-27
 SHOW GARP GIP 10-28
 SHOW GARP MACHINE 10-29
 SHOW GRE 33-21 to 33-23
 SHOW H323 32-54
 SHOW H323 ENTRY 32-55
 SHOW H323 GATEWAY 32-56
 SHOW HTTP CLIENT 5-50
 SHOW HTTP DEBUG 5-51
 SHOW HTTP SERVER 5-52
 SHOW HTTP SESSION 5-53
 SHOW IGMP FILTER 27-107
 SHOW IGMPSNOOPING 27-109
 SHOW IGMPSNOOPING COUNTER 27-111
 SHOW IGMPSNOOPING ROUTERADDRESS 27-113
 SHOW INSTALL 5-54
 SHOW INTERFACE 11-87
 SHOW IP ARP 23-165
 SHOW IP DEBUG 23-176
 SHOW IP FILTER 23-180
 SHOW IP HELPER 23-182
 SHOW IP HOST 23-184
 SHOW IP IGMP 27-114
 SHOW IP IGMP COUNTER 27-118
 SHOW IP INTERFACE 23-186
 SHOW IP MVR 27-122
 SHOW IP MVR COUNTER 27-123
 SHOW IP POOL 23-190
 SHOW IP RIP 28-19
 SHOW IP RIP COUNTER 28-21
 SHOW IP RIPTIMER 28-24
 SHOW IP ROUTE 23-192
 SHOW IP ROUTE FILTER 31-76
 SHOW IP ROUTE MULTICAST 23-196
 SHOW IP ROUTE TEMPLATE 23-198
 SHOW IP TRUSTED 28-25
 SHOW IP UDP 23-201
 SHOW IPSEC 49-117
 SHOW IPSEC BUNDLESPECIFICATION 49-118
 SHOW IPSEC COUNTERS 49-121
 SHOW IPSEC POLICY 49-136, 49-140
 SHOW IPSEC SA 49-146
 SHOW IPSEC SASPECIFICATION 49-154
 SHOW IPV6 34-74
 SHOW IPV6 COUNTER 34-76
 SHOW IPV6 FILTER 34-80
 SHOW IPV6 HOST 34-82
 SHOW IPV6 INTERFACE 34-83
 SHOW IPV6 MLD 36-45
 SHOW IPV6 MLD CONFIG 36-47
 SHOW IPV6 MLD COUNTERS 36-48
 SHOW IPV6 MLD DEBUG 36-49
 SHOW IPV6 MULTICAST 34-85
 SHOW IPV6 ND 34-86
 SHOW IPV6 RIP 34-89
 SHOW IPV6 ROUTE 34-91
 SHOW IPV6 TUNNEL 34-95
 SHOW IPX 38-57
 SHOW IPX CACHE 38-59
 SHOW IPX CALLLOG 38-60
 SHOW IPX CIRCUIT 38-63
 SHOW IPX COUNTER 38-65
 SHOW IPX EXCLUSION 38-68
 SHOW IPX INCLUSION 38-69
 SHOW IPX RIP 38-70
 SHOW IPX ROUTE 38-71
 SHOW IPX SAP 38-72
 SHOW IPX SERVICE 38-74
 SHOW IPX SPXSPOOF 38-75
 SHOW ISAKMP 49-157
 SHOW ISAKMP COUNTERS 49-159
 SHOW ISAKMP EXCHANGE 49-189
 SHOW ISAKMP POLICY 49-196
 SHOW ISAKMP SA 49-201
 SHOW ISDN CALL 12-136
 SHOW ISDN CLILIST 12-140
 SHOW ISDN DOMAINNAME 12-141
 SHOW ISDN LOG 12-142
 SHOW L2TP 21-48
 SHOW L2TP CALL 21-50
 SHOW L2TP IP 21-55
 SHOW L2TP TUNNEL 21-56, 21-59
 SHOW L2TP USER 21-67
 SHOW LACP 8-118



SHOW LACP PORT 8-119, 8-121 to 8-122, 9-74
 SHOW LACP TRUNK 8-122, 9-74
 SHOW LAPB 14-73
 SHOW LAPD 12-144
 SHOW LAPD COUNT 12-147
 SHOW LAPD STATE 12-148
 SHOW LOADBALANCER 52-47
 SHOW LOADBALANCER AFFINITY 52-49
 SHOW LOADBALANCER CONNECTIONS 52-51
 SHOW LOADBALANCER REDUNDANCY 52-52
 SHOW LOADBALANCER RESOURCE 52-55
 SHOW LOADBALANCER RESPOOL 52-58
 SHOW LOADBALANCER VIRTUALBALANCER 52-60
 SHOW LOG 61-36 to 61-37
 SHOW LOG COUNTERS 61-42
 SHOW LOG OUTPUT 61-44, 61-47
 SHOW LOG QUEUE 61-49, 61-52
 SHOW LOG RECEIVE 61-50
 SHOW LOG STATUS 61-52
 Logging Facility 61-52
 SHOW LPD 63-14
 SHOW MAIL 4-51
 SHOW MANAGER PORT 43-61
 SHOW MIOX 14-78
 SHOW MIOX CIRCUIT 14-81
 SHOW MIOX COUNT 14-79
 SHOW MLDSNOOPING 36-50
 SHOW MLDSNOOPING COUNTER 36-51
 SHOW MSTP 9-74, 9-77
 SHOW MSTP CIST PORT 9-79
 SHOW MSTP COUNTER PORT 9-81
 SHOW MSTP DEBUG MSTI 9-82
 SHOW NTP 57-11
 SHOW NVS 6-33
 SHOW NVS FREE 6-34
 SHOW OSPF 29-76
 SHOW OSPF AREA 29-79
 SHOW OSPF DEBUG 29-82
 SHOW OSPF HOST 29-83
 SHOW OSPF INTERFACE 29-85
 SHOW OSPF LSA 29-90
 SHOW OSPF NEIGHBOURS 29-96
 SHOW OSPF RANGE 29-98
 SHOW OSPF ROUTE 29-101
 SHOW OSPF STUB 29-103
 SHOW OSPF SUMMARYADDRESS 29-105
 SHOW PATCH 5-60
 SHOW PIM 27-124
 SHOW PIM BSRCANDIDATE 27-125
 SHOW PIM COUNTERS 27-127
 SHOW PIM DEBUG 27-131
 SHOW PIM INTERFACE 27-132
 SHOW PIM NEIGHBOUR 27-134
 SHOW PIM ROUTE 27-135
 SHOW PIM RPCANDIDATE 27-141
 SHOW PIM RPSET 27-142
 SHOW PIM STATEREFRESH 27-144
 SHOW PIM TIMER 27-145
 SHOW PIM6 BSRCANDIDATE 36-53
 SHOW PIM6 CONFIG 36-54

SHOW PIM6 COUNTERS 36-55
 SHOW PIM6 DEBUG 36-58
 SHOW PIM6 INTERFACE 36-59
 SHOW PIM6 NEIGHBOUR 36-61
 SHOW PIM6 ROUTE 36-62
 SHOW PIM6 RPCANDIDATE 36-67
 SHOW PIM6 RPSET 36-68
 SHOW PIM6 STATEREFRESH 36-70
 SHOW PIM6 TIMER 36-71
 SHOW PING 23-203
 SHOW PING POLL 54-17
 SHOW PKI 50-34
 SHOW PKI CERTIFICATE 50-42
 SHOW PKI CRL 50-45
 SHOW PKI ENROLLMENTREQUEST 50-48
 SHOW PKI KEYUPDATEREQUEST 50-50
 SHOW PKI LDAPREPOSITORY 50-52
 SHOW PORTAUTH 45-50
 SHOW PORTAUTH PORT 45-55
 SHOW PORTAUTH PORT MULTISUPPLICANT 45-63
 SHOW PORTAUTH TIMER 45-68
 SHOW PPP 16-98
 SHOW PPP CONFIG 16-99
 SHOW PPP COUNT 16-105
 SHOW PPP DEBUG 16-118
 SHOW PPP IDLETIMER 16-119
 SHOW PPP LIMITS 16-120
 SHOW PPP MULTILINK 16-121
 SHOW PPP NAMESERVER 16-123
 SHOW PPP TEMPLATE 16-124
 SHOW PPP TXSTATUS 16-130
 SHOW PPP UTILISATION 16-132
 SHOW PRI CONFIGURATION 12-149
 SHOW PRI COUNTERS 12-150
 SHOW PRI CTEST 12-160
 SHOW PRI DEBUG 12-161
 SHOW PRI STATE 12-162
 SHOW PRI TEST 12-168
 SHOW Q931 12-171
 SHOW Q931 SPID 12-174
 SHOW QOS FLOWGROUP 40-38
 SHOW QOS POLICY 40-41
 SHOW QOS TRAFFICCLASS 40-43
 SHOW QOS VLANPRIORITYREMAPPING 40-39
 SHOW RADIUS 43-62
 SHOW RELEASE 5-61
 SHOW RSVP 42-23
 SHOW RSVP COUNTER 42-25
 SHOW RSVP INTERFACE 42-28
 SHOW RSVP PATH 42-29
 SHOW RSVP PROXY 42-30
 SHOW RSVP PROXY COUNTER 42-32
 SHOW RSVP RESV 42-33
 SHOW SA 49-206
 SHOW SA COUNTER 49-209
 SHOW SA USER 49-215
 SHOW SCRIPT 59-14
 SHOW SERVICE 62-26
 SHOW SESSION 62-27
 SHOW SIP 32-57



SHOW SIP GATEWAY 32-58
 SHOW SNMP 55-49, 55-52
 SHOW SNMP COMMUNITY 55-52
 SHOW SNMP GROUP 55-53
 SHOW SNMP TARGETADDR 55-54
 SHOW SNMP TARGETPARAMS 55-55
 SHOW SNMP USER 55-56
 SHOW SNMP VIEW 55-57
 SHOW SSH 46-22
 SHOW SSH SESSIONS 46-33
 SHOW SSH USER 46-36
 SHOW SSL 47-12
 SHOW SSL COUNTERS 47-14
 SHOW SSL SESSIONS 47-22
 show stack 58-26
 SHOW STAR 51-17, 51-19, 51-24 to 51-25
 SHOW STARTUP 4-52
 SHOW STP 9-87
 SHOW STP COUNTER 9-91
 SHOW STP DEBUG 9-93
 SHOW STP PORT 9-94
 SHOW STREAM 64-8
 SHOW STT 18-8
 SHOW SWITCH 8-123
 SHOW SWITCH COUNTER 8-125
 SHOW SWITCH DEBUG 8-127
 SHOW SWITCH FDB 8-128
 SHOW SWITCH FILTER 8-130
 SHOW SWITCH L3FILTER 8-134
 SHOW SWITCH PORT 8-136
 SHOW SWITCH PORT COUNTER 8-139
 SHOW SWITCH PORT INTRUSION 8-143
 SHOW SWITCH QOS 8-144
 SHOW SWITCH TRUNK 8-145
 SHOW SYN 11-91
 SHOW SYN COUNTERS 11-93
 SHOW SYSTEM 4-54
 SHOW SYSTEM SERIALNUMBER 4-58
 SHOW TACACS SERVER 43-67
 SHOW TCP 23-205
 SHOW TDM 13-12
 SHOW TEST 65-13
 SHOW TIME 4-59
 SHOW TPAD 19-26
 SHOW TPAD COUNTERS 19-31
 SHOW TPAD PORTS 19-29
 SHOW TRACE 23-210
 SHOW TRIGGER 60-24
 SHOW TTY 62-29
 SHOW USER 43-72
 SHOW USER RSO 43-77
 SHOW VLAN 8-146
 SHOW VLAN DEBUG 8-148
 SHOW VLANRELAY 8-149
 SHOW VOIP 32-59
 SHOW VOIP COUNTER ENGINE 32-61
 SHOW VOIP LOAD 32-65
 SHOW VOIP PHONE 32-67
 SHOW VRRP 53-25
 SHOW X25C 14-85

SHOW X25C COUNTER 14-87
 SHOW X25C DTEADDRESS 14-90
 SHOW X25C HUNTGROUP 14-91
 SHOW X25C PATH 14-93
 SHOW X25C ROUTE 14-94
 SHOW X25C STATE 14-95
 SHOW X25T 14-97
 SHOW X25T CPAR 14-102
 Simple Network Management Protocol (SNMP)
 55-25 to 55-58
 SSH 46-38
 STOP PING 23-211
 STOP TRACE 23-212
 stream printing 63-9, 64-5
 Switch 8-48 to 8-150, 39-3
 synchronous lines 15-25
 TELNET 62-33
 terminal server 62-13, 62-23
 TRACE 23-213
 UPLOAD 5-62
 WAIT 59-11, 59-15
 X.25 14-37
 Common and Internal Spanning Tree (CIST)
 Trunks and Spanning Trees 9-27
 Vectors 9-25
 common D channel signalling, ISDN 12-28
 COMMUNITY command 55-35
 community, SNMP 55-11
 compacting FLASH memory 6-7
 Compressed Serial Line Internet Protocol (CSLIP) 11-21,
 20-4
 See also Van Jacobson's header compression
 encapsulation, asynchronous ports 11-21, 20-4
 Compression 49-5
 compression 44-2
 commands
 DELETE USER RSO 43-40
 DISABLE USER RSO 43-43
 ENABLE USER RSO 43-49
 SHOW USER RSO 43-77
 Compression Control Protocol (CCP) 44-16
 header 44-4
 history 44-2
 Lempel-Ziv algorithm 44-2
 link 44-3
 lossless 44-2
 lossy 44-2
 over Frame Relay 15-15
 disabling debugging 15-34 to 15-35
 enabling debugging 15-40 to 15-41
 payload 44-4
 Point-to-Point Protocol (PPP) 16-39
 Predictor 44-12
 compression. See Compression and Encryption Services;
 Link Compression and Encryption; IP Security (IPsec)
 Compression and Encryption Services 44-1 to 44-54
 See also Link Compression and Encryption; IP Security
 (IPsec)
 See also IP Security (IPsec)
 authentication 44-8



- HMAC 44-8
- MD5 44-8
- SHA 44-8
- channels
 - ENCO 44-31
- checksum 44-5
- Cipher Block Chaining (CBC) encryption algorithm 44-5
- Cipher Feedback (CFB) encryption algorithm 44-6
- cipher text 44-5
- commands
 - CREATE ENCO KEY 44-19
 - DESTROY ENCO KEY 44-21
 - DISABLE ENCO COMPSTATISTICS 44-22
 - DISABLE ENCO DEBUGGING 44-22
 - ENABLE ENCO COMPSTATISTICS 44-22
 - ENABLE ENCO DEBUGGING 44-23
 - RESET ENCO COUNTERS 44-24
 - SET ENCO DHPADDING 44-25
 - SET ENCO DHPRIORITY 44-25
 - SET ENCO KEY 44-26
 - SET ENCO SW 44-27
 - SHOW ENCO CHANNEL 44-31
 - SHOW ENCO COUNTERS 44-37
 - SHOW ENCO KEY 44-52 to 44-53
- compression
 - Predictor 44-27
 - software 44-11, 44-27
 - speed 44-27
 - STAC LZS 44-27
 - statistics 44-22
- counters
 - displaying 44-37
 - resetting 44-24
- creating
 - encryption keys 44-19
- data authentication 44-8
- data compression 44-2 to 44-4
- data encryption 44-5 to 44-7
- debugging
 - disabling ENCO 44-22
 - enabling ENCO 44-23
- decommissioning 44-15
- Diffie-Hellman key exchange algorithm 44-9
- disabling
 - debugging 44-22
- displaying
 - ENCO counters 44-37
- displaying counters 44-37
- Electronic Code Book (ECB) encryption algorithm 44-5
- enabling
 - debugging 44-23
- ENCO channels 44-31
- ENCO services ?? to 44-15, 44-31
- encryption
 - Cipher Block Chaining (CBC) 44-5
 - Cipher Feedback (CFB) 44-6
 - cipher text 44-5
 - creating keys 44-19
 - decommissioning 44-15
 - Electronic Code Book (ECB) 44-5
 - link 44-7
 - network 44-7
 - Output Feedback (OFB) 44-6
 - payload 44-7
 - plain text 44-5
 - Triple DES 44-6
 - Triple DES inner CBC mode 44-6
 - Triple DES outer CBC mode 44-6
- hardware control and monitoring 44-10
- hardware support 44-9 to 44-10
 - control and monitoring 44-10
 - MAC cards 44-10
- HMAC authentication algorithm 44-8
- key creation and storage 44-19
- key exchange
 - algorithms 44-9
- link encryption 44-7
- MD5 authentication algorithm 44-8
- Mini Accelerator (MAC) cards 44-10
- network encryption 44-7
- Output Feedback (CFB) encryption algorithm 44-6
- payload encryption 44-7, 44-16
- plain text 44-5
- Predictor compression 44-27
- resetting
 - ENCO counters 44-24
- resetting counters 44-24
- services ?? to 44-15, 44-31
- SHA authentication algorithm 44-8
- software compression 44-11, 44-27
- speed, software compression 44-27
- STAC LZS compression 44-27
- statistics, compression 44-22
- Triple DES encryption 44-6
- Triple DES inner CBC mode encryption algorithm 44-6
- Triple DES outer CBC mode encryption algorithm 44-6
- user modules (ENCO)
 - VPNNet 44-16
- VPNNet 44-16
- Compression and Encryption Services (ENCO) 44-10
 - access control 44-15
 - authentication
 - services 44-12
 - compression 44-11
 - encryption 44-12
 - key formats 44-13
 - formats, encryption keys 44-13
 - Frame Relay 44-17
 - key creation and storage 44-13
 - key exchange
 - services 44-12
 - key formats, encryption 44-13
 - PPP 44-16
 - Predictor compression 44-12
 - Secure Shell 44-16
 - security 44-15
 - services
 - authentication 44-12
 - key creation and storage 44-13
 - key exchange 44-12



- STAC LZS compression 44-11
- user modules
 - Frame Relay 44-17
 - IP 44-16
 - PPP 44-16
 - Secure Shell 44-16
 - X.25 44-17
- X.25 44-17
- Compression protocol, IPsec 49-5
- compression statistics 44-22
- compression, IPsec 49-5
- compression, stateful 49-5
- compression, stateless 49-5
- cone NAT 48-26
- configFile MIB object C-21
- configFileExist MIB object C-21
- configFileExistTrap trap message C-21
- configuration
 - asynchronous ports 11-22
 - displaying dynamic 5-46
 - examples
 - finger client 23-39
 - Frame Relay 15-19
 - Internet Protocol (IP) 23-39, 23-48, 28-5
 - Line Printer Daemon (LPD) 63-5
 - stream printing 64-3
 - finger client 23-39
 - Frame Relay 15-16, 15-51
 - examples 15-19
 - Internet Protocol (IP) 23-39, 23-48, 28-5
 - examples 23-48, 28-5
 - IPX 38-17
 - Line Printer Daemon (LPD) 63-3
 - examples 63-5
 - OSPF 29-20, 29-76
 - saving dynamic 5-22
 - setting default 5-38
- configuration example 47-6, 52-18
 - configure the firewall policy for the load balancer's interfaces 52-19
 - configure the load balancer 52-20
 - create interfaces for the load balancer 52-18
- configuration examples
 - AODI 12-44
 - asynchronous call control (ACC) 20-10
 - asynchronous services 62-9
 - DHCP 24-7
 - DHCP for IPv6 35-7
 - DVMRP 27-35
 - firewall 48-53
 - GRE 33-5
 - IGMP 27-35, 27-38
 - IPsec 49-32
 - IPv4 Multicasting 27-35, 27-38
 - IPv6 Multicasting 36-15
 - Layer Two Tunnelling Protocol (L2TP) 21-12
 - Logging Facility 61-9
 - mail subsystem 4-11
 - Multicast Listener Discovery (MLD) 36-15
 - PKI 50-12 to 50-15
 - enrollment with CMP 50-14
 - manual enrollment 50-12
 - Point-to-Point Protocol (PPP) 16-33
 - Protocol Independent Multicasting (PIM), IPv4 27-38
 - Protocol Independent Multicasting (PIM), IPv6 36-15
 - Secure Shell 46-7
 - services 62-9
 - SNMP 55-24
 - switching 8-41 to 8-47
 - terminal server 62-9
 - Time Division Multiplexing (TDM) 13-5
 - TPAD 19-10 to 19-13
 - configuring X.25 19-10
 - creating TPAD instances 19-12
 - VLAN 8-41 to 8-47
- configuring
 - asynchronous ports 20-3
 - Basic Rate Access, ISDN 12-15
 - DHCP 24-7
 - ISDN 12-47
 - NTP 57-4
 - Primary Rate Access, ISDN 12-20
 - stream printing 64-3
- Conformance group, DS1/E1/DS2/E2 Interface Types MIB C-50
- Conformance group, DS3/E3 Interface types MIB C-51
- congestion control
 - Frame Relay networks 15-14, 15-33, 15-38
- congestion control scheme
 - Frame Relay networks 15-12
- congestion detection
 - Frame Relay networks 15-10
- CONNECT ASYN command 11-31
- CONNECT command 62-14
- CONNECT PORT command 11-31
- contact name
 - displaying 4-54
 - setting 4-31
- control protocols, Point-to-Point Protocol 16-4 to 16-6
- control structures, in scripts 59-5, 59-11
- conventions, file naming 6-2, 6-5
- converting old SAs to IPsec 49-20, 49-48
- cookie
 - name 52-7
 - Set Cookie header 52-7
 - value
 - definition 52-7
- coprocessor engine
 - commands
 - DELETE USER RSO 43-40
 - DISABLE USER RSO 43-43
 - ENABLE USER RSO 43-49
 - SHOW USER RSO 43-77
- Counter
 - displaying 10-23
- counters
 - displaying
 - ENCO 44-37
 - IPsec 49-121
 - ISAKMP 49-159



- Security Association 49-209
- STP 9-91
- switch 8-125, 8-128
- switch port 8-139
- displaying PPP activity 16-29
- displaying TPAD 19-7, 19-31
- ENCO
 - displaying 44-37
 - resetting 44-24
- Frame Relay 15-15, 15-51
- Frame Relay DLC 15-61
- Frame Relay logical interface 15-69
- IPsec
 - displaying 49-121
 - resetting 49-90
- IPsec policy
 - resetting 49-91
- IPsec SA
 - resetting 49-92
- IPX 38-16, 38-65
- ISAKMP
 - displaying 49-159
 - resetting 49-93
- OSPF 29-56
- Point-to-Point Protocol (PPP) 16-29
- resetting
 - ENCO 44-24
 - IPsec 49-90
 - IPsec policy 49-91
 - IPsec SA 49-92
 - ISAKMP 49-93
- resetting PPP activity 16-29, 16-81
- Security Association
 - displaying 49-209
- STP 9-91
- switch 8-125
- switch port 8-139
- synchronous interfaces 11-47, 11-93
- X.25 DCE 14-13, 14-87
- counters MIB object C-27
- cpu MIB object C-16
- CPU utilisation 4-8, 4-41
 - resetting 4-27
- CREATE CONFIG command 5-22
- CREATE DHCP POLICY command 24-20
- CREATE DHCP RANGE command 24-21, 24-47
- CREATE ENCO KEY command 44-19
- CREATE FIREWALL POLICY command 48-97
- CREATE FIREWALL POLICY DYNAMIC command 48-98
- CREATE FRAMERELAY command 15-28
- CREATE H323 command 32-25
- CREATE H323 ENTRY command 32-27
- CREATE IGMP FILTER command 27-59
- CREATE IP MVR command 27-61
- CREATE IP POOL command 23-86
- CREATE IPSEC BUNDLESPECIFICATION command 49-50
- CREATE IPSEC POLICY command 49-52
- CREATE IPSEC SASPECIFICATION command 49-60
- CREATE IPV6 INTERFACE command 34-50
- CREATE ISAKMP POLICY command 49-63

- CREATE LAPB command 14-45
- CREATE LOG OUTPUT command 61-18
- CREATE LPD command 63-10
- CREATE PKI ENROLLMENTREQUEST command 50-22
- CREATE PKI KEYUPDATEREQUEST command 50-23
- CREATE PPP command 16-53
- CREATE PPP TEMPLATE command 16-62
- CREATE QOS FLOWGROUP command 40-20
- CREATE QOS POLICY command 40-21
- CREATE QOS TRAFFICCLASS command 40-22
- CREATE RSVP PROXY command 42-9
- CREATE SA command 49-71
- CREATE SERVICE command 62-15
- CREATE SIP command 32-28
- CREATE SNMP COMMUNITY command 55-33
- CREATE STAR command 51-12
- CREATE STP command 9-33
- CREATE SWITCH TRUNK command 8-66
- CREATE TDM command 13-9
- CREATE TPAD command 19-18
- CREATE TRIGGER command 60-8
- CREATE VLAN command 8-68
- CREATE VLANRELAY command 8-69
- CREATE VRRP command 53-14
- CREATE X25C command 14-47
- CREATE X25C HUNTGROUP command 14-49
- CREATE X25T command 14-50
- createConfigFile MIB object C-21
- creating
 - asynchronous calls 20-2, 20-17
 - call definitions, asynchronous 20-2, 20-17
 - encryption keys 44-19
 - files 6-4
 - Frame Relay
 - interfaces 15-28
 - IP address pools 23-86
 - IPsec bundle specifications 49-50
 - IPsec policies 49-52
 - IPsec SA specifications 49-60
 - ISAKMP policies 49-22, 49-63
 - LPD queues 63-10
 - master key table 51-7
 - network keys 51-7
 - PKI enrollment requests 50-22
 - PKI Key Update requests 50-23
 - PPP interfaces 16-53
 - PPP templates 16-62
 - RSVP proxy agent 42-7, 42-9
 - Security Associations 49-71
 - star entities 51-6
 - templates 16-62
 - TPAD instances 19-6, 19-18
- CRL. See Certificate Revocation List (CRL)
- CSLIP. See Compressed Serial Line Internet Protocol (CSLIP)
- currentConfigFile MIB object C-21

D

- data authentication. See Compression and Encryption Services
- Data Communication Equipment (DCE) 14-3



- Data Encryption Standard (DES) 44-5
- Data Link Connection Management Interface group, Frame Relay DTE MIB C-47
- Data Link Connection Management Interface table, Frame Relay DTE MIB C-47
- data over voice 12-46
- Data Terminal Equipment (DTE) 14-3
- Database
 - displaying 10-26
- datagrams, AppleTalk 37-7
- date
 - displaying 4-59
 - setting 4-35
- DB
 - displaying 10-26
- DDP. See AppleTalk: Datagram Delivery Protocol (DDP)
- DEACTIVATE ACC CALL command 20-22
- DEACTIVATE ISDN CALL command 12-71
- DEACTIVATE L2TP CALL command 21-28
- DEACTIVATE MIOX CIRCUIT command 14-52
- DEACTIVATE SCRIPT command 59-9
- deactivating
 - asynchronous calls 20-8, 20-22
- debug
 - STP
 - disabling 9-43
 - displaying 9-93
 - enabling 9-53
 - switch
 - disabling 8-79
 - displaying 8-127
 - enabling 8-88
 - VLAN
 - disabling 8-83
 - displaying 8-148
 - enabling 8-92
- Debugging
 - disabling 10-10
 - displaying 10-27
 - enabling 10-13
- debugging 4-11
 - asynchronous calls 20-25 to 20-26
 - calls, asynchronous 20-25 to 20-26
 - disabling
 - ENCO 44-22
 - enabling
 - ENCO 44-23
 - ENCO
 - disabling 44-22
 - enabling 44-23
 - firewall 48-46
 - Frame Relay 15-51
 - Frame Relay DLCs 15-35, 15-41
 - Frame Relay interfaces 15-33, 15-39
 - Frame Relay logical interfaces 15-36, 15-43
 - mail 4-23
 - OSPF 29-49, 29-51
 - PPP interfaces 16-72, 16-76
 - PPP links 16-30, 16-118
 - PPP templates 16-74, 16-79
 - router 4-43
 - synchronous interfaces 11-35, 11-41
 - templates 16-74, 16-79
 - X.25 DCE interfaces 14-13, 14-59 to 14-60
- debugging, AppleTalk 37-16
- debugging, Internet Protocol (IP) 23-37 to 23-38, 23-98, 23-110, 23-176
- debugging, IPX 38-15
- decommissioning, encryption hardware 44-15
- default configuration, setting 5-38
- DELETE ACC CALL command 20-23
- DELETE ACC DOMAINNAME command 20-23
- DELETE ACC SCRIPT command 20-24
- DELETE ALIAS command 2-13
- DELETE APPLE CIRCUIT command 37-31
- DELETE APPLE DLCI command 37-32
- DELETE APPLE PACKETFILTER command 37-33
- DELETE APPLE PORT command 37-33
- DELETE APPLE ROUTE command 37-16, 37-34
- DELETE APPLE ROUTEFILTER command 37-34
- DELETE APPLE ZONE command 37-35
- DELETE APPLE ZONEFILTER command 37-36
- DELETE BGP AGGREGATE command 30-68
- DELETE BGP CONFEDERATIONPEER command 30-69
- DELETE BGP IMPORT command 30-69
- DELETE BGP NETWORK command 30-70
- DELETE BGP PEER command 30-70
- DELETE BOOTP RELAY command 24-22
- DELETE BRIDGE FILTER command 17-17
- DELETE BRIDGE PORT command 17-17
- DELETE BRIDGE STATION command 17-18
- DELETE DHCP POLICY command 24-24
- DELETE DHCP RANGE command 24-28
- DELETE DVMRP INTERFACE command 27-62
- DELETE FILE command 6-14
- DELETE FIREWALL POLICY APPRULE command 48-99
- DELETE FIREWALL POLICY DYNAMIC command 48-100
- DELETE FIREWALL POLICY INTERFACE command 48-102
- DELETE FIREWALL POLICY LIST command 48-104
- DELETE FIREWALL POLICY NAT command 48-105
- DELETE FIREWALL POLICY RULE command 48-108
- DELETE FIREWALL SESSION command 48-110
- DELETE FRAMERELAY DLC command 15-31
- DELETE FRAMERELAY LI 15-31
- DELETE GRE command 33-4, 33-14
- DELETE IGMP FILTER command 27-63
- DELETE IGMP Snooping ROUTERADDRESS command 27-63
- DELETE INSTALL command 5-23
- DELETE IP ARP command 23-87
- DELETE IP ASPTHLIST command 31-56
- DELETE IP COMMUNITYLIST command 31-57
- DELETE IP FILTER command 23-88
- DELETE IP HELPER command 23-89
- DELETE IP HOST command 23-90
- DELETE IP INTERFACE command 23-91
- DELETE IP MVR command 27-66
- DELETE IP RIP command 28-12
- DELETE IP ROUTE command 23-93
- DELETE IP ROUTE FILTER command 31-58



DELETE IP ROUTE TEMPLATE command 23-94
 DELETE IP ROUTEMAP 31-59
 DELETE IP SA command 23-95
 DELETE IP TRUSTED command 28-13
 DELETE IPV6 FILTER command 34-51
 DELETE IPV6 HOST command 34-52
 DELETE IPV6 INTERFACE command 34-52
 DELETE IPV6 RIP command 34-56
 DELETE IPV6 ROUTE command 34-57
 DELETE IPV6 TUNNEL command 34-58
 DELETE IPX CIRCUIT command 38-42
 DELETE IPX EXCLUSION command 38-43
 DELETE IPX INCLUSION command 38-44
 DELETE IPX RIP command 38-45
 DELETE IPX ROUTE command 38-45
 DELETE IPX SAP command 38-46
 DELETE IPX SERVICE command 38-47
 DELETE ISDN CALL command 12-71
 DELETE ISDN CLILIST command 12-72
 DELETE ISDN DOMAINNAME command 12-72
 DELETE L2TP CALL command 21-28
 DELETE L2TP IP command 21-29
 DELETE L2TP USER command 21-31
 DELETE LACP PORT command 8-70
 DELETE LAPD TEI command 12-73
 DELETE LAPD XSPID command 12-74
 DELETE LAPD XTEI command 12-75
 DELETE LOADBALANCER RESOURCE command 52-28
 DELETE LOADBALANCER RESPOOL command 52-28
 DELETE LOADBALANCER VIRTUALBALANCER command 52-29
 DELETE LOADBALANCER VIRTUALBALANCER HTTPERROR-CODE command 52-30
 DELETE LOG OUTPUT command 61-22
 DELETE LOG RECEIVE command 61-22
 DELETE MAIL command 4-17
 DELETE MIOX CIRCUIT command 14-53
 DELETE NTP PEER command 57-8
 DELETE NVS command 6-15
 DELETE OSPF AREA command 29-42
 DELETE OSPF HOST command 29-42
 DELETE OSPF INTERFACE command 29-43
 DELETE OSPF NEIGHBOUR command 29-45
 DELETE OSPF RANGE command 29-45
 DELETE OSPF STUB command 29-47
 DELETE OSPF SUMMARYADDRESS command 29-48
 DELETE PIM BSR CANDIDATE command 27-66
 DELETE PIM INTERFACE command 27-67
 DELETE PIM RPCANDIDATE command 27-68
 DELETE PIM6 BSR CANDIDATE command 36-30
 DELETE PIM6 INTERFACE command 36-30
 DELETE PIM6 RPCANDIDATE command 36-31
 DELETE PING POLL command 54-11
 DELETE PKI CERTIFICATE command 50-24
 DELETE PKI CRL command 50-24
 DELETE PKI LDAPREPOSITORY command 50-25
 DELETE PPP ACSERVICE command 16-70
 DELETE PPP command 16-69
 DELETE QOS FLOWGROUP command 40-24
 DELETE QOS POLICY command 40-25

DELETE QOS TRAFFICCLASS command 40-26
 DELETE RADIUS SERVER command 43-37
 DELETE SA MEMBER command 49-72
 DELETE SCRIPT command 59-10
 DELETE SNMP COMMUNITY command 55-35
 DELETE SNMP GROUP command 55-36
 DELETE SNMP TARGETADDR command 55-36
 DELETE SNMP TARGETPARAMS command 55-37
 DELETE SNMP USER command 55-37
 DELETE SNMP VIEW command 55-38
 DELETE SSH USER command 46-13
 delete stack interface command 58-18
 DELETE STP VLAN command 9-35
 DELETE STREAM command 64-6
 DELETE STT command 18-6
 DELETE SWITCH FILTER command 8-71, 9-36
 DELETE SWITCH L3FILTER command 8-72, 9-36
 DELETE SWITCH L3FILTER ENTRY command 8-72, 9-36
 DELETE SWITCH TRUNK command 8-73, 9-36
 DELETE TACACS SERVER command 43-38
 DELETE TCP command 23-96
 DELETE TDM command 13-10
 DELETE TPAD command 19-20
 DELETE TRIGGER command 60-15
 DELETE USER command 43-39
 DELETE USER RSO command 43-40
 DELETE VLAN BRIDGE command 9-36, 17-18
 DELETE VLAN PORT command 8-74, 9-36
 DELETE VLANRELAY command 8-75
 DELETE VRRP IP command 53-17
 DELETE VRRP MONITOREDINTERFACE command 53-18
 DELETE X25C DTEADDRESS command 14-54
 DELETE X25C HUNTGROUP command 14-55
 DELETE X25C ROUTE command 14-56
 DELETE X25T CPAR command 14-56
 deleting

- access lists, firewall 48-108
- aliases 2-13
- asynchronous calls 20-3, 20-23
- call definitions, asynchronous 20-3, 20-23
- domain name 12-42, 12-72, 20-10, 20-23
- files 6-14
- firewall rules 48-108
- FLASH files 6-14
- Frame Relay
 - DLCs 15-31
 - logical interfaces 15-31
- install information 5-23
- interfaces from firewall 48-6, 48-102
- LPD queues 63-11
- mail messages 4-11, 4-17
- members from Security Associations 49-72
- NAT translations, firewall 48-105
- NTP peer 57-8
- NVS blocks 6-15
- physical links from PPP interfaces 16-69
- PKI Certificates 50-24
- PKI LDAP repositories 50-25
- ports from TPAD 19-6, 19-20
- PPP interfaces 16-70



- route templates 23-94
- stream ports 64-6
- synchronous tunnel 18-6
- deprecated status 55-8
- descriptor 55-6
- descriptor, MIB object 55-6
- designated bridge 9-3
- designated router, OSPF 29-5, 29-7, 29-32 to 29-33, 29-36, 29-45, 29-68, 29-70, 29-85
- designated router, PIM Sparse Mode 27-13
 - setting PIM DR priority, IPv4 27-97
 - setting PIM DR priority, IPv6 36-27, 36-43
- destination lookup failure packet limiting 8-12
- DESTROY CLASSIFIER command 39-17
- DESTROY DHCP POLICY command 24-29
- DESTROY DHCP RANGE command 24-29
- DESTROY ENCO KEY command 44-21
- DESTROY FIREWALL POLICY command 48-111
- DESTROY FIREWALL POLICY DYNAMIC command 48-111
- DESTROY FRAMERELAY command 15-32
- DESTROY H323 command 32-30
- DESTROY H323 ENTRY command 32-31
- DESTROY IGMP FILTER command 27-69
- DESTROY IP MVR command 27-70
- DESTROY IP POOL command 23-96
- DESTROY IPSEC BUNDLESPECIFICATION command 49-72
- DESTROY IPSEC POLICY command 49-73
- DESTROY IPSEC SASPECIFICATION command 49-74
- DESTROY IPV6 INTERFACE command 34-59
- DESTROY ISAKMP POLICY command 49-74
- DESTROY LAPB command 14-57
- DESTROY LOG OUTPUT command 61-23
- DESTROY LPD command 63-11
- DESTROY PKI ENROLLMENTREQUEST command 50-25
- DESTROY PKI KEYUPDATEREQUEST command 50-26
- DESTROY PPP command 16-70
- DESTROY PPP TEMPLATE command 16-71
- DESTROY QOS FLOWGROUP command 40-27
- DESTROY QOS POLICY command 40-28
- DESTROY QOS TRAFFICCLASS command 40-29
- DESTROY RSVP PROXY command 42-12
- DESTROY SA command 49-75
- DESTROY SERVICE command 62-16
- DESTROY SIP command 32-32
- DESTROY SNMP COMMUNITY command 55-39
- DESTROY STAR command 51-13
- DESTROY STP command 9-37
- DESTROY SWITCH TRUNK command 8-76
- DESTROY TDM command 13-11
- DESTROY TPAD command 19-20
- DESTROY TRIGGER command 60-15
- DESTROY VLAN command 8-77
- DESTROY VLANRELAY command 8-77
- DESTROY VRRP command 53-19
- DESTROY X25C command 14-57
- DESTROY X25C HUNTGROU command 14-58
- DESTROY X25T command 14-58
- destroying
 - Frame Relay
 - interfaces 15-32

- IP address pools 23-96
- IPsec policies 49-73
- IPsec SA specifications 49-74
- ISAKMP policies 49-22, 49-74
- LPD queues 63-11
- PKI Enrollment Requests 50-25
- PPP interfaces 16-70
- PPP templates 16-71
- RSVP proxy agent 42-7, 42-12
- Security Associations 49-75
- templates 16-71
- TPAD instances 19-6, 19-20
- DHCP client 23-18, 23-75, 23-98, 23-111, 23-141
- DHCP group, Allied Telesis Enterprise MIB C-22
- dhcp MIB object C-22
- DHCP Unique Identifier 35-3
- DHCP. See Dynamic Host Configuration Protocol (DHCP)
- DHCP6. See Dynamic Host Configuration Protocol for IPv6 (DHCP6)
- dhcpRangeExhaustedGateway MIB object C-22
- dhcpRangeExhaustedInterface MIB object C-22
- dhcpRangeTable MIB object C-22
- dhcpTrapVariable MIB object C-22
- dial-on-demand, PPP 16-10, 16-37
- Diffie-Hellman key exchange algorithm 44-9, 44-12
- digital certificates. See certificates
- digital signatures 50-2
- directory of files 6-4
- disable
 - OSPF 29-48
- DISABLE ACC CALL command 20-24
- DISABLE ACC CALL DEBUG command 20-25
- DISABLE APPLE command 37-36
- DISABLE APPLE DEBUG command 37-37
- DISABLE ASYNcommand 11-32
- DISABLE BGP DEBUG command 30-75
- DISABLE BGP PEER command 30-76
- DISABLE BOOTP RELAY command 24-30
- DISABLE BRI CTEST command 12-75
- DISABLE BRI DEBUG command 12-76
- DISABLE BRI TEST command 12-76
- DISABLE BRIDGE command 17-19
- DISABLE BRIDGE LEARNING command 17-19
- DISABLE DS3 DEBUGcommand 11-32
- DISABLE DS3 TESTcommand 11-33
- DISABLE DVMRP command 27-70
- DISABLE DVMRP DEBUG command 27-71
- DISABLE ENCO COMPSTATISTICS command 44-22
- DISABLE ENCO DEBUGGING command 44-22
- DISABLE FEATURE command 5-24
- DISABLE FIREWALL command 48-112
- DISABLE FIREWALL NOTIFY command 48-113
- DISABLE FIREWALL POLICY command 48-114
- DISABLE FIREWALL POLICY IDENTPROXY command 48-119
- DISABLE FRAMERELAY command 15-32
- DISABLE FRAMERELAY CONGESTIONCONTROL 15-33
- DISABLE FRAMERELAY DEBUG command 15-33
- DISABLE FRAMERELAY DLC command 15-34
- DISABLE FRAMERELAY DLC DEBUG command 15-35



DISABLE FRAMERELAY LI DEBUG command 15-36, 15-43
 DISABLE FRAMERELAY SLOWSTART command 15-37
 DISABLE GARP command 10-8
 DISABLE GARP DEBUG command 10-10
 DISABLE GARP GIP command 10-11
 DISABLE GRE command 33-15
 DISABLE GUI command 5-25
 DISABLE HTTP DEBUG command 5-25
 DISABLE HTTP SERVER command 5-25
 DISABLE IGMPSNOOPING command 27-72
 DISABLE INTERFACE command 11-34
 DISABLE IP command 23-97
 DISABLE IP DEBUG command 23-98
 DISABLE IP DNSRELAY command 23-98
 DISABLE IP ECHOREPLY command 23-99
 DISABLE IP FOFILTER command 23-100
 DISABLE IP FORWARDING command 23-101
 DISABLE IP HELPER command 23-101
 DISABLE IP IGMP command 27-72
 DISABLE IP IGMP INTERFACE command 27-74
 DISABLE IP INTERFACE command 23-103
 DISABLE IP MULTICASTSWITCHING command 27-74
 DISABLE IP MVR command 27-75
 DISABLE IP MVR DEBUG command 27-75
 DISABLE IP REMOTEASSIGN command 23-104
 DISABLE IP ROUTE command 23-105
 DISABLE IP SRCROUTE command 23-106
 DISABLE IPSEC command 49-75
 DISABLE IPSEC OLDSA command 49-76
 DISABLE IPSEC POLICY DEBUGGING command 49-77
 DISABLE IPV6 ADV command 34-60
 DISABLE IPV6 command 34-59
 DISABLE IPV6 DEBUG command 34-60
 DISABLE IPV6 MLD command 36-31
 DISABLE IPV6 MLD DEBUG command 36-32
 DISABLE IPV6 MLD INTERFACE command 36-32
 DISABLE IPV6 RIP command 34-61
 DISABLE IPX CIRCUIT command 38-48
 DISABLE IPX command 38-47
 DISABLE ISAKMP command 49-79
 DISABLE ISAKMP DEBUGGING command 49-80
 DISABLE ISDN CALL command 12-77
 DISABLE ISDN LOG command 12-77
 DISABLE L2TP command 21-32
 DISABLE L2TP DEBUG command 21-33
 DISABLE L2TP SERVER command 21-34
 DISABLE LACP command 8-78
 DISABLE LACP DEBUG 8-78
 DISABLE LACP DEBUG command 8-78
 DISABLE LOADBALANCER command 52-30
 DISABLE LOADBALANCER DEBUG command 52-31
 DISABLE LOADBALANCER HEALTHPINGS command 52-31
 DISABLE LOADBALANCER REDUNDANCY command 52-32
 DISABLE LOADBALANCER RESOURCE command 52-33
 DISABLE LOADBALANCER VIRTUALBALANCER command 52-34
 DISABLE LOG command 61-23
 DISABLE LOG GENERATION command 61-23
 DISABLE LOG OUTPUT command 61-24
 DISABLE LOG RECEPTION command 61-24

DISABLE MAIL DEBUG command 4-18
 DISABLE MIOX CIRCUIT command 14-59
 DISABLE MLDSNOOPING command 36-33
 DISABLE MLDSNOOPING DEBUG command 36-33
 DISABLE MSTP command 9-46
 DISABLE NTP command 57-9
 DISABLE OSPF command 29-48
 DISABLE OSPF DEBUG command 29-49
 DISABLE OSPF INTERFACE command 29-50
 DISABLE OSPF LOG command 29-50
 DISABLE PIM command 27-75
 DISABLE PIM DEBUG command 27-76
 DISABLE PIM6 command 36-33
 DISABLE PIM6 DEBUG command 36-34
 DISABLE PING POLL command 54-12
 DISABLE PING POLL DEBUG command 54-12
 DISABLE PKI DEBUG command 50-26
 DISABLE PORT command 11-32
 DISABLE PORTAUTH command 45-24
 DISABLE PORTAUTH DEBUG PORT command 45-25
 DISABLE PORTAUTH PORT command 45-26
 DISABLE PPP ACCESSCONCENTRATOR command 16-72
 DISABLE PPP command 16-72
 DISABLE PPP DEBUG command 16-72
 DISABLE PPP TEMPLATE DEBUG command 16-74
 DISABLE PRI CTEST command 12-78
 DISABLE PRI DEBUG command 12-78
 DISABLE PRI TEST command 12-79
 DISABLE Q931 DEBUG command 12-80
 DISABLE QOS DEBUG command 40-29
 DISABLE RELEASE command 5-26
 DISABLE RSVP command 42-12
 DISABLE RSVP DEBUG command 42-13
 DISABLE RSVP INTERFACE command 42-14
 DISABLE RSVP PROXY command 42-15
 DISABLE SA DEBUGGING command 49-81
 DISABLE SNMP AUTHENTICATE_TRAP command 55-39
 DISABLE SNMP command 55-39
 DISABLE SNMP COMMUNITY command 55-40
 DISABLE SSH SERVER command 46-14, 46-19
 DISABLE SSH USER command 46-15
 DISABLE SSL DEBUG command 47-10
 disable stack command 58-19
 disable stack debug command 58-20
 DISABLE STAR DEBUGGING command 51-13
 DISABLE STP command 9-42
 DISABLE STP DEBUG command 9-43
 DISABLE STP PORT command 9-45
 DISABLE SWITCH AGEINGTIMER command 8-78
 DISABLE SWITCH DEBUG command 8-79
 DISABLE SWITCH L3FILTER command 8-81
 DISABLE SWITCH LEARNING command 8-81
 DISABLE SWITCH MIRROR command 8-82
 DISABLE SWITCH PORT command 8-82
 DISABLE SYN command 11-35
 DISABLE SYN DEBUG command 11-35
 DISABLE SYSTEM SECURITY_MODE command 43-41
 DISABLE TELNET SERVER command 23-107
 DISABLE TEST INTERFACE command 65-10
 DISABLE TPAD command 19-21



DISABLE TPAD DEBUG command 19-21
 DISABLE TRIGGER command 60-16
 DISABLE USER command 43-43
 DISABLE USER RSO command 43-43
 DISABLE VLAN DEBUG command 8-83
 DISABLE VLANRELAY command 8-84, 9-46
 DISABLE VLANRELAY DEBUG command 8-84, 9-46
 DISABLE VOIP command 32-32
 DISABLE VOIP DEBUG command 32-33
 DISABLE VRRP command 53-19
 DISABLE VRRP DEBUG command 53-20
 DISABLE X25C DEBUG command 14-59

Disabling

- applications 10-8
- debugging 10-10
- DISABLE MLDSNOOPING 36-33
- DISABLE MLDSNOOPING DEBUG 36-33
- GARP GIP 10-11
- MSTP 9-46

disabling

- asynchronous calls 20-3, 20-24
- bridge learning 17-19
- bridging 17-19
- call definitions, asynchronous 20-3, 20-24
- debugging
 - ENCO 44-22
- debugging, PPP interfaces 16-72
- debugging, PPP templates 16-74
- ENCO debugging 44-22
- firewall 48-6, 48-112
- firewall accounting 48-52, 48-114
- firewall debugging 48-46, 48-114
- Frame Relay
 - DLC debugging 15-35
 - DLCs 15-9, 15-34
 - interfaces 15-8, 15-32
- hardware tests 65-10
- interfaces, PPP 16-72
- IPsec 49-75
- IPsec policy debugging 49-77
- IPX 38-47
- ISAKMP 49-21, 49-79
- ISAKMP debugging 49-80
- logging firewall events 48-48, 48-114
- LPD queues 63-11
- mail debugging 4-18
- notifications of firewall events 48-45, 48-113
- NTP 57-9
- old SAs 49-76
- PPP interfaces 16-72
 - debugging 16-72
- PPP templates
 - debugging 16-74
- RSVP 42-5, 42-12
- RSVP debugging 42-6, 42-13, 42-15
- RSVP interfaces 42-6, 42-14
- RSVP proxies 42-7
- RSVP proxy agent 42-7, 42-15
- Security Association debugging 49-81
- security mode 43-41

- software releases 5-26
- special feature licences 5-24
- tests 65-10
- TPAD debugging 19-7, 19-21
- TPAD instances 19-6, 19-21
- X25C debugging 14-13, 14-59

Disabling GARP 10-8

disabling GUI 5-25

DISCONNECT command 62-18

Displaying

- counter 10-23
- database 10-26
- DB 10-26
- debugging 10-27
- GARP 10-21
- GIP 10-28
- machine state 10-29

displaying

- activity counters on PPP interfaces 16-29
- aliases 2-15 to 2-16, 6-29
- asynchronous calls 20-3, 20-34 to 20-35
- bridge
 - configuration 17-25
 - ports 17-33
- call definitions, asynchronous 20-3, 20-35
- clock 4-59
- configuration, PPP 16-99
- counters
 - ENCO 44-37
- counters, PPP 16-105
- counters, TPAD 19-7, 19-31
- date 4-59
- debugging, PPP 16-118
- directory of FLASH files 6-6
- domain name 12-42, 12-141, 20-10, 20-38
- dynamic configuration 5-46
- dynamic interfaces 20-9
- files 6-26
- firewall accounting 48-52, 48-154
- firewall events 48-45, 48-158
- firewall policies 48-7
- firewall status 48-6, 48-151
- FLASH files 6-24, 6-26
- Frame Relay
 - DLCs 15-61
- Frame Relay logical interfaces 15-69
- free NVS 6-34
- hardware test results 65-13
- install information 5-54
- interfaces table, MIB-II 11-28, 11-87
- interfaces, dynamic 20-9
- interfaces, PPP 16-98
- intrusion 8-143
- IP address pools 23-190
- IPsec bundle specifications 49-118
- IPsec policies 49-136, 49-140
- IPsec SA specifications 49-154
- IPsec SAs 49-146
- ISAKMP exchanges 49-24, 49-189
- ISAKMP policies 49-23, 49-196



ISAKMP SAs 49-25, 49-201
 ISAKMP status 49-21, 49-157
 LPD queues 63-14
 mail 4-11
 mail status 4-51
 members of Security Associations 49-206
 memory contents 4-20
 multilink information, PPP 16-121
 nameservers, PPP 16-123
 NTP configuration 57-11
 NVS blocks 6-33
 NVS contents 6-16
 ports, TPAD 19-7, 19-29
 PPP configuration 16-99
 PPP counters 16-105
 PPP debugging 16-118
 PPP interfaces 16-98
 PPP multilink information 16-121
 PPP nameservers 16-123
 PPP templates 16-124
 PPP timers 16-119
 PPP transmission queue 16-130
 QOS 8-144
 route templates 23-198
 RSVP counters 42-6, 42-25
 RSVP interfaces 42-6, 42-28
 RSVP Path messages 42-6, 42-29
 RSVP proxies 42-8, 42-30
 RSVP proxy agent counters 42-8, 42-32
 RSVP Resv messages 42-6, 42-33
 Security Association counters 49-209
 Security Association users 49-215
 semipermanent manager port 43-61
 software releases 5-61
 special feature licences 5-48
 STP 9-87
 STP counters 9-91
 STP debug 9-93
 STP ports 9-94
 stream ports 64-8
 switch configuration 8-123
 switch debug 8-127
 switch port counters 8-139
 switch ports 8-136
 synchronous tunnel 18-8
 system clock 4-59
 system date 4-59
 system information 4-59
 system time 4-59
 templates 16-124
 test results 65-13
 time 4-59
 timers, PPP 16-119
 TPAD counters 19-7, 19-31
 TPAD instances 19-7, 19-26
 transmission queue, PPP 16-130
 trunk groups 8-145
 VLAN debug 8-148
 VLANs 8-146
 X.25

DCE interface configuration 14-85
 X.25 DCE counters 14-13, 14-87
 X.25 DCE state 14-95
 Distance Vector Multicast Routing Protocol (DVMRP)
 adding interfaces 27-48
 commands
 ADD DVMRP INTERFACE 27-48
 DELETE DVMRP INTERFACE 27-62
 DISABLE DVMRP 27-70
 DISABLE DVMRP DEBUG 27-71
 ENABLE DVMRP 27-77
 ENABLE DVMRP DEBUG 27-78
 PURGE DVMRP 27-84
 RESET DVMRP INTERFACE 27-85
 SET DVMRP INTERFACE 27-87
 SHOW DVMRP 27-100
 SHOW DVMRP COUNTERS 27-101
 SHOW DVMRP DEBUG 27-102
 SHOW DVMRP FORWARDING 27-103
 SHOW DVMRP INTERFACE 27-104
 SHOW DVMRP NEIGHBOUR 27-105
 SHOW DVMRP ROUTE 27-106
 deleting interfaces 27-62
 disabling 27-70
 disabling debug 27-71
 displaying 27-100
 enabling 27-77
 enabling debug 27-78
 interoperability with PIM 27-7
 introduction 27-7
 resetting interfaces 27-85
 setting interfaces 27-87
 DLC, Frame Relay 15-3
 adding 15-26
 deleting 15-31
 disabling 15-9, 15-34
 debugging 15-35
 displaying 15-61
 enabling 15-9, 15-40
 debugging 15-41
 modifying 15-49
 resetting 15-9, 15-45
 DLCI, Frame Relay 15-6
 DNS relay agent 23-98, 23-111, 23-134
 domain name
 adding 12-42, 12-68, 20-10, 20-20
 deleting 12-42, 12-72, 20-10, 20-23
 displaying 12-42, 12-141, 20-10, 20-38
 modifying 12-107
 used with Asynchronous Call Control (ACC) 16-27, 20-4, 20-10, 23-47
 used with ISDN calls 12-42
 dot1dBase group, Bridge MIB C-37
 dot1dBaseNumPorts MIB object C-38
 dot1dBridge MIB object C-37
 dot1dSr group, Bridge MIB C-37
 dot1dStatic group, Bridge MIB C-37
 dot1dStp group, Bridge MIB C-37
 dot1dTp group, Bridge MIB C-37
 dot1qBase group, Virtual Bridge (VLAN) MIB C-39



- dot1qConstraintSetDefault MIB object C-40
- dot1qConstraintTypeDefault MIB object C-40
- dot1qFdbTable MIB object C-39
- dot1qForwardAllTable MIB object C-40
- dot1qForwardUnregisteredTable MIB object C-40
- dot1qLearningConstraintsTable MIB object C-40
- dot1qNextFreeLocalVlanIndex MIB object C-40
- dot1qPortVlanHCStatisticsTable MIB object C-40
- dot1qPortVlanStatisticsTable MIB object C-40
- dot1qPortVlanTable MIB object C-40
- dot1qStatic group, Virtual Bridge (VLAN) MIB C-39 to C-40
- dot1qTp group, Virtual Bridge (VLAN) MIB C-39 to C-40
- dot1qTpFdbTable MIB object C-39
- dot1qTpGroupTable MIB object C-40
- dot1qVlan group, Virtual Bridge (VLAN) MIB C-39 to C-40
- dot1qVlanCurrentTable MIB object C-40
- dot1qVlanNumDeletes MIB object C-39
- dot1qVlanStaticTable MIB object C-40
- dot1xAuthAdminControlledDirections MIB object C-44
- dot1xAuthConfigTable MIB object C-44
- dot1xAuthDiagTable MIB object C-44
- dot1xAuthKeyTxEnabled MIB object C-44
- dot1xAuthSessionStatsTable MIB object C-44
- dot1xAuthStatsTable MIB object C-44
- dot1xPaePortTable MIB object C-44
- dot1xSuppConfigTable MIB object C-44
- dot1xSuppStatsTable MIB object C-44
- dot3 MIB object C-34
- dot3adAggCollectorMaxDelay MIB object C-42
- dot3adAggIndex MIB object C-41
- dot3adAggPortActorAdminState MIB object C-42
- dot3adAggPortActorOperKey MIB object C-42
- dot3adAggPortPartnerAdminKey MIB object C-42
- dot3adAggPortPartnerAdminPort MIB object C-42
- dot3adAggPortPartnerAdminPortPriority MIB object C-42
- dot3adAggPortPartnerAdminState MIB object C-42
- dot3adAggPortPartnerAdminSystemID MIB object C-42
- dot3adAggPortPartnerAdminSystemPriority MIB object C-42
- dot3adAggPortStatsMarkerPDUsRx MIB object C-42
- dot3adAggPortStatsMarkerPDUsTx MIB object C-42
- dot3adAggPortStatsMarkerResponsePDUsRx MIB object C-42
- dot3adAggPortStatsMarkerResponsePDUsTx MIB object C-42
- dot3BroadMauBasicGroup MIB object C-35 to C-36
- dot3IfMauAutoNegGroup MIB object C-36
- dot3IfMauBasicGroup MIB object C-35 to C-36
- dot3MauType MIB object C-35 to C-36
- dot3RpMauBasicGroup MIB object C-35 to C-36
- Dotted notation 55-6
- DOV. See data over voice
- downloading
 - files 5-36, 5-42, 5-58, 5-62, 6-4
- DS1 Far End group, DS1/E1/DS2/E2 Interface Types MIB C-49 to C-50
- DS1 Fractional table, DS1/E1/DS2/E2 Interface Types MIB C-49 to C-50
- ds1 MIB object C-49
- DS1 Near End group, DS1/E1/DS2/E2 Interface Types MIB C-49 to C-50
- DS1 Trap group, DS1/E1/DS2/E2 Interface Types MIB C-50
- DS1, E1, DS2 and E2 Interface Types MIB C-49
- DS3 Far End group, DS3/E3 Interface types MIB C-51
- DS3 Fractional table, DS3/E3 Interface types MIB C-51
- DS3 group, Allied Telesis Enterprise MIB C-25
- ds3 MIB object C-51
- DS3 Near End group, DS3/E3 Interface types MIB C-51
- DS3 Trap group, DS3/E3 Interface types MIB C-51
- DS3/E3 Interface Types MIB C-51
- ds3module MIB object C-25
- ds3TrapTable MIB object C-25
- dsx1ChanMappingTable MIB object C-50
- dsx1ConfigTable MIB object C-50
- dsx3ConfigTable MIB object C-51
- dsx3IfIndex MIB object C-51
- dsx3LineIndex MIB object C-51
- DUID 35-3
- dump
 - memory 4-20
 - NVS blocks 6-16
- DUMP command 4-20
- DUMP NVS command 6-16
- duplex mode, autonegotiation 8-7
- DVMRP. See Distance Vector Multicast Routing Protocol (DVMRP)
- dynamic configuration
 - displaying 5-46
 - saving 5-22
- Dynamic Host Configuration Protocol (DHCP)
 - adding
 - policy options 24-13
 - ranges 24-19
 - address allocation 24-3
 - automatic 24-3
 - dynamic 24-3
 - static 24-4
 - automatic address allocation 24-3
 - BOOTP 24-2 to 24-3
 - clients 24-53
 - commands
 - ADD DHCP POLICY 24-13
 - ADD DHCP RANGE 24-19
 - CREATE DHCP POLICY 24-20
 - CREATE DHCP RANGE 24-21, 24-47
 - DELETE DHCP POLICY 24-24
 - DELETE DHCP RANGE 24-28
 - DESTROY DHCP POLICY 24-29
 - DESTROY DHCP RANGE 24-29
 - SET DHCP POLICY 24-41
 - SHOW DHCP 24-51
 - SHOW DHCP CLIENT 24-53
 - SHOW DHCP POLICY 24-55
 - SHOW DHCP RANGE 24-57
 - configuring 24-7
 - creating
 - policies 24-20
 - ranges 24-21, 24-47
 - deleting
 - policy options 24-24



- ranges 24-28
- destroying
 - policies 24-29
 - ranges 24-29
- displaying
 - clients 24-53
 - policies 24-55
 - ranges 24-57
 - status 24-51
- dynamic address allocation 24-3
- example configuration 24-7
- lease time for IP addresses 24-3
- modifying policy options 24-41
- policies
 - adding options 24-13
 - creating 24-20
 - deleting options 24-24
 - destroying 24-29
 - displaying 24-55
 - modifying options 24-41
- policy 24-3
- range 24-3
- ranges
 - adding 24-19
 - creating 24-21, 24-47
 - deleting 24-28
 - destroying 24-29
 - displaying 24-57
- reuse IP addresses 24-3
- server 24-2
- static address allocation 24-4
- status 24-51
- Dynamic Host Configuration Protocol for IPv6 (DHCP6) 35-1
 - address assignment 35-4, 35-7
 - authentication 35-6, 35-11, 35-17, 35-22
 - clients 35-5, 35-38
 - configuring clients 35-5
 - configuring servers 35-4
 - counters 35-29
 - debugging 35-20 to 35-21, 35-29
 - diagnostics 35-21, 35-29
 - disabling servers 35-20
 - displaying status 35-25
 - DUID 35-3
 - enabling servers 35-21
 - example configurations 35-7
 - IAID 35-3
 - interfaces 35-4, 35-10, 35-17, 35-32
 - policies 35-4, 35-12, 35-15, 35-18 to 35-19, 35-23, 35-35
 - prefix delegation 35-4, 35-8
 - ranges 35-4, 35-14, 35-16, 35-19 to 35-20, 35-36
 - Rapid Commit 35-6, 35-21 to 35-22
 - reserved addresses 35-2
 - servers 35-4, 35-27
 - status 35-25
- dynamic interfaces
 - displaying 20-9
 - firewall 48-16

- adding 48-16, 48-67
 - creating 48-16, 48-98
 - deleting 48-16, 48-100
 - destroying 48-16, 48-111
- IP 20-9, 20-12
- PPP 20-9

E

- e1 MIB object C-49
- E1 Primary Rate Access, ISDN 12-7
- E1/T1. See Time Division Multiplexing (TDM)
- EDIT command 6-17, 59-3
- editing
 - files 6-4, 6-17
- editor 6-5, 6-17
- EGP group, MIB-II MIB C-29
- egpNeighEventTrigger MIB object C-30
- egress rules 8-30
- ELAP. See AppleTalk: EtherTalk Link Access Protocol (ELAP)
- Email
 - Protecting the system 48-34
- enable
 - Frame Relay
 - DLC 15-9
 - interface 15-8, 15-37
 - Frame Relay DLC 15-40
 - OSPF 29-48, 29-51
- ENABLE ACC CALL command 20-25
- ENABLE ACC CALL DEBUG command 20-26
- ENABLE APPLE command 37-37
- ENABLE APPLE DEBUG command 37-37
- ENABLE BGP DEBUG command 30-80
- ENABLE BGP PEER command 30-82
- ENABLE BOOTP RELAY command 24-32
- ENABLE BRI CTEST command 12-82
- ENABLE BRI DEBUG command 12-83
- ENABLE BRI TEST command 12-84
- ENABLE BRIDGE command 17-20
- ENABLE BRIDGE LEARNING command 17-20
- ENABLE DS3 DEGUG command 11-36
- ENABLE DS3 TESTcommand 11-37
- ENABLE DVMRP command 27-77
- ENABLE DVMRP DEBUG command 27-78
- ENABLE ENCO COMPSTATISTICS command 44-22
- ENABLE ENCO DEBUGGING command 44-23
- ENABLE FEATURE command 5-27
- ENABLE FIREWALL command 48-122
- ENABLE FIREWALL NOTIFY command 48-123
- ENABLE FIREWALL POLICY command 48-124, 48-126
- ENABLE FIREWALL POLICY IDENTPROXY command 48-128
- ENABLE FRAMERELAY command 15-37
- ENABLE FRAMERELAY CONGESTIONCONTROL 15-38
- ENABLE FRAMERELAY DEBUG command 15-39
- ENABLE FRAMERELAY DLC command 15-40
- ENABLE FRAMERELAY DLC DEBUG command 15-41
- ENABLE FRAMERELAY SLOWSTART command 15-43
- ENABLE GARP command 10-12
- ENABLE GARP DEBUG command 10-13
- ENABLE GARP GIP command 10-15
- ENABLE GRE command 33-15



- ENABLE GUI command 3-20
- ENABLE HTTP DEBUG command 5-28, 46-14 to 46-15, 46-18
- ENABLE HTTP SERVER command 5-28
- ENABLE IGMP Snooping command 27-79
- ENABLE INTERFACE LINKTRAP command 11-40
- ENABLE IP command 23-108
- ENABLE IP DEBUG command 23-110
- ENABLE IP DNSRELAY command 23-111
- ENABLE IP ECHO REPLY command 23-111
- ENABLE IP FILTER command 23-112
- ENABLE IP FORWARDING command 23-113
- ENABLE IP HELPER command 23-113
- ENABLE IP IGMP command 27-79
- ENABLE IP IGMP INTERFACE command 27-81
- ENABLE IP INTERFACE command 23-115
- ENABLE IP MULTICAST SWITCHING command 27-81
- ENABLE IP MVR command 27-82
- ENABLE IP MVR DEBUG command 27-82
- ENABLE IP REMOTE ASSIGN command 23-117
- ENABLE IP ROUTE command 23-117
- ENABLE IP SRCROUTE command 23-105, 23-107, 23-118 to 23-119
- ENABLE IPSEC command 49-81
- ENABLE IPSEC OLDSA command 49-82
- ENABLE IPSEC POLICY DEBUGGING command 49-83
- ENABLE IPV6 ADV command 34-62
- ENABLE IPV6 command 34-61
- ENABLE IPV6 DEBUG command 34-62
- ENABLE IPV6 MLD command 36-34
- ENABLE IPV6 MLD DEBUG command 36-34, 36-50
- ENABLE IPV6 MLD INTERFACE command 36-35
- ENABLE IPV6 RIP command 34-63
- ENABLE IPX CIRCUIT command 38-49
- ENABLE IPX command 38-48
- ENABLE ISAKMP command 49-86
- ENABLE ISAKMP DEBUGGING command 49-88
- ENABLE ISDN CALL command 12-86
- ENABLE ISDN LOG command 12-86
- ENABLE L2TP command 21-34
- ENABLE L2TP DEBUG command 21-35
- ENABLE L2TP SERVER command 21-39
- ENABLE LOADBALANCER command 52-35
- ENABLE LOADBALANCER DEBUG command 52-35
- ENABLE LOADBALANCER HEALTHPINGS command 52-36
- ENABLE LOADBALANCER REDUNDANCY command 52-37
- ENABLE LOADBALANCER RESOURCE command 52-38
- ENABLE LOADBALANCER VIRTUALBALANCER command 52-38
- ENABLE LOG command 61-25
- ENABLE LOG GENERATION command 61-25
- ENABLE LOG OUTPUT command 61-26
- ENABLE LOG RECEPTION command 61-26
- ENABLE LPD command 63-12
- ENABLE MAIL DEBUG command 4-23
- ENABLE MIOX CIRCUIT command 14-60
- ENABLE MLDSNOOPING command 36-36
- ENABLE MLDSNOOPING DEBUG command 36-36
- ENABLE MSTP CIST PORT command 9-47
- ENABLE NTP command 57-9
- ENABLE OSPF command 29-51
- ENABLE OSPF DEBUG command 29-51
- ENABLE OSPF INTERFACE command 29-53
- ENABLE OSPF LOG command 29-54
- ENABLE PIM command 27-76, 27-83
- ENABLE PIM DEBUG command 27-84
- ENABLE PIM6 command 36-36
- ENABLE PIM6 DEBUG command 36-37
- ENABLE PING POLL command 54-13
- ENABLE PING POLL DEBUG command 54-13
- ENABLE PKI DEBUG command 50-27
- ENABLE PORT command 11-41
- ENABLE PORTAUTH command 45-27
- ENABLE PORTAUTH DEBUG PORT command 45-28
- ENABLE PPP ACCESS CONCENTRATOR command 16-76
- ENABLE PPP command 16-75
- ENABLE PPP DEBUG command 16-76
- ENABLE PPP TEMPLATE DEBUG command 16-79
- ENABLE PRI CTEST command 12-87
- ENABLE PRI DEBUG command 12-88
- ENABLE PRI TEST command 12-89
- ENABLE Q931 ASPID command 12-90
- ENABLE Q931 DEBUG command 12-91
- ENABLE QOS DEBUG command 40-30
- ENABLE RELEASE command 5-30
- ENABLE RSVP command 42-15
- ENABLE RSVP DEBUG command 42-16
- ENABLE RSVP INTERFACE command 42-17
- ENABLE RSVP PROXY command 42-18
- ENABLE SA DEBUGGING command 49-89
- ENABLE SNMP AUTHENTICATE_TRAP command 55-41
- ENABLE SNMP command 55-40
- ENABLE SNMP COMMUNITY command 55-41
- ENABLE SSH SERVER command 46-16
- ENABLE SSH USER command 46-17
- ENABLE SSL DEBUG command 47-10
- enable stack command 58-21
- enable stack debug command 58-22
- ENABLE STAR DEBUGGING command 51-14
- ENABLE STAR MKTTRANSFER command 51-14
- ENABLE STP command 9-52
- ENABLE STP DEBUG command 9-53
- ENABLE STP PORT command 9-55
- ENABLE SWITCH AGEING TIMER command 8-86
- ENABLE SWITCH BIST command 8-87
- ENABLE SWITCH DEBUG command 8-88
- ENABLE SWITCH L3FILTER command 8-90
- ENABLE SWITCH LEARNING command 8-90
- ENABLE SWITCH MIRROR command 8-90
- ENABLE SWITCH PORT command 8-91
- ENABLE SYN command 11-41
- ENABLE SYN DEBUG command 11-41
- ENABLE SYSTEM SECURITY_MODE command 43-46
- ENABLE TELNET SERVER command 23-119
- ENABLE TEST INTERFACE command 65-11
- ENABLE TPAD command 19-22
- ENABLE TPAD DEBUG command 19-22
- ENABLE TRIGGER command 60-17
- ENABLE USER command 43-48
- ENABLE USER RSO command 43-49



ENABLE VLAN DEBUG command 8-92
 ENABLE VLANRELAY command 8-93
 ENABLE VLANRELAY DEBUG command 8-93, 9-56
 ENABLE VOIP command 32-33
 ENABLE VOIP DEBUG command 32-34
 ENABLE VRRP command 53-20
 ENABLE VRRP DEBUG command 53-21
 ENABLE X25C DEBUG command 14-60
 Enabling
 debugging 10-13
 ENABLE MLDSNOOPING 36-36
 ENABLE MLDSNOOPING DEBUG 36-36
 GARP 10-12
 enabling
 asynchronous calls 20-3, 20-25
 bridge learning 17-20
 bridging 17-20
 call definitions, asynchronous 20-3, 20-25
 debugging
 ENCO 44-23
 debugging, PPP interfaces 16-76
 debugging, PPP templates 16-79
 ENCO debugging 44-23
 firewall 48-6, 48-122
 firewall accounting 48-52, 48-124, 48-126
 firewall debugging 48-46, 48-124, 48-126
 Frame Relay
 DLC debugging 15-41
 graphical user interface 3-17
 hardware tests 65-11
 interfaces, PPP 16-75
 IPsec 49-81
 IPsec policy debugging 49-83
 IPX 38-48
 ISAKMP 49-21, 49-86
 ISAKMP debugging 49-88
 logging firewall events 48-48, 48-124, 48-126
 LPD queues 63-12
 mail debugging 4-23
 notifications of firewall events 48-45, 48-123
 NTP 57-9
 old SAs 49-82
 PPP interfaces 16-75
 debugging 16-76
 PPP templates
 debugging 16-79
 RSVP 42-5, 42-15
 RSVP debugging 42-6, 42-16, 42-18
 RSVP interfaces 42-6, 42-17
 RSVP proxies 42-7
 RSVP proxy agent 42-7, 42-18
 Security Association debugging 49-89
 security mode 43-46
 software releases 5-30
 special feature licences 5-27
 tests 65-11
 TPAD debugging 19-7, 19-22
 TPAD instances 19-6, 19-22
 X25C debugging 14-13, 14-60
 Enabling GIP 10-15

enabling GUI 3-20
 Encapsulating Security Payload (ESP) protocol 49-4
 encapsulation
 802.2 11-8
 asynchronous PPP 11-21, 20-4
 cisco 15-5
 CSLIP 11-21, 20-4
 Ethernet 11-7
 GRE 33-2
 PPP 16-3
 prompting for 20-4
 RFC 1490 15-4
 SLIP 11-21, 20-4
 SNAP 11-8
 synchronous lines 11-10, 15-4
 encapsulation, L2TP 21-3
 encapsulations
 X.25 14-8
 ENCO. See Compression and Encryption Services
 encryption 44-5
 access control 43-6
 adding
 Remote Security Officer 43-36
 asymmetrical 44-6
 asymmetrical and symmetrical 47-2
 commands
 DELETE USER RSO 43-40
 DISABLE USER RSO 43-43
 ENABLE USER RSO 43-49
 SHOW USER RSO 43-77
 commands not allowed in boot script 51-11
 Data Encryption Standard (DES) 44-5
 definition 47-2
 deleting
 Remote Security Officer 43-40
 disabling
 Remote Security Officer 43-43
 displaying
 Remote Security Officer 43-77
 enabling
 Remote Security Officer 43-49
 Network iQ VPNet 23-41
 over Frame Relay 15-15
 disabling debugging 15-34 to 15-35
 enabling debugging 15-40 to 15-41
 Point-to-Point Protocol (PPP) 16-39
 Remote Security Officer 43-6
 adding 43-36
 deleting 43-40
 disabling 43-43
 displaying 43-77
 enabling 43-49
 security associations 23-41
 symmetrical 44-5
 Triple DES (3DES) 44-6
 encryption. See Compression and Encryption Services; Link
 Compression and Encryption; IP Security (IPsec)
 End Entity 50-5
 Endpoint Discriminator Option 16-6
 Endpoint Discriminator Option, LCP 16-6



- entering commands 2-4
- enterprise MIB C-4
- envMon MIB object C-16
- Error table, Frame Relay DTE MIB C-48
- Ethernet 11-6
 - encapsulation 11-7
 - interface on router 11-6
- Ethernet group, Allied Telesis Enterprise MIB C-18
- ethernet MIB object C-18
- Ethernet-like Collision Statistics group, Ethernet-like Interface Types MIB C-34
- Ethernet-like Interface Types MIB C-34
- Ethernet-like Statistics group, Ethernet-like Interface Types MIB C-34
- EtherTalk 37-5
- ethIntTable MIB object C-18
- Event group, RMON MIB C-46
- event logging 4-7
 - See also Logging Facility
- events
 - firewall 48-45, 48-113, 48-123
- events, firewall
 - displaying 48-45, 48-158
- events, Point-to-Point Protocol (PPP) 16-5
- example configuration
 - synchronous tunnelling 18-3
- example configurations
 - AODI 12-44
 - asynchronous call control (ACC) 20-10
 - asynchronous services 62-9
 - DHCP 24-7
 - DHCP for IPv6 35-7
 - firewall 48-53
 - GRE 33-5
 - IPsec 49-32
 - Logging Facility 61-9
 - PKI 50-12 to 50-15
 - enrollment with CMP 50-14
 - manual enrollment 50-12
 - Point-to-Point Protocol (PPP) 16-33
 - services 62-9
 - SNMP 55-24
 - switching 8-41 to 8-47
 - terminal server 62-9
 - Time Division Multiplexing (TDM) 13-5
 - VLAN 8-41 to 8-47
- examples
 - finger client 23-39
 - Frame Relay configuration 15-19
 - Internet Protocol (IP) 23-39
 - Internet Protocol (IP) configuration 23-48, 28-5
 - IPX configuration 38-17
 - Layer Two Tunnelling Protocol (L2TP) 21-12
 - Line Printer Daemon (LPD) 63-5
 - mail subsystem 4-11
 - OSPF configuration 29-20
 - Secure Shell 46-7
 - stream printing configuration 64-3
 - TPAD 19-10 to 19-13
 - configuring X.25 19-10

- creatingTPAD instances 19-12
- exceptions 4-9, 4-50
- exchanges, ISAKMP 49-24
 - displaying 49-24, 49-189
- exclusion filters
 - Internet Protocol (IP) 23-65, 23-88, 23-135, 23-180
 - IPX 38-8, 38-35, 38-43, 38-68
- expansion options
 - testing 65-1
- external routes, OSPF 29-3

F

- fanAndPs MIB object C-16
- fatal errors 4-9, 4-50
- fault diagnosis 4-6
- File group, Allied Telesis Enterprise MIB C-21
- file MIB object C-21
- file naming conventions 6-2
 - using wildcards 6-5
- file subsystem
 - creating files 6-4
 - deleting files 6-14
 - displaying directory 6-4
 - displaying files 6-26
 - downloading files 5-36, 5-42, 5-58, 5-62, 6-4
 - editing files 6-4, 6-17
 - file types 6-2
 - naming conventions 6-2
 - renaming files 6-22
 - wildcards 6-5
- file types 6-2
- fileNumbers MIB object C-22
- files
 - creating 6-4
 - deleting 6-14
 - displaying 6-26
 - downloading 5-36, 5-42, 5-58, 5-62, 6-4
 - editing 6-4, 6-17
 - renaming 6-22
- fileTable MIB object C-21
- Filter group, RMON MIB C-45
- filtering
 - Layer 2 8-30 to 8-31, 9-5
 - Layer 3 8-33
- filtering, IGMP 27-29
- filters
 - exclusion
 - Internet Protocol (IP) 23-65, 23-88, 23-135, 23-180
 - IPX 38-8, 38-35, 38-43, 38-68
 - fragment offset
 - Internet Protocol (IP) 23-100, 23-112
 - inclusion
 - Internet Protocol (IP) 23-65, 23-88, 23-135, 23-180
 - IPX 38-8, 38-36, 38-44, 38-69
 - Internet Protocol (IP) 23-100, 23-112
 - exclusion 23-65, 23-88, 23-135, 23-180
 - fragment offset 23-100, 23-112
 - inclusion 23-65, 23-88, 23-135, 23-180
 - routing information 31-46, 31-58, 31-63, 31-76
 - IPX



- exclusion 38-8, 38-35, 38-43, 38-68
 - inclusion 38-8, 38-36, 38-44, 38-69
 - RIP 38-10, 38-37, 38-45, 38-54 to 38-55, 38-70
 - SAP 38-10 to 38-11, 38-39, 38-46, 38-54, 38-56, 38-72
- RIP 38-54
 - IPX 38-37, 38-45, 38-55, 38-70
- RIP (IPX) 38-10
- routing information
 - Internet Protocol (IP) 23-26, 31-46, 31-58, 31-63, 31-76
- SAP 38-54
- SAP (IPX) 38-10 to 38-11, 38-39, 38-46, 38-56, 38-72
- switch
 - adding Layer 2 8-31, 8-52
 - adding Layer 3 8-33, 8-56, 8-59
 - deleting Layer 2 8-71, 9-36
 - deleting Layer 3 8-72, 9-36
 - disabling Layer 3 8-81
 - displaying Layer 2 8-130
 - displaying Layer 3 8-134
 - enabling Layer 3 8-90
 - modifying Layer 3 8-103, 8-106
- traffic
 - Internet Protocol (IP) 23-34
- finger client 23-39, 23-120
- FINGER command 23-120
- Firewall 48-1
 - access lists
 - adding 48-14, 48-75, 48-81
 - deleting 48-108
 - accounting 48-52
 - disabling 48-52, 48-114
 - displaying 48-52, 48-154
 - enabling 48-52, 48-124, 48-126
 - adding
 - access lists 48-14, 48-75, 48-81
 - interfaces 48-6, 48-71
 - NAT translations 48-24, 48-27 to 48-28, 48-76
 - RADIUS servers 48-15, 48-81
 - rules 48-81
 - application gateway 48-4
 - commands 48-62
 - ADD FIREWALL POLICY APPRULE 48-65
 - ADD FIREWALL POLICY DYNAMIC 48-67
 - ADD FIREWALL POLICY INTERFACE 48-71
 - ADD FIREWALL POLICY LIST 48-75
 - ADD FIREWALL POLICY NAT 48-76
 - ADD FIREWALL POLICY PROXY 48-79, 48-81
 - ADD FIREWALL POLICY RULE 48-81
 - ADD FIREWALL POLICY SPAM SOURCES 48-95
 - CREATE FIREWALL POLICY 48-97
 - CREATE FIREWALL POLICY DYNAMIC 48-98
 - DELETE FIREWALL POLICY APPRULE 48-99
 - DELETE FIREWALL POLICY DYNAMIC 48-100
 - DELETE FIREWALL POLICY INTERFACE 48-102
 - DELETE FIREWALL POLICY LIST 48-104
 - DELETE FIREWALL POLICY NAT 48-105
 - DELETE FIREWALL POLICY RULE 48-108
 - DELETE FIREWALL SESSION 48-110
 - DESTROY FIREWALL POLICY 48-111
 - DESTROY FIREWALL POLICY DYNAMIC 48-111
 - DISABLE FIREWALL 48-112
 - DISABLE FIREWALL NOTIFY 48-113
 - DISABLE FIREWALL POLICY 48-114
 - DISABLE FIREWALL POLICY IDENTPROXY 48-119
 - ENABLE FIREWALL 48-122
 - ENABLE FIREWALL NOTIFY 48-123
 - ENABLE FIREWALL POLICY 48-124, 48-126
 - ENABLE FIREWALL POLICY IDENTPROXY 48-128
 - SET FIREWALL POLICY 48-136, 48-138
 - SET FIREWALL POLICY ATTACK 48-138
 - SET FIREWALL POLICY DOMAIN 48-147
 - SET FIREWALL POLICY RULE 48-142
 - SHOW FIREWALL 48-151
 - SHOW FIREWALL ACCOUNTING 48-154
 - SHOW FIREWALL ARP 48-156
 - SHOW FIREWALL EVENT 48-158
 - SHOW FIREWALL POLICY SESSION 48-189
 - configuration examples 48-53
 - creating policies 48-6, 48-97
 - debugging 48-46
 - disabling 48-46, 48-114
 - enabling 48-46, 48-124, 48-126
 - deleting
 - access lists 48-108
 - interfaces 48-6, 48-102
 - NAT translations 48-105
 - rules 48-108
 - destroying policies 48-6, 48-111
 - disabling 48-6, 48-112
 - accounting 48-52, 48-114
 - debugging 48-46, 48-114
 - event logging 48-48, 48-114
 - ICMP forwarding 48-7, 48-114
 - IP options 48-7, 48-114
 - notifications of events 48-45, 48-113
 - ping 48-7, 48-114
 - displaying
 - accounting 48-52, 48-154
 - events 48-45, 48-158
 - policies 48-7
 - status 48-6, 48-151
 - dynamic interfaces 48-16
 - adding 48-16, 48-67
 - creating 48-16, 48-98
 - deleting 48-16, 48-100
 - destroying 48-16, 48-111
 - dynamic packet filtering 48-4
 - enabling 48-6, 48-122
 - accounting 48-52, 48-124, 48-126
 - debugging 48-46, 48-124, 48-126
 - event logging 48-48, 48-124, 48-126
 - ICMP forwarding 48-7, 48-124, 48-126
 - IP options 48-7, 48-124, 48-126
 - notifications of events 48-45, 48-123
 - ping 48-7, 48-124, 48-126
 - events
 - displaying 48-45, 48-158
 - logging 48-47



- notifying 48-45, 48-113, 48-123
 - triggers 48-46
 - example configurations 48-53
 - feature summary 48-5
 - HTTP Proxy 48-35
 - ICMP forwarding
 - disabling 48-7, 48-114
 - enabling 48-7, 48-124, 48-126
 - Interaction between SMTP Proxy and Firewall Rules 48-34
 - interaction with load balancer 52-9
 - IP options
 - disabling 48-7, 48-114
 - enabling 48-7, 48-124, 48-126
 - logging events 48-47
 - disabling 48-48, 48-114
 - enabling 48-48, 48-124, 48-126
 - modifying
 - rules 48-142
 - monitoring 48-45, 48-49
 - NAT 48-21
 - adding translations 48-24, 48-27 to 48-28, 48-76
 - deleting translations 48-105
 - notifications 48-45
 - disabling 48-45, 48-113
 - enabling 48-45, 48-123
 - Packet Fragment Handling 48-19
 - ping
 - disabling 48-7, 48-114
 - enabling 48-7, 48-124, 48-126
 - policies 48-6
 - adding interfaces 48-6, 48-71
 - creating 48-6, 48-97
 - deleting interfaces 48-6, 48-102
 - destroying 48-6, 48-111
 - displaying 48-7
 - Protecting the email system 48-34
 - RADIUS servers 48-14
 - adding 48-15, 48-81
 - rules 48-8
 - adding 48-81
 - deleting 48-108
 - modifying 48-142
 - security policies 48-6
 - security policy 48-6
 - SMTP Proxy 48-33
 - stateful inspection 48-4
 - triggering on events 48-46
 - Xbox Live 48-26, 48-94
- Firewall group, Allied Telesis Enterprise MIB C-22
- firewall MIB object C-22
- Firewall Packet Fragment Handling 48-19
- firewall policy
 - load balancer traffic flow 48-6, 52-10
 - proxies 52-9
- firewallAttackTrap trap message C-23
- firewallSessionStatistics MIB object C-23
- firewallTrapMessage MIB object C-23
- FLASH File System (FFS)
 - displaying files 6-24
- FLASH files 6-6
 - deleting 6-14
 - displaying 6-24, 6-26
 - displaying directory 6-6
 - downloading 5-36, 5-42, 5-58, 5-62
 - editing 6-17
 - renaming 6-22
- Flash group, Allied Telesis Enterprise MIB C-18
- FLASH memory 6-5
 - compacting 6-7
 - displaying 6-6, 6-30, 6-32
- flash MIB object C-18
- flashCheckFailure MIB object C-18
- flashCloseFailure MIB object C-18
- flashCompactFailure MIB object C-18
- flashCompleteFailure MIB object C-18
- flashCreateFailure MIB object C-18
- flashDeleteFailure MIB object C-18
- flashEraseFailure MIB object C-18
- flashFailureTrap trap message C-18
- flashGetFailure MIB object C-18
- flashOpenFailure MIB object C-18
- flashPutFailure MIB object C-18
- flashReadFailure MIB object C-18
- flashVerifyFailure MIB object C-19
- flashWriteFailure MIB object C-18
- flooding 8-30, 9-5
- FLUSH LOG OUTPUT command 61-27
- format of file names 6-2, 6-5
- format, SNMP messages 55-9 to 55-10, 55-13
- Forwarding Database 8-29 to 8-31, 9-5
 - displaying 8-128
- forwarding process 8-30, 9-5
- fragment offset filter
 - Internet Protocol (IP) 23-100, 23-112
- Frame Relay 15-1 to 15-72
 - adding
 - DLCs 15-26
 - logical interfaces 15-27
 - Address Resolution Protocol (ARP) 15-18
 - addresses 15-6, 15-26, 15-31, 15-34, 15-40, 15-45, 15-49, 15-61
 - circuit 15-3, 15-31, 15-34 to 15-35, 15-40 to 15-41, 15-45
 - commands
 - ADD FRAMERELAY DLC 15-26
 - ADD FRAMERELAY LI 15-27
 - CREATE FRAMERELAY 15-28
 - DELETE FRAMERELAY DLC 15-31
 - DELETE FRAMERELAY LI 15-31
 - DESTROY FRAMERELAY 15-32
 - DISABLE FRAMERELAY 15-32
 - DISABLE FRAMERELAY CONGESTIONCONTROL 15-33
 - DISABLE FRAMERELAY DEBUG 15-33
 - DISABLE FRAMERELAY DLC 15-34
 - DISABLE FRAMERELAY DLC DEBUG 15-35
 - DISABLE FRAMERELAY LI DEBUG 15-36, 15-43
 - DISABLE FRAMERELAY SLOWSTART 15-37
 - ENABLE FRAMERELAY 15-37



- ENABLE FRAMERELAY CONGESTIONCONTROL 15-38
- ENABLE FRAMERELAY DEBUG 15-39
- ENABLE FRAMERELAY DLC 15-40
- ENABLE FRAMERELAY DLC DEBUG 15-41
- ENABLE FRAMERELAY SLOWSTART 15-43
- RESET FRAMERELAY 15-44
- RESET FRAMERELAY DLC 15-45
- SET FRAMERELAY 15-46
- SET FRAMERELAY DLC 15-49
- SHOW FRAMERELAY 15-51
- SHOW FRAMERELAY DLC 15-61
- SHOW FRAMERELAY LI 15-69
- compression 15-15
 - disabling debugging 15-34 to 15-35
 - enabling debugging 15-40 to 15-41
- configuration 15-16, 15-51
- examples 15-19
- congestion control 15-14
 - disabling 15-33
 - enabling 15-38
- congestion control scheme 15-12
- congestion detection 15-10
- counters 15-15, 15-51
- counters, DLC 15-61
- counters, logical interface 15-69
- create
 - interface 15-28
- debugging 15-34, 15-40, 15-51
 - DLCs 15-35, 15-41
 - interfaces 15-33, 15-39
 - logical interfaces 15-36, 15-43
- debugging DLCs
 - disabling 15-35
 - enabling 15-41
- debugging interfaces
 - disabling 15-33
 - enabling 15-39
- debugging logical interfaces
 - disabling 15-36, 15-43
- deleting
 - DLCs 15-31
 - logical interfaces 15-31
- destroying
 - interfaces 15-32
- disable
 - DLC 15-9
 - interface 15-8, 15-32
- disable DLC 15-34
- disabling
 - congestion control 15-33
 - DLC debugging 15-35
 - interface debugging 15-33
 - logical interface debugging 15-36, 15-43
 - slowstart 15-37
- displaying
 - logical interfaces 15-69
- displaying configuration 15-51
- displaying counters 15-15, 15-51, 15-61, 15-69
- displaying DLC 15-61
 - displaying DLCs 15-51
 - displaying DLCs 15-61
 - DLC 15-3, 15-26, 15-31, 15-34, 15-40, 15-45, 15-49, 15-61
 - disable 15-9
 - enable 15-9
 - reset 15-9
 - DLCI 15-6, 15-51
 - DLCs
 - debugging 15-35, 15-41
 - enable
 - DLC 15-9
 - interface 15-8, 15-37
 - enable DLC 15-40
 - enabling
 - congestion control 15-38
 - DLC debugging 15-41
 - interface debugging 15-39
 - slow-start 15-43
 - encapsulation
 - cisco 15-5
 - RFC 1490 15-4
 - encryption 15-15
 - disabling debugging 15-34 to 15-35
 - enabling debugging 15-40 to 15-41
 - examples 15-19
 - interface
 - create 15-28
 - debugging 15-33, 15-39
 - destroy 15-32
 - disable 15-8, 15-32
 - enable 15-8, 15-37
 - reset 15-8, 15-44
- Inverse ARP 15-18
- LMI
 - dialogue 15-7, 15-28, 15-46
- logical interfaces 15-8, 15-17, 15-27, 15-31, 15-69
 - adding 15-27
 - debugging 15-36, 15-43
 - deleting 15-31
 - displaying 15-69
- MIB 15-14 to 15-15, 15-51, 15-61
- modify DLC 15-49
- reset
 - DLC 15-9
 - interface 15-8, 15-44
- reset DLC 15-45
- routing modules 15-17
- slow-start mechanism 15-9
 - enabling 15-43
- slowstart mechanism 15-14
 - disabling 15-37
- static ARPs 15-18
- support for 15-14
- Frame Relay MIB C-47
- frame storage 8-30, 9-5
- frame-relay MIB object C-47
- framework, for network management 55-3
- frCircuitCommittedBurst MIB object C-48
- frCircuitExcessBurst MIB object C-48



frCircuitState MIB object C-48
 frCircuitThroughput MIB object C-48
 frDLCIStatusChange MIB object C-48
 frDlcmiAddress MIB object C-48
 frDlcmiAddressLen MIB object C-48
 frDlcmiErrorThreshold MIB object C-48
 frDlcmiFullEnquiryInterval MIB object C-48
 frDlcmiMaxSupportedVCs MIB object C-48
 frDlcmiMonitoredEvents MIB object C-48
 frDlcmiMulticast MIB object C-48
 frDlcmiPollingInterval MIB object C-48
 frDlcmiState MIB object C-48
 free NVS memory, displaying 6-34
 frTrapState MIB object C-48
 Fully Qualified Interface Names 11-5

G

g703at2mb MIB object C-49
 GARP
 disabling 10-8
 disabling debugging 10-10
 displaying 10-21
 displaying counter 10-23
 displaying database 10-26
 enabling 10-12
 enabling debugging 10-13
 resetting 10-16
 setting ports 10-17
 setting timer 10-19
 GARP Information Declaration (GID) 10-2
 GARP Information Propagation (GIP) 10-2
 GARP VLAN Registration Protocol (GVRP) 10-2
 Generic Receive Address table, Interface Extensions MIB
 C-31 to C-32
 Generic Routing Encapsulation (GRE) 33-1 to 33-23
 adding entities 33-11
 commands
 ADD GRE 33-11
 ADD IP INTERFACE 33-4
 DELETE GRE 33-4, 33-14
 DISABLE GRE 33-15
 ENABLE GRE 33-15
 PURGE GRE 33-16
 RESET GRE 33-17
 SET GRE 33-18
 SET IP INTERFACE 33-4 to 33-5
 SHOW GRE 33-21 to 33-23
 configuration 33-5
 configuring multi-point GRE 33-6
 configuring point-to-point GRE 33-5
 deleting entities 33-14
 delivery protocol 33-2
 disabling 33-5, 33-15
 disabling interfaces 33-4
 displaying entities 33-21 to 33-23
 enabling 33-5, 33-15
 entities 33-3, 33-11, 33-14, 33-18, 33-21 to 33-23
 examples 33-5
 interfaces 33-4
 IP over IP 33-3

 modifying entities 33-18
 multi-point 33-4
 example configuration 33-6
 patterns 33-3
 payload packet 33-2
 point-to-point 33-3
 example configuration 33-5
 private IP networks 33-2
 public IP networks 33-2
 purging 33-16
 reserved IP address ranges 33-2
 resetting 33-17
 supported encapsulations 33-3
 Generic VLAN Registration Protocol (GVRP) 10-5
 get-bulk-request PDU 55-9
 get-next PDU 55-9
 get-request PDU 55-9
 get-response PDU 55-9
 GIP
 disabling 10-11
 displaying 10-28
 enabling 10-15
 Graphical User Interface
 disabling 5-25
 enabling 3-20
 GRE. See Generic Routing Encapsulation (GRE)
 GROUP command 55-36
 Groups, MIB
 address translation C-29
 Aggregation Port C-41
 Aggregation Port Debug C-41
 Aggregation Port Statistics C-41
 Aggregator C-41
 Alarm C-45 to C-46
 arInterfaces C-17
 BRI C-20
 Broadband MAU Basic C-35 to C-36
 CMOT C-29
 Conformance C-50 to C-51
 Data Link Connection Management Interface C-47
 DHCP C-22
 dot1dBase C-37
 dot1dSr C-37
 dot1dStatic C-37
 dot1dStp C-37
 dot1dTp C-37
 dot1qBase C-39
 dot1qStatic C-39 to C-40
 dot1qTp C-39 to C-40
 dot1qVlan C-39 to C-40
 DS1 Far End C-49 to C-50
 DS1 Near End C-49 to C-50
 DS1 Trap C-50
 DS3 C-25
 DS3 Far End C-51
 DS3 Near End C-51
 DS3 Trap C-51
 EGP C-29
 Ethernet C-18
 Ethernet-like Collision Statistics C-34



Ethernet-like Statistics C-34
 Event C-46
 File C-21
 Filter C-45
 Firewall C-22
 Flash C-18
 History C-45 to C-46
 Host C-45
 Host Resources Device C-52 to C-53
 Host Resources Installed Software C-52 to C-53
 Host Resources Running Software C-52 to C-53
 Host Resources Running Software Performance C-52 to C-53
 Host Resources Storage C-52 to C-53
 Host Resources System C-52 to C-53
 HostTopN C-45
 ICMP C-29
 Install C-20
 Interface MAU Autonegotiation C-36
 Interface MAU Basic C-35 to C-36
 interfaces C-29, C-38
 IP C-29, C-33
 ISDN Call Control C-19
 Load Balancer C-24
 Loader C-20
 Matrix C-45
 Modules C-18
 Objects C-9
 Packet Capture C-46
 PAE Authenticator C-43 to C-44
 PAE Supplicant C-44
 PAE System C-43 to C-44
 PIM4 C-24
 Ping C-22
 Port Authentication C-25
 PRI C-20
 QoS C-24
 Repeater MAU Basic C-35 to C-36
 SNMP C-30
 Software QoS C-27
 Stack C-26
 Statistics C-45 to C-46
 Switch C-23
 sysinfo C-16
 system C-29, C-38
 TCP C-29
 Transmission C-29, C-34, C-47, C-49, C-51
 traps C-16
 Trigger C-21
 TTY C-19
 UDP C-29
 GUI
 disable 5-25
 enable 3-20

H

handshake
 definition 47-4
 hardware
 testing 65-1

header compression 44-4
 header, Internet Protocol (IP) 23-5
 health checks 52-12
 fail-over load balancer 52-13
 load balancer process 52-13
 resource 52-12
 heartbeats
 UDP 49-19
 Hello message
 PIM Sparse Mode 27-14
 Hello packets, OSPF 29-5, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66
 help
 displaying 1-7, 2-9, 2-13
 setting system help file 2-15
 HELP command 2-13
 History group, RMON MIB C-45 to C-46
 history, command recall 2-4
 homepage
 setting HTTP server 5-39
 hop count
 AppleTalk 37-8
 host
 adding Internet Protocol (IP) 23-73
 adding OSPF 29-30
 changing Internet Protocol (IP) 23-139
 deleting Internet Protocol (IP) 23-90
 deleting OSPF 29-42
 displaying Internet Protocol (IP) 23-184
 displaying OSPF 29-83
 modifying Internet Protocol (IP) 23-139
 modifying OSPF 29-65
 setting Internet Protocol (IP) 23-139
 Host group, RMON MIB C-45
 host MIB object C-52
 Host Resources Device group, Host Resources MIB C-52 to C-53
 Host Resources Installed Software group, Host Resources MIB C-52 to C-53
 Host Resources MIB C-52
 Host Resources Running Software group, Host Resources MIB C-52 to C-53
 Host Resources Running Software Performance group, Host Resources MIB C-52 to C-53
 Host Resources Storage group, Host Resources MIB C-52 to C-53
 Host Resources System group, Host Resources MIB C-52 to C-53
 host-directed commands (HDC) for stacking 58-17
 hostId MIB object C-16
 HostTopN group, RMON MIB C-45
 hrDeviceDiskStorage MIB object C-53
 hrDeviceEntry MIB object C-53
 hrDeviceId MIB object C-9, C-53
 hrDeviceType MIB object C-53
 hrDiskStorageTable MIB object C-53
 hrFSTable MIB object C-53
 hrNetworkTable MIB object C-53
 hrPrinterTable MIB object C-53
 hrStorageAllocationUnits MIB object C-53



hrSWRunTable MIB object C-52
 hrSystemDate MIB object C-53
 hrSystemInitialLoadDevice MIB object C-53
 hrSystemInitialLoadParameters MIB object C-53
 hrSystemMaxProcesses MIB object C-53
 hrSystemNumUsers MIB object C-53
 hrSystemProcesses MIB object C-53
 HTTP Proxy
 Firewall 48-35
 HTTP server 5-9
 disabling 5-25
 disabling debugging 5-25
 displaying client status 5-50
 displaying debugging status 5-51
 displaying session information 5-53
 displaying status 5-52
 enabling 5-28
 enabling and disabling the GUI 3-17
 enabling debugging 5-28, 46-14 to 46-15, 46-18
 resetting 5-36
 setting homepage 5-39
 HTTP virtual balancer 52-7
 cookies 52-7
 SSL enabled 52-9
 Hunt Groups 14-16

I

IAID 35-3
 ICMP group, MIB-II MIB C-29
 identifier, instance 55-6
 identifier, MIB object 55-6
 combined notation 55-6
 dotted notation 55-6
 textual notation 55-6
 Identity associations 35-3
 IEEE 802.2, Ethernet encapsulation 11-8
 ieee8021paeMIB MIB object C-43
 if..then..else..endif, in scripts 59-5, 59-11
 ifaceAsyn MIB object C-15
 ifaceBri MIB object C-15
 ifaceEth MIB object C-15
 ifaceGBIC MIB object C-15
 ifacePots MIB object C-15
 ifacePri MIB object C-15
 ifaceSyn MIB object C-15
 ifAdminStatus MIB object C-30
 ifEntry MIB object C-47
 ifExtnsRcvAddrTable MIB object C-31
 ifExtnsTable MIB object C-31
 ifIndex MIB object C-18 to C-20, C-35, C-41
 ifJackTable MIB object C-35
 ifMauAutoNegAdminStatus MIB object C-36
 ifMauAutoNegCapAdvertised MIB object C-36
 ifMauAutoNegRestart MIB object C-36
 ifMauAutoNegTable object C-36
 ifMauDefaultType MIB object C-36
 ifMauIfIndex MIB object C-35
 ifMauStatus MIB object C-36
 ifMauTable object C-35
 ifMIB MIB object C-31

ifName MIB object C-16
 ifNumber MIB object C-31 to C-32
 ifPromiscuousMode MIB object C-32
 ifRcvAddressAddress MIB object C-32
 ifRcvAddressStatus MIB object C-32
 ifRcvAddressTable MIB object C-31 to C-32
 ifRcvAddressType MIB object C-32
 ifSpecific MIB object C-34
 ifStackStatus MIB object C-32
 ifStackTable MIB object C-31 to C-32
 ifTable MIB object C-31 to C-32, C-41
 ifTableLastChange MIB object C-31
 ifTestTable MIB object C-31 to C-32
 IfType MIB object C-47
 ifType MIB object C-34, C-49, C-51
 iftypes MIB object C-15
 ifXTable MIB object C-31 to C-32
 IGMP. See Internet Group Management Protocol (IGMP)
 IGMP filtering 27-29
 IGMP proxy 27-23
 IGMP snooping 27-25, 27-109, 27-111
 disabling 27-72
 enabling 27-79
 IGMP throttling 27-31
 IGMP. See Internet Group Management Protocol
 igmpGeneralQueryNotReceivedEvent trap message C-16
 inclusion filters
 Internet Protocol (IP) 23-65, 23-88, 23-135, 23-180
 IPX 38-8, 38-36, 38-44, 38-69
 incoming calls
 asynchronous 20-2
 authenticating 20-5
 authenticating, with CHAP 20-5
 authenticating, with PAP 20-5
 deactivating 20-8, 20-22
 ingress filtering 8-28
 ingress rules 8-28
 Install group, Allied Telesis Enterprise MIB C-20
 install information 5-13
 deleting 5-23
 displaying 5-54
 setting 5-40
 install MIB object C-20
 installHistoryTable MIB object C-21
 installTable MIB object C-21
 instance 11-4
 instance identifier, MIB object 55-6
 instance, MIB object 55-6
 Integrated Services Digital Network (ISDN) 12-1
 adding domain name 12-42, 12-68
 addressing, LAPD 12-27
 AODI 12-42 to 12-46
 components 12-43
 configuration example 12-44
 automatic switch detection 12-36
 auto-SPIDs 12-32, 12-60 to 12-61, 12-90
 Basic Rate Access 12-4 to 12-7
 configuring 12-15
 BRI physical layer 12-15, 12-75 to 12-76,
 12-82 to 12-84, 12-95, 12-99, 12-118, 12-120,



12-127 to 12-129, 12-133
 call control 12-37, 12-59, 12-62, 12-68,
 12-71 to 12-72, 12-77, 12-86, 12-101, 12-136,
 12-140, 12-146
 call logging 12-41, 12-77, 12-86, 12-107, 12-142
 commands
 ACTIVATE ISDN CALL 12-59, 12-146
 ACTIVATE Q931 ASPID 12-60 to 12-61
 ADD ISDN CALL 12-62
 ADD ISDN CLILIST 12-68
 ADD ISDN DOMAINNAME 12-68
 ADD LAPD 12-108
 ADD LAPD TEI 12-69
 ADD LAPD XSPID 12-69
 ADD LAPD XTEI 12-70
 DEACTIVATE ISDN CALL 12-71
 DELETE ISDN CALL 12-71
 DELETE ISDN CLILIST 12-72
 DELETE ISDN DOMAINNAME 12-72
 DELETE LAPD TEI 12-73
 DELETE LAPD XSPID 12-74
 DELETE LAPD XTEI 12-75
 DISABLE BRI CTEST 12-75
 DISABLE BRI DEBUG 12-76
 DISABLE BRI TEST 12-76
 DISABLE ISDN CALL 12-77
 DISABLE ISDN LOG 12-77
 DISABLE PRI CTEST 12-78
 DISABLE PRI DEBUG 12-78
 DISABLE PRI TEST 12-79
 DISABLE Q931 DEBUG 12-80
 ENABLE BRI CTEST 12-82
 ENABLE BRI DEBUG 12-83
 ENABLE BRI TEST 12-84
 ENABLE ISDN CALL 12-86
 ENABLE ISDN LOG 12-86
 ENABLE PRI CTEST 12-87
 ENABLE PRI DEBUG 12-88
 ENABLE PRI TEST 12-89
 ENABLE Q931 ASPID 12-90
 ENABLE Q931 DEBUG 12-91
 RESET BRI 12-95
 RESET BRI COUNTERS 12-96
 RESET PRI 12-96
 RESET PRI COUNTERS 12-97
 RESET Q931 12-98
 SET BRI 12-99
 SET ISDN CALL 12-101
 SET ISDN DOMAINNAME 12-107
 SET ISDN LOG 12-107
 SET PRI 12-110
 SET Q931 12-114
 SHOW BRI CONFIGURATION 12-118
 SHOW BRI COUNTERS 12-120
 SHOW BRI CTEST 12-127
 SHOW BRI DEBUG 12-128
 SHOW BRI STATE 12-129
 SHOW BRI TEST 12-133
 SHOW ISDN CALL 12-136
 SHOW ISDN CLILIST 12-140

SHOW ISDN DOMAINNAME 12-141
 SHOW ISDN LOG 12-142
 SHOW LAPD 12-144
 SHOW LAPD COUNT 12-147
 SHOW LAPD STATE 12-148
 SHOW PRI CONFIGURATION 12-149
 SHOW PRI COUNTERS 12-150
 SHOW PRI CTEST 12-160
 SHOW PRI DEBUG 12-161
 SHOW PRI STATE 12-162
 SHOW PRI TEST 12-168
 SHOW Q931 12-171
 SHOW Q931 SPID 12-174
 common D channel signalling 12-28
 configuring 12-47
 Basic Rate Access 12-15
 Primary Rate Access 12-20
 counters 12-96 to 12-97, 12-120, 12-147, 12-150
 data over voice 12-46
 debugging
 SPIDs 12-33
 deleting domain name 12-42, 12-72
 displaying domain name 12-42, 12-141
 domain name 12-42
 adding 12-42, 12-68
 deleting 12-42, 12-72
 displaying 12-42, 12-141
 modifying 12-107
 interfaces, slotted 12-42
 LAPD 12-25, 12-69, 12-73, 12-108, 12-144, 12-148
 LAPD addressing 12-27
 modifying domain name 12-107
 non-associated signalling 12-28
 packet mode 12-26, 12-69 to 12-70, 12-74 to 12-75
 PRI physical layer 12-19, 12-78 to 12-79,
 12-87 to 12-89, 12-96, 12-110,
 12-149 to 12-150, 12-160 to 12-162, 12-168
 Primary Rate Access 12-7 to 12-13
 configuring 12-20
 E1 12-7
 T1 12-9
 profile 12-30
 profiles 12-32 to 12-37, 12-174
 Q.931 12-30, 12-80, 12-91, 12-98, 12-114, 12-171
 S/T interfaces 12-5
 service provider profiles 12-32 to 12-37, 12-174
 slotted interfaces 12-42
 SPIDs 12-32 to 12-37, 12-174
 automatic selection 12-32, 12-60 to 12-61, 12-90
 debugging 12-33
 support 12-13
 switch detection 12-36
 territory 12-20, 12-31, 12-47, 12-49
 U interfaces 12-7
 X.25 over LAPD 12-26, 12-69 to 12-70, 12-74 to 12-75
 Interaction
 Between SMTP Proxy and Firewall Rules 48-34
 Interface Extensions table, Interface Extensions MIB
 C-31 to C-32
 Interface Jack Table, MAU MIB C-35



- Interface MAU Autonegotiation Group, MAU MIB C-36
- Interface MAU Autonegotiation MIB table, MAU MIB C-36
- Interface MAU Basic Group, MAU MIB C-35 to C-36
- Interface MAU MIB table, MAU MIB C-35
- Interface Stack table, Interface Extensions MIB C-31 to C-32
- Interface Test table, Interface Extensions MIB C-31 to C-32
- Interfaces 11-4 to 11-58
 - Fully Qualified Interface Names 11-5
 - link up/down traps 11-29, 11-34, 11-40, 11-57
 - managing with SNMP 11-29
- interfaces
 - adding
 - Internet Protocol (IP) 23-74
 - IPX 38-6
 - OSPF 29-31
 - PPP physical links 16-49
 - addressless
 - OSPF 29-10, 29-22, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66
 - asynchronous ports 11-21
 - changing
 - Internet Protocol (IP) 23-145
 - commands
 - CONNECT ASYN 11-31
 - DISABLE ASYN 11-32
 - DISABLE DS3 DEBUG 11-32
 - DISABLE DS3 TEST 11-33
 - DISABLE INTERFACE 11-34
 - ENABLE DS3 DEBUG 11-36
 - ENABLE DS3 TEST 11-37
 - ENABLE INTERFACE LINKTRAP 11-40
 - RESET DS3 11-44
 - RESET DS3 COUNTERS 11-45
 - SET INTERFACE MTU 11-55
 - SET INTERFACE TRAPLIMIT 11-57
 - SHOW DS3 CMTCE 11-69
 - SHOW DS3 CONFIGURATION 11-71
 - SHOW DS3 COUNTERS 11-72
 - SHOW DS3 DEBUG 11-80
 - SHOW DS3 STATE 11-81
 - SHOW DS3 TEST 11-85
 - SHOW INTERFACE 11-87
 - configuration
 - asynchronous ports 11-21
 - Frame Relay 15-16
 - synchronous lines 11-9
 - creating
 - PPP 16-53
 - debugging synchronous 11-35, 11-41
 - defined 11-3
 - deleting
 - Internet Protocol (IP) 23-91
 - OSPF 29-43
 - PPP physical links 16-69
 - destroying
 - PPP 16-70
 - disabling
 - Internet Protocol (IP) 23-103
 - OSPF 29-50
 - PPP 16-72
 - disabling synchronous 11-35
 - displaying
 - dynamic 20-9
 - Internet Protocol (IP) 23-186
 - IPX 38-6
 - OSPF 29-85
 - PPP 16-98
 - displaying MIB 11-28, 11-87
 - displaying synchronous 11-91
 - displaying synchronous counters 11-93
 - dynamic IP 20-9, 20-12
 - dynamic PPP 20-9
 - enabling
 - Internet Protocol (IP) 23-115
 - OSPF 29-53
 - PPP 16-75
 - enabling synchronous 11-41
 - instance 11-4
 - Internet Protocol (IP)
 - adding 23-74
 - changing 23-145
 - deleting 23-91
 - disabling 23-103
 - displaying 23-186
 - dynamic 20-9, 20-12
 - enabling 23-115
 - modifying 23-140, 23-145
 - resetting 23-125
 - setting 23-145
 - IPX 38-5
 - adding 38-6
 - displaying 38-6
 - modem control signals 11-10, 11-58, 11-91
 - modifying
 - Internet Protocol (IP) 23-140, 23-145
 - OSPF 29-66
 - PPP 16-82
 - modifying synchronous 11-58
 - naming 11-4
 - OSPF 29-7, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66
 - adding 29-31
 - addressless 29-10, 29-22, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66
 - deleting 29-43
 - disabling 29-50
 - displaying 29-85
 - enabling 29-53
 - modifying 29-66
 - resetting 29-57
 - Point-to-Point Protocol (PPP)
 - dynamic 20-9
 - PPP
 - adding physical links 16-49
 - creating 16-53
 - deleting physical links 16-69
 - destroying 16-70
 - disabling 16-72
 - displaying 16-98
 - enabling 16-75



- modifying 16-82
 - purging 16-80
 - resetting 16-81
- purging
 - PPP 16-80
- resetting
 - Internet Protocol (IP) 23-125
 - OSPF 29-57
 - PPP 16-81
- resetting synchronous 11-46
- resetting synchronous counters 11-47
- setting
 - Internet Protocol (IP) 23-145
- synchronous lines 11-9
- testing 65-1
- types 11-4
- Interfaces Group MIB C-31
- Interfaces group, MIB-II C-38
- interfaces group, MIB-II C-29, C-38
- Interfaces table, Interface Extensions MIB C-31 to C-32
- Internet 23-5
- Internet Control Message Protocol (ICMP) 23-19
 - router advertisements 23-20
- Internet Group Management Protocol (IGMP) 36-13
 - adding
 - filters 27-49
 - commands
 - ADD IGMP FILTER 27-49
 - ADD IGMP Snooping RouterAddress 27-50
 - CREATE IGMP FILTER 27-59
 - DELETE IGMP FILTER 27-63
 - DELETE IGMP Snooping RouterAddress 27-63
 - DESTROY IGMP FILTER 27-69
 - DISABLE IGMP Snooping 27-72
 - DISABLE IP IGMP Interface 27-74
 - ENABLE IGMP Snooping 27-79
 - ENABLE IP IGMP 27-79
 - ENABLE IP IGMP Interface 27-81
 - SET IGMP FILTER 27-88
 - SET IGMP Snooping FastLeave 27-89
 - SET IGMP Snooping RouterMode 27-90
 - SET IP IGMP 27-91
 - SET IP IGMP Interface 27-92
 - SHOW IGMP FILTER 27-107
 - SHOW IGMP Snooping 27-109
 - SHOW IGMP Snooping Counter 27-111
 - SHOW IGMP Snooping RouterAddress 27-113
 - SHOW IP IGMP 27-114
 - SHOW IP IGMP Counter 27-118
 - creating
 - filters 27-59
 - deleting
 - filters 27-63
 - destroying
 - filters 27-69
 - disabling 27-72
 - disabling interfaces 27-74
 - displaying 27-114
 - filters 27-107
 - displaying counters 27-118
 - enabling 27-79
 - enabling interfaces 27-81
 - filtering 27-29
 - filters
 - adding 27-49
 - creating 27-59
 - deleting 27-63
 - destroying 27-69
 - displaying 27-107
 - modifying 27-88
 - introduction 27-20
 - modifying
 - filters 27-88
 - proxy 27-23
 - setting timers 27-91 to 27-92
 - snooping 27-25
 - throttling 27-31
- Internet Protocol (IP)
 - adding
 - ARP entries 23-13, 23-61
 - BOOTP relay destination 24-10
 - exclusion filters 23-65
 - filters 23-65
 - hosts 23-73
 - inclusion filters 23-65
 - interfaces 23-74
 - metric boosts 23-26
 - proxy ARPs 23-17
 - RIP addresses 28-2, 28-7
 - route templates 23-83
 - routes 23-23, 23-80, 28-7
 - routing filters 31-46
 - trusted routers 28-11
 - address assignment
 - remote 23-46, 23-104, 23-117
 - using DHCP 23-18, 23-98, 23-111
 - address classes 23-7
 - address format 23-7
 - address pools 23-47
 - creating 23-86
 - destroying 23-96
 - displaying 23-190
 - Address Resolution Protocol (ARP)
 - adding entries 23-13, 23-61
 - changing entries 23-127
 - deleting entries 23-87
 - displaying entries 23-165
 - modifying entries 23-127
 - proxy 23-17
 - setting entries 23-127
 - addresses 23-5, 23-7, 23-46, 23-104, 23-117
 - addresses, for asynchronous ports 20-4, 20-12
 - agent, SNMP
 - displaying 55-52
 - authentication, SNMPv1 and v2 55-17
 - autonomous system number 30-111
 - boosts 23-26
 - BOOTP relay agent 24-4, 24-10, 24-22, 24-30, 24-32, 24-48
 - broadcast forwarding 23-42 to 23-45, 23-72, 23-89,



- 23-101, 23-113, 23-182
 - to a broadcast address 23-44
 - to a unicast address 23-43
- changing
 - ARP entries 23-127
 - hosts 23-139
 - interfaces 23-145
 - RIP addresses 28-14
 - RIP timers 28-18
 - routes 23-148, 28-14
- commands 23-59, 28-7
 - ADD BOOTP RELAY 24-10
 - ADD IP ARP 23-61
 - ADD IP FILTER 23-65
 - ADD IP HELPER 23-72
 - ADD IP HOST 23-73
 - ADD IP INTERFACE 23-74
 - ADD IP RIP 28-7
 - ADD IP ROUTE 23-80
 - ADD IP ROUTE FILTER 31-46
 - ADD IP ROUTE TEMPLATE 23-83
 - ADD IP SA 23-200, 31-49
 - ADD IP TRUSTED 28-11
 - CREATE IP POOL 23-86
 - DELETE BOOTP RELAY 24-22
 - DELETE IP ARP 23-87
 - DELETE IP FILTER 23-88
 - DELETE IP HELPER 23-89
 - DELETE IP HOST 23-90
 - DELETE IP INTERFACE 23-91
 - DELETE IP RIP 28-12
 - DELETE IP ROUTE 23-93
 - DELETE IP ROUTE FILTER 31-58
 - DELETE IP ROUTE TEMPLATE 23-94
 - DELETE IP SA 23-95
 - DELETE IP TRUSTED 28-13
 - DELETE TCP 23-96
 - DESTROY IP POOL 23-96
 - DISABLE BOOTP RELAY 24-30
 - DISABLE IP 23-97
 - DISABLE IP DEBUG 23-98
 - DISABLE IP DNSRELAY 23-98
 - DISABLE IP ECHOREPLY 23-99
 - DISABLE IP FOFILTER 23-100
 - DISABLE IP FORWARDING 23-101
 - DISABLE IP HELPER 23-101
 - DISABLE IP INTERFACE 23-103
 - DISABLE IP REMOTEASSIGN 23-104
 - DISABLE IP ROUTE 23-105
 - DISABLE IP SRCROUTE 23-106
 - ENABLE BOOTP RELAY 24-32
 - ENABLE IP 23-108
 - ENABLE IP DEBUG 23-110
 - ENABLE IP DNSRELAY 23-111
 - ENABLE IP ECHOREPLY 23-111
 - ENABLE IP FOFILTER 23-112
 - ENABLE IP FORWARDING 23-113
 - ENABLE IP HELPER 23-113
 - ENABLE IP INTERFACE 23-115
 - ENABLE IP REMOTEASSIGN 23-117
 - ENABLE IP ROUTE 23-117
 - ENABLE IP SRCROUTE 23-105, 23-107, 23-118 to 23-119
 - FINGER 23-120
 - PING 23-121
 - PURGE BOOTP RELAY 24-34
 - PURGE IP 23-123
 - RESET IP 23-124
 - RESET IP INTERFACE 23-125
 - SET BOOTP MAXHOPS 24-35
 - SET IP ARP 23-127
 - SET IP ARP TIMEOUT 23-128 to 23-129
 - SET IP AUTONOMOUS 30-111
 - SET IP DNSRELAY 23-134
 - SET IP FILTER 23-135
 - SET IP HOST 23-139
 - SET IP INTERFACE 23-140
 - SET IP LOCAL 23-145
 - SET IP NAMESERVER 23-147
 - SET IP RIP 28-14
 - SET IP RIPTIMER 28-18
 - SET IP ROUTE 23-148
 - SET IP ROUTE FILTER 31-63
 - SET IP ROUTE TEMPLATE 23-152
 - SET IP SECONDARYNAMESERVER 23-153
 - SET PING 23-154
 - SET TRACE 23-157
 - SHOW BOOTP RELAY 24-48
 - SHOW IP ARP 23-165
 - SHOW IP DEBUG 23-176
 - SHOW IP FILTER 23-180
 - SHOW IP HELPER 23-182
 - SHOW IP HOST 23-184
 - SHOW IP INTERFACE 23-186
 - SHOW IP POOL 23-190
 - SHOW IP RIP 28-19
 - SHOW IP RIP COUNTER 28-21
 - SHOW IP RIPTIMER 28-24
 - SHOW IP ROUTE 23-192
 - SHOW IP ROUTE FILTER 31-76
 - SHOW IP ROUTE MULTICAST 23-196
 - SHOW IP ROUTE TEMPLATE 23-198
 - SHOW IP TRUSTED 28-25
 - SHOW IP UDP 23-201
 - SHOW PING 23-203
 - SHOW SNMP 55-52
 - SHOW SNMP COMMUNITY 55-52
 - SHOW TCP 23-205
 - SHOW TRACE 23-210
 - STOP PING 23-211
 - STOP TRACE 23-212
 - TRACE 23-213
 - communities, SNMP 55-16
 - displaying 55-52
 - configuration 23-39, 23-48, 28-5
 - examples 23-39, 23-48, 28-5
 - connection vs. connectionless mode 23-5
 - control functions 23-37
 - counters 28-21
 - creating



- address pools 23-86
- debugging functions 23-37 to 23-38, 23-98, 23-110, 23-176
- definition 23-5
- deleting
 - ARP entries 23-87
 - BOOTP relay destination 24-22
 - exclusion filters 23-88
 - filters 23-88
 - hosts 23-90
 - inclusion filters 23-88, 23-135
 - interfaces 23-91
 - metric boosts 23-26
 - RIP addresses 28-12
 - route templates 23-94
 - routes 23-93, 28-12
 - routing filters 31-58
 - TCP sessions 23-96
 - trusted routers 28-13
- destination address 23-5
- destroying
 - address pools 23-96
- DHCP client 23-18, 23-75, 23-98, 23-111, 23-141
- disabling
 - BOOTP relay agent 24-30
 - fragment offset filter 23-100
 - interfaces 23-103
 - routes 23-105
- displaying
 - address pools 23-190
 - ARP entries 23-50, 23-165
 - BOOTP relay destination 24-48
 - counters 28-21
 - exclusion filters 23-180
 - hosts 23-184
 - inclusion filters 23-180
 - interfaces 23-186
 - metric boosts 23-26
 - proxy ARPs 23-17
 - RIP addresses 28-2, 28-19
 - RIP counters 28-21
 - RIP timers 28-24
 - route templates 23-198
 - routes 23-25, 23-50, 23-192
 - routing filters 31-76
 - TCP sessions 23-205
 - trusted routers 28-25
 - UDP sessions 23-201
- DNS relay agent 23-98, 23-111, 23-134
- dynamic interfaces 20-9, 20-12
- echo reply
 - disabling 23-99
 - enabling 23-111
- enabling
 - BOOTP relay agent 24-32
 - fragment offset filter 23-112
 - interfaces 23-115
 - routes 23-117
- examples 23-48, 28-5
- exclusion filters 23-65, 23-88, 23-135, 23-180
- filters 23-26, 23-34, 23-65, 23-88, 23-100, 23-112, 23-135, 23-180
- finger client 23-39, 23-120
- fragment offset filter 23-100, 23-112
- gateway 23-57, 23-97, 23-101, 23-108, 23-113
- header 23-5
- hosts 23-73, 23-90, 23-139, 23-184
- inclusion filters 23-65, 23-88, 23-135, 23-180
- interfaces
 - adding 23-74
 - changing 23-145
 - deleting 23-91
 - disabling 23-103
 - displaying 23-186
 - dynamic 20-9, 20-12
 - enabling 23-115
 - modifying 23-140, 23-145
 - resetting 23-125
 - setting 23-145
- Internet Control Message Protocol (ICMP) 23-19
- local interface 23-145
- maximum transmission unit, for asynchronous ports 20-4, 20-12
- metrics 23-26
- MIB 23-36, 55-1
- modifying
 - ARP entries 23-127
 - hosts 23-139
 - interfaces 23-140, 23-145
 - route templates 23-152
 - routes 23-148
 - routing filters 31-63
- multicasting 23-45
- multihoming 23-10
- name server 23-147, 23-153
- Open Shortest Path First (OSPF) 23-26
- ping function 23-38, 23-121, 23-154, 23-203, 23-211
- primary name server 23-147
- proxy ARPs 23-17
- purge configuration database 23-123
- reinitialise module 23-124
- remote address assignment 23-46, 23-104, 23-117
- resetting
 - interfaces 23-125
- restart module 23-124
- RIP timers
 - displaying 28-24
 - setting 28-18
- route templates 23-29
 - adding 23-83
 - deleting 23-94
 - displaying 23-198
 - modifying 23-152
- router type 23-57, 23-97, 23-101, 23-108, 23-113
- routes 23-22
 - adding 23-23, 23-80
 - changing 23-148
 - deleting 23-93
 - disabling 23-105
 - displaying 23-25, 23-192



- enabling 23-117
 - modifying 23-148
 - setting 23-148
 - tracing 23-157, 23-210, 23-212 to 23-213
- routing 23-22
- routing filters 31-46
 - deleting 31-58
 - displaying 31-76
 - modifying 31-63
- routing information filters 23-26
- Routing Information Protocol (RIP) 23-25, 28-7, 28-12, 28-14, 28-18 to 28-19, 28-21, 28-24
- routing protocols
 - Open Shortest Path First (OSPF) 23-26
 - Routing Information Protocol (RIP) 23-25, 28-7, 28-12, 28-14, 28-18, 28-24
- routing table 23-23, 23-192
- secondary name server 23-153
- security associations 23-41, 23-95, 23-200, 31-49
- security associations. *See Also* encryption
- security options 23-41, 23-100, 23-112
- server 23-57, 23-97, 23-101, 23-108, 23-113
- Server selection 23-34
- setting
 - ARP entries 23-127
 - displaying 23-180
 - exclusion filters 23-135
 - filters 23-135
 - hosts 23-139
 - interfaces 23-145
 - routes 23-148
- SNMP 23-36, 55-1
- SNMP agent
 - displaying 55-52
- SNMP authenticationv1 and v2 55-17
- SNMP communities 55-16
 - displaying 55-52
- source address 23-5
- subnet 23-8
- subnet mask 23-8
- TCP sessions 23-96, 23-205
- Telnet server 23-57, 23-97, 23-101, 23-108, 23-113
- timers
 - RIP 28-18, 28-24
- trace route 23-157, 23-210, 23-212 to 23-213
- traffic filters 23-34
- trusted routers 28-11, 28-13, 28-25
- UDP sessions 23-201
- Internet Protocol (IP). *See also* Generic Routing Encapsulation (GRE)
 - reserved IP address ranges 33-2
- Internet Protocol version 6 (IPv6) 34-12
 - addresses
 - adding to interfaces 34-13
 - associating with host names 34-15
 - slash notation 34-13
 - commands
 - ADD IPV6 FILTER 34-36
 - ADD IPV6 HOST 34-41
 - ADD IPV6 INTERFACE 34-42
 - ADD IPV6 RIP 34-47
 - ADD IPV6 ROUTE 34-48
 - ADD IPV6 TUNNEL 34-49
 - CREATE IPV6 INTERFACE 34-50
 - DELETE IPV6 FILTER 34-51
 - DELETE IPV6 HOST 34-52
 - DELETE IPV6 INTERFACE 34-52
 - DELETE IPV6 RIP 34-56
 - DELETE IPV6 ROUTE 34-57
 - DELETE IPV6 TUNNEL 34-58
 - DESTROY IPV6 INTERFACE 34-59
 - DISABLE IPV6 34-59
 - DISABLE IPV6 ADV 34-60
 - DISABLE IPV6 DEBUG 34-60
 - DISABLE IPV6 RIP 34-61
 - ENABLE IPV6 34-61
 - ENABLE IPV6 ADV 34-62
 - ENABLE IPV6 DEBUG 34-62
 - ENABLE IPV6 RIP 34-63
 - SET IPV6 FILTER 34-65
 - SET IPV6 INTERFACE 34-68
 - SET IPV6 MTU 34-69
 - SHOW IPV6 34-74
 - SHOW IPV6 COUNTER 34-76
 - SHOW IPV6 FILTER 34-80
 - SHOW IPV6 HOST 34-82
 - SHOW IPV6 INTERFACE 34-83
 - SHOW IPV6 MULTICAST 34-85
 - SHOW IPV6 ND 34-86
 - SHOW IPV6 RIP 34-89
 - SHOW IPV6 ROUTE 34-91
 - SHOW IPV6 TUNNEL 34-95
 - default routes 34-15
 - DHCP. *See* Dynamic Host Configuration Protocol for IPv6 (DHCP6)
 - disabling 34-13
 - enabling 34-13
 - extension headers 34-15
 - filtering 34-17
 - fragmentation 34-18
 - headers
 - extension 34-15
 - ICMPv6 34-19
 - integration with IPv4 34-21
 - interfaces 34-13
 - MTU 34-18
 - neighbour discovery 34-16
 - ping 34-19
 - prefix delegation 35-4
 - RIPv6 34-15
 - routes
 - default 34-15
 - static 34-15
 - routing 34-15 to 34-16
 - through IPv4 networks 34-21
 - Stateless Address Autoconfiguration 34-13
 - static routes 34-15
 - TCP 34-18
 - telnet 34-18
 - trace route 34-19



- tunnelling 34-21
- UDP 34-15
- Internet-standard MIB 55-5
- Internet-standard Network Management Framework 55-3
- Introduction 16-3, 25-2, 34-2, 35-2, 53-2
- Inverse ARP 15-18
- IP address 23-75, 23-141
 - from DHCP 23-18, 23-98, 23-111
- IP CIDR Route table, IP Forwarding Table MIB C-33
- IP Forwarding Table MIB C-33
- IP Forwarding table, IP Forwarding Table MIB C-33
- IP group, MIB-II MIB C-29, C-33
- IP Multicasting
 - displaying route 23-196
 - static multicast forwarding 23-46
- IP Security (IPsec) 49-1, 49-32 to 49-216
 - See *also* Compression and Encryption Services; Link Compression and Encryption
 - actions 49-15
 - adding
 - members to Security Associations 49-49
 - authentication 49-9
 - IKE 49-11
 - Authentication Header (AH) 49-4
 - bundle specifications
 - creating 49-50
 - destroying 49-72
 - displaying 49-118
 - modifying 49-95
 - SAs 49-13, 49-15
 - bundle strings, SAs 49-13
 - bundles, SAs 49-5, 49-15
 - commands 49-48 to 49-216
 - ACTIVATE IPSEC CONVERTOLDSA 49-48
 - ADD SA MEMBER command 49-49
 - CREATE IPSEC BUNDLESPECIFICATION 49-50
 - CREATE IPSEC POLICY 49-52
 - CREATE IPSEC SASPECIFICATION 49-60
 - CREATE ISAKMP POLICY 49-63
 - CREATE SA 49-71
 - DELETE SA MEMBER 49-72
 - DESTROY IPSEC BUNDLESPECIFICATION 49-72
 - DESTROY IPSEC POLICY 49-73
 - DESTROY IPSEC SASPECIFICATION 49-74
 - DESTROY ISAKMP POLICY 49-74
 - DESTROY SA 49-75
 - DISABLE IPSEC 49-75
 - DISABLE IPSEC OLDSA 49-76
 - DISABLE IPSEC POLICY DEBUGGING 49-77
 - DISABLE ISAKMP 49-79
 - DISABLE ISAKMP DEBUGGING 49-80
 - DISABLE SA DEBUGGING 49-81
 - ENABLE IPSEC 49-81
 - ENABLE IPSEC OLDSA 49-82
 - ENABLE IPSEC POLICY DEBUGGING 49-83
 - ENABLE ISAKMP 49-86
 - ENABLE ISAKMP DEBUGGING 49-88
 - ENABLE SA DEBUGGING 49-89
 - PURGE IPSEC 49-89
 - RESET IPSEC COUNTERS 49-90
 - RESET IPSEC POLICY COUNTERS 49-91
 - RESET IPSEC SA COUNTERS 49-92
 - RESET ISAKMP COUNTERS 49-93
 - SET IPSEC BUNDLESPECIFICATION 49-95
 - SET IPSEC POLICY 49-96
 - SET IPSEC SASPECIFICATION 49-104
 - SET IPSEC UDPPORT 49-106
 - SET ISAKMP POLICY 49-107
 - SET SA 49-115
 - SHOW IPSEC 49-117
 - SHOW IPSEC BUNDLESPECIFICATION 49-118
 - SHOW IPSEC COUNTERS 49-121
 - SHOW IPSEC POLICY 49-136, 49-140
 - SHOW IPSEC SA 49-146
 - SHOW IPSEC SASPECIFICATION 49-154
 - SHOW ISAKMP 49-157
 - SHOW ISAKMP COUNTERS 49-159
 - SHOW ISAKMP EXCHANGE 49-189
 - SHOW ISAKMP POLICY 49-196
 - SHOW ISAKMP SA 49-201
 - SHOW SA 49-206
 - SHOW SA COUNTER 49-209
 - SHOW SA USER 49-215
 - compression 49-5
 - converting old SAs 49-20, 49-48
 - counters
 - displaying IPsec 49-121
 - displaying ISAKMP 49-159
 - displaying SA 49-209
 - resetting IPsec 49-90
 - resetting IPsec policy 49-91
 - resetting IPsec SA 49-92
 - resetting ISAKMP 49-93
 - creating
 - bundle specifications 49-50
 - IPsec policies 49-52
 - ISAKMP policies 49-22, 49-63
 - SA specifications 49-60
 - Security Associations 49-71
 - debugging
 - IPsec policies 49-77, 49-83
 - ISAKMP 49-80, 49-88
 - Security Associations 49-81, 49-89
 - deleting
 - members from Security Associations 49-72
 - destroying
 - bundle specifications 49-72
 - IPsec configurations 49-89
 - IPsec policies 49-73
 - ISAKMP policies 49-22, 49-74
 - SA specifications 49-74
 - Security Associations 49-75
 - disabling
 - IPsec 49-75
 - IPsec policy debugging 49-77
 - ISAKMP 49-21, 49-79
 - ISAKMP debugging 49-80
 - old SAs 49-76
 - Security Association debugging 49-81
 - displaying



- bundle specifications 49-118
- IPsec counters 49-121
- IPsec policies 49-136, 49-140
- IPsec SAs 49-146
- IPsec status 49-117
- ISAKMP counters 49-159
- ISAKMP exchanges 49-24, 49-189
- ISAKMP policies 49-23, 49-196
- ISAKMP SAs 49-25, 49-201
- ISAKMP status 49-21, 49-157
- members of Security Associations 49-206
- SA specifications 49-154
- Security Association counters 49-209
- Security Association users 49-215
- enabling
 - IPsec 49-81
 - IPsec policy debugging 49-83
 - ISAKMP 49-21, 49-86
 - ISAKMP debugging 49-88
 - old SAs 49-82
 - Security Association debugging 49-89
- Encapsulating Security Payload (ESP) protocol 49-4
- ESP 49-4
- exchanges, ISAKMP 49-24
 - displaying 49-24, 49-189
- IKE 49-10
 - authentication 49-11
 - exchanges 49-10
 - key exchange 49-10
 - SA negotiation 49-10
- IPComp protocol 49-5
- IPsec
 - disabling 49-75
 - displaying status 49-117
 - enabling 49-81
 - purging 49-89
- IPsec configurations
 - destroying 49-89
- ISAKMP 49-6
 - counters 49-93, 49-159
 - debugging 49-80, 49-88
 - disabling 49-21, 49-79
 - displaying SAs 49-25
 - displaying status 49-21, 49-157
 - enabling 49-21, 49-86
 - exchanges 49-9, 49-24, 49-189
 - ISAKMP SA 49-9
 - messages 49-6
 - overview 49-6
 - policies 49-21 to 49-23, 49-63, 49-74, 49-196
 - SAs 49-24 to 49-25, 49-201
 - support 49-21
 - troubleshooting 49-46
- key exchange 49-8, 49-10
- key management 49-7, 49-16
 - manual 49-16
 - using ISAKMP 49-17
- mode
 - tunnel 49-5
- modes 49-4
- modifying
 - bundle specifications 49-95
 - IPsec policies 49-96
 - SA specifications 49-104
 - Security Associations 49-115
- OAKLEY Key Determination Protocol 49-10
- old SAs 49-19, 49-31
 - converting 49-20, 49-48
 - disabling 49-76
 - enabling 49-20, 49-82
- overview of IPsec 49-4
- overview of ISAKMP/IKE 49-6
- peers, defined 49-4
- policies 49-14, 49-21
 - actions 49-15
 - creating 49-22, 49-52
 - debugging 49-77, 49-83
 - destroying 49-22, 49-73
 - displaying 49-23, 49-136, 49-140
 - ISAKMP 49-22 to 49-23, 49-63, 49-74, 49-196
 - modifying 49-96
 - selectors 49-14
- proposals, SAs 49-13
- purging
 - IPsec 49-89
- resetting
 - IPsec counters 49-90
 - IPsec policy counters 49-91
 - IPsec SA counters 49-92
 - ISAKMP counters 49-93
- RFCs 49-12
- SA specifications
 - creating 49-60
 - destroying 49-74
 - displaying 49-154
 - modifying 49-104
- Security Associations 49-5
 - adding members 49-49
 - bundle specifications 49-13, 49-50, 49-72, 49-95, 49-118
 - bundle strings 49-13
 - bundles 49-5, 49-15
 - counters 49-209
 - creating 49-71
 - debugging 49-81, 49-89
 - deleting members 49-72
 - destroying 49-75
 - displaying 49-146
 - displaying members 49-206
 - ISAKMP 49-24 to 49-25
 - modifying 49-115
 - proposals 49-13
 - specifications 49-13, 49-60, 49-74, 49-104, 49-154
 - users 49-215
- Security Parameter Index (SPI) 49-5
- Security Policy Database (SPD) 49-13
- security protocols 49-4
- security services 49-4
- selectors 49-14
- support 49-12



- support for ISAKMP 49-21
- troubleshooting 49-45
- tunnel mode 49-5
- users
 - displaying SA 49-215
- ipCidrRouteNumber MIB object C-33
- ipCidrRouteTable MIB object C-33
- IPComp compression protocol 49-5
- ipForward MIB object C-33
- ipForwardNumber MIB object C-33
- ipForwardTable MIB object C-33
- ipNetToMediaIfIndex MIB object C-30
- ipNetToMediaNetAddress MIB object C-30
- ipNetToMediaPhysAddress MIB object C-30
- ipNetToMediaType MIB object C-30
- ipRouteAge MIB object C-30
- ipRouteIfIndex MIB object C-30
- ipRouteMask MIB object C-30
- ipRouteMetric1 MIB object C-30
- ipRouteMetric2 MIB object C-30
- ipRouteMetric3 MIB object C-30
- ipRouteMetric4 MIB object C-30
- ipRouteMetric5 MIB object C-30
- ipRouteNextHop MIB object C-30
- ipRouteType MIB object C-30
- IPsec
 - NAT 49-19
 - Network Address Translation 49-19
 - over UDP 49-19
 - permit policy 49-19
- IPsec over UDP 49-19
- IPsec. *See* IP Security (IPsec)
- IPv4 Multicasting 27-5
 - See also* Distance Vector Multicast Routing Protocol (DVMRP)
 - See also* Internet Group Management Protocol (IGMP)
 - See also* Protocol Independent Multicast (PIM)
 - hardware switching emulation 27-74, 27-81
 - Multicast Border Router 27-7
- IPv6
 - DHCP. *See* Dynamic Host Configuration Protocol for IPv6 (DHCP6)
- IPv6 Multicasting 36-3
 - See also* Multicast Listener Discovery (MLD)
 - See also* Protocol Independent Multicast (PIM)
 - configuration example 36-15
 - Multicast Border Router 36-4
- IPv6. *See* Internet Protocol version 6 (IPv6)
- IPX 38-1 to 38-76
 - adding
 - circuits 38-31
 - exclusions 38-35
 - filters 38-8, 38-35 to 38-37
 - inclusions 38-36
 - interfaces 38-6
 - RIP filters 38-37
 - routes 38-38
 - addresses 38-4
 - MAC 38-4
 - network 38-4
 - station 38-4
 - circuit
 - adding 38-31
 - deleting 38-42
 - disabling 38-48
 - displaying 38-63
 - enabling 38-49
 - setting 38-51
 - circuits 38-5
 - commands
 - ADD IPX CIRCUIT 38-31
 - ADD IPX EXCLUSION 38-35
 - ADD IPX INCLUSION 38-36
 - ADD IPX RIP 38-37
 - ADD IPX ROUTE 38-38
 - ADD IPX SERVICE 38-40
 - DELETE IPX CIRCUIT 38-42
 - DELETE IPX EXCLUSION 38-43
 - DELETE IPX INCLUSION 38-44
 - DELETE IPX RIP 38-45
 - DELETE IPX ROUTE 38-45
 - DELETE IPX SAP 38-46
 - DELETE IPX SERVICE 38-47
 - DISABLE IPX 38-47
 - DISABLE IPX CIRCUIT 38-48
 - ENABLE IPX 38-48
 - ENABLE IPX CIRCUIT 38-49
 - PURGE IPX 38-49
 - RESET IPX 38-50
 - SET IPX CIRCUIT 38-51
 - SET IPX GRIP|GSAP 38-54
 - SET IPX RIP 38-55
 - SET IPX SAP 38-56
 - SHOW IPX 38-57
 - SHOW IPX CACHE 38-59
 - SHOW IPX CALLLOG 38-60
 - SHOW IPX CIRCUIT 38-63
 - SHOW IPX COUNTER 38-65
 - SHOW IPX EXCLUSION 38-68
 - SHOW IPX INCLUSION 38-69
 - SHOW IPX RIP 38-70
 - SHOW IPX ROUTE 38-71
 - SHOW IPX SAP 38-72
 - SHOW IPX SERVICE 38-74
 - SHOW IPX SPXSPOOF 38-75
 - configuration 38-17, 38-57
 - examples 38-17
 - counters 38-16, 38-65
 - debugging calls 38-60, 38-75
 - debugging routes and circuits 38-15
 - deleting
 - circuits 38-42
 - exclusions 38-43
 - filters 38-43 to 38-45, 38-55
 - inclusions 38-44
 - RIP filters 38-45
 - routes 38-45
 - dial-in connections 20-13
 - disabling 38-47
 - circuits 38-48



displaying
 circuits 38-63
 configuration 38-57
 counters 38-16, 38-65
 exclusions 38-68
 filters 38-68 to 38-70, 38-72
 inclusions 38-69
 interfaces 38-6
 RIP filters 38-70
 route cache 38-59
 routes 38-71
 services 38-7, 38-74
 enabling 38-48
 circuits 38-49
 examples 38-17
 exclusion filters 38-8, 38-35, 38-43, 38-68
 filters 38-8, 38-35 to 38-37, 38-43 to 38-45, 38-55, 38-68 to 38-70, 38-72
 GetNearestServer request 38-7
 inclusion filters 38-8, 38-36, 38-44, 38-69
 interface
 adding 38-6
 displaying 38-6
 interfaces 38-5
 MAC address 38-4
 MIB 38-16, 38-65
 network address 38-4
 PING 38-15
 protocol 38-3
 purge configuration database 38-49
 reinitialise module 38-50
 reset module 38-50
 RIP 38-3, 38-5
 RIP filters 38-10, 38-37, 38-45, 38-54 to 38-55, 38-70
 routes 38-5, 38-38, 38-45, 38-59, 38-71
 routing 38-5
 Routing Information Protocol (RIP) 38-3, 38-5
 SAP filters 38-10 to 38-11, 38-39, 38-46, 38-54, 38-56, 38-72
 Service Advertisement Protocol (SAP) 38-7, 38-39, 38-46, 38-54, 38-56, 38-72
 Services 38-7, 38-74
 services 38-40, 38-47
 setting
 circuits 38-51
 RIP filters 38-55
 sockets 38-3
 SPX spoofing 38-12
 station address 38-4
 status 38-57
 ISAKMP 49-21
 ISAKMP policy 49-107
 ISAKMP/IKE. See IP Security (IPsec)
 ISDN Call Control group, Allied Telesis Enterprise MIB C-19
 ISDN. See Integrated Services Digital Network (ISDN)

J

jobs
 aborting LPD 63-12

K

key exchange, IPsec 49-8
 key exchange. See Compression and Encryption Services
 key management, IPsec 49-7, 49-16
 manual 49-16
 using ISAKMP 49-17
 key management, link encryption 51-5 to 51-9
 creating master keys 51-7
 creating network keys 51-7
 creating star entities 51-6
 entering network keys 51-7
 exchanging session keys 51-9
 master router 51-5
 network key 51-6
 session keys 51-6
 slave router 51-6
 stand-by router 51-6, 51-9
 transferring master keys 51-7
 keys
 creating 44-19

L

L2TP Access Concentrator. See Layer Two Tunnelling Protocol (L2TP)
 L2TP Network Server. See Layer Two Tunnelling Protocol (L2TP)
 L2TP. See Layer Two Tunnelling Protocol (L2TP)
 LAC. See Layer Two Tunnelling Protocol (L2TP)
 LAPB counters, displaying 14-73
 LAPB interface
 destroying 14-57
 LAPB interfaces
 creating 14-45
 displaying 14-73
 modifying 14-62
 resetting 14-61
 LAPD, ISDN 12-25, 12-69, 12-73, 12-108, 12-144, 12-147 to 12-148
 addressing 12-27
 Layer 2 Filtering 8-30 to 8-31, 9-5
 Layer 2 Switching 8-1, 8-28
 ageing timer 8-29
 commands
 ACTIVATE SWITCH PORT 8-49
 ADD STP VLAN 9-30
 ADD SWITCH FILTER 8-52
 ADD SWITCH TRUNK 8-62
 ADD VLAN BRIDGE 9-31, 17-16
 ADD VLAN PORT 8-63
 CREATE STP 9-33
 CREATE SWITCH TRUNK 8-66
 CREATE VLAN 8-68
 DELETE STP VLAN 9-35
 DELETE SWITCH FILTER 8-71, 9-36
 DELETE SWITCH TRUNK 8-73, 9-36
 DELETE VLAN BRIDGE 9-36, 17-18
 DELETE VLAN PORT 8-74, 9-36
 DESTROY STP 9-37
 DESTROY SWITCH TRUNK 8-76
 DESTROY VLAN 8-77



- DISABLE STP 9-42
- DISABLE STP DEBUG 9-43
- DISABLE STP PORT 9-45
- DISABLE SWITCH AGEINGTIMER 8-78
- DISABLE SWITCH DEBUG 8-79
- DISABLE SWITCH LEARNING 8-81
- DISABLE SWITCH MIRROR 8-82
- DISABLE SWITCH PORT 8-82
- DISABLE VLAN DEBUG 8-83
- ENABLE MSTP CIST PORT 9-47
- ENABLE STP 9-52
- ENABLE STP DEBUG 9-53
- ENABLE STP PORT 9-55
- ENABLE SWITCH AGEINGTIMER 8-86
- ENABLE SWITCH DEBUG 8-88
- ENABLE SWITCH LEARNING 8-90
- ENABLE SWITCH MIRROR 8-90
- ENABLE SWITCH PORT 8-91
- ENABLE VLAN DEBUG 8-92
- PURGE STP 9-57
- RESET MSTP COUNTER PORT 9-58
- RESET STP 9-58
- RESET SWITCH 8-94, 9-58
- RESET SWITCH PORT 8-95, 9-58
- SET STP 9-67
- SET STP PORT 9-70
- SET SWITCH AGEINGTIMER 8-97
- SET SWITCH MIRROR 8-108
- SET SWITCH PORT 8-109
- SET SWITCH QOS 8-114
- SET SWITCH TRUNK 8-116
- SET VLAN PORT 8-117
- SHOW MSTP 9-74, 9-77
- SHOW MSTP COUNTER PORT 9-81
- SHOW MSTP DEBUG MSTI 9-82
- SHOW STP 9-87
- SHOW STP COUNTER 9-91
- SHOW STP DEBUG 9-93
- SHOW STP PORT 9-94
- SHOW SWITCH 8-123
- SHOW SWITCH COUNTER 8-125
- SHOW SWITCH DEBUG 8-127
- SHOW SWITCH FDB 8-128
- SHOW SWITCH FILTER 8-130
- SHOW SWITCH PORT 8-136
- SHOW SWITCH PORT COUNTER 8-139
- SHOW SWITCH PORT INTRUSION 8-143
- SHOW SWITCH QOS 8-144
- SHOW SWITCH TRUNK 8-145
- SHOW VLAN 8-146
- SHOW VLAN DEBUG 8-148
- egress rules 8-30
- Forwarding Database 8-31
- ingress rules 8-28
- Quality of Service (QOS) 8-31
- switch learning 8-29
- switch ports 8-5
- triggers 8-40
- VLAN tagging 8-30
- Layer 3 Filtering 8-33
- Layer 3 filters
 - IGMP snooping 27-25
- Layer 3 Switching 8-1
 - commands
 - ADD SWITCH L3FILTER ENTRY 8-56
 - ADD SWITCH L3FILTER MATCH 8-59
 - DELETE SWITCH L3FILTER 8-72, 9-36
 - DELETE SWITCH L3FILTER ENTRY 8-72, 9-36
 - DISABLE SWITCH L3FILTER 8-81
 - ENABLE SWITCH L3FILTER 8-90
 - SET SWITCH L3FILTER ENTRY 8-103
 - SET SWITCH L3FILTER MATCH 8-106
 - SHOW SWITCH L3FILTER 8-134
- Layer Two Tunnelling Protocol (L2TP) 21-1 to 21-68
 - activating calls 21-10, 21-18
 - adding
 - calls 21-8, 21-19
 - filters 21-43
 - PPP templates 21-6, 21-22
 - username mappings 21-24, 21-30
 - authentication 21-3
 - call id 21-3
 - calls
 - activating 21-10, 21-18
 - adding 21-8, 21-19
 - deactivating 21-10, 21-28
 - deleting 21-10, 21-28
 - displaying 21-10, 21-50, 21-56, 21-59
 - modifying 21-8, 21-40
 - checksum, UDP 21-43
 - commands
 - ACTIVATE L2TP CALL 21-18
 - ADD L2TP CALL 21-19
 - ADD L2TP IP 21-22
 - ADD L2TP USER 21-24, 21-30
 - DEACTIVATE L2TP CALL 21-28
 - DELETE L2TP CALL 21-28
 - DELETE L2TP IP 21-29
 - DELETE L2TP USER 21-31
 - DISABLE L2TP 21-32
 - DISABLE L2TP DEBUG 21-33
 - DISABLE L2TP SERVER 21-34
 - ENABLE L2TP 21-34
 - ENABLE L2TP DEBUG 21-35
 - ENABLE L2TP SERVER 21-39
 - SET L2TP CALL 21-40
 - SET L2TP CHECKSUM 21-43
 - SET L2TP FILTER 21-43
 - SET L2TP PASSWORD 21-44
 - SET L2TP USER 21-45
 - SHOW L2TP 21-48
 - SHOW L2TP CALL 21-50
 - SHOW L2TP IP 21-55
 - SHOW L2TP TUNNEL 21-56, 21-59
 - SHOW L2TP USER 21-67
 - configuration
 - displaying 21-10, 21-48
 - configuration examples 21-12
 - configure L2TP to tunnel PPPoE sessions 21-15
 - configure L2TP tunnels 21-12



- simple dial-in system 21-14
- counters
 - displaying 21-48, 21-56, 21-59
- deactivating calls 21-10, 21-28
- debugging
 - disabling 21-33
 - enabling 21-35
- deleting
 - calls 21-10, 21-28
 - PPP templates 21-8, 21-29
 - username mappings 21-7, 21-31
- dial-up connections 21-3
- disabling
 - debugging 21-33
 - L2TP server 21-32, 21-34
- displaying
 - calls 21-10, 21-50, 21-56, 21-59
 - configuration 21-10, 21-48
 - counters 21-48, 21-56, 21-59
 - PPP templates 21-7, 21-55
 - tunnels 21-10, 21-56, 21-59
 - username mappings 21-8, 21-67
- enabling
 - debugging 21-35
 - L2TP server 21-34, 21-39
- encapsulation 21-3
- example configurations 21-12
 - configure L2TP to tunnel PPPoE sessions 21-15
 - configure L2TP tunnels 21-12
 - simple dial-in system 21-14
- filter, adding 21-43
- L2TP Access Concentrator (LAC) 21-3
 - disabling 21-34
 - enabling 21-39
- L2TP Network Server (LNS) 21-3
 - disabling 21-34
 - enabling 21-39
- LAC. See L2TP Access Concentrator
- LNS. See L2TP Network Server
- mapping usernames to actions 21-24, 21-30 to 21-31, 21-45, 21-67
- modifying
 - calls 21-8, 21-40
 - username mappings 21-45
- overview 21-3
- password 21-44
- PPP templates
 - associating with L2TP peers 21-6 to 21-8, 21-22, 21-29, 21-55
- support for 21-5
- templates
 - associating with L2TP peers 21-6 to 21-8, 21-22, 21-29, 21-55
- tunnels 21-3
 - displaying 21-10, 21-56, 21-59
- two-way connections 21-8
- UDP checksum 21-43
- username mappings
 - adding 21-24, 21-30
 - deleting 21-7, 21-31
 - displaying 21-8, 21-67
 - modifying 21-45
- lb MIB object C-24
- lbShowAffTable MIB object C-25
- lbShowConTable MIB object C-25
- lbShowGlobalTable MIB object C-24
- lbShowResPoolTable MIB object C-25
- lbShowResTable MIB object C-25
- lbShowVirtBalTable MIB object C-25
- LDAP. See Lightweight Directory Access Protocol (LDAP)
- learning
 - switch
 - disabling 8-81
 - enabling 8-90
- Learning Process 8-29
- leased line backup, PPP 16-11, 16-40
- Lempel-Ziv compression 44-2
- licenceTable MIB object C-21
- Lightweight Directory Access Protocol (LDAP) 50-5, 50-9
 - PKI repositories
 - adding 50-20
 - deleting 50-25
- limits, on PPP interfaces 16-28, 16-53, 16-62, 16-81 to 16-82, 16-90
- Line Printer Daemon (LPD) 63-1
 - aborting jobs 63-12
 - adding LPD queue 63-10
 - commands 63-9
 - CREATE LPD 63-10
 - DESTROY LPD 63-11
 - DISABLE LPD 63-11
 - ENABLE LPD 63-12
 - RESET LPD 63-12
 - SET LPD 63-13
 - SHOW LPD 63-14
 - configuration 63-3
 - examples 63-5
 - printer ports 63-4
 - queues 63-4
 - TCP/IP 63-3
 - creating LPD queues 63-10
 - destroying LPD queues 63-11
 - disabling LPD queues 63-11
 - displaying LPD queues 63-14
 - enabling LPD queues 63-12
 - examples 63-5
 - jobs, aborting 63-12
 - modifying LPD queues 63-13
 - operation 63-6
 - printers 63-6
 - problem solving 63-7
 - protocol 63-2
 - queues
 - creating 63-10
 - deleting 63-11
 - disabling 63-11
 - displaying status 63-14
 - enabling 63-12
 - modifying 63-13
 - resetting 63-12



- starting 63-12
- stopping 63-11
- resetting queues 63-12
- standard 63-2
- starting queues 63-12
- stopping queues 63-11
- support 63-2
- troubleshooting 63-7
- Link 8-11
- Link Aggregation Control Protocol 8-11
- Link Aggregation MIB C-41
- link compression 44-3
- Link Compression and Encryption 51-1 to 51-25
 - See also Compression and Encryption Services; IP Security (IPsec)
 - commands
 - CREATE STAR 51-12
 - DESTROY STAR 51-13
 - DISABLE STAR DEBUGGING 51-13
 - ENABLE STAR DEBUGGING 51-14
 - ENABLE STAR MKTTRANSFER 51-14
 - SET STAR 51-15
 - SHOW STAR 51-17, 51-19, 51-24 to 51-25
 - compression, link 51-2 to 51-4
 - creating
 - master keys 51-7
 - network keys 51-7
 - star entities 51-6, 51-12
 - debugging
 - disabling, star 51-13
 - enabling, star 51-14
 - destroying star entities 51-13
 - disabling star debugging 51-13
 - displaying star entities 51-17, 51-19, 51-24 to 51-25
 - enabling
 - master key transfer 51-14
 - star debugging 51-14
 - enabling star debugging 51-14
 - encryption, link 51-4 to 51-10
 - entering network keys 51-7
 - exchanging session keys 51-9
 - Frame Relay 51-4, 51-10
 - link compression 51-2 to 51-4
 - link encryption 51-4 to 51-10
 - master key transfer 51-14
 - master keys 51-7
 - modifying star entities 51-15
 - network key 51-6
 - network keys 51-7
 - overview 51-2
 - PPP 51-3, 51-9
 - session keys 51-6, 51-9
 - star debugging 51-14
 - star entities 51-6
 - creating 51-12
 - destroying 51-13
 - displaying 51-17, 51-19, 51-24 to 51-25
 - modifying 51-15
 - star key management 51-5 to 51-9
 - master router 51-5

- slave router 51-6
- stand-by router 51-6, 51-9
- transferring master keys 51-7
- user modules
 - Frame Relay 51-4, 51-10
 - PPP 51-3, 51-9
 - X.25 51-4
- X.25 51-4
- link compression. See Link Compression and Encryption
- Link Control Protocol (LCP) 16-4 to 16-5, 16-30
 - options 16-6
 - Asynchronous Control Character Map (ACCM) 16-6
 - Authentication Protocol 16-6
 - Endpoint Discriminator 16-6
 - Link Discriminator 16-6
 - Link Quality Reporting (LQR) 16-6, 16-8
 - Magic Number 16-6
 - Maximum Receive Unit 16-6
 - Maximum Received Reconstructed Unit 16-6
- Link Discriminator Option, LCP 16-6
- link encryption 44-7
- link encryption. See Link Compression and Encryption
- link management, PPP 16-28, 16-53, 16-62, 16-81 to 16-82, 16-90
- link quality management (LQM) 16-38
- Link Quality Reporting (LQR) Option, LCP 16-6, 16-8
- link state advertisements, OSPF 29-5, 29-90
- link up/down traps 11-29, 11-34, 11-40, 11-57
- linkagg MIB object C-41
- LINKDOWN trigger 8-40
- LINKUP trigger 8-40
- LLAP. See AppleTalk: LocalTalk Link Access Protocol (LLAP)
- IldpConfiguration MIB object C-58
- IldpLocalSystemData MIB object C-58
- IldpMIB MIB object C-58
- IldpNotifications MIB object C-58
- IldpRemoteSystemsData MIB object C-58
- IldpStatistics MIB object C-58
- LMI dialogue 15-7
- LMI parameters 15-28, 15-46
- LNS. See Layer Two Tunnelling Protocol (L2TP)
- Load Balancer
 - commands
 - ADD LOADBALANCER RESOURCE 52-21
 - ADD LOADBALANCER RESPOOL 52-23
 - ADD LOADBALANCER VIRTUALBALANCER 52-24
 - ADD LOADBALANCER VIRTUALBALANCER HTTPERRORCODE 52-27
 - DELETE LOADBALANCER RESOURCE 52-28
 - DELETE LOADBALANCER RESPOOL 52-28
 - DELETE LOADBALANCER VIRTUALBALANCER 52-29
 - DELETE LOADBALANCER VIRTUALBALANCER HTTPERRORCODE 52-30
 - DISABLE LOADBALANCER 52-30
 - DISABLE LOADBALANCER DEBUG 52-31
 - DISABLE LOADBALANCER HEALTHPINGS 52-31
 - DISABLE LOADBALANCER REDUNDANCY 52-32
 - DISABLE LOADBALANCER RESOURCE 52-33
 - DISABLE LOADBALANCER VIRTUALBALANCER 52-34



- ENABLE LOADBALANCER 52-35
- ENABLE LOADBALANCER DEBUG 52-35
- ENABLE LOADBALANCER HEALTHPINGS 52-36
- ENABLE LOADBALANCER REDUNDANCY 52-37
- ENABLE LOADBALANCER RESOURCE 52-38
- ENABLE LOADBALANCER VIRTUALBALANCER 52-38
- RESET LOADBALANCER 52-39
- SET LOADBALANCER 52-40
- SET LOADBALANCER REDUNDANCY 52-41
- SET LOADBALANCER RESOURCE 52-43
- SET LOADBALANCER RESPOOL 52-44
- SET LOADBALANCER VIRTUALBALANCER 52-45
- SHOW LOADBALANCER 52-47
- SHOW LOADBALANCER AFFINITY 52-49
- SHOW LOADBALANCER CONNECTIONS 52-51
- SHOW LOADBALANCER REDUNDANCY 52-52
- SHOW LOADBALANCER RESOURCE 52-55
- SHOW LOADBALANCER RESPOOL 52-58
- SHOW LOADBALANCER VIRTUALBALANCER 52-60
- Load Balancer group, Allied Telesis Enterprise MIB C-24
- Load Balancing
 - Server
 - Introduction 52-3
 - Overview 52-3
- LOAD command 5-31, 59-3 to 59-4
- Loader group, Allied Telesis Enterprise MIB C-20
- loader MIB object C-20
- loadStatus MIB object C-20
- loadTable MIB object C-20
- LocalTalk. *See also* AppleTalk
- location
 - displaying 4-54
 - setting 4-32
- logging
 - firewall events 48-47
 - OSPF 29-50, 29-54
- Logging Facility 61-1 to 61-52
 - adding log filters 61-8, 61-13
 - changing log filters 61-9, 61-28
 - changing output definitions 61-8, 61-28
 - changing reception of log messages 61-34
 - commands
 - ADD LOG OUTPUT 61-13
 - ADD LOG RECEIVE 61-16
 - CREATE LOG OUTPUT 61-18
 - DELETE LOG OUTPUT 61-22
 - DELETE LOG RECEIVE 61-22
 - DESTROY LOG OUTPUT 61-23
 - DISABLE LOG 61-23
 - DISABLE LOG GENERATION 61-23
 - DISABLE LOG OUTPUT 61-24
 - DISABLE LOG RECEPTION 61-24
 - ENABLE LOG 61-25
 - ENABLE LOG GENERATION 61-25
 - ENABLE LOG OUTPUT 61-26
 - ENABLE LOG RECEPTION 61-26
 - FLUSH LOG OUTPUT 61-27
 - PURGE LOG 61-27
 - SET LOG OUTPUT 61-28
 - SET LOG RECEIVE 61-34
 - SET LOG UTCOFFSET 61-35
 - SHOW LOG 61-36 to 61-37
 - SHOW LOG COUNTERS 61-42
 - SHOW LOG OUTPUT 61-44, 61-47
 - SHOW LOG QUEUE 61-49, 61-52
 - SHOW LOG RECEIVE 61-50
 - SHOW LOG STATUS 61-52
 - comparison operators 61-9, 61-28
 - configuration example 61-9
 - configuring 61-52
 - counters 61-42
 - creating output definitions 61-8, 61-18
 - deleting log filters 61-9
 - deleting output definitions 61-8, 61-22 to 61-23
 - destinations 61-4, 61-6, 61-18, 61-27 to 61-28, 61-47
 - disabling 61-23, 61-52
 - disabling generation of log messages 61-23
 - disabling output definitions 61-8, 61-24, 61-44
 - disabling reception of log messages 61-24
 - displaying counters 61-42
 - displaying log filters 61-44
 - displaying log messages 61-36 to 61-37
 - displaying log queues 61-49, 61-52
 - displaying output definitions 61-8, 61-47
 - displaying reception of log messages 61-50
 - enabling 61-25, 61-52
 - enabling generation of log messages 61-25
 - enabling output definitions 61-8, 61-26
 - enabling reception of log messages 61-26
 - example configuration 61-9
 - fields in log message 61-3
 - filters 61-4, 61-13, 61-28, 61-44
 - format of log messages 61-3
 - forwarding to another router via SRLP 61-6, 61-28
 - forwarding to syslog server 61-6, 61-28
 - forwarding via email 61-6
 - forwarding via SRLP 61-28
 - message filter comparison operators 61-9, 61-28
 - message filters 61-4, 61-8, 61-13, 61-28, 61-44
 - message ID 61-3
 - message reference 61-3
 - message severity 61-3 to 61-4
 - message subtype 61-3 to 61-4
 - message text 61-3
 - message type 61-3 to 61-4
 - modifying log filters 61-9, 61-28
 - modifying output definitions 61-8, 61-28
 - module ID 61-3
 - Net Manage protocol 61-2, 61-4, 61-16, 61-22, 61-24, 61-26, 61-34 to 61-35, 61-50
 - output definitions 61-4, 61-8, 61-18, 61-22 to 61-24, 61-26 to 61-28, 61-44, 61-47
 - output to asynchronous port 61-6
 - output to RAM or NVS 61-6
 - PERMANENT output definition 61-5
 - processing of log messages 61-4
 - purging 61-27
 - queues 61-5, 61-27, 61-49, 61-52
 - reception via Net Manage 61-16, 61-22, 61-24, 61-26, 61-34, 61-50



- reception via SRLP 61-16, 61-22, 61-24, 61-26, 61-34, 61-50, 61-52
- secure router logging protocol (SRLP) 61-2, 61-4, 61-6, 61-16, 61-24, 61-26, 61-34, 61-50
- source file 61-3
- source line 61-3
- status 61-52
- syslog server 61-6
- TEMPORARY output definition 61-5
- Universal Coordinated Time (UTC) 61-3, 61-35
- logging in and out 43-8, 43-50 to 43-51
- logical interfaces
 - configuring for Frame Relay 15-17
 - Frame Relay 15-8, 15-17
- LOGIN command 43-50
- login name
 - asynchronous calls 20-4
 - authenticating with CHAP 20-5
 - authenticating with PAP 20-5
- loginFailureAttempts MIB object C-19
- loginFailureIPAddress MIB object C-19
- loginFailureTrap trap message C-19
- loginFailureUser MIB object C-19
- LOGOFF command 43-51
- loopback plugs
 - for testing 65-2
- loops 9-3
- lossless data compression 44-2
- lossy data compression 44-2
- LQM. See link quality management

M

- MAC (message authentication code)
 - definition 47-2
- MAC address
 - IPX 38-4
- Machine state
 - displaying 10-29
- Magic Number Option, LCP 16-6
- magic number, PPP 16-20
- MAIL command 4-24
- mail subsystem 4-10
 - configuration examples 4-11
 - debugging 4-11
 - deleting mail messages 4-11, 4-17
 - disabling debugging 4-18
 - displaying mail 4-11
 - displaying status 4-51
 - enabling debugging 4-23
 - sending mail 4-10, 4-24
 - setting host name 4-28
- managed devices, SNMP 55-3
- Management Information Base C-55
 - See also Tables, MIB
 - See also Groups, MIB
 - access mode 55-7
 - Allied Telesis Enterprise MIB C-4
 - atRouter subtree, Allied Telesis Enterprise MIB C-9
 - Border Gateway Protocol version 4 (BGP-4) MIB C-56
 - Bridge MIB C-37

- Circuit table, Frame Relay DTE MIB C-47
- combined notation 55-6
- deprecated status 55-8
- dotted notation 55-6
- DS1, E1, DS2 and E2 Interface Types MIB C-49
- DS3/E3 Interface Types MIB C-51
- enterprise MIB C-4
- Ethernet-like Interface Types MIB C-34
- Frame Relay DTE MIB C-47
- get-bulk-request PDU 55-9
- get-next PDU 55-9
- get-request PDU 55-9
- get-response PDU 55-9
- Host Resources MIB C-52
- instance identifier 55-6
- Interfaces Group MIB C-31
- Internet-standard MIB 55-5
- IP Forwarding Table MIB C-33
- Link Aggregation MIB C-41
- Management Target MIB C-55
- mandatory status 55-8
- Medium Attachment Unit (MAU) MIB C-35
- Message Processing and Dispatching MIB C-55
- mib-2 C-29
- MIB-II MIB C-29
- not-accessible access mode 55-7
- object descriptor 55-6
- object identifier 55-6
- object instance 55-6
- object syntax 55-7
- obsolete status 55-8
- optional status 55-8
- Port Access Control MIB C-43
- Products subtree, Allied Telesis Enterprise MIB C-5
- read-only access mode 55-7
- read-write access mode 55-7
- RMON MIB C-45
- set PDU 55-9
- SNMP Framework MIB C-55
- SNMPv3 MIBs C-55
- status 55-8
- textual notation 55-6
- trap PDU 55-9
- User-based Security MIB C-55
- Virtual Bridge (VLAN) MIB C-39
- write-only access mode 55-7
- Management Information Base (MIB)
 - Frame Relay 15-14 to 15-15, 15-51, 15-61
 - Internet Protocol (IP) 23-36, 55-1
 - IPX 38-16, 38-65
 - Point-to-Point Protocol (PPP) 16-29
- Management Target MIB C-55
- management, using Telnet 62-7
- manager port, semipermanent 43-4, 43-14, 43-53, 43-61
- MANAGER privilege 43-4
- mandatory status 55-8
- mask, OSPF 29-3, 29-28, 29-42, 29-63
- master keys, star key management 51-7
- master router, star key management 51-5
- Matrix group, RMON MIB C-45



- MAU MIB. *See* Medium Attachment Unit (MAU) MIB
- Maximum Receive Unit Option, LCP 16-6
- Maximum Received Reconstructed Unit Option, LCP 16-6
- Maximum Transmission Unit (MTU)
 - Internet Protocol version 6 (IPv6) 34-18
 - IP, for asynchronous ports 20-4, 20-12
- Medium Attachment Unit (MAU) MIB C-35
- memory
 - clearing NVS 6-11
 - deleting NVS blocks 6-15
 - displaying
 - contents 4-9, 4-20
 - free 4-9, 4-37
 - free NVS 6-34
 - NVS blocks 6-33
 - NVS contents 6-16
 - modifying
 - contents 4-9, 4-26
 - NVS contents 6-20
- memory MIB object C-16
- meshed network 9-3
- message format
 - NTP 57-3
- message format, SNMP protocol 55-9 to 55-10, 55-13
- Message Processing and Dispatching MIB C-55
- metrics
 - boosts 23-26
 - Internet Protocol (IP) 23-26
- MIB. *See* Management Information Base
- mib-2 MIB C-29
- MIB-II MIB C-29
- Mini Accelerator (MAC) card 44-10
- MIOX 14-63, 14-78 to 14-79
- MIOX circuits 14-8, 14-37, 14-39, 14-52 to 14-53, 14-59 to 14-60, 14-64, 14-81, 1-21
- mirror ports
 - disabling 8-82
 - enabling 8-90
 - modifying 8-108
- mirroring
 - switch ports 8-12
- mixed mode, Time Division Multiplexing (TDM) 13-2
- MLD 36-7
- MLD Snooping commands
 - DISABLE MLDSNOOPING 36-33
 - DISABLE MLDSNOOPING DEBUG 36-33
 - ENABLE MLDSNOOPING 36-36
 - ENABLE MLDSNOOPING DEBUG 36-36
 - SHOW MLDSNOOPING 36-50
 - SHOW MLDSNOOPING COUNTER 36-51
- MLD. *See* Multicast Listener Discovery
- modem control signals 11-10, 11-58, 11-91
- modem control, PPP 16-14
- modems
 - asynchronous 20-2
 - scripts 20-6
 - creating 20-21
 - deleting 20-7, 20-24, 20-27
 - displaying 20-8, 20-34, 20-39
 - modifying 20-7, 20-32
- MODIFY command 4-26
- MODIFY NVS command 6-20
- modifying
 - asynchronous calls 20-3, 20-28, 20-31
 - call definitions, asynchronous 20-3, 20-28, 20-31
 - domain name 12-107
 - firewall rules 48-142
 - Frame Relay DLC 15-49
 - interfaces, PPP 16-82
 - IPsec bundle specifications 49-95
 - IPsec policies 49-96
 - IPsec SA specifications 49-104
 - ISAKMP policies 49-107
 - LPD queues 63-13
 - passwords 43-54 to 43-55
 - PPP interfaces 16-82
 - PPP templates 16-90
 - route templates 23-152
 - RSVP interfaces 42-6, 42-20
 - RSVP proxy agent 42-7, 42-21
 - Security Associations 49-115
 - stream ports 64-7
 - synchronous tunnel 18-7
 - templates 16-90
 - TPAD instances 19-6, 19-24
- Modules group, Allied Telesis Enterprise MIB C-18
- modules MIB object C-9
- monitoring
 - firewall 48-45, 48-49
- monitoring operation 4-6
- MSTP
 - disabling 9-46
- mstp MIB object C-60
- mstpNewRootBridge trap message C-60
- mstpNewRootPort trap message C-60
- mstpTopologyChange trap message C-60
- mstpXstId MIB object C-60
- mstpXstPortIndex MIB object C-60
- mstpXstPortState MIB object C-60
- MTU (Maximum Transmission Unit) 52-5
- MTU. *See* Maximum Transmission Unit
- MTU. *See* Maximum Transmission Unit (MTU)
- Multicast Border Router
 - IPv4 27-7
 - IPv6 36-4
- Multicast Listener Discovery (MLD)
 - commands
 - DISABLE IPV6 MLD 36-31
 - DISABLE IPV6 MLD DEBUG 36-32
 - DISABLE IPV6 MLD INTERFACE 36-32
 - ENABLE IPV6 MLD 36-34
 - ENABLE IPV6 MLD DEBUG 36-34, 36-50
 - ENABLE IPV6 MLD INTERFACE 36-35
 - SET IPV6 MLD 36-39
 - SET IPV6 MLD INTERFACE 36-40
 - SHOW IPV6 MLD 36-45
 - SHOW IPV6 MLD CONFIG 36-47
 - SHOW IPV6 MLD COUNTERS 36-48
 - SHOW IPV6 MLD DEBUG 36-49
 - configuration 36-7



- displaying 36-47
- configuration example 36-15
- counters 36-39
 - displaying 36-48
- debugging
 - displaying 36-49
- disabling 36-7, 36-31
- disabling debugging 36-32
- disabling interfaces 36-32
- displaying 36-45
- displaying configuration 36-47
- displaying counters 36-48
- displaying debugging 36-49
- enabling 36-7, 36-34
- enabling debugging 36-33 to 36-34, 36-36, 36-50
- enabling interfaces 36-35
- example configuration 36-15
- introduction 36-5
- MLD Snooping 36-7
- setting interface parameters 36-40
- timers 36-39
- multicast packet limiting 8-12
- multicast switching, IPv4
 - between VLANs 27-32
 - disabling 27-74
 - enabling 27-81
- Multicast VLAN Registration (MVR) 27-33
 - commands
 - ADD IP MVR 27-53
 - CREATE IP MVR 27-61
 - DELETE IP MVR 27-66
 - DESTROY IP MVR 27-70
 - DISABLE IP MVR 27-75
 - DISABLE IP MVR DEBUG 27-75
 - ENABLE IP MVR 27-82
 - ENABLE IP MVR DEBUG 27-82
 - SHOW IP MVR 27-122
 - SHOW IP MVR COUNTER 27-123
- multicasting
 - displaying IP route 23-196
- multicasting, IP 23-45
- Multicasting, IPv4. See IPv4 Multicasting
- Multicasting, IPv6. See IPv6 Multicasting
- multidrop 11-9
- multihoming, Internet Protocol (IP) 23-10
- multilink, PPP 16-9
- Multiple Spanning Tree Protocol (MSTP CIST PORT)
 - enabling 9-47
- Multiple Spanning Tree Protocol (MSTP COUNTER PORT)
 - displaying 9-81
 - resetting 9-58
- Multiple Spanning Tree Protocol (MSTP)
 - Bridge Protocol Data Units (BPDUs) 9-14
 - Compatibility with previous versions 9-15
 - Configuring 9-17
 - MSTI
 - Path selection 9-22
 - Root bridge selection 9-21
 - Regions 9-13
- Multiple Spanning Tree Protocol (SHOW MSTP DEBUG

- MSTI)
 - displaying 9-82
- Multiple Spanning Tree Protocol (SHOW MSTP)
 - displaying 9-74, 9-77
- MVR. See Multicast VLAN Registration (MVR)

N

- name
 - displaying 4-54
 - setting 4-33
- Name Binding Protocol (NBP) 37-9
 - See also AppleTalk
- name information socket (NIS) 37-9
 - See also AppleTalk
- name server 23-147, 23-153
- name server, Internet Protocol (IP) 23-147
- Names, MIB objects 55-6
- naming files 6-2
 - using wildcards 6-5
- naming interfaces 11-4
- NAT
 - port restricted cone NAT 48-26
 - used with firewall 48-21
- NAT (Network Address Translation)
 - definition 52-4
 - interaction with firewall 52-9
 - route-based virtual balancer 52-6
- neighbour
 - OSPF 29-36, 29-45, 29-70, 29-96
- Net Manage protocol 61-2, 61-4
- Network Address Tunnelling (NAT)
 - IPsec 49-19
- network address, IPX 38-4
- network classes 23-7
- Network Control Protocol (NCP) 16-4 to 16-5
- Network iQ VPNet 23-41
- network key, star key management 51-6
- network keys, star key management 51-7
- network management protocol 55-3
- Network Management Station (NMS) 55-3
- Network Time Protocol (NTP) 57-1 to 57-12
 - adding peer 57-8
 - broadcast mode 57-2
 - client mode 57-2, 57-4
 - commands
 - ADD NTP PEER 57-8
 - DELETE NTP PEER 57-8
 - DISABLE NTP 57-9
 - ENABLE NTP 57-9
 - PURGE NTP 57-9
 - RESET NTP 57-10
 - SET NTP UTCOFFSET 57-10
 - SHOW NTP 57-11
 - configuring 57-4
 - deleting peer 57-8
 - disabling 57-9
 - displaying configuration 57-11
 - enabling 57-9
 - message format 57-3
 - operating modes 57-2



- operation 57-4
- peer 57-2
 - adding 57-8
 - deleting 57-8
- purging 57-9
- reference clocks 57-2
- resetting 57-10
- server mode 57-2, 57-4
- setting
 - UTC offset 57-10
- symmetric mode 57-2
- time servers 57-2
- UTC offset 57-10
- network types, OSPF 29-4
- network-visible entity, AppleTalk 37-7
- noelAddress MIB object C-23
- non-associated signalling, ISDN 12-28
- Non-Volatile Storage (NVS) 6-8
 - clearing 6-11
 - deleting blocks 6-15
 - displaying
 - blocks 6-33
 - contents 6-8, 6-16
 - free memory 6-34
 - free space 6-8
 - information 6-8
- normal mode operation 43-41, 43-46
- not-accessible, MIB object 55-7
- notation, MIB object identifiers
 - combined 55-6
 - dotted 55-6
 - textual 55-6
- notifications
 - of firewall events 48-45
- Novell IPX
 - dial-in connections 20-13
- NTP See Network Time Protocol (NTP)
- numberOfSessionsPerNode MIB object C-23
- numberOfSessionsPerNodeCountingStatus MIB object C-23
- numberOfSessionsPerNodeTable MIB object C-23
- NVE. See AppleTalk: network-visible entity (NVE)
- NVS. See Non-Volatile Storage (NVS)

O

- object descriptor 55-6
- object identifier 55-6
 - combined notation 55-6
 - dotted notation 55-6
 - textual notation 55-6
- object instance 55-6
- object syntax 55-7
- object, MIB
 - access mode 55-7
 - deprecated 55-8
 - mandatory 55-8
 - not-accessible 55-7
 - obsolete 55-8
 - optional 55-8
 - read-only 55-7

- read-write 55-7
- status 55-8
- write-only 55-7
- Objects group, Allied Telesis Enterprise MIB C-9
- objects MIB object C-9
- obsolete status 55-8
- on-demand bridging 17-4
- online help 2-13
 - setting system help file 2-15
- Open Shortest Path First (OSPF) 29-3
 - adding
 - areas 29-28, 29-37
 - hosts 29-30
 - interfaces 29-31
 - neighbours 29-36
 - ranges 29-37
 - stubs 29-40
 - summary addresses 29-41
 - addresses, summary 29-41, 29-48, 29-75, 29-105
 - addressless interfaces 29-10, 29-22, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66
 - adjacency 29-5 to 29-6
 - aging 29-5, 29-91, 29-93
 - area 29-3, 29-28, 29-37, 29-42, 29-45, 29-63, 29-71, 29-79
 - area border router 29-4
 - authentication 29-3, 29-28, 29-42, 29-63
 - autonomous systems 29-3
 - backbone 29-23, 29-28, 29-42, 29-63
 - commands 29-27
 - ADD OSPF AREA 29-28
 - ADD OSPF HOST 29-30
 - ADD OSPF INTERFACE 29-31
 - ADD OSPF NEIGHBOUR 29-36
 - ADD OSPF STUB 29-40
 - ADD OSPF SUMMARYADDRESS 29-41
 - DELETE OSPF AREA 29-42
 - DELETE OSPF HOST 29-42
 - DELETE OSPF INTERFACE 29-43
 - DELETE OSPF NEIGHBOUR 29-45
 - DELETE OSPF STUB 29-47
 - DELETE OSPF SUMMARYADDRESS 29-48
 - DISABLE OSPF 29-48
 - DISABLE OSPF DEBUG 29-49
 - DISABLE OSPF INTERFACE 29-50
 - DISABLE OSPF LOG 29-50
 - ENABLE OSPF 29-51
 - ENABLE OSPF DEBUG 29-51
 - ENABLE OSPF INTERFACE 29-53
 - ENABLE OSPF LOG 29-54
 - PURGE OSPF 29-55
 - RESET OSPF 29-55
 - RESET OSPF COUNTERS 29-56
 - RESET OSPF INTERFACE 29-57
 - RESET OSPF SPF 29-58
 - SET OSPF 29-59
 - SET OSPF AREA 29-63
 - SET OSPF HOST 29-65
 - SET OSPF INTERFACE 29-66
 - SET OSPF NEIGHBOUR 29-70



- SET OSPF STUB 29-74
- SET OSPF SUMMARYADDRESS 29-75
- SHOW OSPF 29-76
- SHOW OSPF AREA 29-79
- SHOW OSPF DEBUG 29-82
- SHOW OSPF HOST 29-83
- SHOW OSPF INTERFACE 29-85
- SHOW OSPF LSA 29-90
- SHOW OSPF NEIGHBOURS 29-96
- SHOW OSPF RANGE 29-98
- SHOW OSPF ROUTE 29-101
- SHOW OSPF STUB 29-103
- SHOW OSPF SUMMARYADDRESS 29-105
- configuration 29-76
 - examples 29-20
- counters
 - resetting 29-56
- debugging 29-49, 29-51
- deleting
 - areas 29-42, 29-45
 - hosts 29-42
 - interfaces 29-43
 - neighbours 29-45
 - ranges 29-45
 - stubs 29-47
 - summary addresses 29-48
- designated router 29-5, 29-7, 29-33, 29-36, 29-45, 29-68, 29-70, 29-85
- disable 29-48
- disabling
 - interfaces 29-50
- displaying
 - areas 29-79
 - configuration 29-76
 - hosts 29-83
 - interfaces 29-85
 - link state advertisements 29-90
 - neighbours 29-96
 - ranges 29-98
 - router configuration 29-76
 - routes 29-101
 - status 29-76
 - stubs 29-103
 - summary addresses 29-105
- enable 29-48, 29-51
- enabling
 - interfaces 29-53
- examples 29-20
- external routes 29-3
- features 29-3
- Hello packets 29-5, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66
- hosts 29-30, 29-42, 29-65, 29-83
- interface to RIP 29-14, 29-59
- interfaces 29-7, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66, 29-85
 - adding 29-31
 - addressless 29-10, 29-22, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66
 - deleting 29-43
 - disabling 29-50
 - displaying 29-85
 - enabling 29-53
 - modifying 29-66
 - resetting 29-57
 - link state advertisements 29-5, 29-90
 - logging 29-50, 29-54
 - mask 29-3, 29-28, 29-42, 29-63
 - modifying
 - areas 29-63, 29-71
 - hosts 29-65
 - interfaces 29-66
 - neighbours 29-70
 - ranges 29-71
 - stubs 29-74
 - summary addresses 29-75
 - neighbour 29-36, 29-45, 29-70, 29-96
 - network types 29-4
 - on demand circuits 29-18
 - packet types 29-6
 - pathtypes 29-9
 - purge 29-55
 - ranges 29-37, 29-45, 29-71, 29-98
 - reset 29-55
 - resetting
 - interfaces 29-57
 - route table 29-58
 - resetting counters 29-56
 - RIP interface 29-14, 29-59
 - router id 29-59
 - router status 29-76
 - router types 29-4, 29-28, 29-42, 29-63
 - routes 29-9, 29-101
 - routing 29-9
 - state 29-48, 29-51
 - states 29-7
 - status 29-76
 - stub areas 29-4, 29-28, 29-42, 29-63
 - stubs 29-40, 29-47, 29-74, 29-103
 - summary addresses 29-41, 29-48, 29-75, 29-105
 - transit network 29-6, 29-23
 - virtual links 29-23, 29-31, 29-43, 29-50, 29-53, 29-57, 29-66
- Operation
 - adding
 - users 43-33
 - administrator name
 - displaying 4-54
 - setting 4-31
 - asynchronous port security 43-12
 - base hardware serial number
 - displaying 4-58
 - booting the router 4-9, 5-37
 - changing
 - passwords 43-54 to 43-55
 - clearing NVS memory 6-11
 - command
 - editing 2-4
 - history 2-4
 - commands



- ADD ALIAS 2-12, 6-10, 6-13, 6-23
- ADD RADIUS SERVER 43-30
- ADD TACACS SERVER 43-31
- ADD USER 43-33
- ADD USER RSO 43-36
- CLEAR NVS TOTALLY 6-11
- CREATE CONFIG 5-22
- DELETE ALIAS 2-13
- DELETE FILE 6-14
- DELETE INSTALL 5-23
- DELETE MAIL 4-17
- DELETE NVS 6-15
- DELETE RADIUS SERVER 43-37
- DELETE TACACS SERVER 43-38
- DELETE USER 43-39
- DISABLE FEATURE 5-24
- DISABLE GUI 5-25
- DISABLE HTTP DEBUG 5-25
- DISABLE HTTP SERVER 5-25
- DISABLE MAIL DEBUG 4-18
- DISABLE RELEASE 5-26
- DISABLE SYSTEM SECURITY_MODE 43-41
- DISABLE USER 43-43
- DUMP 4-20
- DUMP NVS 6-16
- EDIT 6-17
- ENABLE FEATURE 5-27
- ENABLE GUI 3-20
- ENABLE HTTP DEBUG 5-28, 46-14 to 46-15, 46-18
- ENABLE HTTP SERVER 5-28
- ENABLE MAIL DEBUG 4-23
- ENABLE RELEASE 5-30
- ENABLE SYSTEM SECURITY_MODE 43-46
- ENABLE USER 43-48
- HELP 2-13
- LOAD 5-31
- LOGIN 43-50
- LOGOFF 43-51
- MAIL 4-24
- MODIFY 4-26
- MODIFY NVS 6-20
- PURGE USER 43-51
- RENAME 6-22
- RESET CPU UTILISATION 4-27
- RESET HTTP SERVER 5-36
- RESET LOADER 5-36
- RESET USER 43-52
- RESTART 5-37
- SET CONFIG 5-38
- SET HELP 2-15
- SET HTTP SERVER 5-39
- SET INSTALL 5-40
- SET LOADER 5-42
- SET MAIL 4-28
- SET MANAGER PORT 43-53
- SET PASSWORD 43-54 to 43-55
- SET SYSTEM CONTACT 4-31
- SET SYSTEM LOCATION 4-32
- SET SYSTEM NAME 4-33
- SET SYSTEM RPSMONITOR 4-34
- SET SYSTEM TERRITORY 12-117
- SET TIME 4-35
- SET USER 43-58
- SHOW ALIAS 2-15 to 2-16, 6-29
- SHOW BUFFER 4-37
- SHOW CONFIG 5-46
- SHOW CPU 4-41
- SHOW DEBUG 4-43
- SHOW EXCEPTION 4-50
- SHOW FEATURE 5-48
- SHOW FFIL 6-24, 6-26
- SHOW FLASH 6-30
- SHOW FLASH PHYSICAL 6-32
- SHOW HTTP CLIENT 5-50
- SHOW HTTP DEBUG 5-51
- SHOW HTTP SERVER 5-52
- SHOW HTTP SESSION 5-53
- SHOW INSTALL 5-54
- SHOW LOADER 5-58
- SHOW MAIL 4-51
- SHOW MANAGER PORT 43-61
- SHOW NVS 6-33
- SHOW NVS FREE 6-34
- SHOW PATCH 5-60
- SHOW RADIUS 43-62
- SHOW RELEASE 5-61
- SHOW STARTUP 4-52
- SHOW SYSTEM 4-54
- SHOW SYSTEM SERIALNUMBER 4-58
- SHOW TACACS SERVER 43-67
- SHOW TIME 4-59
- SHOW USER 43-72
- UPLOAD 5-62
- configuration
 - displaying dynamic 5-46
 - saving dynamic 5-22
 - setting default 5-38
- contact name
 - displaying 4-54
 - setting 4-31
- counters 43-14
- CPU utilisation 4-8, 4-41
 - resetting 4-27
- creating
 - files 6-4
- debugging 4-9, 4-43
- debugging mail 4-11
- default configuration, setting 5-38
- deleting
 - files 6-14
 - FLASH files 6-14
 - install information 5-23
 - mail messages 4-11, 4-17
 - NVS blocks 6-15
 - users 43-39
- disabling
 - mail debugging 4-18
 - security mode 43-41
 - software releases 5-26
 - users 43-43



- displaying
 - administrator name 4-54
 - base hardware serial number 4-58
 - clock 4-59
 - contact name 4-54
 - date 4-59
 - directory of files 6-4
 - dynamic configuration 5-46
 - exceptions 4-9, 4-50
 - file downloads 5-58
 - files 6-26
 - FLASH files 6-26
 - FLASH memory 6-6, 6-30, 6-32
 - free memory 4-9, 4-37
 - free NVS memory 6-34
 - help 1-7, 2-9, 2-13
 - install information 5-54
 - location 4-54
 - mail 4-11
 - mail system 4-51
 - memory contents 4-9, 4-20
 - name 4-54
 - NVS blocks 6-33
 - NVS contents 6-16
 - patches 5-60
 - semipermanent manager port 43-61
 - software releases 5-61
 - special feature licences 5-48
 - startup status 4-9, 4-52
 - system clock 4-59
 - system date 4-59
 - system information 4-54
 - system location 4-54
 - system name 4-54
 - system territory 4-54
 - system time 4-59
 - territory 4-54
 - time 4-59
 - users 43-72
- download files 5-31
- downloading files 5-36, 5-42, 5-58, 6-4
- dumping
 - NVS blocks 6-16
- dynamic configuration
 - displaying 5-46
 - saving 5-22
- editing files 6-4, 6-17
- editor 6-5, 6-17
- enabling
 - mail debugging 4-23
 - security mode 43-46
 - software releases 5-30
 - special feature licences 5-27
 - users 43-48
- entering commands 2-4
- event logging 4-7
- exceptions, displaying 4-9, 4-50
- fatal errors 4-9, 4-50
- fault diagnosis 4-6
- file naming conventions 6-2
- file types 6-2
- files
 - creating 6-4
 - deleting 6-14
 - displaying 6-26
 - displaying directory 6-4
 - downloading 5-36, 5-42, 5-58, 6-4
 - editing 6-4, 6-17
 - renaming 6-22
 - uploading 5-62
- FLASH files 6-6
 - deleting 6-14
 - displaying 6-24, 6-26
 - displaying directory 6-6
 - downloading 5-36, 5-42, 5-58
 - editing 6-17
 - renaming 6-22
 - uploading 5-62
- FLASH memory 6-5 to 6-6
 - compaction 6-7
 - displaying 6-30, 6-32
- GUI
 - enabling and disabling 3-17
- help
 - displaying 2-13
 - setting system help file 2-15
- help file 1-7, 2-9
- HTTP server 5-9
 - disabling 5-25
 - disabling debugging 5-25
 - displaying client status 5-50
 - displaying debugging status 5-51
 - displaying session information 5-53
 - displaying status 5-52
 - enabling 5-28
 - enabling debugging 5-28, 46-14 to 46-15, 46-18
 - resetting 5-36
 - setting homepage 5-39
- install information 5-13
 - deleting 5-23
 - displaying 5-54
 - setting 5-40
- location
 - displaying 4-54
 - setting 4-32
- logging events 4-7
- logging in and out 43-8, 43-50 to 43-51
- mail 4-24
- mail subsystem 4-10 to 4-11
 - configuration 4-11
 - deleting mail messages 4-17
 - displaying mail status 4-51
 - sending mail messages 4-24
 - setting mail host name 4-28
- manager port, semipermanent 43-4, 43-14, 43-53, 43-61
- MANAGER privilege 43-4
- memory
 - clearing NVS 6-11
 - deleting NVS blocks 6-15



- displaying 4-9
- displaying contents 4-20
- displaying FLASH 6-6
- displaying free 4-9, 4-37
- displaying free NVS 6-34
- displaying NVS blocks 6-33
- displaying NVS contents 6-16
- FLASH 6-5 to 6-6, 6-30, 6-32
- FLASH compaction 6-7
- modifying 4-9, 4-26
- modifying NVS 6-20
- modifying
 - memory 4-9, 4-26
 - NVS memory 6-20
 - passwords 43-54 to 43-55
 - users 43-58
- monitoring 4-6
- name
 - displaying 4-54
 - setting 4-33
- Non-Volatile Storage (NVS) 6-8
- normal mode 43-41, 43-46
- NVS
 - clearing 6-11
 - deleting blocks 6-15
 - displaying blocks 6-33
 - displaying contents 6-16
 - displaying free memory 6-34
- online help 1-7, 2-9, 2-13
- passwords 43-11 to 43-12
 - changing 43-54 to 43-55
 - recovering 43-12
- patches
 - displaying 5-60
 - downloading 5-36, 5-42, 5-58
- power supply monitoring 4-10
- purging
 - users 43-51
- RADIUS servers 43-9, 43-15, 43-30, 43-37, 43-62
- recovering passwords 43-12
- remote management 62-7
- remote power supply (RPS) monitoring 4-10, 4-34
- renaming
 - files 6-22
 - FLASH files 6-22
- resetting
 - users 43-52
- restarting the router 4-9, 5-37
- saving default configuration 5-38
- saving dynamic configuration 5-22
- security mode
 - disabling 43-41
 - enabling 43-46
- security timer 43-5
- semipermanent manager port 43-4, 43-14, 43-53, 43-61
- sending mail 4-10, 4-24
- setting
 - administrator name 4-31
 - clock 4-35
 - contact name 4-31
 - date 4-35
 - install information 5-40
 - location 4-32
 - mail host name 4-28
 - name 4-33
 - semipermanent manager port 43-53
 - system clock 4-35
 - system date 4-35
 - system help file 2-15
 - system information 4-31 to 4-33, 12-117
 - system location 4-32
 - system name 4-33
 - system territory 12-117
 - system time 4-35
 - territory 12-117
 - time 4-35
- snapshot 4-9, 4-43
- software releases
 - deleting 5-23
 - disabling 5-26
 - displaying 5-54, 5-61
 - downloading 5-36, 5-42, 5-58
 - enabling 5-30
 - setting 5-40
- special feature licences 5-16
 - disabling 5-24
 - displaying 5-48
 - enabling 5-27
- startup status 4-9, 4-52
- system information
 - displaying 4-54
 - setting 4-31 to 4-33, 12-117
- system location
 - displaying 4-54
 - setting 4-32
- system name
 - displaying 4-54
 - setting 4-33
- system territory
 - displaying 4-54
 - setting 12-117
- TACACS servers 43-9, 43-18, 43-31, 43-38, 43-67
- Telnet 62-7
- Telnet from the router 43-13
- territory
 - displaying 4-54
 - setting 12-117
- text editor 6-5, 6-17
- uploading files 5-62
- User Authentication Database 43-9 to 43-10
 - adding users 43-10, 43-33
 - counters 43-14
 - deleting users 43-11, 43-39
 - disabling users 43-43
 - displaying users 43-11, 43-72
 - enabling users 43-48
 - logging in and out 43-8, 43-50 to 43-51
 - modifying users 43-11, 43-58
 - passwords 43-11 to 43-12



- purging users 43-51
 - recovering passwords 43-12
 - resetting users 43-52
- User Authentication Facility 43-8
 - asynchronous port security 43-12
 - semipermanent manager port 43-14
 - Telnetting from the router 43-13
- USER privilege 43-3
- users
 - adding 43-33
 - deleting 43-39
 - disabling 43-43
 - displaying 43-72
 - enabling 43-48
 - modifying 43-58
 - purging 43-51
 - resetting 43-52
- wildcards, in file names 6-5
- operation
 - commands
 - SET SYSTEM TERRITORY 12-20, 12-31, 12-47, 12-49
- Operations 47-2
- optional status 55-8
- ospf MIB object C-59
- ospfAddressLessIf MIB object C-59
- ospfIfIpAddr MIB object C-59
- ospfIfState MIB object C-59
- ospfIfStateChange trap message C-59
- ospfNbrAddressLessIndex MIB object C-59
- ospfNbrIfAddr MIB object C-59
- ospfNbrRtrId MIB object C-59
- ospfNbrState MIB object C-59
- ospfNbrStateChange trap message C-59
- ospfRouterId MIB object C-59
- ospfVirtIfAreaId MIB object C-59
- ospfVirtIfNeighbor MIB object C-59
- ospfVirtIfState MIB object C-59
- ospfVirtIfStateChange trap message C-59
- ospfVirtNbrArea MIB object C-59
- ospfVirtNbrRtrId MIB object C-59
- ospfVirtNbrState MIB object C-59
- ospfVirtNbrStateChange trap message C-59
- outgoing calls
 - activating 20-8, 20-16
 - asynchronous 20-2
 - deactivating 20-8, 20-22

P

- packet assembler/disassembler (PAD) 14-3
- Packet Capture group, RMON MIB C-46
- Packet Fragment Handling 48-19
- packet or DDP filtering 37-12
- packet storm protection 8-12
- packet types, OSPF 29-6
- PAD, X.25 14-3
- PAE Authenticator group, Port Access Control MIB C-43 to C-44
- PAE Supplicant group, Port Access Control MIB C-44
- PAE System group, Port Access Control MIB C-43 to C-44
- PAP. See Password Authentication Protocol (PAP)

- parameters, in scripts 59-4
- password
 - asynchronous calls 20-4
 - authenticating with CHAP 20-5
 - authenticating with PAP 20-5
- Password Authentication Protocol (PAP) 16-22, 20-5
- passwords 43-11 to 43-12
 - changing 43-54 to 43-55
 - recovering 43-12
- patches
 - displaying 5-60
 - downloading 5-36, 5-42, 5-58, 5-62
- path types, OSPF 29-9
- payload compression 44-4
- payload encryption 44-7
- PCI Accelerator (PAC) cards
 - testing 65-9
- peer
 - adding NTP 57-8
 - deleting NTP 57-8
 - NTP 57-2
- peers defined, IPsec 49-4
- periodic triggers 60-2
- permanent assignments
 - commands 63-9
- permanent virtual circuits (PVC) 14-3
- PIM Dense Mode, See Protocol Independent Multicast (PIM)
- PIM Sparse Mode, See Protocol Independent Multicast (PIM)
- PIM4 group, Allied Telesis Enterprise MIB C-24
- pim4ErrorTrap trap message C-24
- pim4ErrorTrapType MIB object C-24
- pim4Events MIB object C-24
- pim4InterfaceDownTrap trap message C-24
- pim4InterfaceUpTrap trap message C-24
- pim4NeighbourAddedTrap trap message C-24
- pim4NeighbourDeletedTrap trap message C-24
- PING 23-38, 23-121, 23-154, 23-203, 23-211, 37-16, 38-15
- PING command 23-121
- Ping group, Allied Telesis Enterprise MIB C-22
- ping MIB object C-22
- Ping Polling of Device Reachability
 - commands
 - ADD PING POLL 54-9
 - DELETE PING POLL 54-11
 - DISABLE PING POLL 54-12
 - DISABLE PING POLL DEBUG 54-12
 - ENABLE PING POLL 54-13
 - ENABLE PING POLL DEBUG 54-13
 - RESET PING POLL 54-14
 - SET PING POLL 54-15
 - SHOW PING POLL 54-17
- pingIndex MIB object C-22
- pingStatistics MIB object C-22
- pingStatus MIB object C-22
- pingTable MIB object C-22
- pingTrap trap message C-22
- PKI. See Public Key Infrastructure (PKI)
- plain text 44-5



Point-to-Point Protocol (PPP) 16-1

See *also* Layer Two Tunnelling Protocol (L2TP)

adding

physical links 16-49

aggregating links 16-9, 16-36

Always On/Demand ISDN (AODI) 16-13

asynchronous PPP 11-21, 20-4

authentication 16-22 to 16-27, 16-49

BACP. See Bandwidth Allocation Control Protocol

Bandwidth Allocation Control Protocol (BACP) 16-9

Bandwidth Allocation Protocol (BAP) 16-9

bandwidth on demand 16-12, 16-42, 16-44

BAP. See Bandwidth Allocation Protocol

callback 16-18

Challenge-Handshake Authentication Protocol (CHAP)
16-23 to 16-24

channel aggregation 16-9, 16-36

commands

ACTIVATE PPP 16-47

ADD PPP 16-49

CREATE PPP 16-53

CREATE PPP TEMPLATE 16-62

DELETE PPP 16-69

DESTROY PPP 16-70

DESTROY PPP TEMPLATE 16-71

DISABLE PPP 16-72

DISABLE PPP DEBUG 16-72

DISABLE PPP TEMPLATE DEBUG 16-74

ENABLE PPP 16-75

ENABLE PPP DEBUG 16-76

ENABLE PPP TEMPLATE DEBUG 16-79

PURGE PPP 16-80

RESET PPP 16-81

SET PPP 16-82

SET PPP TEMPLATE 16-90

SHOW PPP 16-98

SHOW PPP CONFIG 16-99

SHOW PPP COUNT 16-105

SHOW PPP DEBUG 16-118

SHOW PPP IDLETIMER 16-119

SHOW PPP LIMITS 16-120

SHOW PPP MULTILINK 16-121

SHOW PPP NAMESERVER 16-123

SHOW PPP TEMPLATE 16-124

SHOW PPP TXSTATUS 16-130

SHOW PPP UTILISATION 16-132

compression 16-39, 16-49

configuration

displaying 16-99

configuration examples 16-33

control protocols 16-4 to 16-5

counters 16-29

displaying 16-105

displaying activity 16-29

resetting activity 16-29, 16-81

creating

interfaces 16-53

templates 16-62

debugging 16-30, 16-72, 16-76, 16-118

templates 16-74, 16-79

deleting

physical links 16-69

destroying

interfaces 16-70

templates 16-71

dial-on-demand 16-10, 16-37

disabling

debugging, interfaces 16-72

debugging, templates 16-74

interfaces 16-72

displaying

activity counters 16-29

configuration 16-99

counters 16-105

debugging 16-118

interfaces 16-98

multilink information 16-121

nameservers 16-123

templates 16-124

timers 16-119

transmission queue 16-130

dynamic interfaces 20-9

templates 16-17

enabling

debugging, interfaces 16-76

debugging, templates 16-79

interfaces 16-75

encapsulation 11-21, 16-3, 20-4

encryption 16-39

events 16-5

example configurations 16-33

interfaces

adding physical links 16-49

creating 16-53

deleting physical links 16-69

destroying 16-70

disabling 16-72

displaying 16-98

enabling 16-75

modifying 16-82

purging 16-80

resetting 16-81

interfaces, dynamic 20-9

leased line backup 16-11, 16-40

limiting connection time and data throughput 16-28,
16-53, 16-62, 16-81 to 16-82, 16-90

Link Control Protocol (LCP) 16-5, 16-30

Asynchronous Control Character Map (ACCM) Op-
tion 16-6

Authentication Protocol Option 16-6

Endpoint Discriminator Option 16-6

Link Discriminator Option 16-6

Link Quality Reporting (LQR) Option 16-6, 16-8

Magic Number Option 16-6

Maximum Receive Unit Option 16-6

Maximum Received Reconstructed Unit Option 16-6
options 16-6

link management 16-28, 16-53, 16-62,
16-81 to 16-82, 16-90

link quality management 16-38, 16-49



- Link Quality Reporting (LQR) 16-8
- magic number 16-20
- MIB 16-29
- modem control 16-14
- modifying
 - interfaces 16-82
- multilink 16-9
 - displaying 16-121
- nameservers
 - displaying 16-123
 - setting 16-82
- NCP 16-5
- Network Control Protocol (NCP) 16-5
- Password Authentication Protocol (PAP) 16-22
- protocols 16-3
- purging configuration 16-80
- resetting
 - activity counters 16-29, 16-81
- resetting interfaces 16-81
- setting
 - activity limits 16-29, 16-53, 16-62
- standards 16-3
- states 16-5
- synchronous dialling 16-14
- templates 16-17
 - creating 16-62
 - debugging 16-74, 16-79
 - destroying 16-71
 - displaying 16-124
 - modifying 16-90
- thresholds for connection time and data throughput 16-28, 16-53, 16-62, 16-81 to 16-82, 16-90
- timers 16-29, 16-119
- transmission queue 16-130
- policies, firewall 48-6
 - adding interfaces 48-6, 48-71
 - creating 48-6, 48-97
 - deleting interfaces 48-6, 48-102
 - destroying 48-6, 48-111
 - displaying 48-7
 - setting firewall policy 48-138
- policies, IPsec 49-14
- policies, ISAKMP 49-21
 - creating 49-22, 49-63
 - destroying 49-22, 49-74
 - displaying 49-23, 49-196
 - setting 49-107
- polling, SNMP protocol 55-11
- port
 - AppleTalk 37-8
 - UDP listen 49-19, 49-106
- Port Access Control MIB C-43
- port authentication (802.1x)
 - 802.1x Port Based Network Access Control 45-2
 - authentication process 45-9
 - authentication server 45-8
 - Authenticator PAE 45-7
 - Command Reference 45-23
 - commands
 - ACTIVATE PORTAUTH PORT REAUTHENTICATE 45-23
 - DISABLE PORTAUTH 45-24
 - DISABLE PORTAUTH DEBUG PORT 45-25
 - DISABLE PORTAUTH PORT 45-26
 - ENABLE PORTAUTH 45-27
 - ENABLE PORTAUTH DEBUG PORT 45-28
 - PURGE PORTAUTH PORT 45-35
 - RESET PORTAUTH PORT MULTIMIB 45-37
 - SET PORTAUTH PORT 45-38
 - SET PORTAUTH PORT SUPPLICANTMAC 45-44
 - SET PORTAUTH USERNAME 45-48
 - SHOW PORTAUTH 45-50
 - SHOW PORTAUTH PORT 45-55
 - SHOW PORTAUTH PORT MULTISUPPLICANT 45-63
 - SHOW PORTAUTH TIMER 45-68
 - configuration example
 - authenticator 45-20
 - supplicant 45-21
 - Configuration Examples 45-20
 - configure a multi-supplicant system 45-18
 - debug 802.1x 45-18
 - enable 802.1x 45-15
 - multi-supplicant system 45-5, 45-12
 - port authentication control overview 45-6
 - Authenticator PAE 45-7
 - Supplicant PAE 45-8
 - reauthenticate supplicants 45-17
 - set global username and password 45-18
 - single supplicant system 45-3
 - supplicant and authenticator configuration 45-6
 - Supplicant PAE 45-8
- Port Authentication group, Allied Telesis Enterprise MIB C-25
- Port Authentication. See 802.1x
- port speed, autonegotiation 8-7
- port-based VLANs 8-19
- Ports
 - setting 10-17
- ports
 - configuring asynchronous 20-3
- STP
 - disabling 9-45
 - displaying 9-94
 - enabling 9-55
 - modifying 9-70
- switch 8-5
 - activating 8-49
 - autonegotiation 8-7
 - blocking 9-7
 - disabling 8-5, 8-82
 - displaying 8-136
 - displaying counters 8-139
 - enabling 8-5, 8-91
 - ingress rules 8-28
 - intrusion 8-143
 - mirroring 8-12
 - modifying 8-109
 - packet storm protection 8-12
 - resetting 8-95, 9-58
 - security 7-4, 8-13, 8-109



STP ports 9-3
 triggers 8-40
 VLAN
 adding 8-63
 deleting 8-74, 9-36
 power supply monitoring 4-10
 ppr8624xl80 MIB object C-10
 ppr8948EX MIB object C-13
 ppr8948i MIB object C-13
 ppr8948iN MIB object C-14
 ppr9812T MIB object C-13
 ppr9812TDC MIB object C-13
 ppr9812TF MIB object C-12
 ppr9816GB MIB object C-12
 ppr9816GBDC MIB object C-13
 ppr9816GF MIB object C-12
 ppr9924SP MIB object C-13
 ppr9924T MIB object C-13
 ppr9924T4SP MIB object C-13
 ppr9924TEMC MIB object C-13
 ppr9924Ts MIB object C-14
 ppr9924TsiN MIB object C-15
 pprA35LXSC MIB object C-10
 pprA35SXSC MIB object C-10
 pprA36MTRJ MIB object C-10
 pprA37VF45 MIB object C-10
 pprA38LC MIB object C-10
 pprA39Tx MIB object C-10
 pprA40MTRJ MIB object C-12
 pprA40SC MIB object C-12
 pprA41MTRJ MIB object C-12
 pprA41SC MIB object C-12
 pprA42GBIC MIB object C-12
 pprA46Tx MIB object C-14
 pprA50 MIB object C-13
 pprA51 MIB object C-13
 pprA52 MIB object C-13
 pprA53 MIB object C-13
 pprAr010 MIB object C-10
 pprAr011 MIB object C-10
 pprAr012 MIB object C-10
 pprAr120 MIB object C-9
 pprAr130s MIB object C-10
 pprAr130u MIB object C-10
 pprAr140s MIB object C-10
 pprAr140u MIB object C-10
 pprAr160su MIB object C-10
 pprAr300 MIB object C-9
 pprAr300L MIB object C-9
 pprAr300Lu MIB object C-9
 pprAr300u MIB object C-9
 pprAr310 MIB object C-9
 pprAr310u MIB object C-9
 pprAr320 MIB object C-10
 pprAr330 MIB object C-10
 pprAr350 MIB object C-9
 pprAr370 MIB object C-10
 pprAr370u MIB object C-10
 pprAr390 MIB object C-10
 pprAr395 MIB object C-10

pprAr410 MIB object C-12
 pprAr410v2 MIB object C-13
 pprAr410v3 MIB object C-13
 pprAR415S MIB object C-14
 pprAR415SDC MIB object C-14
 pprAR420 MIB object C-14
 pprAR440 MIB object C-14
 pprAR441 MIB object C-14
 pprAR442 MIB object C-14
 pprAR443 MIB object C-14
 pprAR444 MIB object C-14
 pprAr450 MIB object C-13
 pprAr450Dual MIB object C-13
 pprAR550 MIB object C-14
 pprAR550SDP MIB object C-14
 pprAR551 MIB object C-14
 pprAR552 MIB object C-14
 pprAR570 MIB object C-14
 pprAr720 MIB object C-9
 pprAr725 MIB object C-12
 pprAr725DC MIB object C-13
 pprAr740 MIB object C-10
 pprAr740DC MIB object C-10
 pprAr745 MIB object C-12
 pprAr745DC MIB object C-13
 pprAR770 MIB object C-14
 pprAr816fMT MIB object C-11
 pprAr816fMTi MIB object C-11
 pprAr816fSC MIB object C-11
 pprAr816fSCi MIB object C-11
 pprAr824 MIB object C-11
 pprAr824i MIB object C-11
 pprAr88fMT MIB object C-11
 pprAr88fMTi MIB object C-11
 pprAr88fSC MIB object C-11
 pprAr88fSCi MIB object C-11
 pprAr88t8fMT MIB object C-11
 pprAr88t8fMTi MIB object C-11
 pprAr88t8fSC MIB object C-11
 pprAr88t8fSCi MIB object C-11
 pprAT-8624PoE MIB object C-14
 pprAt8624T2M MIB object C-14
 pprAt86482SP MIB object C-14
 pprAt8724XL MIB object C-11
 pprAt8724XLDC MIB object C-11
 pprAt8724XLDC-NEBS MIB object C-11
 pprAt8748XL MIB object C-11
 pprAt8748XLDC MIB object C-11
 pprAt8824 MIB object C-11
 pprAt8824DC MIB object C-11
 pprAt8824XLDC MIB object C-11
 pprAt8848 MIB object C-12
 pprAt8848DC MIB object C-11
 pprAtFan01 MIB object C-13
 pprAtPwr01AC MIB object C-13
 pprAtPwr01DC MIB object C-13
 pprAtXum10G MIB object C-14
 pprAtXum10Gi MIB object C-14
 pprAtXum12SFP MIB object C-14
 pprAtXum12SFPi MIB object C-14



pprAtXum12T MIB object C-14
 pprAtXum12TiN MIB object C-14
 pprC8724MLB MIB object C-14
 pprFan01R MIB object C-14
 pprFanA01 MIB object C-13
 pprlcmAr020 MIB object C-10
 pprlcmAr021s MIB object C-9
 pprlcmAr021u MIB object C-9
 pprlcmAr021v2s MIB object C-13
 pprlcmAr022 MIB object C-9
 pprlcmAr023 MIB object C-9
 pprlcmAr024 MIB object C-9
 pprlcmAr025 MIB object C-9
 pprlcmAr026 MIB object C-12
 pprlcmAr027 MIB object C-13
 pprNsm0404Pic MIB object C-10
 pprNsm0418BRI MIB object C-10
 pprNsm0428BRI MIB object C-12
 pprNsm048DS3 MIB object C-13
 pprPwr01RAC MIB object C-14
 pprPwr02AC MIB object C-14
 pprPwr02RAC MIB object C-14
 pprRapier16fMT MIB object C-10
 pprRapier16fMTi MIB object C-10
 pprRapier16fSC MIB object C-10
 pprRapier16fSCi MIB object C-11
 pprRapier24 MIB object C-10
 pprRapier24i MIB object C-11
 pprRapier24iDC-NEBS MIB object C-11
 pprRapier48 MIB object C-11
 pprRapier48i MIB object C-12
 pprRapier48w MIB object C-15
 pprRapier8fMT MIB object C-10
 pprRapier8fMTi MIB object C-11
 pprRapier8fSC MIB object C-10
 pprRapier8fSCi MIB object C-10
 pprRapier8t8fMT MIB object C-10
 pprRapier8t8fMTi MIB object C-10
 pprRapier8t8fSC MIB object C-10
 pprRapier8t8fSCi MIB object C-10
 pprRapierG6 MIB object C-11
 pprRapierG6LX MIB object C-11
 pprRapierG6MT MIB object C-11
 pprRapierG6SX MIB object C-11
 pprSb1XFP MIB object C-13
 pprSb24RJ MIB object C-13
 pprSb24SFP MIB object C-14
 pprSb32fMT MIB object C-12
 pprSb32fSC MIB object C-12
 pprSb48t MIB object C-12
 pprSb8fLXMT MIB object C-12
 pprSb8fLXSC MIB object C-12
 pprSb8fRJ MIB object C-12
 pprSb8fSXMT MIB object C-12
 pprSb8fSXSC MIB object C-12
 pprSb8GBIC MIB object C-12
 pprSb96t MIB object C-12
 pprSbChassis16AC MIB object C-12
 pprSbChassis16DC MIB object C-12
 pprSbChassis4AC MIB object C-12

pprSbChassis4DC MIB object C-12
 pprSbChassis8AC MIB object C-12
 pprSbChassis8DC MIB object C-12
 pprSbControl MIB object C-12
 pprSbControlDTM MIB object C-12
 pprSbExpander MIB object C-13
 Predictor compression 44-12, 44-27
 PRI group, Allied Telesis Enterprise MIB C-20
 pri MIB object C-20
 PRI physical layer 12-19
 priChanTable MIB object C-20
 priIntTable MIB object C-20
 primary clock source 57-2
 primary name server 23-147
 Primary Rate Access
 configuring 12-20
 Primary Rate Access, ISDN 12-7 to 12-13
 E1 12-7
 T1 12-9
 printer ports, configuration 63-4
 printer server 63-1 to 63-15
 printers
 operation 63-6
 problem solving 63-7
 troubleshooting 63-7
 private keys 50-2
 privilege levels
 MANAGER 43-4
 USER 43-3
 products MIB object C-5
 Products subtree, Allied Telesis Enterprise MIB C-5
 protocol
 IPX 38-3
 LPD 63-2
 RIP (IPX) 38-3, 38-5
 SAP (IPX) 38-3
 XNS 38-3
 Protocol Independent Multicast (PIM)
 Assert message, Sparse Mode 27-15
 bootstrap router candidate 27-13, 27-17, 36-10
 adding, IPv4 27-54
 adding, IPv6 36-26
 deleting, IPv4 27-66
 deleting, IPv6 36-30
 displaying, IPv4 27-125
 displaying, IPv6 36-53
 setting parameters, IPv6 36-42
 setting preference, IPv4 27-96
 commands, IPv4
 ADD PIM BSRCANDIDATE 27-54
 ADD PIM INTERFACE 27-55
 ADD PIM RPCANDIDATE 27-57
 DELETE PIM BSRCANDIDATE 27-66
 DELETE PIM INTERFACE 27-67
 DELETE PIM RPCANDIDATE 27-68
 DISABLE PIM 27-75
 DISABLE PIM DEBUG 27-76
 ENABLE PIM 27-76, 27-83
 ENABLE PIM DEBUG 27-84
 PURGE PIM 27-85



- RESET PIM INTERFACE 27-86
- SET PIM 27-94
- SET PIM BSRCANDIDATE 27-96
- SET PIM INTERFACE 27-97
- SET PIM RPCANDIDATE 27-99
- SHOW PIM 27-124
- SHOW PIM BSRCANDIDATE 27-125
- SHOW PIM COUNTERS 27-127
- SHOW PIM DEBUG 27-131
- SHOW PIM INTERFACE 27-132
- SHOW PIM NEIGHBOUR 27-134
- SHOW PIM ROUTE 27-135
- SHOW PIM RPCANDIDATE 27-141
- SHOW PIM RPSET 27-142
- SHOW PIM STATEREFRSH 27-144
- SHOW PIM TIMER 27-145
- commands, IPv6
 - ADD PIM6 BSRCANDIDATE 36-26
 - ADD PIM6 INTERFACE 36-27
 - ADD PIM6 RPCANDIDATE 36-29
 - DELETE PIM6 BSRCANDIDATE 36-30
 - DELETE PIM6 INTERFACE 36-30
 - DELETE PIM6 RPCANDIDATE 36-31
 - DISABLE PIM6 36-33
 - DISABLE PIM6 DEBUG 36-34
 - ENABLE PIM6 36-36
 - ENABLE PIM6 DEBUG 36-37
 - PURGE PIM6 36-38
 - RESET PIM6 INTERFACE 36-38
 - SET PIM6 36-41
 - SET PIM6 BSRCANDIDATE 36-42
 - SET PIM6 INTERFACE 36-43
 - SET PIM6 RPCANDIDATE 36-44
 - SHOW PIM6 BSRCANDIDATE 36-53
 - SHOW PIM6 CONFIG 36-54
 - SHOW PIM6 COUNTERS 36-55
 - SHOW PIM6 DEBUG 36-58
 - SHOW PIM6 INTERFACE 36-59
 - SHOW PIM6 NEIGHBOUR 36-61
 - SHOW PIM6 ROUTE 36-62
 - SHOW PIM6 RPCANDIDATE 36-67
 - SHOW PIM6 RPSET 36-68
 - SHOW PIM6 STATEREFRSH 36-70
 - SHOW PIM6 TIMER 36-71
- configuration
 - displaying, IPv4 27-126
 - displaying, IPv6 36-54
 - example, IPv4 27-38
 - example, IPv6 36-15
- counters
 - displaying, IPv4 27-127
 - displaying, IPv6 36-55
- debugging
 - disabling, IPv4 27-76
 - disabling, IPv6 36-34
 - displaying, IPv4 27-131
 - displaying, IPv6 36-58
 - enabling, IPv4 27-84
 - enabling, IPv6 36-12, 36-37
- Dense Mode
 - interoperability with Sparse Mode, IPv6 36-4
 - introduction 27-10
- designated router 27-13
- disabling, IPv4 27-75
- disabling, IPv6 36-33
- displaying, IPv4 27-124, 27-142
- displaying, IPv6 36-50
- enabling, IPv4 27-76, 27-83
- enabling, IPv6 36-36
- example configuration, IPv4 27-38
- example configuration, IPv6 36-15
- interfaces 27-10, 27-16, 36-10
 - adding, IPv4 27-55
 - adding, IPv6 36-27
 - deleting, IPv4 27-67
 - deleting, IPv6 36-30
 - displaying, IPv4 27-132
 - displaying, IPv6 36-59
 - resetting, IPv4 27-86
 - resetting, IPv6 36-38
 - setting parameters, IPv4 27-97
 - setting parameters, IPv6 36-43
- interoperability with DVMRP 27-7
- neighbours
 - displaying, IPv4 27-134
 - displaying, IPv6 36-61
- overview 27-9
- overview, IPv6 36-9
- purging, IPv4 27-85
- purging, IPv6 36-38
- Rendezvous Point candidate 27-13, 27-17
 - adding, IPv4 27-57
 - adding, IPv6 36-29
 - deleting, IPv4 27-68
 - deleting, IPv6 36-31
 - displaying information about, IPv4 27-141
 - displaying information about, IPv6 36-67 to 36-68
 - setting parameters, IPv6 36-44
 - setting priority, IPv4 27-99
- Rendezvous Point tree 27-14
- Rendezvous Point, static 27-17, 36-11
- routing table
 - displaying, IPv4 27-135
 - displaying, IPv6 36-62
- shortest path tree 27-15
- Sparse Mode
 - interoperability with Dense Mode, IPv6 36-4
 - introduction 27-12
- State Refresh, IPv4 27-11, 27-144
- State Refresh, IPv6 36-13, 36-70
- timers
 - displaying, IPv4 27-145
 - displaying, IPv6 36-71
 - setting, IPv4 27-94
 - setting, IPv6 36-41
- Protocol Independent Multicast, IPv6. See Protocol Independent Multicasting (PIM)
- protocols
 - OSPF 23-26
 - RIP 23-25



protocols MIB object C-9

Proxy

Firewall HTTP 48-35

Firewall SMTP 48-33

proxy ARP 23-17

PSTN. See Public Switched Telephone Network (PSTN)

public key encryption 50-2

Public Key Infrastructure (PKI) 50-1

alternative name 50-10

Certificate Authority (CA) 50-5

root 50-6, 50-8

Certificate Database 50-7

certificates 50-3

adding 50-7

chains 50-6

deleting 50-24

fingerprint 50-8

modifying information about 50-8

requesting 50-9

retrieving 50-7, 50-9

storage limits 50-10

updating 50-10

updating keypairs 50-23

validating 50-5, 50-8

CMP 50-9

commands

ADD PKI CERTIFICATE 50-16

ADD PKI CRL 50-18

ADD PKI LDAPREPOSITORY 50-20

CREATE PKI ENROLLMENTREQUEST 50-22

CREATE PKI KEYUPDATEREQUEST 50-23

DELETE PKI CERTIFICATE 50-24

DELETE PKI CRL 50-24

DELETE PKI LDAPREPOSITORY 50-25

DESTROY PKI ENROLLMENTREQUEST 50-25

DESTROY PKI KEYUPDATEREQUEST 50-26

DISABLE PKI DEBUG 50-26

ENABLE PKI DEBUG 50-27

PURGE PKI 50-28

SET PKI 50-29

SET PKI CERTIFICATE 50-30

SET PKI CRL 50-31

SET PKI LDAPREPOSITORY 50-32

SHOW PKI 50-34

SHOW PKI CERTIFICATE 50-42

SHOW PKI CRL 50-45

SHOW PKI ENROLLMENTREQUEST 50-48

SHOW PKI KEYUPDATEREQUEST 50-50

SHOW PKI LDAPREPOSITORY 50-52

configuration examples 50-12

CRL

adding 50-18

update frequency 50-10

CRL Database 50-9

End Entity 50-5

enrollment 50-9, 50-22

removing requests 50-25

retry number 50-10

updating keypairs 50-10

implementing 50-7

ISAKMP

interaction with 50-8

Key Update requests

destroying 50-26

LDAP 50-5, 50-9

overview 50-2

PKCS #10 50-9

PKIX 50-9

repositories 50-5, 50-9

retrieving certificates 50-7

X.509 50-3

Public Switched Telephone Network (PSTN) 20-2

purge

Internet Protocol (IP) configuration 23-123

IPX configuration 38-49

OSPF 29-55

PURGE ACC command 20-26

PURGE ACC SCRIPT command 20-27

PURGE APPLE command 37-38

PURGE ASYN command 11-42

PURGE BOOTP RELAY command 24-34

PURGE BRIDGE command 17-21

PURGE DVMRP command 27-84

PURGE GRE command 33-16

PURGE IP command 23-123

PURGE IPSEC command 49-89

PURGE IPX command 38-49

PURGE LOG command 61-27

PURGE NTP command 57-9

PURGE OSPF command 29-55

PURGE PIM command 27-85

PURGE PIM6 command 36-38

PURGE PKI command 50-28

PURGE PORTAUTH PORT command 45-35

PURGE PPP command 16-80

PURGE QOS command 40-30

PURGE SNMP command 55-42

PURGE STP command 9-57

PURGE TDM command 13-11

PURGE TRIGGER command 60-17

PURGE USER command 43-51

purging

asynchronous calls 20-26

bridge configuration 17-21

call definitions, asynchronous 20-26

IPsec 49-89

NTP 57-9

PPP configuration 16-80

users 43-51

PVC. See X.25

Q

Q.931 12-30

qBridgeConformance MIB object C-40

qBridgeMIBObjects MIB object C-39

QoS group, Allied Telesis Enterprise MIB C-24

qosSwitch MIB object C-24

qosSwitch8948 MIB object C-24

qosSwitch8948PortTable MIB object C-24

qosSwitch8948TrafficClassCountersTable MIB object C-24



qosSwitchPolicyTable MIB object C-24
 qosSwitchPortTable MIB object C-24
 qosSwitchTrafficClassTable MIB object C-24
 Quality of Service (QoS) 8-31
 displaying 8-144
 modifying 8-114
 Quality of Service (QoS)
 commands
 ADD QOS FLOWGROUP 40-17
 ADD QOS POLICY 40-18
 ADD QOS TRAFFICCLASS 40-19
 CREATE QOS FLOWGROUP 40-20
 CREATE QOS POLICY 40-21
 CREATE QOS TRAFFICCLASS 40-22
 DELETE QOS FLOWGROUP 40-24
 DELETE QOS POLICY 40-25
 DELETE QOS TRAFFICCLASS 40-26
 DESTROY QOS FLOWGROUP 40-27
 DESTROY QOS POLICY 40-28
 DESTROY QOS TRAFFICCLASS 40-29
 DISABLE QOS DEBUG 40-29
 ENABLE QOS DEBUG 40-30
 PURGE QOS 40-30
 SET QOS FLOWGROUP 40-31
 SET QOS POLICY 40-34
 SET QOS PORT 40-35
 SET QOS TRAFFICCLASS 40-36
 SET QOS VLANREMAP 40-33
 SHOW QOS FLOWGROUP 40-38
 SHOW QOS POLICY 40-41
 SHOW QOS TRAFFICCLASS 40-43
 SHOW QOS VLANPRIORITYREMAPING 40-39
 queues
 aborting LPD 63-12
 adding LPD 63-10
 configuring LPD 63-4
 creating LPD 63-10
 deleting LPD 63-11
 disabling LPD 63-11
 displaying LPD 63-14
 enabling LPD 63-12
 modifying LPD 63-13
 starting LPD 63-12
 stopping LPD 63-11
 transmission 8-30, 9-5

R

RADIUS
 used by ACC 20-5 to 20-6
 RADIUS authentication 43-15, 43-30, 43-37, 43-62
 RADIUS server
 adding to rule 48-15, 48-81
 used with firewall 48-14
 ranges, OSPF 29-37, 29-45, 29-71, 29-98
 Rapid Commit 35-6, 35-21 to 35-22
 read-only, MIB object 55-7
 read-write, MIB object 55-7
 realTimeClockStatus MIB object C-16
 reboot
 triggers 60-2

RECONNECT command 62-20
 redundancy 52-10
 configuration overview 52-10
 device requirements 52-10
 fail-over balancer 52-10
 firewall policy
 adding logical interface 52-11
 IPaddress alias 52-10
 master 52-10
 master-slave negotiation 52-10
 slave 52-10
 redundant pair
 definition 52-10
 reference clock 57-2
 reinitialise
 Internet Protocol (IP) module 23-124
 IPX module 38-50
 remote management 62-7
 remote power supply (RPS) monitoring 4-10, 4-34
 Remote Security Officer, encryption 43-6
 removing
 PKI Enrollment Requests 50-25
 RENAME command 6-22
 renaming
 files 6-22
 FLASH files 6-22
 Rendezvous Point (RP) 27-13
 adding PIM RP candidate, IPv4 27-17, 27-57
 adding PIM RP candidate, IPv6 36-11, 36-29
 deleting PIM RP candidate, IPv4 27-17, 27-68
 deleting PIM RP candidate, IPv6 36-11, 36-31
 RP tree 27-14
 static 27-17, 36-11
 Repeater Jack Table, MAU MIB C-35
 Repeater MAU Basic Group, MAU MIB C-35 to C-36
 Repeater MAU MIB table, MAU MIB C-35
 repositories 50-5, 50-9
 reset 11-46
 Frame Relay
 DLC 15-9
 interface 15-8, 15-44
 Frame Relay DLC 15-45
 IPX module 38-50
 OSPF 29-55
 stream ports 64-6
 RESET APPLE command 37-38
 RESET BGP PEER command 30-83
 RESET BRI command 12-95
 RESET BRI COUNTERS command 12-96
 RESET BRIDGE command 17-21
 RESET CPU UTILISATION command 4-27
 RESET DS3 command 11-44
 RESET DS3 COUNTERS command 11-45
 RESET DVMRP INTERFACE command 27-85
 RESET ENCO COUNTERS command 44-24
 RESET FRAMERELAY command 15-44
 RESET FRAMERELAY DLC command 15-45
 RESET GARP command 10-16
 RESET GRE command 33-17
 RESET HTTP SERVER command 5-36



RESET IP command 23-124
 RESET IP INTERFACE command 23-125
 RESET IPSEC COUNTERS command 49-90
 RESET IPSEC POLICY COUNTERS command 49-91
 RESET IPSEC SA COUNTERS command 49-92
 RESET IPX command 38-50
 RESET ISAKMP COUNTERS command 49-93
 RESET LACP PORT COUNTER command 8-94, 9-58
 RESET LAPB command 14-61
 RESET LOADBALANCER command 52-39
 RESET LOADER command 5-36
 RESET LPD command 63-12
 reset LPD queue 63-12
 RESET MSTP COUNTER PORT command 9-58
 RESET NTP command 57-10
 RESET OSPF command 29-55
 RESET OSPF COUNTERS command 29-56
 RESET OSPF INTERFACE command 29-57
 RESET OSPF SPF command 29-58
 RESET PIM INTERFACE command 27-86
 RESET PIM6 INTERFACE command 36-38
 RESET PING POLL command 54-14
 RESET PORT command 11-42
 RESET PORT COUNTERS command 11-43
 RESET PORT HISTORY command 11-44
 RESET PORTAUTH PORT MULTIMIB command 45-37
 RESET PPP command 16-81
 RESET PRI command 12-96
 RESET PRI COUNTERS command 12-97
 RESET Q931 command 12-98
 RESET RSVP PROXY command 42-19
 RESET STP command 9-58
 RESET STREAM command 64-6
 RESET STT command 18-6
 RESET SWITCH command 8-94, 9-58
 RESET SWITCH PORT command 8-95, 9-58
 RESET TEST INTERFACE command 65-12
 RESET TPAD command 19-23
 RESET USER command 43-52
 RESET VOIP command 32-35
 RESET X25T command 14-61
 resetting
 activity counters on PPP interfaces 16-29, 16-81
 bridge 17-21
 counters
 ENCO 44-24
 hardware tests 65-12
 interfaces, PPP 16-81
 IPsec counters 49-90
 IPsec policy counters 49-91
 IPsec SA counters 49-92
 ISAKMP counters 49-93
 NTP 57-10
 OSPF counters 29-56
 PPP interfaces 16-81
 RSVP proxy agent 42-8, 42-19
 synchronous tunnel 18-6
 tests 65-12
 TPAD instances 19-7, 19-23
 Resetting GARP 10-16

resource
 definition 52-3
 resource pool
 definition 52-3
 Resource Reservation Protocol (RSVP) 42-1 to 42-33
 best effort QoS 42-2
 commands 42-9 to 42-33
 CREATE RSVP PROXY 42-9
 DESTROY RSVP PROXY 42-12
 DISABLE RSVP 42-12
 DISABLE RSVP DEBUG 42-13
 DISABLE RSVP INTERFACE 42-14
 DISABLE RSVP PROXY 42-15
 ENABLE RSVP 42-15
 ENABLE RSVP DEBUG 42-16
 ENABLE RSVP INTERFACE 42-17
 ENABLE RSVP PROXY 42-18
 RESET RSVP PROXY 42-19
 SET RSVP INTERFACE 42-20
 SET RSVP PROXY 42-21
 SHOW RSVP 42-23
 SHOW RSVP COUNTER 42-25
 SHOW RSVP INTERFACE 42-28
 SHOW RSVP PATH 42-29
 SHOW RSVP PROXY 42-30
 SHOW RSVP PROXY COUNTER 42-32
 SHOW RSVP RESV 42-33
 controlled load service 42-5
 counters
 proxy agent 42-8, 42-32
 counters, displaying 42-6, 42-25
 creating, proxy agent 42-7, 42-9
 data flows 42-2
 debugging
 disabling 42-6, 42-13, 42-15
 enabling 42-6, 42-16, 42-18
 destroying, proxy agent 42-7, 42-12
 disabling 42-5, 42-12
 debugging 42-6, 42-13, 42-15
 interfaces 42-6, 42-14
 proxies 42-7
 proxy agent 42-7, 42-15
 displaying
 counters 42-6, 42-25
 interfaces 42-6, 42-28
 path information 42-6, 42-29
 reservation information 42-6, 42-33
 status 42-5, 42-23
 displaying, counters 42-8, 42-32
 displaying, proxies 42-8, 42-30
 enabling 42-5, 42-15
 debugging 42-6, 42-16, 42-18
 interfaces 42-6, 42-17
 proxies 42-7
 proxy agent 42-7, 42-18
 error messages 42-5
 FF (Fixed-Filter) style 42-4
 filter spec 42-4
 flowspec 42-4
 interfaces



- disabling 42-6, 42-14
 - displaying 42-6, 42-28
 - enabling 42-6, 42-17
 - modifying 42-6, 42-20
- messages
 - error 42-5
 - Path 42-2
 - PathErr 42-5
 - PathTear 42-4
 - Resv 42-4
 - ResvErr 42-5
 - ResvTear 42-4
 - teardown 42-4
- modifying
 - interfaces 42-6, 42-20
 - proxy agent 42-7, 42-21
- overview 42-2 to 42-5
- Path message 42-2
- Path messages
 - displaying 42-6, 42-29
- path state 42-4
- PathErr message 42-5
- PathTear message 42-4
- protocol overview 42-2 to 42-5
- proxy agent 42-6 to 42-9
 - creating 42-7, 42-9
 - destroying 42-7, 42-12
 - disabling 42-7, 42-15
 - disabling proxies 42-7
 - displaying counters 42-8, 42-32
 - displaying proxies 42-8, 42-30
 - enabling 42-7, 42-18
 - enabling proxies 42-7
 - modifying 42-7, 42-21
 - receiver 42-7
 - resetting 42-8, 42-19
 - sender 42-6
- QoS
 - best effort 42-2
 - controlled load 42-5
- receiver 42-4
- receiver proxy agent 42-7
- reservation state 42-4
- reservation style 42-4
- resetting, proxy agent 42-8, 42-19
- Resv message 42-4
- Resv messages
 - displaying 42-6, 42-33
- ResvErr message 42-5
- ResvTear message 42-4
- SE (Shared-Explicit) style 42-4
- sender proxy agent 42-6
- senders 42-2
- sessions 42-2
- soft state 42-4
- state
 - path 42-4
 - reservation 42-4
- status 42-5, 42-23
- support 42-5
 - teardown messages 42-4
 - TSpec 42-2
 - WF (Wildcard-Filter) style 42-4
- restart
 - Internet Protocol (IP) module 23-124
- RESTART command 5-37
- restartGroup MIB object C-16
- restarting the router 4-9, 5-37
- RIP (IPX) 38-3, 38-5
- RIP filters
 - IPX 38-10, 38-37, 38-45, 38-54 to 38-55, 38-70
- RIPng. See Router Information Protocol version 6 (RIPv6)
- RIPv6. See Router Information Protocol version 6 (RIPv6)
- RMON MIB C-45
- rmon MIB object C-45
- root bridge 9-3
- route
 - mapping
 - X.25 14-7, 14-13, 14-43, 14-56, 14-94
 - X.25
 - mapping 14-7, 14-13, 14-43, 14-56, 14-94
- route or RTMP filtering 37-13
- route templates
 - adding 23-83
 - deleting 23-94
 - displaying 23-198
 - modifying 23-152
- route templates, IP 23-29
- route-based virtual balancer 52-6
 - affinity table 52-6
 - selection algorithm 52-6
 - static routes 52-6
- router advertisements (ICMP) 23-20
- Router Discovery 23-20
- router id
 - OSPF 29-59
- Router Information Protocol version 6 (RIPv6) 34-15
- router status
 - OSPF 29-76
- router type
 - Internet Protocol (IP) 23-97, 23-101, 23-108, 23-113
- router types
 - OSPF 29-4, 29-28, 29-42, 29-63
- routerSwitch MIB object C-5 to C-6
- routes
 - adding Internet Protocol (IP) 23-23, 23-80
 - changing Internet Protocol (IP) 23-148
 - deleting Internet Protocol (IP) 23-93
 - disabling Internet Protocol (IP) 23-105
 - displaying Internet Protocol (IP) 23-25, 23-50, 23-192
 - enabling Internet Protocol (IP) 23-117
 - Internet Protocol (IP) 23-22, 23-80, 23-93, 23-105, 23-117, 23-148
 - IPX 38-5
 - modifying Internet Protocol (IP) 23-148
 - OSPF 29-9
 - setting Internet Protocol (IP) 23-148
- routes, OSPF 29-101
- routing
 - information filters 23-26



- information filters, Internet Protocol (IP) 31-46, 31-58, 31-63, 31-76
- Internet Protocol (IP) 23-22
- IPX 38-5
- OSPF 29-9
- protocols
 - Routing Information Protocol (RIP) 23-25
- Routing Information Protocol (RIP) 23-25, 28-7, 28-12, 28-14, 28-18 to 28-19, 28-21, 28-24, 38-3, 38-5, 38-54
- interface to OSPF 29-14, 29-59
- OSPF interface 29-14, 29-59
- routing modules
 - configuring for Frame Relay 15-17
- Routing Table Maintenance Protocol (RTMP) 37-8
 - See also AppleTalk
- routing table, Internet Protocol (IP) 23-23, 23-192
- rpJackTable MIB object C-35
- rpMauTable object C-35
- RSO. See Remote Security Officer
- RSVP. See Resource Reservation Protocol (RSVP)
- RTMP. See AppleTalk: Routing Table Maintenance Protocol (RTMP)
- rules, firewall 48-8
 - adding 48-81
 - deleting 48-108
 - modifying 48-142

S

- S/T interfaces, Basic Rate Access 12-5
- SAP filters
 - IPX 38-10 to 38-11, 38-39, 38-46, 38-54, 38-56, 38-72
- saving dynamic configuration 5-22
- scripting. See scripts
- scripts 59-1
 - activating by trigger 59-2
 - activating from command line 59-2, 59-7
 - adding 59-8
 - BOOT.CFG 59-2
 - calling other scripts 59-4
 - commands
 - ACTIVATE SCRIPT 59-7
 - ADD SCRIPT 59-8
 - DEACTIVATE SCRIPT 59-9
 - DELETE SCRIPT 59-10
 - SET SCRIPT 59-12
 - SHOW SCRIPT 59-14
 - WAIT 59-11, 59-15
 - control structures 59-5, 59-11
 - creating 59-2
 - creating modem 20-21
 - creating using script commands 59-3, 59-8
 - creating using text editor 59-3
 - deactivating 59-9
 - deleting 59-10
 - deleting modem 20-7, 20-24, 20-27
 - displaying 59-3, 59-14
 - displaying modem 20-8, 20-34, 20-39
 - file format 59-2
 - halting 59-9

- if..then..else..endif 59-5, 59-11
- loading from asynchronous port 59-4
- loading from TFTP server 59-3
- modem 20-6
- modifying 59-12
- modifying modem 20-7, 20-32
- modifying using script commands 59-3, 59-10, 59-12
- output to logging facility 59-4
- output to terminal 59-4
- parameters 59-4
- parameters, global 59-5
- pausing 59-15
- playing 59-2
- redirecting output 59-4
- script commands 59-3
- using scripts 59-4
- secondary name server 23-153
- Secure Copy
 - configuration 46-5
- secure router logging protocol (SRLP) 61-4, 61-6
- Secure Shell 46-1
 - adding
 - users 46-4, 46-11
 - ciphers 46-3
 - commands
 - ADD SSH USER 46-11
 - DELETE SSH USER 46-13
 - DISABLE SSH SERVER 46-14, 46-19
 - DISABLE SSH USER 46-15
 - ENABLE SSH SERVER 46-16
 - ENABLE SSH USER 46-17
 - SET SSH USER 46-21
 - SHOW SSH 46-22
 - SHOW SSH SESSIONS 46-33
 - SHOW SSH USER 46-36
 - SSH 46-38
 - configuration 46-4
 - configuration examples 46-7
 - deleting
 - users 46-4, 46-13
 - disabling
 - server 46-14
 - users 46-5, 46-15
 - displaying
 - server configuration 46-4, 46-22
 - sessions 46-33
 - users 46-5, 46-36
 - enabling
 - server 46-16
 - users 46-5, 46-17
 - encryption algorithms 46-3
 - encryption keys 46-2, 46-5
 - example configurations 46-7
 - keys 46-2, 46-5
 - log messages 46-3
 - modifying
 - server 46-19
 - users 46-5, 46-21
 - operations 46-2
 - Secure Copy 46-5



- Secure Shell protocol 46-2
- server
 - disabling 46-14
 - displaying 46-4, 46-22
 - enabling 46-16
 - modifying 46-19
- sessions 46-38
 - displaying 46-33
- users
 - adding 46-4, 46-11
 - deleting 46-4, 46-13
 - disabling 46-5, 46-15
 - displaying 46-5, 46-36
 - enabling 46-5, 46-17
 - modifying 46-5, 46-21
- Secure Sockets Layer
 - commands
 - DISABLE SSL DEBUG 47-10
 - ENABLE SSL DEBUG 47-10
 - SET SSL 47-11
 - SHOW SSL 47-12
 - SHOW SSL COUNTERS 47-14
 - SHOW SSL SESSIONS 47-22
- security
 - asynchronous ports 43-12
 - options for Internet Protocol (IP) 23-41
 - switch ports 7-4, 8-13, 8-109
- Security Associations
 - adding members 49-49
 - bundles 49-15, 49-50, 49-72, 49-95, 49-118
 - converting old style to IPsec 49-20, 49-48
 - creating 49-71
 - debugging 49-81, 49-89
 - deleting members 49-72
 - destroying 49-75
 - disabling old style 49-76
 - displaying counters 49-209
 - displaying members 49-206
 - displaying users 49-215
 - enabling old style 49-82
 - IPsec 49-5
 - ISAKMP 49-24 to 49-25
 - modifying 49-115
 - specifications 49-13
 - creating 49-60
 - destroying 49-74
 - displaying 49-154
 - modifying 49-104
- security associations 23-41
- security gateway, defined 49-4
- security mode
 - disabling 43-41
 - enabling 43-46
- Security Parameter Index (SPI) 49-5
- security policies, firewall 48-6
- Security Policy Database (SPD) 49-13
- security policy for firewalls 48-6
- security timer 43-5
- seed router, AppleTalk 37-9
- selection algorithm
 - definition 52-4
- selectors, IPsec policies 49-14
- semipermanent manager port 43-4, 43-14, 43-53, 43-61
- send statement, scripts 20-7
- sending mail 4-10, 4-24
- Serial Line Internet Protocol (SLIP) 20-2
 - See also Internet Protocol (IP)
 - encapsulation, asynchronous ports 11-21, 20-4
- server
 - NTP entity 57-2, 57-4
- Server Load Balancing
 - Introduction 52-3
 - Overview 52-3
- Server selection 23-34
- Service Advertisement Protocol (SAP) 38-39, 38-46, 38-54, 38-56, 38-72
- services 62-15 to 62-16, 62-21, 62-26
 - IPX 38-40, 38-47
- session keys, star key management 51-6, 51-9
- sessions, terminal server 62-5
- SET ACC CALL command 20-28
- SET ACC CALL PORT command 20-31
- SET ACC SCRIPT command 20-32
- SET APPLE PACKETFILTER command 37-39
- SET APPLE PORT command 37-15, 37-41
- SET APPLE ROUTECONVERT command 37-43
- SET APPLE ROUTEFILTER command 37-44
- SET APPLE ZONE command 37-45
- SET APPLE ZONEFILTER command 37-46
- SET BGP AGGREGATE command 30-87
- SET BGP command 30-85
- SET BGP IMPORT command 30-91
- SET BGP PEER command 30-93
- SET BOOTP MAXHOPS command 24-35
- SET BRI command 12-99
- SET BRIDGE AGEINGTIMER command 17-21
- SET BRIDGE FILTER command 17-22
- SET BRIDGE PORT command 17-24
- SET CONFIG command 5-38
- SET DHCP POLICY command 24-41
- SET DTEADDRESS command 14-37
- SET DVMPR INTERFACE command 27-87
- SET ENCO DHPADDING command 44-25
- SET ENCO DHPRIORITY command 44-25
- SET ENCO KEY command 44-26
- SET ENCO SW command 44-27
- SET FIREWALL POLICY ATTACK command 48-138
- SET FIREWALL POLICY command 48-136, 48-138
- SET FIREWALL POLICY RULE command 48-142
- SET FIREWALL POLICY SMTPDOMAIN command 48-147
- SET FRAMERELAY command 15-46
- SET FRAMERELAY DLC command 15-49
- SET GARP PORT command 10-17
- SET GARP TIMER command 10-19
- SET GRE command 33-18
- SET H323 command 32-36
- SET H323 ENTRY command 32-37
- SET H323 GATEWAY command 32-38
- SET HELP command 2-15
- SET HTTP SERVER command 5-39



SET IGMP FILTER command 27-88
 SET IGMP Snooping FASTLEAVE command 27-89
 SET IGMP Snooping ROUTERMODE command 27-90
 SET INSTALL command 5-40
 SET INTERFACE MTU command 11-55
 SET INTERFACE TRAPLIMIT command 11-57
 SET IP ARP command 23-127
 SET IP ARP TIMEOUT command 23-128 to 23-129
 SET IP AUTONOMOUS command 30-111
 SET IP DNSRELAY command 23-134
 SET IP FILTER command 23-135
 SET IP HOST command 23-139
 SET IP IGMP command 27-91
 SET IP IGMP INTERFACE command 27-92
 SET IP INTERFACE command 23-140, 33-4 to 33-5
 SET IP LOCAL command 23-145
 SET IP NAMESERVER command 23-147
 SET IP RIP 28-14
 SET IP RIPTIMER command 28-18
 SET IP ROUTE command 23-148
 SET IP ROUTE FILTER command 31-63
 SET IP ROUTE TEMPLATE command 23-152
 SET IP ROUTEMAP command 31-66
 SET IP SECONDARYNAMESERVER command 23-153
 SET IPSEC BUNDLESPECIFICATION command 49-95
 SET IPSEC POLICY command 49-96
 SET IPSEC SASPECIFICATION command 49-104
 SET IPSEC UDPPORT command 49-106
 SET IPV6 FILTER command 34-65
 SET IPV6 INTERFACE command 34-68
 SET IPV6 MLD command 36-39
 SET IPV6 MLD INTERFACE command 36-40
 SET IPV6 MTU command 34-69
 SET IPX CIRCUIT command 38-51
 SET IPX GRIP|GSAP command 38-54
 SET IPX RIP command 38-55
 SET IPX SAP command 38-56
 SET ISAKMP POLICY command 49-107
 SET ISDN CALL command 12-101
 SET ISDN DOMAINNAME command 12-107
 SET ISDN LOG command 12-107
 SET L2TP CALL command 21-40
 SET L2TP CHECKSUM command 21-43
 SET L2TP FILTER command 21-43
 SET L2TP PASSWORD command 21-44
 SET L2TP USER command 21-45
 SET LACP PRIORITY command 8-97, 9-59
 SET LAPB command 14-62
 SET LOADBALANCER command 52-40
 SET LOADBALANCER REDUNDANCY command 52-41
 SET LOADBALANCER RESOURCE command 52-43
 SET LOADBALANCER RESPOOL command 52-44
 SET LOADBALANCER VIRTUALBALANCER command 52-45
 SET LOADER command 5-42
 SET LOG OUTPUT command 61-28
 SET LOG RECEIVE command 61-34
 SET LOG UTCOFFSET command 61-35
 SET LPD command 63-13
 SET MAIL command 4-28
 SET MANAGER PORT command 43-53
 SET MIOX CIRCUIT command 14-64
 SET MIOX command 14-63
 SET NTP UTCOFFSET command 57-10
 SET OSPF AREA command 29-63
 SET OSPF command 29-59
 SET OSPF HOST command 29-65
 SET OSPF INTERFACE command 29-66
 SET OSPF NEIGHBOUR command 29-70
 SET OSPF RANGE command 29-71
 SET OSPF STUB command 29-74
 SET OSPF SUMMARYADDRESS command 29-75
 SET PASSWORD command 43-54 to 43-55
 set PDU 55-9
 SET PIM BSR CANDIDATE command 27-96
 SET PIM command 27-94
 SET PIM INTERFACE command 27-97
 SET PIM RPCANDIDATE command 27-99
 SET PIM6 BSR CANDIDATE command 36-42
 SET PIM6 command 36-41
 SET PIM6 INTERFACE command 36-43
 SET PIM6 RPCANDIDATE command 36-44
 SET PING command 23-154
 SET PING POLL command 54-15
 SET PKI CERTIFICATE command 50-30
 SET PKI command 50-29
 SET PKI CRL command 50-31
 SET PKI LDAPREPOSITORY command 50-32
 SET PORT command 11-48
 SET PORTAUTH PORT command 45-38
 SET PORTAUTH PORT SUPPLICANTMAC command 45-44
 SET PORTAUTH USERNAME command 45-48
 SET PPP ACSERVICE command 16-90
 SET PPP command 16-82
 SET PPP TEMPLATE command 16-90
 SET PRI command 12-110
 SET Q931 command 12-114
 SET QOS FLOWGROUP command 40-31
 SET QOS POLICY command 40-34
 SET QOS PORT command 40-35
 SET QOS TRAFFICCLASS command 40-36
 SET QOS VLANREMAP command 40-33
 SET RSVP INTERFACE command 42-20
 SET RSVP PROXY command 42-21
 SET SA command 49-115
 SET SCRIPT command 59-12
 SET SERVICE command 62-21
 SET SIP command 32-39
 SET SIP GATEWAY command 32-41
 SET SNMP COMMUNITY command 55-42, 55-52
 SET SNMP ENGINEID command 55-43
 SET SNMP GROUP command 55-44
 SET SNMP TARGETADDR command 55-46
 SET SNMP TARGETPARAMS command 55-47
 SET SNMP USER command 55-48
 SET SSH USER command 46-21
 SET SSL command 47-11
 set stack authentication command 58-23
 set stack stackid command 58-24
 SET STAR command 51-15
 SET STP command 9-67



SET STP PORT command 9-70
 SET STREAM command 64-7
 SET STT command 18-7
 SET SWITCH AGEINGTIMER command 8-97
 SET SWITCH L3FILTER ENTRY command 8-103
 SET SWITCH L3FILTER MATCH command 8-106
 SET SWITCH MIRROR command 8-108
 SET SWITCH PORT command 8-109
 SET SWITCH QOS command 8-114
 SET SWITCH TRUNK command 8-116
 SET SYN command 11-58
 SET SYSTEM CONTACT command 4-31
 SET SYSTEM LOCATION command 4-32
 SET SYSTEM NAME command 4-33
 SET SYSTEM RPSMONITOR command 4-34
 SET SYSTEM TERRITORY command 12-20, 12-31, 12-47, 12-49, 12-117
 SET TELNET command 62-23
 SET TIME command 4-35
 SET TPAD command 19-24
 SET TRACE command 23-157
 SET TRIGGER command 60-18
 SET TTY command 62-24
 SET USER command 43-58
 SET VLAN PORT command 8-117
 SET VOIP BOOTCODE command 32-43
 SET VOIP command 32-42
 SET VOIP FILE command 32-45
 SET VOIP PHONE command 32-46
 SET VOIP PUBLIC INTERFACE command 32-53
 SET VRRP command 53-22
 SET X25C command 14-66
 SET X25C HUNTGROUPO command 14-68
 SET X25T command 14-70
 SET X25T CPAR command 14-72
 Setting
 timer 10-19
 setting
 activity limits on PPP interfaces 16-29, 16-53, 16-62
 clock 4-35
 date 4-35
 default configuration 5-38
 install information 5-40
 mail host name 4-28
 NTP
 UTC offset 57-10
 semipermanent manager port 43-53
 synchronous tunnel 18-7
 system clock 4-35
 system date 4-35
 system help file 2-15
 system information 4-35
 system time 4-35
 time 4-35
 Setting Ports 10-17
 shortest path tree, PIM Sparse Mode 27-15
 show 48-156
 SHOW ACC CALL command 20-35
 SHOW ACC command 20-34
 SHOW ACC DOMAINNAME command 20-38

SHOW ACC SCRIPT command 20-39
 SHOW ALIAS command 2-15 to 2-16, 6-29
 SHOW APPLE AARP command 37-48
 SHOW APPLE CIRCUIT command 37-49
 SHOW APPLE command 37-47
 SHOW APPLE COUNTER command 37-50
 SHOW APPLE DLCI command 37-56
 SHOW APPLE PORT command 37-59
 SHOW APPLE ROUTE command 37-16, 37-61
 SHOW APPLE ZONE command 37-63
 SHOW APPLE ZONEFILTER command 37-64
 SHOW BGP AGGREGATE command 30-114
 SHOW BGP command 30-112
 SHOW BGP CONFEDERATION command 30-115
 SHOW BGP IMPORT command 30-125
 SHOW BGP NETWORK command 30-130
 SHOW BGP PEER command 30-131
 SHOW BGP ROUTE command 30-138
 SHOW BOOTP RELAY command 24-48
 SHOW BRI CONFIGURATION command 12-118
 SHOW BRI COUNTERS command 12-120
 SHOW BRI CTEST command 12-127
 SHOW BRI DEBUG command 12-128
 SHOW BRI STATE command 12-129
 SHOW BRI TEST command 12-133
 SHOW BRIDGE command 17-25
 SHOW BRIDGE PORT command 17-33
 SHOW BRIDGE STATION command 17-35
 SHOW BUFFER command 4-37
 SHOW CONFIG command 5-46
 SHOW CPU command 4-41
 SHOW DEBUG command 4-43
 SHOW DHCP CLIENT command 24-53
 SHOW DHCP command 24-51
 SHOW DHCP POLICY command 24-55
 SHOW DHCP RANGE command 24-57
 SHOW DS3 CMTCE command 11-69
 SHOW DS3 CONFIGURATION command 11-71
 SHOW DS3 COUNTERS command 11-72
 SHOW DS3 DEBUG command 11-80
 SHOW DS3 STATE command 11-81
 SHOW DS3 TEST command 11-85
 SHOW DVMRP command 27-100
 SHOW DVMRP COUNTERS command 27-101
 SHOW DVMRP DEBUG command 27-102
 SHOW DVMRP FORWARDING command 27-103
 SHOW DVMRP INTERFACE command 27-104
 SHOW DVMRP NEIGHBOUR command 27-105
 SHOW DVMRP ROUTE command 27-106
 SHOW ENCO CHANNEL command 44-31
 SHOW ENCO COUNTERS command 44-37
 SHOW ENCO KEY command 44-52 to 44-53
 SHOW EXCEPTION command 4-50
 SHOW FEATURE command 5-48
 SHOW FFILE command 6-24, 6-26
 SHOW FIREWALL ACCOUNTING command 48-154
 SHOW FIREWALL ARP command 48-156
 SHOW FIREWALL ARP command 48-156
 SHOW FIREWALL command 48-151
 SHOW FIREWALL EVENT command 48-158



SHOW FIREWALL POLICY SESSION command 48-189
 SHOW FLASH command 6-30
 SHOW FLASH PHYSICAL command 6-32
 SHOW FRAMERELAY command 15-51
 SHOW FRAMERELAY DLC command 15-61
 SHOW FRAMERELAY LI 15-69
 SHOW GARP command 10-21
 SHOW GARP COUNTER command 10-23
 SHOW GARP DB command 10-26
 SHOW GARP DEBUG command 10-27
 SHOW GARP GIP command 10-28
 SHOW GARP MACHINE command 10-29
 SHOW GRE command 33-21 to 33-23
 SHOW H323 command 32-54
 SHOW H323 ENTRY command 32-55
 SHOW H323 GATEWAY command 32-56
 SHOW HTTP DEBUG command 5-51
 SHOW HTTP SERVER command 5-52
 SHOW HTTP SESSION command 5-53
 SHOW IGMP FILTER command 27-107
 SHOW IGMP SNOOPING command 27-109
 SHOW IGMP SNOOPING COUNTER command 27-111
 SHOW IGMP SNOOPING ROUTERADDRESS command 27-113
 SHOW INSTALL command 5-54
 SHOW INTERFACE command 11-87
 SHOW IP ARP command 23-165
 SHOW IP ASPATHLIST 31-73
 SHOW IP COMMUNITYLIST command 31-74
 SHOW IP DEBUG command 23-176
 SHOW IP FILTER command 23-180
 SHOW IP HELPER command 23-182
 SHOW IP HOST command 23-184
 SHOW IP IGMP command 27-114
 SHOW IP IGMP COUNTER command 27-118
 SHOW IP INTERFACE command 23-186
 SHOW IP MVR command 27-122
 SHOW IP MVR COUNTER command 27-123
 SHOW IP POOL command 23-190
 SHOW IP RIP command 28-19
 SHOW IP RIP COUNTERS command 28-21
 SHOW IP RIPTIMER command 28-24
 SHOW IP ROUTE command 23-192
 SHOW IP ROUTE FILTER command 31-76
 SHOW IP ROUTE MULTICAST command 23-196
 SHOW IP ROUTE TEMPLATE command 23-198
 SHOW IP ROUTEMAP command 31-77
 SHOW IP TRUSTED command 28-25
 SHOW IP UDP command 23-201
 SHOW IPSEC BUNDLESPECIFICATION command 49-118
 SHOW IPSEC command 49-117
 SHOW IPSEC COUNTERS command 49-121
 SHOW IPSEC POLICY command 49-136, 49-140
 SHOW IPSEC SA command 49-146
 SHOW IPSEC SASPECIFICATION command 49-154
 SHOW IPV6 command 34-74
 SHOW IPV6 COUNTER command 34-76
 SHOW IPV6 FILTER command 34-80
 SHOW IPV6 HOST command 34-82
 SHOW IPV6 INTERFACE command 34-83

SHOW IPV6 MLD command 36-45
 SHOW IPV6 MLD CONFIG command 36-47
 SHOW IPV6 MLD COUNTERS command 36-48
 SHOW IPV6 MLD DEBUG command 36-49
 SHOW IPV6 MULTICAST command 34-85
 SHOW IPV6 ND command 34-86
 SHOW IPV6 RIP command 34-89
 SHOW IPV6 ROUTE command 34-91
 SHOW IPV6 TUNNEL command 34-95
 SHOW IPX CACHE command 38-59
 SHOW IPX CALLLOG command 38-60
 SHOW IPX CIRCUIT command 38-63
 SHOW IPX command 38-57
 SHOW IPX COUNTER command 38-65
 SHOW IPX EXCLUSION command 38-68
 SHOW IPX INCLUSION command 38-69
 SHOW IPX RIP command 38-70
 SHOW IPX ROUTE command 38-71
 SHOW IPX SAP command 38-72
 SHOW IPX SERVICE command 38-74
 SHOW IPX SPXSPOOF command 38-75
 SHOW ISAKMP command 49-157
 SHOW ISAKMP COUNTERS command 49-159
 SHOW ISAKMP EXCHANGE command 49-189
 SHOW ISAKMP POLICY command 49-196
 SHOW ISAKMP SA command 49-201
 SHOW ISDN CALL command 12-136
 SHOW ISDN CLILIST command 12-140
 SHOW ISDN DOMAINNAME command 12-141
 SHOW ISDN LOG command 12-142
 SHOW L2TP CALL command 21-50
 SHOW L2TP command 21-48
 SHOW L2TP IP command 21-55
 SHOW L2TP TUNNEL command 21-56, 21-59
 SHOW L2TP USER command 21-67
 SHOW LACP command 8-118
 SHOW LACP PORT command 8-119, 8-121 to 8-122, 9-74
 SHOW LACP TRUNK command 8-122, 9-74
 SHOW LAPB command 14-73
 SHOW LAPD command 12-144
 SHOW LAPD COUNT command 12-147
 SHOW LAPD STATE command 12-148
 SHOW LOADBALANCER AFFINITY command 52-49
 SHOW LOADBALANCER command 52-47
 SHOW LOADBALANCER CONNECTIONS command 52-51
 SHOW LOADBALANCER REDUNDANCY command 52-52
 SHOW LOADBALANCER RESOURCE command 52-55
 SHOW LOADBALANCER RESPOOL command 52-58
 SHOW LOADBALANCER VIRTUALBALANCER command 52-60
 SHOW LOADER 5-58
 SHOW LOADER command 5-58
 SHOW LOG command 61-36 to 61-37
 SHOW LOG COUNTERS command 61-42
 SHOW LOG OUTPUT command 61-44, 61-47
 SHOW LOG QUEUE command 61-49, 61-52
 SHOW LOG RECEIVE command 61-50
 SHOW LOG STATUS command 61-52
 SHOW LPD command 63-14
 SHOW MAIL command 4-51



SHOW MANAGER PORT command 43-61
 SHOW MIOX CIRCUIT command 14-81
 SHOW MIOX command 14-78
 SHOW MIOX COUNT command 14-79
 SHOW MLDSNOOPING command 36-50
 SHOW MLDSNOOPING COUNTER command 36-51
 SHOW MSTP CIST PORT command 9-79
 SHOW MSTP command 9-74, 9-77
 SHOW MSTP COUNTER PORT command 9-81
 SHOW MSTP DEBUG MSTI command 9-82
 SHOW NTP command 57-11
 SHOW NVS command 6-33
 SHOW NVS FREE command 6-34
 SHOW OSPF AREA command 29-79
 SHOW OSPF command 29-76
 SHOW OSPF DEBUG command 29-82
 SHOW OSPF HOST command 29-83
 SHOW OSPF INTERFACE command 29-85
 SHOW OSPF LSA command 29-90
 SHOW OSPF NEIGHBOURS command 29-96
 SHOW OSPF RANGE command 29-98
 SHOW OSPF ROUTE command 29-101
 SHOW OSPF STUB command 29-103
 SHOW OSPF SUMMARYADDRESS command 29-105
 SHOW PATCH command 5-60
 SHOW PIM BSRCANDIDATE command 27-125
 SHOW PIM command 27-124
 SHOW PIM COUNTERS command 27-127
 SHOW PIM DEBUG command 27-131
 SHOW PIM INTERFACE command 27-132
 SHOW PIM NEIGHBOUR command 27-134
 SHOW PIM ROUTE command 27-135
 SHOW PIM RPCANDIDATE command 27-141
 SHOW PIM RPSET command 27-142
 SHOW PIM STATEREFRRESH command 27-144
 SHOW PIM TIMER command 27-145
 SHOW PIM6 BSRCANDIDATE command 36-53
 SHOW PIM6 CONFIG command 36-54
 SHOW PIM6 COUNTERS command 36-55
 SHOW PIM6 DEBUG command 36-58
 SHOW PIM6 INTERFACE command 36-59
 SHOW PIM6 NEIGHBOUR command 36-61
 SHOW PIM6 ROUTE command 36-62
 SHOW PIM6 RPCANDIDATE command 36-67
 SHOW PIM6 RPSET command 36-68
 SHOW PIM6 STATEREFRRESH command 36-70
 SHOW PIM6 TIMER command 36-71
 SHOW PING command 23-203
 SHOW PING POLL command 54-17
 SHOW PKI CERTIFICATE command 50-42
 SHOW PKI command 50-34
 SHOW PKI CRL command 50-45
 SHOW PKI ENROLLMENTREQUEST command 50-48
 SHOW PKI KEYUPDATEREQUEST command 50-50
 SHOW PKI LDAPREPOSITORY command 50-52
 SHOW PORTAUTH command 45-50
 SHOW PORTAUTH PORT command 45-55
 SHOW PORTAUTH PORT MULTISUPPLICANT command 45-63
 SHOW PORTAUTH TIMER command 45-68

SHOW PPP command 16-98
 SHOW PPP CONFIG command 16-99
 SHOW PPP COUNT command 16-105
 SHOW PPP DEBUG command 16-118
 SHOW PPP IDLETIMER command 16-119
 SHOW PPP LIMITS command 16-120
 SHOW PPP MULTILINK command 16-121
 SHOW PPP NAMESERVER command 16-123
 SHOW PPP PPPOE command 16-124
 SHOW PPP TEMPLATE command 16-124
 SHOW PPP TXSTATUS command 16-130
 SHOW PPP UTILISATION command 16-132
 SHOW PRI CONFIGURATION command 12-149
 SHOW PRI COUNTERS command 12-150
 SHOW PRI CTEST command 12-160
 SHOW PRI DEBUG command 12-161
 SHOW PRI STATE command 12-162
 SHOW PRI TEST command 12-168
 SHOW Q931 command 12-171
 SHOW Q931 SPID command 12-174
 SHOW QOS FLOWGROUP command 40-38
 SHOW QOS POLICY command 40-41
 SHOW QOS TRAFFICCLASS command 40-43
 SHOW QOS VLANPRIORITYREMAPING command 40-39
 SHOW RADIUS command 43-62
 SHOW RELEASE command 5-61
 SHOW RSVP command 42-23
 SHOW RSVP COUNTER command 42-25
 SHOW RSVP INTERFACE command 42-28
 SHOW RSVP PATH command 42-29
 SHOW RSVP PROXY command 42-30
 SHOW RSVP PROXY COUNTER command 42-32
 SHOW RSVP RESV command 42-33
 SHOW SA command 49-206
 SHOW SA COUNTER command 49-209
 SHOW SA USER command 49-215
 SHOW SCRIPT command 59-14
 SHOW SERVICE command 62-26
 SHOW SESSIONS command 62-27
 SHOW SIP command 32-57
 SHOW SIP GATEWAY command 32-58
 SHOW SNMP command 55-49, 55-52
 SHOW SNMP COMMUNITY command 55-52
 SHOW SNMP GROUP command 55-53
 SHOW SNMP TARGETADDR command 55-54
 SHOW SNMP TARGETPARAMS command 55-55
 SHOW SNMP USER command 55-56
 SHOW SNMP VIEW command 55-57
 SHOW SSH command 46-22
 SHOW SSH SESSIONS command 46-33
 SHOW SSH USER command 46-36
 SHOW SSL command 47-12
 SHOW SSL COUNTERS command 47-14
 SHOW SSL SESSIONS command 47-22
 show stack command 58-26
 SHOW STAR command 51-17, 51-19, 51-24 to 51-25
 SHOW STARTUP command 4-52
 SHOW STP command 9-87
 SHOW STP COUNTER command 9-91
 SHOW STP DEBUG command 9-93



SHOW STP PORT command 9-94
 SHOW STREAM command 64-8
 SHOW STT command 18-8
 SHOW SWITCH command 8-123
 SHOW SWITCH COUNTER command 8-125
 SHOW SWITCH DEBUG command 8-127
 SHOW SWITCH FDB command 8-128
 SHOW SWITCH FILTER command 8-130
 SHOW SWITCH L3FILTER command 8-134
 SHOW SWITCH PORT command 8-136
 SHOW SWITCH PORT COUNTER command 8-139
 SHOW SWITCH PORT INTRUSION command 8-143
 SHOW SWITCH QOS command 8-144
 SHOW SWITCH TRUNK command 8-145
 SHOW SYN command 11-91
 SHOW SYN COUNTERS command 11-93
 SHOW SYSTEM command 4-54
 SHOW SYSTEM SERIALNUMBER command 4-58
 SHOW TACACS SERVER command 43-67
 SHOW TCP command 23-205
 SHOW TDM command 13-12
 SHOW TEST command 65-13
 SHOW TIME command 4-59
 SHOW TPAD command 19-26
 SHOW TPAD COUNTERS command 19-31
 SHOW TPAD PORTS command 19-29
 SHOW TRACE command 23-210
 SHOW TRIGGER command 60-24
 SHOW TTY command 62-29
 SHOW USER command 43-72
 SHOW USER RSO command 43-77
 SHOW VLAN command 8-146
 SHOW VLAN DEBUG command 8-148
 SHOW VLANRELAY command 8-149
 SHOW VOIP command 32-59
 SHOW VOIP COUNTER ENGINE command 32-61
 SHOW VOIP LOAD command 32-65
 SHOW VOIP PHONE command 32-67
 SHOW VRRP command 53-25
 SHOW X25C command 14-85
 SHOW X25C COUNTER command 14-87
 SHOW X25C DTEADDRESS command 14-90
 SHOW X25C HUNTGROU command 14-91
 SHOW X25C PATH command 14-93
 SHOW X25C ROUTE command 14-94
 SHOW X25C STATE command 14-95
 SHOW X25T command 14-97
 SHOW X25T CPAR command 14-102
 signals, modem control 11-10, 11-58, 11-91
 Simple Interface Names 11-4
 Simple Network Management (SNMP) commands
 ADD SNMP TARGETADDR 55-30
 Simple Network Management Commands commands
 ADD SNMP VIEW 55-32
 Simple Network Management Protocol (SNMP) 23-36,
 55-1 to 55-58
 access mode 55-7
 agent
 displaying 55-52
 enabling 55-40

authentication trap
 enabling 55-41
 authenticationv1 and v2 55-17
 commands
 ADD SNMP COMMUNITY 55-25
 ADD SNMP GROUP 55-27
 ADD SNMP TARGETADDR 55-28
 ADD SNMP TARGETPARAMS 55-29
 ADD SNMP USER 55-30
 CREATE SNMP COMMUNITY 55-33
 DELETE SNMP COMMUNITY 55-35
 ENABLE SNMP 55-40
 ENABLE SNMP AUTHENTICATE_TRAP 55-41
 ENABLE SNMP COMMUNITY 55-41
 PURGE SNMP 55-42
 SET SNMP COMMUNITY 55-42, 55-52
 SET SNMP ENGINEID 55-43
 SET SNMP GROUP 55-44
 SET SNMP TARGETADDR 55-46
 SET SNMP TARGETPARAMS 55-47
 SET SNMP USER 55-48
 SHOW SNMP 55-49, 55-52
 SHOW SNMP COMMUNITY 55-52
 SHOW SNMP GROUP 55-53
 SHOW SNMP TARGETADDR 55-54
 SHOW SNMP TARGETPARAMS 55-55
 SHOW SNMP USER 55-56
 SHOW SNMP VIEW 55-57
 communities 55-16
 adding 55-25
 creating 55-33
 deleting 55-35
 destroying 55-39
 disabling 55-40
 displaying 55-52
 enabling 55-41
 setting 55-42
 showing 55-52
 community 55-11
 configuration example 55-24
 deprecated status 55-8
 example configuration 55-24
 get-bulk-request PDU 55-9
 get-next PDU 55-9
 get-request PDU 55-9
 get-response PDU 55-9
 groups
 adding 55-27
 deleting 55-36
 setting 55-44
 showing 55-53
 instance 55-6
 instance identifier 55-6
 interface link traps 11-29, 11-34, 11-40, 11-57
 Internet-standard MIB 55-5
 Internet-standard Network Management Framework
 55-3
 link traps 11-29, 11-34, 11-40, 11-57
 managed devices 55-3
 Management Information Base (MIB) 55-3, 55-5



- managing interfaces 11-29
- mandatory status 55-8
- message format 55-9 to 55-10
- message format SNMPv3 55-13
- message protocol format SNMPv1 and v2 55-8
- names, object 55-6
- network management framework 55-3
- network management protocol 55-3 to 55-4
- Network Management Station (NMS) 55-3
- not-accessible access mode 55-7
- object descriptor 55-6
- object identifier 55-6
- object names 55-6
- object syntax 55-7
- obsolete status 55-8
- optional status 55-8
- polling 55-11
- protocol format SNMPv1 55-8
- read-only access mode 55-7
- read-write access mode 55-7
- set PDU 55-9
- SNMP versions 55-9
- SNMPv1 and v2 55-15
- SNMPv3 55-21
 - entities 55-11
 - message protocol format 55-13
- SNMPv3 MIB views 55-21
- status 55-8
- structure of information 55-3, 55-5
- syntax 55-7
- trap PDU 55-9
- view 55-15
- write-only access mode 55-7
- Simple Network Management Protocol (SNMP) commands
 - DELETE SNMP SNMP 55-36
 - DELETE SNMP TARGETADDR 55-36
 - DELETE SNMP TARGETPARAMS 55-37
 - DELETE SNMP USER 55-37
 - DELETE SNMP VIEW 55-38
 - DESTROY SNMP COMMUNITY 55-39
 - DISABLE SNMP 55-39
 - DISABLE SNMP AUTHENTICATE_TRAP 55-39
 - DISABLE SNMP COMMUNITY 55-40
- slave router, star key management 51-6
- SLIP. *See* Serial Line Internet Protocol (SLIP)
- slotted interfaces 12-42
- slow-start mechanism
 - Frame Relay networks 15-9
- slowstart mechanism
 - Frame Relay networks 15-14
- slow-start mechanism, Frame Relay 15-43
- slowstart mechanism, Frame Relay 15-37
- SMTP Proxy
 - Firewall 48-33
 - Interaction 48-34
- SNAP
 - encapsulation on Ethernet 11-8
- SNAP. *See* SubNetwork Access Protocol (SNAP)
- SNMP. *See* Simple Network Management Protocol
- SNMP commands
 - CREATE SNMP 55-35 to 55-36
 - DELETE SNMP TARGETPARAMS command 55-37
 - SNMP Framework MIB C-55
 - SNMP group, MIB-II MIB C-30
 - snmpDot3MauMgt MIB object C-35
 - snmpEnableAuthenTraps MIB object C-30
 - snmpModules MIB object C-55
 - snmpMPDStats MIB object C-55
 - SNMPv3 MIBs C-55
 - Snooping 36-7
 - snooping, IGMP 27-25
 - socket
 - AppleTalk 37-7
 - sockets, IPX 38-3
 - Software QoS group, Allied Telesis Enterprise MIB C-27
 - software releases
 - deleting 5-23
 - disabling 5-26
 - displaying 5-54, 5-61
 - downloading 5-36, 5-42, 5-58, 5-62
 - enabling 5-30
 - setting 5-40
 - Spanning Tree Protocol (STP) 9-3
 - creating 9-33
 - debug
 - disabling 9-43
 - displaying 9-93
 - enabling 9-53
 - destroying 9-37
 - disabling 9-42
 - enabling 9-52
 - modifying 9-67
 - ports
 - disabling 9-45
 - displaying 9-94
 - enabling 9-55
 - modifying 9-70
 - purging 9-57
 - resetting 9-58
 - showing 9-87
 - showing counters 9-91
 - VLANs
 - adding 9-30
 - deleting 9-35
 - Spanning Trees and Trunks 9-27
 - SPD 49-13
 - special feature licences 5-16
 - disabling 5-24
 - displaying 5-48
 - enabling 5-27
 - speed, synchronous lines 11-9
 - SPI 49-5
 - SPID. *See* Integrated Services Digital Network (ISDN)
 - split horizon
 - AppleTalk 37-8
 - spoofing, SPX 38-12
 - SPX spoofing 38-12
 - sqos MIB object C-27
 - sqosClfrCounterTable MIB object C-28
 - sqosDarCounterTable MIB object C-28



- sqosDarTable MIB object C-27
- sqosDscpMapRowTable MIB object C-27
- sqosDscpMapTable MIB object C-27
- sqosInterfaceTable MIB object C-28
- sqosMeterTable MIB object C-27
- sqosModuleTable MIB object C-27
- sqosPolicyCounterTable MIB object C-28
- sqosPolicyTable MIB object C-27
- sqosRedTable MIB object C-27
- sqosTcCounterTable MIB object C-28
- sqosTrafficTable MIB object C-27
- sqosTrapDCLimitExceeded trap message C-28
- sqosTrapPaused trap message C-28
- sqosTrapQLimitExceeded trap message C-28
- sqosTraps MIB object C-28
- sqosTrapUnpaused trap message C-28
- SRLP. See Logging Facility:secure router logging protocol (SRLP)
- SSH command 46-38
- SSL (Secure Sockets Layer)
 - definition 52-8
 - load balancer 47-6
 - sticky connection 52-8
- SSL and the GUI (graphical user interface) 47-5
- SSL connection
 - data transfer 47-3
 - handshake 47-3
 - session 47-4
- SSL handshake
 - certificate 47-3
 - change cipher spec 47-3
 - client hello 47-3
 - client key exchange 47-3
 - finished 47-3
 - server hello 47-3
 - server hello done 47-3
- SSL load balancing 52-8
 - HTTP virtual balancer with SSL enabled 52-9
 - SSL virtual balancer 52-8
- SSL messages
 - alert 47-4
 - application data 47-4
 - change cipher spec 47-4
 - record layer 47-4
- STAC LZS compression 44-11, 44-27
- Stack group, Allied Telesis Enterprise MIB C-26
- stack MIB object C-26
- stackAuth MIB object C-27
- stackId MIB object C-26
- stacking
 - add stack interface 58-18
 - adding a switch 58-9
 - benefits 58-2
 - configuration example 58-15
 - creating a stack 58-6
 - definition 58-2
 - delete stack interface 58-18
 - disable stack 58-19
 - disable stack debug 58-20
 - enable stack 58-21
 - enable stack debug 58-22
 - Host-Directed Commands (HDC) 58-17
 - how it works 58-4
 - interface 58-4
 - local commands 58-5
 - planning 58-6
 - process walkthrough 58-5
 - removing a stack member 58-13
 - replacing a stack member 58-11
 - set stack authentication 58-23
 - set stack stackid 58-24
 - show stack 58-26
 - stack ID and host ID 58-4
 - topologies 58-2
- stackInterface MIB object C-27
- stackMemberTable MIB object C-27
- stackPassword MIB object C-27
- stackSnmphost MIB object C-26
- stackStatus MIB object C-26
- standards
 - Line Printer Daemon (LPD) 63-2
 - LPD 63-2
 - Point-to-Point Protocol (PPP) 16-3
- stand-by router, star key management 51-6, 51-9
- star entities, star key management 51-6
- star key management 51-5 to 51-9
 - creating master keys 51-7
 - creating network keys 51-7
 - creating star entities 51-6
 - entering network keys 51-7
 - exchanging session keys 51-9
 - master router 51-5
 - network key 51-6
 - session keys 51-6
 - slave router 51-6
 - stand-by router 51-6, 51-9
 - transferring master keys 51-7
- start LPD queue 63-12
- startup status 4-9, 4-52
- state
 - X.25 DCE 14-95
- State machine
 - displaying 10-29
- State Refresh, PIM Dense Mode, IPv4 27-11
- State Refresh, PIM Dense Mode, IPv6 36-13
- state, OSPF 29-48, 29-51
- stateful inspection, firewall 48-4
- states
 - OSPF 29-7
 - Point-to-Point Protocol (PPP) 16-5
- static ARPs 15-18
- station address, IPX 38-4
- Statistics group, RMON MIB C-45 to C-46
- statistics, compression 44-22
- status, MIB object 55-8
- status, OSPF 29-76
- stop LPD queue 63-11
- STOP PING command 23-211
- STOP TRACE command 23-212
- storage, frame 8-30, 9-5



STP. See Spanning Tree Protocol (STP)

stream printing 64-1 to 64-8

adding a stream port 64-3, 64-5

commands 63-9, 64-5

ADD STREAM 64-5

DELETE STREAM 64-6

RESET STREAM 64-6

SET STREAM 64-7

SHOW STREAM 64-8

configuration

examples 64-3

configuring 64-3

deleting a stream port 64-3, 64-6

displaying a stream port 64-3, 64-8

examples 64-3

modifying a stream port 64-7

overview 64-2

resetting a stream port 64-3, 64-6

Structure of Management Information (SMI) 55-3, 55-5

stub areas

OSPF 29-4, 29-28, 29-42, 29-63

subnet 23-8

subnet mask 23-8

SubNetwork Access Protocol (SNAP)

relaying between VLANs 8-69

support

for ISDN 12-13

for NTP 57-4

Support for AppleTalk 37-10

support for load balancer 52-18

redundancy 52-18

support for SSL 47-6

SVC. See X.25

swi MIB object C-23

swi56xxPortNumber MIB object C-23

swi56xxPortTable MIB object C-23

swiDebugVariables MIB object C-23

swiPortNumber MIB object C-23

swiPortTable MIB object C-23

swiPortVlanControl MIB object C-23

swiPortVlanPortNumber MIB object C-23

swiPortVlanStateNotify MIB object C-23

swiPortVlanTable MIB object C-23

swiPortVlanVlanId MIB object C-23

switch ageing timer 8-29

disabling 8-78

enabling 8-86

setting 8-97

switch counters

displaying 8-125, 8-128

switch debug

enabling 8-88

switch filters

adding Layer 2 8-31, 8-52

adding Layer 3 8-33, 8-56, 8-59

deleting Layer 2 8-71, 9-36

deleting Layer 3 8-72, 9-36

disabling Layer 3 8-81

displaying Layer 2 8-130

displaying Layer 3 8-134

enabling Layer 3 8-90

modifying Layer 3 8-103, 8-106

Switch group, Allied Telesis Enterprise MIB C-23

switch learning 8-29

disabling 8-81

enabling 8-90

switch ports 8-5

activating 8-49

autonegotiation 8-7

blocking 9-7

counters 8-139

disabling 8-5, 8-82

displaying 8-136

enabling 8-5, 8-91

ingress filtering 8-28

ingress rules 8-28

intrusion 8-143

mirroring 8-12

modifying 8-109

packet storm protection 8-12

resetting 8-95, 9-58

security 7-4, 8-13, 8-109

STP states 9-3

triggers 8-40

switched virtual circuits (SVC) 14-3

symmetric

NTP entity 57-2

symmetrical encryption 44-5

synchronous

tunnelling. See Synchronous Tunnelling; Layer Two Tunnelling Protocol (L2TP)

synchronous dialling, PPP 16-14

synchronous interfaces

commands

DISABLE SYN 11-35

DISABLE SYN DEBUG 11-35

ENABLE SYN 11-41

ENABLE SYN DEBUG 11-41

RESET SYN 11-46

RESET SYN COUNTERS 11-47

SET SYN 11-58

SHOW SYN 11-91

SHOW SYN COUNTERS 11-93

counters 11-47, 11-93

debugging 11-35, 11-41

disabling 11-35

displaying 11-91

displaying counters 11-93

enabling 11-41

modem control signals 11-10, 11-58, 11-91

modifying configuration 11-58

resetting 11-46

resetting counters 11-47

synchronous lines 11-9

clocks 11-9

encapsulations 11-10, 15-4

speeds 11-9

Synchronous Tunnelling 18-1 to 18-9

See Also Layer Two Tunnelling Protocol (L2TP)

adding 18-5



- changing 18-7
- commands
 - ADD STT 18-5
 - DELETE STT 18-6
 - RESET STT 18-6
 - SET STT 18-7
 - SHOW STT 18-8
- configuring 18-3
- deleting 18-6
- displaying 18-8
- example configuration 18-3
- modifying 18-7
- operations 18-2
- resetting 18-6
- syntax, MIB object 55-7
- sysinfo Group, Allied Telesis Enterprise MIB C-16
- sysinfo MIB object C-9, C-16
- system clock
 - displaying 4-59
 - setting 4-35
- system date
 - displaying 4-59
 - setting 4-35
- system group, MIB-II MIB C-29, C-38
- system information
 - displaying 4-54, 4-59
 - setting 4-31 to 4-33, 4-35, 12-117
- system time
 - displaying 4-59
 - setting 4-35
- sysTemperature MIB object C-16
- sysUpTime MIB object C-31

T

- T1 Primary Rate Access, ISDN 12-9
- Tables, MIB
 - atrDot1xAuthConfigTable C-26
 - atrDot1xAuthStatsTable C-26
 - atrDot1xPaePortTable C-26
 - atrMacBasedAuthConfigTable C-26
 - atrMacBasedAuthPaePortTable C-26
- BGP Peer C-56
- BGP Received Path Attribute C-56
- BGP-4 Received Path Attribute C-56
- Boards C-17 to C-18
- BRI Channel C-20
- BRI Interface C-20
- Broadband MAU Basic C-35
- Circuit C-47
- Disk Storage C-53
- dot1qFdbTable C-39
- dot1qForwardAllTable C-40
- dot1qForwardUnregisteredTable C-40
- dot1qLearningConstraintsTable C-40
- dot1qPortVlanHCStatisticsTable C-40
- dot1qPortVlanStatisticsTable C-40
- dot1qPortVlanTable C-40
- dot1qTpFdbTable C-39
- dot1qTpGroupTable C-40
- dot1qVlanCurrentTable C-40

- dot1qVlanStaticTable C-40
- dot1xAuthConfigTable C-44
- dot1xAuthDiagTable C-44
- dot1xAuthSessionStatsTable C-44
- dot1xAuthStatsTable C-44
- dot1xPaePortTable C-44
- dot1xSuppConfigTable C-44
- dot1xSuppStatsTable C-44
- DS1 Fractional C-49 to C-50
- DS3 Fractional C-51
- ds3TrapTable C-25
- dsx1ChanMappingTable C-50
- dsx1ConfigTable C-50
- dsx3ConfigTable C-51
- Error C-48
- Ethernet Interfaces C-18
- File C-21
- File System C-53
- Generic Receive Address C-31 to C-32
- Host Resources Running Software C-52
- Install C-21
- Install History C-21
- Interface C-17
- Interface Extensions C-17, C-31 to C-32
- Interface Jack C-35
- Interface MAU C-35
- Interface MAU Autonegotiation C-36
- Interface Stack C-31 to C-32
- Interface Test C-31 to C-32
- Interfaces C-31 to C-32
- IP CIDR Route C-33
- IP Forwarding C-33
- ISDN Active Call C-19
- ISDN B Channel C-19
- ISDN Call Attachment C-19
- ISDN Call Details C-19
- ISDN Call Log C-19
- ISDN CLI List C-19
- lbShowAffTable C-25
- lbShowConTable C-25
- lbShowGlobalTable C-24
- lbShowResPoolTable C-25
- lbShowResTable C-25
- lbShowVirtBalTable C-25
- Load C-20
- Network Devices C-53
- Ping C-22
- PRI Channel C-20
- PRI Interface C-20
- Printer C-53
- qosSwitch8948PortTable C-24
- qosSwitch8948TrafficClassCountersTable C-24
- qosSwitchPolicyTable C-24
- qosSwitchPortTable C-24
- qosSwitchTrafficClassTable C-24
- Release Licence C-21
- Repeater Jack C-35
- Repeater MAU C-35
- Slot C-17
- sqosClfrCounterTable C-28



- sqosDarCounterTable C-28
- sqosDarTable C-27
- sqosDscpMapRowTable C-27
- sqosDscpMapTable C-27
- sqosInterfaceTable C-28
- sqosMeterTable C-27
- sqosModuleTable C-27
- sqosPolicyCounterTable C-28
- sqosPolicyTable C-27
- sqosRedTable C-27
- sqosTcCounterTable C-28
- sqosTrafficTable C-27
- stackMemberTable C-27
- Switch Debug C-23
- Switch Port C-23
- TACACS authentication 43-18, 43-31, 43-38, 43-67
- TARGETADDR command 55-36
- TARGETPARAMS command 55-55
- TCP group, MIB-II MIB C-29
- TCP virtual balancer 52-5
- tcpConnState MIB object C-30
- TDM. See Time Division Multiplexing (TDM)
- Telnet 62-6 to 62-7, 62-23, 62-33
 - for remote management 62-7
 - from the router 43-13
- TELNET command 62-33
- Telnet server
 - disabling 23-107
 - enabling 23-119
- templates, PPP interfaces 16-17
 - creating 16-62
 - debugging 16-74, 16-79
 - destroying 16-71
 - displaying 16-124
 - modifying 16-90
- terminal server 62-1 to 62-34
 - accessing services 62-7, 62-14, 62-18, 62-20, 62-27
 - accessing Telnet hosts 62-6, 62-23, 62-33
 - asynchronous ports 11-21, 11-31 to 11-32, 11-41 to 11-44, 11-48
 - auto-bauding 11-27
 - commands 62-13
 - CONNECT 62-14
 - CONNECT PORT 11-31
 - CREATE SERVICE 62-15
 - DESTROY SERVICE 62-16
 - DISABLE PORT 11-32
 - DISCONNECT 62-18
 - ENABLE PORT 11-41
 - RECONNECT 62-20
 - RESET PORT 11-42
 - RESET PORT COUNTERS 11-43
 - RESET PORT HISTORY 11-44
 - SET PORT 11-48
 - SET SERVICE 62-21
 - SET TELNET 62-23
 - SET TTY 62-24
 - SHOW SERVICE 62-26
 - SHOW SESSIONS 62-27
 - SHOW TTY 62-29
 - TELNET 62-33
 - configuration examples 62-9
 - configuring asynchronous ports 11-22, 11-31 to 11-32, 11-41 to 11-44, 11-48
 - configuring Telnet 62-23
 - configuring TTY devices 62-24
 - connecting to ports 11-31
 - creating nicknames for Telnet hosts 62-6
 - disabling ports 11-32
 - disconnecting from a session 62-18
 - displaying
 - sessions 62-27
 - TTY devices 62-29
 - displaying asynchronous port characteristics 11-24
 - enabling ports 11-41
 - example configurations 62-9
 - history 11-44
 - multiple sessions 62-5, 62-18, 62-20, 62-27
 - ports 11-22, 11-31 to 11-32, 11-41 to 11-43, 11-48
 - reconnecting to a session 62-20
 - resetting command history 11-44
 - resetting port counters 11-43
 - resetting ports 11-42
 - services 62-7, 62-14 to 62-16, 62-21, 62-26
 - setting port characteristics 11-22, 11-48
 - Telnet 62-6, 62-33
 - TTY device 62-2
 - configuring 62-24
 - displaying 62-29
- territory
 - displaying 4-54
 - setting 12-117
- Testing
 - commands
 - DISABLE TEST INTERFACE 65-10
 - ENABLE TEST INTERFACE 65-11
 - RESET TEST INTERFACE 65-12
 - SHOW TEST 65-13
 - disabling tests 65-10
 - displaying test results 65-13
 - enabling tests 65-11
 - expansion options 65-1
 - hardware 65-1
 - interfaces 65-1
 - loopback plugs 65-2
 - PAC cards 65-9
 - resetting tests 65-12
- text editor 6-5, 6-17
- textual notation 55-6
- throttling, IGMP 27-31
- time
 - displaying 4-59
 - setting 4-35
 - triggers 60-2
- Time Division Multiplexing (TDM) 13-1 to 13-13
 - adding TDM groups 13-6
 - adding time slots 13-8
 - Basic Rate ISDN interfaces
 - configuring 13-7
 - channel aggregation 13-4



- commands
 - ADD TDM 13-8
 - CREATE TDM 13-9
 - DELETE TDM 13-10
 - DESTROY TDM 13-11
 - PURGE TDM 13-11
 - SHOW TDM 13-12
- configuration example 13-5
- configuring BRI interfaces 13-7
- configuring PRI interfaces 13-5
- creating TDM groups 13-6, 13-9
- deleting time slots 13-10
- destroying TDM groups 13-11
- displaying TDM groups 13-12
- displaying time slots 13-12
- E1/T1 13-2 to 13-3
- example configuration 13-5
- mixed mode 13-2
- PPP interfaces, over TDM groups 13-6
- Primary Rate ISDN interfaces 13-2
 - configuring 13-5
- purging all TDM groups 13-11
- static E1/T1 13-4
- synchronous interfaces 13-4
- TDM group 13-4 to 13-5
 - adding 13-6
 - adding time slots 13-8
 - creating 13-6, 13-9
 - creating PPP interfaces over 13-6, 13-8 to 13-9
 - deleting time slots 13-10
 - destroying 13-11
 - displaying 13-12
 - purging all 13-11
- time slots 13-2 to 13-3
 - adding 13-8
 - deleting 13-10
 - displaying 13-12
- time servers. See Network Time Protocol (NTP)
- time. See Network Time Protocol (NTP)
- Timer
 - setting 10-19
- timer
 - switch ageing 8-29
- timers
 - Point-to-Point Protocol (PPP) 16-29
- TLAP. See AppleTalk: TokenTalk Link Access Protocol (TLAP)
- TokenTalk 37-5
- totalNumberOfSessions MIB object C-23
- TPAD. See Transaction Packet Assembler Disassembler
- TRACE command 23-213
- trace route 23-157, 23-210, 23-212 to 23-213
- traffic filters 23-34
- traffic flow
 - interaction with firewall policies 52-9
- Transaction Packet Assembler Disassembler (TPAD) 19-1
 - adding ports 19-6, 19-17
 - commands 19-17
 - ADD TPAD 19-17
 - CREATE TPAD 19-18
 - DELETE TPAD 19-20
 - DESTROY TPAD 19-20
 - DISABLE TPAD 19-21
 - DISABLE TPAD DEBUG 19-21
 - ENABLE TPAD 19-22
 - ENABLE TPAD DEBUG 19-22
 - RESET TPAD 19-23
 - SET TPAD 19-24
 - SHOW TPAD 19-26
 - SHOW TPAD COUNTERS 19-31
 - SHOW TPAD PORTS 19-29
 - configuration examples 19-10 to 19-13
 - configuring X.25 19-10
 - creating TPAD instances 19-12
 - connection
 - over a synchronous link 19-5
 - over ISDN B channel 19-6
 - over ISDN D channel 19-5
 - counters, displaying 19-7, 19-31
 - creating instances 19-6, 19-18
 - debugging
 - disabling 19-7, 19-21
 - enabling 19-7, 19-22
 - deleting ports 19-6, 19-20
 - destroying instances 19-6, 19-20
 - disabling
 - debugging 19-7, 19-21
 - instances 19-6, 19-21
 - displaying
 - counters 19-7, 19-31
 - instances 19-7, 19-26
 - ports 19-7, 19-29
 - enabling
 - debugging 19-7, 19-22
 - instances 19-6, 19-22
 - environment 19-2
 - example configurations 19-10 to 19-13
 - configuring X.25 19-10
 - creating TPAD instances 19-12
 - instances
 - adding ports 19-6, 19-17
 - creating 19-6, 19-18
 - deleting ports 19-6, 19-20
 - destroying 19-6, 19-20
 - disabling 19-6, 19-21
 - disabling debugging 19-7, 19-21
 - displaying 19-7, 19-26
 - displaying ports 19-7, 19-29
 - enabling 19-6, 19-22
 - enabling debugging 19-7, 19-22
 - modifying 19-6, 19-24
 - resetting 19-7, 19-23
 - ISDN B channel connection 19-6
 - ISDN D channel connection 19-5
 - modifying instances 19-6, 19-24
 - operations 19-5
 - ports
 - adding 19-6, 19-17
 - deleting 19-6, 19-20
 - displaying 19-7, 19-29
 - protocol 19-4



- resetting instances 19-7, 19-23
 - retail environment 19-2
 - synchronous connection 19-5
 - troubleshooting 19-14 to 19-16
 - X.25
 - over a synchronous link 19-5
 - over ISDN B channel 19-6
 - over ISDN D channel 19-5
 - transferring master keys, star key management 51-7
 - transit network
 - OSPF 29-6, 29-23
 - Transmission group, MIB-II MIB C-29, C-34, C-47, C-49, C-51
 - transmission queues 8-30, 9-5
 - trap PDU 55-9
 - traps Group, Allied Telesis Enterprise MIB C-16
 - traps MIB object C-9, C-16
 - traps, SNMP
 - bgpBackwardTransition, Border Gateway Protocol version 4 (BGP-4) MIB C-56
 - bgpEstablished, Border Gateway Protocol version 4 (BGP-4) MIB C-56
 - flashFailureTrap, Enterprise MIB C-18
 - igmpGeneralQueryNotReceivedEvent C-16
 - loginFailureTrap, Enterprise MIB C-19
 - mstpNewRootBridge, Multiple and Rapid Spanning Tree Protocols MIB C-60
 - mstpNewRootPort, Multiple and Rapid Spanning Tree Protocols MIB C-60
 - mstpTopologyChange, Multiple and Rapid Spanning Tree Protocols MIB C-60
 - ospfIfStateChange, Open Shortest Path First (OSPF) Version 2 MIB C-59
 - ospfNbrStateChange, Open Shortest Path First (OSPF) Version 2 MIB C-59
 - ospfVirtIfStateChange, Open Shortest Path First (OSPF) Version 2 MIB C-59
 - ospfVirtNbrStateChange, Open Shortest Path First (OSPF) Version 2 MIB C-59
 - vrrpTrapNewMaster, Virtual Router Redundancy Protocol (VRRP) MIB C-60
 - Trigger Facility
 - firewall events 48-46
 - Trigger group, Allied Telesis Enterprise MIB C-21
 - trigger MIB object C-21
 - triggerLastTriggerActivated MIB object C-21
 - triggers 52-14, 60-1 to 60-28
 - actions 60-2
 - adding to triggers 60-7 to 60-8
 - deleting from triggers 60-15
 - displaying 60-24
 - activation 60-2, 60-6
 - automated command execution 60-2
 - commands
 - ACTIVATE TRIGGER 60-6
 - ADD TRIGGER 60-7
 - CREATE TRIGGER 60-8
 - DELETE TRIGGER 60-15
 - DESTROY TRIGGER 60-15
 - DISABLE TRIGGER 60-16
 - ENABLE TRIGGER 60-17
 - PURGE TRIGGER 60-17
 - SET TRIGGER 60-18
 - SHOW TRIGGER 60-24
 - CPU 60-8, 60-18
 - creating 60-3, 60-8
 - deleting 60-15
 - destroying
 - triggers 60-15
 - disabling 60-16
 - displaying
 - triggers 60-24
 - enabling 60-17
 - firewall 48-46, 60-8, 60-18
 - interface 60-8, 60-18
 - link 60-8, 60-18
 - manual activation 60-6
 - memory 60-8, 60-18
 - modifying 60-18
 - output 60-2
 - periodic 60-2, 60-8, 60-18
 - purging 60-17
 - reboot 60-2, 60-8, 60-18
 - response to events 60-2
 - time 60-2, 60-8, 60-18
 - timed command execution 60-2
 - types 60-2, 60-8, 60-18
 - triggerTrap trap message C-21
 - Triple DES (3DES) encryption 44-6
 - Triple DES encryption algorithm 44-6
 - troubleshooting
 - IPsec 49-45
 - ISAKMP 49-46
 - TPAD 19-14 to 19-16
 - trunk groups
 - adding 8-62
 - creating 8-66
 - deleting 8-73, 9-36
 - destroying 8-76
 - displaying 8-145
 - modifying 8-116
 - Trunks and Spanning Trees 9-27
 - trusted routers 28-11, 28-13, 28-25
 - TTY group, Allied Telesis Enterprise MIB C-19
 - tty MIB object C-19
 - ttyTraps MIB object C-19
 - tunnel key, GRE 33-3
 - tunnel mode, IPsec 49-5
 - tunnel, L2TP. See Layer Two Tunnelling Protocol (L2TP)
 - tunnelling
 - UDP 49-19
 - tunnelling. See Synchronous Tunnelling; Layer Two Tunnelling Protocol (L2TP)
- ## U
- U interfaces, Basic Rate Access 12-7
 - UAF. See User Authentication Facility
 - UDP group, MIB-II MIB C-29
 - UDP heartbeats 49-19
 - UDP listen port 49-19, 49-106



UDP tunnelling 49-19
 Universal Coordinated Time (UTC) 61-3
 untagged VLANs 8-19
 UPLOAD command 5-62
 User Authentication Database 43-9 to 43-10
 adding users 43-10, 43-33
 counters 43-14
 deleting users 43-11, 43-39
 disabling users 43-43
 displaying users 43-11, 43-72
 enabling users 43-48
 logging in and out 43-8, 43-50 to 43-51
 modifying users 43-11, 43-58
 passwords 43-11 to 43-12
 purging users 43-51
 recovering passwords 43-12
 resetting users 43-52
 User Authentication Database. See User Authentication Facility (UAF)
 User Authentication Facility 43-8
 asynchronous port security 43-12
 semipermanent manager port 43-14
 Telneting from the router 43-13
 User Authentication Facility (UAF)
 See also Asynchronous Call Control (ACC)
 asynchronous calls 20-4 to 20-5
 database 16-27, 20-4
 USER privilege 43-3
 User-based Security MIB C-55
 users
 displaying
 Security Association 49-215
 Security Association
 displaying 49-215
 UTC. See Universal Coordinated Time (UTC)

V

validity timer
 AppleTalk 37-8
 Van Jacobson header compression 44-4
 Vectors 9-25
 view, SNMP MIB 55-15
 View-based Access Control MIB C-55
 virtual balancer
 definition 52-3
 HTTP type 52-7
 operation 52-3
 route-based type 52-6
 TCP type 52-5
 Virtual Bridge (VLAN) MIB C-39
 virtual links, OSPF 29-23, 29-31, 29-43, 29-50, 29-53,
 29-57, 29-66
 Virtual Local Area Network (VLAN)
 bridging
 relaying 8-25
 transferring packets between VLANs
 Virtual Local Area Networks (VLAN) 8-14
 commands
 ADD VLAN BRIDGE 9-31, 17-16
 ADD VLAN PORT 8-63

 ADD VLANRELAY 8-65
 CREATE VLAN 8-68
 CREATE VLANRELAY 8-69
 DELETE STP VLAN 9-35
 DELETE VLAN BRIDGE 9-36, 17-18
 DELETE VLAN PORT 8-74, 9-36
 DELETE VLANRELAY 8-75
 DESTROY VLAN 8-77
 DESTROY VLANRELAY 8-77
 DISABLE VLAN DEBUG 8-83
 DISABLE VLANRELAY 8-84, 9-46
 DISABLE VLANRELAY DEBUG 8-84, 9-46
 ENABLE VLAN DEBUG 8-92
 ENABLE VLANRELAY 8-93
 ENABLE VLANRELAY DEBUG 8-93, 9-56
 SET VLAN PORT 8-117
 SHOW VLAN 8-146
 SHOW VLANRELAY 8-149
 destroying 8-77
 displaying 8-146
 modifying ports 8-117
 relaying
 adding protocols and VLANs 8-65
 creating 8-69
 creating entities 8-69
 destroying entities 8-77
 disabling debugging 8-84, 9-46
 disabling entities 8-84, 9-46
 displaying 8-149
 enabling debugging 8-93, 9-56
 enabling entities 8-93
 removing protocols and VLANs 8-75
 SHOW VLAN DEBUG 8-148
 switch ports
 deleting 8-74, 9-36
 tagged ports 8-117
 tagging 8-30
 untagged VLANs 8-19
 Virtual Router Redundancy Protocol (VRRP)
 adopt IP address address 53-7
 commands
 ADD VRRP IP 53-12
 ADD VRRP MONITOREDINTERFACE 53-13
 CREATE VRRP 53-14
 DELETE VRRP IP 53-17
 DELETE VRRP MONITOREDINTERFACE 53-18
 DESTROY VRRP 53-19
 DISABLE VRRP 53-19
 DISABLE VRRP DEBUG 53-20
 ENABLE VRRP 53-20
 ENABLE VRRP DEBUG 53-21
 SET VRRP 53-22
 SHOW VRRP 53-25
 triggers 53-9
 VLAN. See Virtual Local Area Networks (VLAN)
 VLANs
 multicast switching between, IPv4 27-32, 27-81
 Voice over IP (VoIP)
 commands
 CREATE H323 32-25



CREATE H323 ENTRY 32-27
 CREATE SIP 32-28
 DESTROY H323 32-30
 DESTROY H323 ENTRY 32-31
 DESTROY SIP 32-32
 DISABLE VOIP 32-32
 DISABLE VOIP DEBUG 32-33
 ENABLE VOIP 32-33
 ENABLE VOIP DEBUG 32-34
 RESET VOIP 32-35
 SET H323 32-36
 SET H323 ENTRY 32-37
 SET H323 GATEWAY 32-38
 SET SIP 32-39
 SET SIP GATEWAY 32-41
 SET VOIP 32-42
 SET VOIP BOOTCODE 32-43
 SET VOIP FILE 32-45
 SET VOIP PHONE 32-46
 SET VOIP PUBLIC INTERFACE 32-53
 SHOW H323 32-54
 SHOW H323 ENTRY 32-55
 SHOW H323 GATEWAY 32-56
 SHOW SIP 32-57
 SHOW SIP GATEWAY 32-58
 SHOW VOIP 32-59
 SHOW VOIP COUNTER ENGINE 32-61
 SHOW VOIP LOAD 32-65
 SHOW VOIP PHONE 32-67

vrpMIB MIB object C-60

vrpOperMasterIpAddr MIB object C-60

vrpTrapNewMaster trap message C-60

W

WAIT command 59-11, 59-15
 wait statement, modem scripts 20-7
 web server. See HTTP server
 wildcard characters
 in file names 6-5
 write-only, MIB object 55-7
 WWW server. See HTTP server

X

X.25 14-1 to 14-102

 activating MIOX circuits 14-37

 adding

 call parameters 14-44

 MIOX circuits 14-39

 routes 14-43

 addresses

 DTE 14-7, 14-41, 14-54, 14-90

 call parameters

 adding 14-44

 configuring 14-15

 deleting 14-56

 displaying 14-102

 modifying 14-72

 call setup 14-4, 14-37

 channels 14-12

 circuit 14-3

 commands 14-37

 ACTIVATE MIOX CIRCUIT 14-37

 ADD MIOX CIRCUIT 14-39

 ADD X25C DTEADDRESS 14-41

 ADD X25C HUNTGROUP 14-42

 ADD X25C ROUTE 14-43

 ADD X25T CPAR 14-44

 CREATE LAPB 14-45

 CREATE X25C 14-47

 CREATE X25C HUNTGROUP 14-49

 CREATE X25T 14-50

 DEACTIVATE MIOX CIRCUIT 14-52

 DELETE MIOX CIRCUIT 14-53

 DELETE X25C DTEADDRESS 14-54

 DELETE X25C HUNTGROUP 14-55

 DELETE X25C ROUTE 14-56

 DELETE X25T CPAR 14-56

 DESTROY LAPB 14-57

 DESTROY X25C 14-57

 DESTROY X25C HUNTGROUP 14-58

 DESTROY X25T 14-58

 DISABLE MIOX CIRCUIT 14-59

 DISABLE X25C DEBUG 14-59

 ENABLE MIOX CIRCUIT 14-60

 ENABLE X25C DEBUG 14-60

 RESET LAPB 14-61

 RESET X25T 14-61

 SET LAPB 14-62

 SET MIOX 14-63

 SET MIOX CIRCUIT 14-64

 SET X25C 14-66

 SET X25C HUNTGROUP 14-68

 SET X25T 14-70

 SET X25T CPAR 14-72

 SHOW LAPB 14-73

 SHOW MIOX 14-78

 SHOW MIOX CIRCUIT 14-81

 SHOW MIOX COUNT 14-79

 SHOW X25C 14-85

 SHOW X25C COUNTER 14-87

 SHOW X25C DTEADDRESS 14-90

 SHOW X25C HUNTGROUP 14-91

 SHOW X25C PATH 14-93

 SHOW X25C ROUTE 14-94

 SHOW X25C STATE 14-95

 SHOW X25T 14-97

 SHOW X25T CPAR 14-102

 configuration example 14-11

 configuring

 call parameters 14-15

 DCE 14-11

 DTE 14-14

 LAPB 14-9

 permanent virtual circuit (PVC) 14-15

 counters

 displaying DCE 14-13, 14-87

 creating

 LAPB interfaces 14-45

 X.25 DCE interfaces 14-47

 X.25 DTE interfaces 14-50



Data Communication Equipment (DCE) 14-3 to 14-4, 14-37

Data Terminal Equipment (DTE) 14-3 to 14-4, 14-37

DCE 14-3

configuring 14-11

DCE interfaces

creating 14-47

debugging 14-13, 14-59 to 14-60

destroying 14-57

displaying 14-85

displaying counters 14-13, 14-87

displaying state 14-95

modifying 14-66

DCE mode 14-4

deactivating MIOX circuits 14-52

debugging

DCE interfaces 14-13, 14-59 to 14-60

deleting

call parameters 14-56

MIOX circuits 14-53

routes 14-56

destroying

LAPB interfaces 14-57

X.25 DCE interfaces 14-57

X.25 DTE interfaces 14-58

disabling

MIOX circuits 14-59

displaying

call parameters 14-102

DCE counters 14-13, 14-87

DCE interface state 14-95

LAPB counters 14-73

LAPB interfaces 14-73

MIOX 14-78

MIOX circuits 14-81

MIOX counters 14-79

routes 14-94

X.25 DCE interfaces 14-85

X.25 DTE counters 14-97

X.25 DTE interfaces 14-97

DTE 14-3

configuring 14-14

DTE addresses 14-7, 14-12

adding 14-41

deleting 14-54

displaying 14-90

DTE counters

displaying 14-97

DTE interfaces

creating 14-50

destroying 14-58

displaying 14-97

modifying 14-70

resetting 14-61

DTE mode 14-5

enabling

MIOX circuits 14-60

encapsulations 14-8

interface parameters 14-12

LAPB 14-4

configuring 14-9

LAPB counters, displaying 14-73

LAPB interfaces

creating 14-45

destroying 14-57

displaying 14-73

modifying 14-62

resetting 14-61

line 14-11

logical line 14-11

MIOX

displaying 14-78

modifying 14-63

MIOX circuits 14-8, 1-21

activating 14-37

adding 14-39

deactivating 14-52

deleting 14-53

disabling 14-59

displaying 14-81

enabling 14-60

modifying 14-64

MIOX counters

displaying 14-79

modifying

call parameters 14-72

LAPB interfaces 14-62

MIOX 14-63

MIOX circuits 14-64

X.25 DCE interfaces 14-66

X.25 DTE interfaces 14-70

over ISDN 12-26, 12-69 to 12-70, 12-74 to 12-75

packet assembler/disassembler (PAD) 14-3

permanent virtual circuit (PVC) 14-6

configuring 14-15

permanent virtual circuits (PVC) 14-3

resetting

LAPB interfaces 14-61

X.25 DTE interfaces 14-61

route mapping 14-7, 14-13, 14-43, 14-56, 14-94

routes

adding 14-43

deleting 14-56

displaying 14-94

standards 14-4

state, DCE

displaying DCE 14-95

support for 14-4, 14-37

switched virtual circuit (SVC) 14-3, 14-6

virtual circuit 14-3

Xbox Live 48-26, 48-94

Xerox Network Standard (XNS) 38-3

Z

ZIP or zone filtering 37-14

ZIP. See AppleTalk: Zone Information Protocol (ZIP)

Zone Information Protocol (ZIP) 37-10

See also AppleTalk

zone name, AppleTalk 37-10

See also AppleTalk