



Symbols

A

access lists [1-21, 4-6, 4-10](#)
access rate control [1-18](#)
access routers [1-3, 1-7](#)
aggregation router [1-5, 1-9](#)
alarms [2-9](#)
availability [1-22, 2-7, 4-10, 4-11](#)

B

backbone routers [1-3](#)
backplane [1-23, 2-5, 3-2](#)
BGP [4-4](#)
boot fields [4-11](#)
Border Gateway Protocol [4-4](#)

C

CAR [4-6](#)
CDP [4-12](#)

central office [1-11](#)
CGMP [4-7](#)
changes in this guide [iv](#)
channelized OC-12 line card [3-8](#)
channelized STM-1 line card [3-11](#)
channelized T3 line card [3-5, 3-7](#)
Cisco Discovery Protocol [4-12](#)
Cisco Group Management Protocol [4-7](#)
Cisco IOS [4-2](#)
class-based queuing [1-17](#)
class-based random early detection [4-6](#)
classes of traffic [4-5, 4-6](#)
class of service [1-17, 4-5](#)
clear-channel DS3 [3-5, 3-7](#)
committed access rate [4-6](#)
configuration features [4-11](#)
configuration modes, in QoS [4-5](#)
costs, reducing [4-2](#)

D

denial of service [1-21](#)
density [1-7, 1-13, 3-5, 3-10](#)
disk logging [4-12](#)

Distance Vector Multicast Routing Protocol 4-7

distributed processing 3-2

document revision history iv

DS0 data channels 3-5

DS1 data channels 3-5

DS3 data channels 3-5, 3-7

DVMRP 4-7

E

EIGRP 4-4

encapsulation protocols 4-2

encryption services 2-8

Enhanced IGRP Routing Protocol 4-4

equipment rack 2-3

error isolation 2-7, 4-10

Ethernet

See gigabit Ethernet

Ethernet connections 3-4

F

fault isolation 2-7, 4-10

Flash memory 3-2, 3-4

forwarding path 2-9, 2-10, 3-2, 3-3

Frame Relay 4-3

G

gigabit Ethernet line card 3-15

H

HDLC 4-3

High-Level Data Link Control 4-3

hot swapping

described 2-2, 2-7

line cards 3-5, 3-9, 3-11, 3-13, 3-15, 3-16, 3-18, 3-20

PEMs 2-1

I

ICMP 1-22, 4-10

IGMP 4-7

IGRP 4-4

interface types

See line cards

Interior Gateway Routing Protocol 4-4

Intermediate System-to-Intermediate System routing protocol 4-4

Internet Control Message Protocol 1-22

Internet Group Management Protocol 4-7

Internet routing protocols 4-4

IOS 4-2

IP packets 1-17, 3-14, 3-17

IP precedence 4-6

IP source addresses 1-21

IS-IS routing protocol [4-4](#)

ISP networks [1-3](#)

L

Layer 1 mechanism [3-12](#)

Layer 2 data link switching [4-8](#)

Layer 3 encapsulation [4-2](#)

Layer 3 functionality [2-9](#)

linear protection [3-12](#)

line cards

 channelized OC-12 [3-8](#)

 channelized STM-1 [3-11](#)

 channelized T3 [3-5, 3-7](#)

 described [1-12, 2-5, 2-8](#)

 gigabit Ethernet [3-15](#)

 OC-12 ATM [3-18, 3-20](#)

 OC-12 POS [3-13, 3-16](#)

M

management services [4-12](#)

MIBs supported [4-12](#)

MLP [1-18, 4-3, 4-10](#)

MPLS [1-15, 4-3, 4-8](#)

MSP [3-12](#)

multicast services [4-7](#)

Multilink PPP

 See MLP

Multiprotocol Label Switching

 See MPLS

N

NEBS requirements [1-12](#)

network costs, reducing [4-2](#)

Networks

 See ISP networks, VPN

new in this guide [iv](#)

NVRAM [3-4](#)

O

OC-12 ATM line card [3-18, 3-20](#)

 SC connector [3-12, 3-18, 3-20](#)

OC-12 line card

 See channelized OC-12 line card

OC-12 POS line card [3-13, 3-16](#)

online insertion and removal [2-7](#)

 See also hot swapping

Open Shortest Path First [4-4](#)

OSPF [4-4](#)

P

packet forwarding [2-9](#)

packets

 See IP packets

- parallel express forwarding
 - See PXF network processors
 - performance optimization [4-10](#)
 - performance routing engine
 - See PRE
 - PIM routing protocol [4-7](#)
 - pinging [4-2](#)
 - point of presence
 - See POP
 - Point-to-Point Protocol [4-3](#)
 - POP [1-4, 1-6, 1-7](#)
 - ports
 - channelized OC-12 line card [3-8](#)
 - OC-12 ATM SC connector [3-12, 3-18, 3-20](#)
 - on channelized STM-1 line card [3-11](#)
 - on channelized T3 line card [3-6, 3-8](#)
 - on OC-12 ATM line card [3-18, 3-20](#)
 - PPP [4-3](#)
 - PRE
 - defined [2-5, 2-9, 3-2](#)
 - redundancy [1-23](#)
 - redundant [2-7, 3-3](#)
 - preconfiguring slots [4-11](#)
 - Protocol-Independent Multicast routing protocol [4-7](#)
 - protocols
 - Border Gateway Protocol (BGP) [4-4](#)
 - Cisco Discovery Protocol [4-12](#)
 - Cisco Group Management Protocol (CGMP) [4-7](#)
 - Distance Vector Multicast Routing Protocol (DVMRP) [4-7](#)
 - encapsulation [4-2](#)
 - Enhanced IGRP (EIGRP) [4-4](#)
 - Interior Gateway Routing Protocol (IGRP) [4-4](#)
 - Intermediate System-to-Intermediate System (IS-IS) [4-4](#)
 - Internet Group Management Protocol (IGMP) [4-7](#)
 - Internet routing [4-4](#)
 - multicast routing [4-7](#)
 - Open Shortest Path First (OSPF) [4-4](#)
 - Protocol-Independent Multicast (PIM) [4-7](#)
 - Routing Information Protocol (RIP) [4-4](#)
 - PXF network processors [3-2, 3-3, 4-10](#)
-
- Q
- QoS
 - configuration modes [4-5](#)
 - discussed [1-17, 3-14, 3-17, 4-10](#)
 - QoS Policy Propagation on BGP [4-6](#)
 - QPPB [4-6](#)
 - quality of service
 - See QoS
 - queuing [1-17](#)

R

rate control [1-18](#)
redundancy
 introduced [1-22](#)
 PRE and [2-7, 3-3](#)
related documentation [v](#)
reverse path forwarding check [1-21](#)
RIP [4-4](#)
RMON [4-14](#)
route processor [2-9, 2-10, 3-2, 3-4](#)
Route Processor Redundancy Plus [1-23](#)
routers
 See access routers, aggregation router,
 backbone routers
Routing Information Protocol [4-4](#)
RPF [1-21](#)
RPR+ [1-23](#)

S

scalability [4-2](#)
SDH [1-8, 3-12](#)
security [1-21, 4-9](#)
Simple Network Management Protocol [4-12](#)
SNMP [4-12, 4-14](#)
SONET [1-8, 1-23, 3-10](#)
specifications for OC-12 POS cables [3-16](#)
STM-1 line card
 See channelized STM-1 line card

Synchronous Digital Hierarchy
 See SDH
Synchronous Optical Network
 See SONET
syslog [4-12, 4-14](#)

T

T1 facility data link (FDL) [2-8](#)
T3 connections [3-5, 3-7](#)
T3 line card
 See channelized T3 line card
ToS field [1-17](#)
traffic engineering [4-8](#)

V

virtual private network [1-14](#)
voice-over-IP [1-17](#)
VPN [1-14](#)

W

weighted random early detection [1-17, 4-6](#)
WRED [1-17, 4-6](#)

