

Acronyms and Abbreviations

This appendix identifies abbreviations, acronyms, and initialisms used in this book and in the internetworking industry.

Acronym	Expanded Term
3DES	Triple DES
6-to-4	IPv6-to-IPv4
AAA	Authentication, authorization, accounting
ABR	Area Border Router
ACK	1. acknowledge 2. acknowledgment 3. acknowledgment bit in a TCP segment
ACL	access control list
ACS	Access Control Server
AD	advertised distance
ADSL	asymmetric DSL
AES	Advanced Encryption Standard
AfriNIC	African Network Information Centre
AH	Authentication Header
ALG	application layer gateway
ANSI	American National Standards Institute
AON	Application-Oriented Networking
API	application programming interface
APNIC	Asia Pacific Network Information Center
ARCNET	Attached Resource Computer Network
ARIN	American Registry for Internet Numbers

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ARP	Address Resolution Protocol
AS	autonomous system
ASA	Adaptive Security Appliance
ASBR	Autonomous System Boundary Router
ATM	Asynchronous Transfer Mode
AToM	Any Transport over MPLS
BDR	Backup Designated Router
BGP	Border Gateway Protocol
BGPv4 or BGP-4	BGP Version 4
BIS	Bump-in-the-Stack
BPDU	bridge protocol data unit
bps	bits per second
BRI	Basic Rate Interface
BSCI	Building Scalable Cisco Internetworks
CATV	community antenna television
CBAC	context-based access control
CCDP	Cisco Certified Design Professional
CCNA	Cisco Certified Network Associate
CCNP	Cisco Certified Network Professional
CCSP	Cisco Certified Security Professional
CDP	Cisco Discovery Protocol
CE	Customer Edge
CEF	Cisco Express Forwarding
CEFv6	Cisco Express Forwarding for IPv6
CIDR	classless interdomain routing
CIR	committed information rate
CMTS	Cable modem termination system
CO	Central office
CoS	class of service
CPE	customer provider edge customer premise equipment
CPU	central processing unit
CSM	Cisco Security Manager
CSMA/CD	carrier sense multiple access collision detect
DAD	Duplicate address detection
DBD	database description packets
DDP	database description packets

DES	Data Encryption Standard
DESIGN	Designing for Cisco Internetwork Solutions
DHCP	Dynamic Host Configuration Protocol
DHCPv6	DHCP for IPv6
DiffServ	Differentiated Services
DLCI	data-link connection identifier
DMVPN	Dynamic multipoint VPN
DNA	DoNotAge
DNS	Domain Name Service or Domain Name System
DoD	Department of Defense
DR	designated router
DSL	digital subscriber line
DSLAM	DSL access multiplexer
DUAL	Diffusing Update Algorithm
E1	External Type 1
E2	External Type 2
EAP	Extensible Authentication Protocol
EBGP	External BGP
e-bit	external bit
EGP	Exterior Gateway Protocol
EIGRP	Enhanced Interior Gateway Routing Protocol
EoMPLS	Ethernet over MPLS
ESP	Encapsulating Security Payload
EUI-64	extended universal identifier 64-bit
FD	feasible distance
FCAPS	Fault, Configuration, Accounting, Performance, and Security
FDDI	Fiber Distributed Data Interface
FEC	forwarding equivalence class
FIB	Forwarding Information Base
FLSM	fixed-length subnet mask
FS	feasible successor
FTP	File Transfer Protocol
Gbps	gigabits per second
GET	Group encrypted transport
GRE	Generic Routing Encapsulation
HDLC	High-Level Data Link Control
HFC	hybrid fiber-coaxial

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HSRP	Hot Standby Router Protocol
HTTP	Hypertext Transfer Protocol
Hz	hertz
IANA	Internet Assigned Numbers Authority
IBGP	Internal BGP
ICMP	Internet Control Message Protocol
ID	identifier
IDP	initial domain part
IDRP	Interdomain Routing Protocol
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
IGMP	Internet Group Management Protocol
IGP	Interior Gateway Protocol
IGRP	Interior Gateway Routing Protocol
IIN	Intelligent Information Network
IKE	Internet Key Exchange
IntServ	Integrated Services
IOS	Internet Operating System
IP	Internet Protocol
IPCP	Internet Protocol Control Protocol
IPM	Internetwork Performance Monitor
IPsec	IP security
IPv4	IP Version 4
IPv6	IP Version 6
IPX	Internetwork Packet Exchange
IS	1. information systems 2. intermediate system
ISAKMP	Internet Security Association and Key Management Protocol
ISATAP	Intra-Site Automatic Tunnel Addressing
IS-IS	Intermediate System-to-Intermediate System
IS-ISv6	IS-IS for IPv6
ISDN	Integrated Services Digital Network
ISO	International Organization for Standardization
ISP	Internet service provider
ISR	integrated services router
ITIL	IT Infrastructure Library
ITU-T	International Telecommunication Union Telecommunication Standardization Sector

kbps	kilobits per second
L3	Level 3
LACNIC	Latin American and Caribbean IP Address Regional Registry
LAN	local-area network
LANE	LAN Emulation
LS	link state
LSA	link-state advertisement
LSAck	link-state acknowledgment
LSDB	link-state database
LSP	link-state packet
LSR	link-state request
LSU	link-state update
M	metric
MAC	Media Access Control
MAN	metropolitan-area network
MB	megabyte
MBGP	Multiprotocol BGP
Mbps	megabits per second
MD5	message digest algorithm 5
MED	Multi-Exit-Discriminator
MIB	Management Information Base
MLD	Multicast Listener Discovery
MOSPF	Multicast OSPF
MP-BGP4	Multiprotocol Border Gateway Protocol Version 4
MPLS	Multiprotocol Label Switching
ms	Millisecond
MTU	maximum transmission unit
NA	Neighbor advertisement
NAC	Network Admission Control
NAT	Network Address Translation
NAT-T	NAT Traversal
NAT-PT	NAT-Protocol Translation
NBMA	nonbroadcast multiaccess
NCP	Network control protocol
ND	Neighbor discovery
NLRI	Network Layer Reachability Information
NMS	Network Management System

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NS	Neighbor solicitation
NSSA	not-so-stubby area
NTP	Network Time Protocol
ODR	on-demand routing
OER	Optimized Edge Routing
OS	operating system
OSI	Open System Interconnection
OSPF	Open Shortest Path First
OSPFv2	OSPF Version 2
OSPFv3	OSPF Version 3
OUI	organizationally unique identifier
P2P	Point-to-point
PAT	Port Address Translation
PBR	policy-based routing
PBX	Private Branch Exchange
PDM	protocol-dependent module
PDU	protocol data unit
PE	Provider Edge
POP	point of presence
POTS	plain old telephone service
PPDIOO	Prepare, Plan, Design, Implement, Operate, Optimize
PPP	Point-to-Point Protocol
PPPoA	PPP over ATM
PPPoE	PPP over Ethernet
pps	packets per second
PPTP	Point-to-Point Tunneling Protocol
PRI	Primary Rate Interface
PSTN	public switched telephone network
PVC	permanent virtual circuit
QoS	quality of service
RA	Router advertisement
RF	Radio frequency
RFC	Request For Comments
RIB	Routing Information Base
RIP	Routing Information Protocol
RIPE-NCC	Réseaux IP Européens-Network Coordination Center
RIPng	Routing Information Protocol new generation

RIPv1	Routing Information Protocol Version 1
RIPv2	Routing Information Protocol Version 2
RIR	Regional Internet registries
RPF	Reverse Path Forwarding
RR	route reflector
RRI	reverse route injection
RS	Router solicitation
RSVP	Resource Reservation Protocol
RTO	retransmit timeout
RTP	Reliable Transport Protocol
RTT	round-trip time
RTTMON	Round-Trip Time Monitor
SA	security association
SDSL	Symmetric DSL
SHA	Secure hash
SHDSL	single-pair high-speed DSL
SIA	stuck in active
SIN	ships in the night
SLAs	Service level agreements
SM	source metric
SMTP	Simple Mail Transfer Protocol
SNAP	Subnetwork Access Protocol
SNMP	Simple Network Management Protocol
SOHO	small office/home office
SONA	Service-Oriented Network Architecture
SP	Service Provider
SPF	shortest path first
SPT	shortest path tree
SPX	Sequenced Packet Exchange
SRTT	smooth round-trip time
ssh	secure shell
SSL	Secure socket layer
STP	1. shielded twisted-pair 2. Spanning Tree Protocol
SVC	switched virtual circuit
SYN	Synchronize
TCP	Transmission Control Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol

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TFTP	Trivial File Transfer Protocol
TLV	Type, Length, Value
TMN	Telecommunications Management Network
ToS	type of service
TTL	Time To Live
UDP	User Datagram Protocol
U/L	Universal/Local
URL	Uniform Resource Locator
UTP	unshielded twisted-pair
VC	virtual circuit
VDSL	very high bitrate DSL
VLAN	virtual LAN
VLSM	variable-length subnet mask
VoD	video on demand
VoIP	Voice over IP
VPN	virtual private network
VRF	VPN routing and forwarding
VT	video telephony
VTI	Virtual tunnel interface
VTP	VLAN Trunking Protocol
vtty	virtual terminal
WAN	wide-area network
WAAS	Wide Area Application Services
WCCP	Web Cache Communications Protocol
WFQ	weighted fair queuing
WiMAX	Worldwide Interoperability for Microwave Access
WLAN	wireless LAN
WRED	weighted random early detection
WWW	World Wide Web
ZBF	zone-based firewall