

## ACRONYMS

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AAA	Authentication, Authorization, and Accounting
AAP	ITU-T alternate approval process
ACTS	Advanced Communications Technologies and Services
AD	Application processing delays
ADSL	Asymmetric digital subscriber line
AES	Advanced encryption standard
AFD	Assured forwarding
AH	Authentication header
AID	Application identifier
AIP	Accounting Information Path
AML	Application and Middleware layer
ANSI	American National Standards Institute
AOL	America-Online
APD	Avalanche photodiode
API	Application programming interface
AR	Alternate routing
ARPA	Advanced Research Projects Agency
ARPANET	ARPA NETwork
ARS	Accounting-Rate Systems
AS	Autonomous system, authentication server
ASC	Accredited Standards Committee
ASC X12	Accredited Standards Committee X12—SDO for cross-industry electronic exchange of business information
ASIC	Application Specific Integrated Circuits
ASN.1	Abstract syntax notation 1

ASP	Application Service Provider
ASR	Access Service Requests
ASTM International	Formerly known as American Society for Testing and Materials
ATM	Asynchronous Transfer Mode
ATMOS	Asynchronous Transfer Mode Optical Switching
BA	TM Forum Business Agreement; behavior aggregate
BC	Biometric Consortium
BDV	Business domain view
BER	Basic encoding rules; bit error rate
BET	Business entity type
BGP	Border gateway protocol
B-ISDN	Broadband integrated services digital network
BOV	Business operation view
BPAWG	Business Process Analysis Working Group
BPDS	Business process definition specification
BPIM	Business process and information modeling
BRV	Business requirements view
BSI	<i>Nundesamt für Sicherheit in der Informationstechnik</i>
BSS	Business support system
BSV	Business service view
BT-EC	ISO-IEC JTC 1 Business Team on Electronic commerce
BTV	Business transaction view
CABS	Carrier Access Billing Systems
CAM	Content addressable memory
CANCAN	Contract Negotiation and Charging in ATM Networks
CAPI	Cryptographic application programming interface
CARE	Customer account record exchange
CAS	Channel-associated signaling
CASHMAN	Charging and Accounting Schemes in Multiservice ATM Networks
CATI	Charging and accounting technology for the Internet
CBC	Cipher block chaining
CBEFF	Common Biometric Exchange File Format
CBL	Common Business Library
CBQ	Class-based queuing
CC	Company Code
CCD	Charge-coupled device
CCP	Collaboration Protocol Profile
CCS	Common channel signaling
CDR	Call detail record
CEN	European Committee for Standardization
CE	Congestion experienced
CEN TC 251	European Standardization of Health Informatics
CFB	Cipher feedback
CFDL	Care packet first, don't care packet last
CIM	DMTF common information model
CLEC	Competitive local telephone company

CM&B	Customer management and billing system
CMIP	Common Management Information Protocol
CMP	Certificate Management Protocol
CMS	Cryptographic message syntax
CNM	Customer network management
CORBA	Common Object Request Broker Architecture
CORD	Contention resolution by delay lines
CoS	Class of service
CPA	Collaboration Protocol Agreement
CPE	Customer-provided equipment
CPP	Control Policy Path
CPN	Customer premises network
CPS	Cumulus pricing scheme
CR	Constraint-based routing
CRL	Certification revocation list
CR-LDP	Constraint-based routing label distribution protocol
CR-LSP	Constraint-based routing LSP
CSS	Charging support system
CWDM	Coarse wavelength division multiplexing
CWR	Congestion window reduced
DAP	Directory Access Protocol
DARPA	Defense Advanced Research Projects Agency
DDOS	Distributed denial of service
DEC	Digital Equipment Corporation
DES	Data Encryption Standard
DHCP	Dynamic host configuration protocol
DiffServ	Differentiated services architecture
DIS	Draft International Standard
DISP	Directory Information Shadowing Protocol
DLCI	Data link connection identifier
DMTF	Distributed Management Task Force
DNS	Domain name system
DOD	Department of Defense
DOI	Domain of interpretation
DRA	Distributed restoration algorithms
DRR	Distributed round-robin
DS	DiffServ
DSA	Digital Signature Algorithm; directory system agent
DSCP	Differentiated-service code point
DSP	Directory System Protocol
DSS	Digital signature standard
DTD	Document-type description
DUA	Directory user agent
DWDM	Dense-wavelength division multiplexing
DWFQ	Distributed weighted-fair queuing
DWRED	Distributed weighted RED
EAN	European Article Numbering, former name of EAN International

EBONE	European BackBONE
eBusiness	Electronic business
ebXML	Electronic Business eXtensible Markup Language
EC	Electronic commerce
ECB	Electronic code book
ECC	Elliptic curve cryptography
ECDH	Elliptic Curve Diffie–Hellman
ECDSA	Elliptic Curve Digital Signature Algorithm
ECN	Explicit congestion notification
eCo	e (or eCommerce) Framework that enables businesses to discover each other on the WWW and determine how they can do business
eCommerce	Electronic commerce
EDE	Encryption-decryption-encryption
EDFA	Erbium-doped fiber amplifier
EDI	Electronic data interchange
EE	End-to-end (delay)
EF	Expedited forwarding
EMR	Exchange Message Record
EPL	Enterprise policy layer
EPSRC	Engineering and Physical Sciences Research Council
ER LSP	Explicit-routed LSF
eSociety	Electronic society
ESP	Encapsulating security payload
eTOM	enhanced Telecom Operations Map
ETSI	European Telecommunications Standardization Institute
EuropaNET	Europa NETWORK
FAQ	Frequently asked questions
FBI	Federal Bureau of Investigation
FCC	Federal Communication Commission
FCFS	First-come first-served
FDDI	Fiber-distributed data interface
FDL	Fiber delay line
FDT	Formal description technique
FEC	Forward equivalent class
FF	Fixed filter
FGON	First-generation optical network
FIFO	First-in first-out
FoIP	Fax over IP
F-OXC	Fiber-optical cross connect
FRED	Fact RED
FSV	Functional services view
FTP	File Transfer Protocol
GMPLS	Generalized multiprotocol label switching
GOCPKI	Government of Canada Public Key Infrastructure
GPO	Government Printing Office
GPRS	General packet radio system

GPS	Generalized processor sharing
GSM	Groupe Speciale Mobile
GTDD	Global Telecommunications Data Registry
HA-API	Human-Authentication–Application Program Interface
HEDIC	Healthcare EDI Coalition
HHA	Hand-held authenticators
HL7	Health level 7—An SDO for the production and promotion of health care IT communications standards
HMAC	Hashed Message Authentication Code
HTTP	Hypertext transfer protocol
HTTPS	Hypertext transfer protocol secure
IB	Information bundle
IBIA	International Biometric Industry Association
IC	Implementation convention
ICAO	International Civil Aviation Organization
ICC	ITU Carrier Code
ICCAS	Internet Charge Calculation and Accounting System
ICMP	Internet Control Message Protocol
ICT	Information and communication technologies
IDEA	International Data Encryption Algorithm
IEC	Interexchange carrier; International Electrotechnical Commission
IETF	Internet Engineering Task Force
IGP	Interior gateway protocol
IKE	Internet key exchange
ILEC	Incumbent local telephone company
ILM	Incoming label map
IMD	Information management domain
IMO	International Maritime Organization
INCITS	InterNational Committee for Information Technology Standards
INDEX	Internet Demand Experiment
IntServe	Integrated services architecture
IP	Internet protocol
IPDR	Internet protocol detail record; Internet protocol data records
IPng	IP new generation
IPSEC	Internet Protocol Security
IPv4	IP version 4
ISAKMP	Internet Security Association and Key Management Protocol
ISDN	Integrated services digital networks
IS-IS	Intelligent scheduling and information system
ISO	International Organization for Standardization
ISO/IEC JTC 1/SC 7	Subcommittee for Software and System Engineering
ISO/IEC JTC 1/SC 27	Subcommittee for IT Security Techniques
ISO/IEC JTC 1/SC 31	Automatic Identification and Data Capture Techniques
ISO/IEC JTC 1/SC 32	Subcommittee for Data Management and Interchange
ISO TC 184	Technical Committee for Industrial Automation Systems and Integration

ISO TC 211	Technical Committee for Geographic Information/Geomatics
ISO TC 215	Technical Committee for Health Informatics
ISP	Internet service provider
IT	Information technology
ITU	International Telecommunication Union
ITU-T	International Organization for Standardization, Telecommunications Sector
JTC 1	Joint Technical Committee under ISO and IEC for information technology standards
KEA	Key Exchange Algorithm
KEOPS	Keys to optical packet switching
L2TP	Layer 2 Tunneling Protocol
λSR	Lambda switch router
LAN	Local-area network
LDAP	Lightweight directory access protocol (X.500)
LDP	Label distribution protocol
LED	Light-emitting diode
LER	Label edge router
LIB	Label information base
LOA	Linear optical amplifier
LOBS	Labeled OBS
LoF	Loss of frame
LoS	Loss of signal
LSA	Link state advertisement
LSP	Label switched path
LSR	Label switched router
M3I	Market-Managed Multiservice Internet
MAC	Message authentication code; medium access control
MAN	Metropolitan-area network
MCMF	Multicommodity maximum flow
MD	Message digest
MECAB	Multiple Exchange Carrier Access Billing
MEMS	Microelectromechanical switch
MF	Mulifield
MIB	Management information base
MIC	Message integrity check
MISPC	Minimum interoperability specification for PKI components
MIT	Massachusetts Institute of Technology
MOSPF	Multicast OSPF
MoU	Memorandum of Understanding
MPEG	Moving Picture Experts Group
MPLS	Multiprotocol label switching
MPλS	Multiprotocol lambda switching
MTU	Maximum transfer unit
NAS	Network access server

NECA	National Exchange Carrier Association
NeTraMet	Network traffic meter
NGI	Next-Generation Internet
NGOSS	New-generation operation support systems
NHLFE	Next hop label forwarding entry
N-ISDN	Narrowband Integrated Services Digital Network
NIST	National Institute of Standards and Technology
NL	Network latency
NMAC	Nested Message Authentication Code
NOC	Network Operation Center
NSA	National Security Agency
NSFNET	NSF Network
OA	Optical amplifier
OADM	Optical add/drop multiplexer
OAEP	Optimal asymmetric encryption padding
OAG	Open applications group
OAM	Operations and maintenance
OAM&P	Operation, administration, maintenance, and provisioning
OASIS	Organization for the Advancement of Structured Information Standards
OBS	Optical burst switching
OC	Optical channel
OCL	Object Constraint Language
OCSP	Online Certificate Status Protocol
OFB	Output feedback
OI	Optical Internet
OL	Optical layer
OLT	Optical line terminal
OMS	Optical multiplex section
ONRAMP	Optical network for regional access using multiwavelength protocol
OPWA	One path with advertising
OSI	Open Systems Interconnection
OSPF	Open shortest path first
OSS	Operation support system
OTN	Optical transport network
OTS	Optical transmission section
OXC	Optical cross-connect
PBX	Private branch exchange
PDB	Per-domain behavior
PDFA	Praseodymium-doped fiber amplifier
PDH	Plaesychronous digital hierarchy
PGP	Pretty Good Privacy
PHB	Per-hop behavior
PHL	Physical layer
PISP	Pure ISP
PKCS	Public key cryptography standards

PKI	Public key infrastructure
PKIX	Public key infrastructure (X.509)
PMI	Privilege Management Infrastructure
PMP	Paris Metro pricing
PNNI	Private network-to-network interface
PO	Purchase order
POP	Points of presence
POP3	Post office protocol
POS	Packet over SONET
PPP	Point-to-point protocol
PPS	Packets per second
PQ	Priority queuing
PSTN	Public switched telephone network
PTT	Posts, telephone, telegraph
PVC	Permanent virtual circuit
QoS	Quality of service
RA	Raman amplifiers; root authority
RAC	RADIUS accounting record
RADIUS	Remote access dial-in user service; Remote Authentication Dial-In User Service
RBAC	Role-based access control
REA	Resource–event–agent
RED	Random early detection
RFC	Request for comments
RIP	Routing information protocol
RR	Round-robin
RSA	Rivest, Shamir, and Adleman
RSADSI	RSA Data Security, Inc.
RSVP	Resource reservation protocol
RSVP-TE	Resource reservation protocol for traffic engineering
RT	Response time
RTFM	Real-time flow measurement
RTP	Real-time protocol
RWA	Routing and wavelength assignment
S/MIME	Secure Multipurpose Internet Mail Extensions
S/WAN	Secure Wide Area Network
SASL	Simple authentication and security layer
SC	Semantic component
SDH	Synchronous digital hierarchy
SDL	Simple data link
SDO	Standards Development Organization
SDSI	Simple distributed security infrastructure
SECAB	Small Exchange Carrier Access Billing
SET	Secure electronic transactions
SF	Shared filter
SGML	Standard Generalized Markup Language



SGON	Second-generation optical network
SHA	Secure hash algorithm
SID	TM forum shared information/data model
SIM	TM forum systems integration map
SIP	Session initiation protocol
SIU	Smart Internet Usage
SKIP	Simple key management for Internet protocols
SLA	Service-level agreement
SLS	Service-level specification
SMDR	Station management detail record; station message detail record
SME	Small- and medium-size enterprise
SMTP	Simple mail-transfer protocol
SNMP	Simple network-management protocol
SOA	Semiconductor optical amplifier; source of authority
SONET	Synchronous optical network
SPKI	Simple public key infrastructure
SPL	Service provisioning layer
SPR	Stochastic preplanned restoration
SPR-PW	SPR scheme with proportional weighted
SRED	Stabilized RED
SSH	Secure Shell
SSL	Secure socket layer
STM-N	Synchronous transport module-level $N$
STS-N	Synchronous transport signal- $N$
SVC	Switched virtual circuit
SWG-EDI	Special Working Group on Electronic Data Interchange
SWIFT	Industry-owned cooperative providing secure, reliable, and standardized messaging between financial institutions
T1	Accredited Standards Committee T1-SDO for telecommunications network standards
TCA	Traffic conditioning agreement
TACACS	Terminal Access Controller Access System
TCP	Transport control protocol
TCS	Traffic conditioning specification
TDM	Time-division multiplexing
TE	Traffic engineering
TGS	Ticket-granting server
TISP	Telecommunications ISP
TLS	Transport layer security; transmission layer security
TM Forum	TeleManagement Forum
tML	telecommunications Markup Language
TMN	Telecommunications Management Network
TMN X-Interface	Interface for inter-TMN communication
TMWG	Techniques and Methodologies Working Group
ToS	Type of service
TSB	ITU-T Telecommunications Service Bureau
TSC T1M1	Technical Subcommittee for Internetwork Operations, Administration, Maintenance, and Provisioning

UCC	Uniform Code Council
UDP	User datagram protocol
UML	Unified Modeling Language
UMM	UN/CEFACT modeling methodology
UMTS	Universal mobile telecommunication system
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
UN/ECE	United Nations Economic Commission for Europe
UN/EDIFACT	EDI standards developed and maintained by UN/CEFACT
UNI	User network interface
URL	Uniform resource locator
UTRAD	Unified TMN Requirements, Analysis, and Design
VC	Virtual circuits
VCI	Virtual path identifier
VCSEL	Vertical cavity surface emitting laser
VLSI	Very larger scale integration
VoATM	Voice over ATM
VoD	Video-on-demand
VoFR	Voice over frame relay
VoIP	Voice over IP
VPI	Virtual path identifier
VPN	Virtual private networks
W3C	World Wide Web Consortium
WAN	Wide-area network
WASPNET	Wavelength switched packet network
WBXC	Waveband cross-connect
WCO	World Customs Organization
WDM	Wavelength division multiplexing
WfMC	Workforce Management Coalition
WF	Wildcard filter
WFQ	Weighted fair queuing
WLL	Wireless local loop
WRED	Weighted RED
WR-OXC	Wavelength routing optical cross-connect
WRR	Weighted round-robin
WT-OXC	Wavelength translating optical cross-connect
WTO	World Trade Organization
WWW	World Wide Web
X12	EDI standards developed and maintained by ASC X12
xDFA	<i>x</i> -Doped fiber amplifier
XML	Extensible Markup Language: W3C recommended subset of SGML enabling the exchange of structured data over the WWW
XOR	exclusive OR