



The following glossary of acronyms expands acronyms and initialisms that are used in *Cisco IOS System Error Messages, Release 12.2*.

A

AAA	authentication, authorization, and accounting
AAL5	ATM adaptation layer 5
ABM	asynchronous balanced mode
ABR	Area Border Router
AC	alternating current
ACIP	ATM Cable Interface Processor
ACL	Access Control List
ACO	alarm cutoff
ACTLU	activate logical unit
ACTPU	activate physical unit
ADSL	asymmetric digital subscriber line
AH	Authentication Header
AIP	ATM Interface Processor
ALC	ATM Line Card
ALPS	Airline Product Set
AMD	Advanced Micro Devices
ANR	Automatic Network Routing
ANS1	<i>Undefined</i>
AP	authentication proxy
API	application programming interface
APING	<i>Undefined</i>

APN	access point name
APPC	Advanced Program-to-Program Communications
APPN	Advanced Peer-to-Peer Networking
APS	automatic protection switching
ARAP	AppleTalk Remote Access Protocol
ARB	Adaptive Rate-Based
ARP	Address Resolution Protocol
ARQ	automatic repeat request
AS	autonomous system
ASCU	agent-set control unit
ASIC	application-specific integrated circuit
ASP	ATM switch processor
ATF	area to free
ATM	Asynchronous Transfer Mode
AURP	AppleTalk Update-Based Routing Protocol
AutoRP	Auto-Rendezvous Point
AVL	approved vendor list

B

BAP	Bandwidth Allocation Protocol
BB	<i>Undefined</i>
BBI	<i>Undefined</i>
BERT	bit error rate tester
BGP	Border Gateway Protocol
BIC	backplane interface card
BIDI	bidirectional bus
BIND	Berkeley Internet Name Domain
BIS	<i>Undefined</i>

BLLI	Broadband Low Layer Information
BMA	Buffer Management ASIC
BOOTP	Bootstrap Protocol
BPDU	bridge protocol data unit
BPI	baseline privacy interface
BRI	Basic Rate Interface
BRF	Bridge Relay Function
BSC	Binary Synchronous Communications
BSS	Business Support System
BSTUN	Block Serial Tunnel
BTU	<i>Undefined</i>
BUS	broadcast-and-unknown server

C

CA	certification authority
CAIM	Compression Advanced Interface Module
CAM	content-addressable memory
CAS	channel-associated signaling
CASA	Cisco Appliance and Services Architecture
CBAC	Context-Based Access Control
CBI	<i>Undefined</i>
CBUS	ciscoBus
CCAPI	call control API
CCB	call control block
CCO	Cisco Connection Online (obsolete term, replaced by Cisco.com)
CCW	channel command word
CDI	<i>Undefined</i>
CDM	cable data modem

CDP	Cisco Discovery Protocol
CE	certificate enrollment
CEB	<i>Undefined</i>
CEBI	<i>Undefined</i>
CEF	Cisco Express Forwarding
CES	circuit emulation service
CET	Cisco Encryption Technology
CGMP	Cisco Group Management Protocol
CGX	CryptoGraphics eXtensions
CHAP	Challenge Handshake Authentication Protocol
CI	chassis interface
CICS	Customer Information Control System
CIP	Channel Interface Processor
CIP2	enhanced Channel Interface Processor
CIR	committed information rate
CLAW	Common Link Access for Workstations
CLI	command-line interface
CLNS	Connectionless Network Service
CLS	Cisco link services
CLSI	Cisco link services interface
CMCC	Cisco Mainframe Channel Connection
CMNS	Connection Mode Network Service
CMPC	Cisco Multipath Channel
CMTS	cable modem termination system
CNR	Cisco Network Registrar
CNOS	change number of sessions
CNS	Cisco Networking Services
codec	coder-decoder
CoS	class of service

COT	continuity testing
CP	control point
CPA	Channel Port Adapter
CPI	common part indicator
CPI-C	common programming interface for communications
CRC	cyclic redundancy check
CRF	Concentrator Relay Function
CRL	certificate revocation list
CRV	call reference value
CSA	compression service adapter
CSAR	Cisco Cell Segmentation and Reassembly
CSC	clock switch card
CSI	called subscriber identification
CSM	call switching mode
CSM	call switching module
CSNA	Cisco SNA
CSU	channel service unit
CTRC	Cisco Transaction Connection
CTS	Clear To Send
CV	<i>Undefined</i>
CWAN	Constellation WAN

D

DC	direct-connect
DC	direct current
DCD	data carrier detect
DCE	data communications equipment
DDR	dial-on-demand routing

DDSM	Digital Data Services Manager
DFC	dial feature card
DFP	Dynamic Feedback Protocol
DHCP	Dynamic Host Configuration Protocol
DLC	data-link connection
DLC	data-link control
DLCI	data-link connection identifier
DLR	designated local retransmitter
DLSw	data-link switching
DLU	dependent logical unit
DLU	destination logical unit
DLU	dynamic logical unit
DLUR	dependent logical unit requester
DLUS	dependent logical unit server
DM	disconnect mode
DMA	direct memory access
DMAC	destination MAC
DMLP	Distributed Multilink Point-to-Point Protocol
DNIS	dialed number identification service
DNS	Domain Name Server
DNS	Domain Name Service
DNS	Domain Name System
DOCSIS	Data-over-Cable Service Interface Specifications
DOI	domain of interpretation
DPRAM	dual-port RAM
DR	dynamic replenishment
DRAM	dynamic RAM
DRDA	Distributed Relational Database Architecture
DRiP	Duplicate Ring Protocol

DRP	Director Response Protocol
DSC	dial shelf control
DSC	dial shelf controller
DSI	dial shelf interconnect
DSI	dial shelf interface
DSIP	Dial Shelf Interconnect Protocol
DSL	digital subscriber line
DSP	digital signal processor
DSP	Domain Specific Part
DSPM	digital signal processor module
DSPRM	Digital Signal Processor Resource Manager
DSPU	downstream physical unit
DSR	data set ready
DSU	data service unit
DSU	digital service unit
DTE	data terminal equipment
DTP	Dynamic Trunking Protocol
DTR	data terminal ready
DVMRP	Distance Vector Multicast Routing Protocol

E

EC	EtherChannel
ECA	ESCON Channel Adapter
ECC	error-correcting code
ECC	Error-Check Code
ECC	error checking and correction
ECPA	Escon Channel Port Adapter
ECPA4	enhanced Escon Channel Port Adapter

EEPROM	erasable programmable read-only memory
EGP	exterior gateway protocol
EHSA	enhanced high system availability
EID	endpoint identifier
EIGRP	Enhanced Interior Gateway Routing Protocol
ELAN	emulated LAN
ENVM	Constellation WAN Environmental Monitor
EOF	end of frame
EOIR	enhanced online insertion and removal
ESCON	Enterprise System Connection
ESP	Extended Services Processor

F

FAQ	frequently asked questions
FB	feature board
FCIT	<i>Undefined</i>
FC-PFQ	feature card per-flow queueing
FDDI	Fiber Distributed Data Interface
FDL	Facility Data Link
FDM	frequency-division multiplexing
FE	Fast Ethernet
FEC	Fast EtherChannel
FI	format indicator
FIA	Fabric Interface ASIC
FIB	forwarding information base
FIFO	first-in, first-out
FIR	Finite Impulse Response
FM	<i>Undefined</i>

FMSP	Fax MSP
FPGA	field-programmable gate array
FQDN	fully qualified domain name
FQPCID	fully qualified procedure correlation identifier
FRMR	Frame Reject
FRU	field-replaceable unit
FSIP	Fast Serial Interface Processor
FSM	finite state machine
FTP	File Transfer Protocol

G

GBIC	Gigabit Interface Converter
GC	global configuration
GDS	general data stream
GE	Gigabit Ethernet
GEIP	Gigabit Ethernet Interface Processor
GGSN	gateway GPRS support node
GLC	Gigabit line card
GPRS	general packet radio service
GRP	gigabit route processor
GSN	GPRS support node
GSR	Internet router
GTF	Generalized Trace Facility
GTP	GPRS tunneling protocol

H

HDLC	High-Level Data Link Control
HDV	High Density Voice

HDX	half-duplex
HGW	home gateway
HPR	High-Performance Routing
HSA	high system availability
HSRP	Hot Standby Router Protocol
HWIDB	hardware interface descriptor block

I

IBGP	internal BGP
IBOC	in-band bit-oriented code
ICC	Interface Controller Card
ICMP	Internet Control Message Protocol
ICPIF	Calculated Planning Impairment Factor
ICS	Integrated Communication System
IDAP	<i>Undefined</i>
IDB	interface descriptor block
IDPROM	Identification PROM
IDS	Internal Data Services
IDT	Integrated Digital Terminal
IDU	indoor unit
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
IF	intermediate frequency
IGMP	Internet Group Management Protocol
IGRP	Interior Gateway Routing Protocol
IKE	Internet Key Exchange
ILMI	Integrated Local Management Interface
IMA	inverse multiplexing over ATM

IP	Internet Protocol
IPC	interprocess communication
IPDC	Internet Protocol device control
IPDLC	IP data link connection
IPG	Inter-Packet Gap
IPM	Cisco Internetwork Performance Monitor
IPPCP	IP Payload Compression Protocol
IPSec	IP Security
IPv6	IP version 6
IPX	Internetwork Packet Exchange
ISA	Integrated Services Adapter
ISAKMP	Internet Security Association and Key Management Protocol
ISDN	Integrated Services Digital Network
IS-IS	Intermediate System-to-Intermediate System
ISL	Inter-Switch Link
ISR	intermediate session routing
IVR	interactive voice response

L

LAC	L2TP access concentrator
LANCE	Local Area Network Controller Ethernet
LANE	LAN Emulation
LAPB	Link Access Procedure, Balanced
LAT	local-area transport
LC	line card
LCB	Line Control Block
LCD	liquid crystal display
LCI	local channel identifier

LCN	logical channel number
LDLC	LocalDirector link control
LDN	local directory number
LDP	label distribution protocol
LEC	LANE Client
LECS	LANE Configuration Server
LEN	low-entry networking
LES	LANE Server
LFSID	local-form session identifier
LIR	link incident report
LLC	logical link control
LLC2	Logical Link Control, type 2
LMI	Local Management Interface
LNМ	LAN Network Manager
LNS	L2TP network server
LPD	line printer daemon
LS	<i>Undefined</i>
LSA	link-state advertisement
LSIPC	LightStream interprocess communication
LSP	Label Switch Path
LSP	link-state packet
LU	logical unit
LU6.2	logical unit type 6.2

M

MAC	Media Access Control
MARS	Multicast Address Resolution Server
MAU	media attachment unit

MBRI	Multi-BRI
MBRI	Multipoint Basic Rate Interface
MBus	maintenance bus
MCNS	Multimedia Cable Network System Partners, Ltd.
MCOM	Microcom carrier card
MD5	message digest algorithm 5
MDS	multicast distributed switching
MEMD	memory device
MGCP	Media Gateway Control Protocol
MIB	Management Information Base
MIB/SMT	Management Information Base/Station Management
MIC	media interface connector
MICA	Modem ISDN channel aggregation
MID	Multiplex ID
midb	multicast interface data block
MII	media-independent interface
MLS	multilayer switching
MLTG	multilink trunk group
MNCNS	Multimedia Cable Network System Partners, Ltd.
MNP4	Microcom Networking Protocol, level 4
MPC	MultiPath Channel
MPC	Multiprotocol-over-ATM client
MPLS	Multiprotocol Label Switching
MPOA	Multiprotocol over ATM
MPS	Multiprotocol-over-ATM server
MSDP	Multicast Source Discovery Protocol
MSFC	Multilayer Switch Feature Card
MPT	Ministry of Posts and Telecommunications
MS	Management Services

MTU maximum transmission unit

Mx *Undefined*

N

NAK negative acknowledgment

NAS network access server

NAT Network Address Translation

NBAR network-based application recognition

NBP Name Binding Protocol

NCE network connection endpoint

NCP Network Control Program

NCP Network Control Protocol

NHDR Network Layer Header

NHRP Next Hop Resolution Protocol

NHS Next Hop Server

NIM network interface module

NIP Nitro Interconnect Protocol

NLP network-layer packet

NLSP NetWare Link Services Protocol

NM network module

NMI nonmaskable interrupt

NMP Network Management Processor

NMS network management system

NMVT network management vector transport

NNI Network-to-Network Interface

NNS network node server

NPE network processing engine

NRM normal response mode

NRP	Network Routing Processor
NRP	node route processor
NSAP	network service access point
NSE	network services engine
NSP	Network Switch Processor
NSP	node switch processor
NVRAM	nonvolatile RAM

O

OAM	Operation, Administration, and Maintenance
ODU	outdoor unit
OIR	online insertion and removal
OOBP	out-of-band port
OOS	out of service
OSPF	Open Shortest Path First
OSS	<i>Undefined</i>

P

PA	port adapter
PAD	packet assembler/disassembler
PAgP	Port Aggregation Protocol
PAM	port adapter module card
PAM	pulse amplitude modulation
PAP	Password Authentication Protocol
PASCB	port adapter system control block
PBP	packet-by-packet
PC	program counter
PCA	parallel channel adapter

PCI	protocol control information
PCM	pulse code modulation
PCPA	Parallel Channel Port Adapter
PCR	peak cell rate
PDP	policy decision point
PDU	protocol data unit
PGM	Pragmatic General Multicast
PIC	Peripheral Interface Controller
PIC	point in call
PIE	protocol information element
PIF	Packet Input FIFO
PIM	Protocol Independent Multicast
PIMv2	Protocol Independent Multicast version 2
PIU	PCM Interface Unit
PKI	public key infrastructure
PLD	programmable logic device
PLU	primary logical unit
PM	<i>Undefined</i> , refers to SPE state machine
PNNI	Private Network-Network Interface
PoS	Packet over SONET
PoS	Packet over SONET/SDH
POST	power-on self test
POTS	plain old telephone service
PPP	Point-to-Point Protocol
PRI	Primary Rate Interface
PROM	programmable read-only memory
PU	physical unit
PU 2.0	Physical Unit 2.0
PU 2.1	Physical Unit 2.1

PVC	permanent virtual circuit
PVC	permanent virtual connection
PVID	Port VLAN ID
PVP	permanent virtual path
PXF	Parallel eXpress Forwarding
PXM	Processor Switching Module

Q

QA	queue and accumulator
QEM	<i>Undefined</i>
QLLC	Qualified Logical Link Control
QoS	quality of service

R

RA	registration authority
RAC	Resource Availability Confirm
RADIUS	Remote Authentication Dial-In User Service
RARP	Reverse Address Resolution Protocol
RAS	Registration, Admission, and Status
RAS	remote access server
RBS	Robbed-Bit Signaling
RCP	remote copy protocol
RDB	relational database
REXEC	remote execution
RF	radio frequency
RIP	Routing Information Protocol
RISC	reduced instruction set computer
RJE	remote job entry

RLM	Redundant Link Manager
RNR	receive not ready
ROM	read-only memory
RP	Route Processor
RPA	Resource Pool Allocation
RPC	Remote Procedure Call
RPF	Reverse Path Forwarding
RPM	Route Processor Module
RPM	Resource Pool Management
RPS	Ring Parameter Server
RR	receive ready
RS	router shelf
RS-232	EIA/TIA-232
RSA	Rivest, Shamir, and Adelman
RSC	route switch controller
RSCV	Route Selection Control Vector
rsh	remote shell
RSM	Route Switch Module
RSP	Route Switch Processor
RSRB	remote source-route bridging
RSVP	Resource Reservation Protocol
RTM	Real Time Monitor
RTP	Rapid Transport Protocol
RTP	Real-Time Transport Protocol
RTR	response time reporter
RTS	Request To Send
RTT	round-trip time
RTTMON	Round Trip Time Monitor

RU	request/response unit
Rx	Receive
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S	
SA	security association
SA	Source-Active
SADB	security association database
SAP	service access point
SAR	segmentation and reassembly
SC	<i>Undefined</i>
SCB	storage control blocks
SCB	system control board
SCC	Signaling Connection Control
SCCP	Signaling Connection Control Part
SCP	Service Control Point
SCP	System Control Protocol
SDLC	Synchronous Data Link Control
SDLLC	Synchronous Data Logical Link Control
SDP	Shelf Discovery Protocol
SDRAM	synchronous DRAM
SDT	Start Data Transfer
SFC	switch fabric card
SGBP	Stack Group Bidding Protocol
SGCP	Simple Gateway Control Protocol
SGSN	Serving GPRS Support Node
SID	Service ID
SIMM	single in-line memory module
SLARP	Serial Line Address Resolution Protocol

SLB	Server Load Balancing
SLC	signaling link code
SLCI	Signaling Link Code Interface
SLIP	Serial Line Internet Protocol
SLU	secondary logical unit
SM	state machine
SMDS	Switched Multimegabit Data Service
SMRP	Simple Multicast Routing Protocol
SMTP	Simple Mail Transfer Protocol
SNA	Systems Network Architecture
SNASw	SNA Switch
SNMP	Simple Network Management Protocol
SNR	signal-to-noise ratio
SNRM	Set Normal Response
SOF	start of frame
SOP	Second-Generation Packet-over-SONET
SP	Switch Processor
SPAN	Switched Port Analyzer
SPE	service processing element
SPI	security parameter index
SPID	service profile identifier
SPM	source path message
SPMM	SIMM DSP module
SRA	source routing accelerator
SRAM	Static RAM
SRCP	Simple Resource Coordination Protocol
SRDB	source route relational database
SSCOP	Service-Specific Connection-Oriented Protocol
SSCP	system services control points

SSE	silicon switching engine
SSH	Secure Shell
SSM	Source Specific Multicast
SSP	Silicon Switch Processor
SSRP	Simple Server Redundancy Protocol
SSTP	Shared Spanning-Tree Protocol
STUN	serial tunnel
SU	service unit
SU	signaling unit
SVC	switched virtual circuit
SVI	switched virtual interface
SW56	switched 56K
SWIDB	software for Interface Descriptor Block
SYSMGT	system management

T

TAC	Cisco Technical Assistance Center
TACACS	Terminal Access Controller Access Control System
TCAM	Ternary Content Addressable Memory
TCB	Transmission Control Block
TCL	Toolkit Command Language
TCP	Transmission Control Protocol
TDM	time-division multiplexing
TDP	Tag Distribution Protocol
TDP	tag distribution protocol
TDR	time domain reflectometer
TE	tunnel equipment
TED	Tunnel Endpoint Discovery

TEI	terminal endpoint identifier
TFIB	Tag Forwarding Information Base
TFTP	Trivial File Transfer Protocol
TG	transmission group
TIB	Tag Information Base
TID	Terminal Identifier
TIFF	tagged image file format
TLV	type, length, value
TMQ	terminal port queueing
TP	Transport Protocol
TR	Token Ring
TRANGE	time-range
TSC	Tag Switch Controller
TSI	transmitting subscriber information
TSP	tag-switched path
TTL	time to live
TVC	tag switched controlled virtual circuit
TVC	tag virtual circuits
Tx	transmit

U

UA	unnumbered acknowledgement
UCB	University of California, Berkeley
UDLD	UniDirectional Link Detection
UDP	User Datagram Protocol

V

VACL	VLAN access control list
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VAD	voice activity detection
VBR	variable bit rate
VC	virtual circuit
VCC	virtual channel connection
VCD	virtual circuit descriptor
VCI	virtual channel identifier (ATM only)
VCN	virtual circuit number
VFC	voice feature card
VFC	VoIP feature card
VG	voice gateway
VIC	voice interface card
VIP	Versatile Interface Processor
VLAN	virtual LAN
VMAC	Virtual MAC
VMPS	VLAN Membership Policy Server
VNM	Voice Network Manager
VoIP	Voice over IP
VPDN	Virtual Private Dialup Network
VPI	virtual path identifier
VPN	Virtual Private Network
VPNv4	Virtual Private Network version 4
VSI	Virtual Switch Interface
VSM	Voice Service Manager
VT	virtual terminal
VTAM	virtual telecommunications access method
VTP	VLAN Trunk Protocol
VTSP	voice telephony service provider
VTT	voltage termination

W

WCCP	Web Cache Communication Protocol
WCS	writable control store
WIC	WAN interface card
WLM	Workload Manager
WWW	World Wide Web

X

XCA	external communication adapter
XDR	eXternal Data Representation
XID	exchange identification
XNS	Xerox Network Systems
XOT	X.25-over-TCP
XTagATM	extended tag ATM