

**P/F**

poll/final bit. Bit in bit-synchronous data link layer protocols that indicates the function of a frame. If the frame is a command, a 1 in this bit indicates a poll. If the frame is a response, a 1 in this bit indicates that the current frame is the last frame in the response.

p2mp

point-to-multipoint. Communication between a series of receivers and transmitters to a central location. Cisco p2mp typically is set up in three segments to enable frequency re-use. Cisco offers MMDS, U-NII, and LMDS systems in p2mp.

p2p

point-to-point. Communication between one receiver and one location. P2p has a higher bandwidth than p2mp for reasons including that it has less overhead to manage the data paths and there is only one receiver per transmitter. Cisco offers MMDS, U-NII, and LMDS systems in p2p.

PABX

private automatic branch exchange. Telephone switch for use inside a corporation. PABX is the preferred term in Europe, whereas PBX is used in the United States.

 pacing

See *flow control*.

packet

Logical grouping of information that includes a header containing control information and (usually) user data. Packets most often are used to refer to network layer units of data. The terms *datagram*, *frame*, *message*, and *segment* also are used to describe logical information groupings at various layers of the OSI reference model and in various technology circles. See also *PDU*.

packet buffer

See *buffer*.

packet internet groper

See *ping*.

packet level protocol

See *PLP*.

packet of disconnect

Process that allows a PPP session to be verified and then terminated by the network access server. It terminates connections on the network access server when particular session attributes are identified. The POD client, residing on a UNIX workstation, sends disconnect packets to the POD server running on the network access server using session information obtained from AAA. The network access server terminates any inbound user session with one or more matching key attributes. It rejects requests that do not have the required fields or where an exact match is not found.

packet per second

See *PPS*.

packet switch

WAN device that routes packets along the most efficient path and allows a communications channel to be shared by multiple connections. Formerly called an IMP. See also *IMP*.

packet switch exchange

See *PSE*.

packet switching

Networking method in which nodes share bandwidth with each other by sending packets. Compare with *circuit switching* and *message switching*. See also *PSN*.

packet-switched data network

See *PSN*.

packet-switched network

See *PSN*.

packet-switching node

See *packet switch*.

PAD

packet assembler/disassembler. Device used to connect simple devices (like character-mode terminals) that do not support the full functionality of a particular protocol to a network. PADs buffer data and assemble and disassemble packets sent to such end devices.

PAgP

port aggregation protocol.

PAL

Phase Alternating Line. TV system used in most of Europe in which the color carrier phase definition changes in alternate scan lines. Utilizes an 8 MHz-wide modulated signal.

Palo Alto Research Center

See *PARC*.

PAM

Port to Application Mapping. PAM allows you to customize TCP or UDP port numbers for network services or applications.

PAM

pulse amplitude modulation. Modulation scheme where the modulating wave is caused to modulate the amplitude of a pulse stream. Compare with *AM* and *FM*. See also *modulation*.

PAP

Password Authentication Protocol. Authentication protocol that allows PPP peers to authenticate one another. The remote router attempting to connect to the local router is required to send an authentication request. Unlike CHAP, PAP passes the password and the host name or username in the clear (unencrypted). PAP does not itself prevent unauthorized access but merely identifies the remote end. The router or access server then determines whether that user is allowed access. PAP is supported only on PPP lines. Compare with *CHAP*.

parabolic antenna

Dish-like antenna that sends RF waves in a highly focused manner. Such antennas provide very large power gains and are highly efficient. This antenna is typical to Cisco's LMDS, U-NII, and MMDS systems but is not the only design available or appropriate for those frequencies.

parallel channel

Channel that uses bus and tag cables as a transmission medium. Compare with *ESCON channel*. See also *bus and tag channel*.

parallel transmission

Method of data transmission in which the bits of a data character are transmitted simultaneously over a number of channels. Compare with *serial transmission*.

parallelism

Indicates that multiple paths exist between two points in a network. These paths might be of equal or unequal cost. Parallelism is often a network design goal: If one path fails, there is redundancy in the network to ensure that an alternate path to the same point exists.

PARC

Palo Alto Research Center. Research and development center operated by XEROX. A number of widely used technologies were originally conceived at PARC, including the first personal computers and LANs.

PARC Universal Protocol

See *PUP*.

parent peer group

In ATM, a peer group that acts as a “parent” to a subordinate peer group. Organizing peer groups hierarchically reduces the exchange of PTSPs. See also *child peer group*, *peer group*, and *PTSP*.

parity check

Process for checking the integrity of a character. A parity check involves appending a bit that makes the total number of binary 1 digits in a character or word (excluding the parity bit) either odd (for *odd parity*) or even (for *even parity*).

partial mesh

Network in which devices are organized in a mesh topology with some network nodes organized in a full mesh but others that are connected only to one or two other nodes in the network. A partial mesh does not provide the level of redundancy of a full mesh topology but is less expensive to implement. Partial mesh topologies generally are used in the peripheral networks that connect to a fully meshed backbone. See also *full mesh* and *mesh*.

password

Secret data value, usually a character string, that is used as authentication information.

Password Authentication Protocol

See *PAP*.

password sniffing

Passive wiretapping, usually on a local-area network, to gain knowledge of passwords.

path control layer

Layer 3 in the SNA architectural model. This layer performs sequencing services related to proper data reassembly. The path control layer also is responsible for routing. Corresponds roughly with the *network layer* of the OSI model. See also *data flow control layer*, *data-link control layer*, *physical control layer*, *presentation services layer*, *transaction services layer*, and *transmission control layer*.

path control network

SNA concept that consists of lower-level components that control the routing and data flow through an SNA network and handle physical data transmission between SNA nodes. Compare with *NAU*.

path cost

See *cost*.

path discovery

For a digital certificate, the process of finding a set of public-key certificates that comprise a certification path from a trusted key to that specific certificate.

path loss

Power loss that occurs when RF waves are transmitted through the air. This loss occurs because the atmosphere provides a filtering effect to the signal. Certain electromagnetic frequencies (very high and non-commercial) are completely blocked or filtered by the atmosphere.

path name

Full name of a DOS, Mac OS, or UNIX file or directory, including all directory and subdirectory names. Consecutive names in a path name typically are separated by a backslash (\) for DOS, a colon (:) for Mac OS, and a forward slash (/) for UNIX.

path state block

Block maintained by RSVP to store a path.

path validation

Process of validating (a) all the digital certificates in a certification path and (b) the required relationships between those certificates, thus validating the contents of the last certificate on the path.

payload

Portion of a cell, frame, or packet that contains upper-layer information (data).

payload type identifier

See *PTI*.

PBX

private branch exchange. Digital or analog telephone switchboard located on the subscriber premises and used to connect private and public telephone networks.

PCI

protocol control information. Control information added to user data to comprise an OSI packet. The OSI equivalent of the term *header*. See also *header*.

PCM

pulse code modulation. Technique of encoding analog voice into a 64-kbit data stream by sampling with eight-bit resolution at a rate of 8000 times per second.

PCR

peak cell rate. Parameter defined by the ATM Forum for ATM traffic management. In CBR transmissions, PCR determines how often data samples are sent. In ABR transmissions, PCR determines the maximum value of the ACR. See also *ABR* (*available bit rate*), *ACOM*, and *CBR*.

PCS

1. Personal Communications Service. Advanced network architecture that provides personal, terminal, and service mobility. In the United States, PCS spectrum has been allocated for broadband, narrowband, and unlicensed services.

2. port concentrator switch.

PCU

packet control unit. Network component that normally resides in a BSC and directs packet traffic to the SGSN for processing by the GPRS network.

PDN

1. public data network. Network operated either by a government (as in Europe) or by a private concern to provide computer communications to the public, usually for a fee. PDNs enable small organizations to create a WAN without the equipment costs of long-distance circuits.

2. public/private/packet data network. Represents a public or private packet-based network, such as an IP or X.25 network.

PDP context

packet data protocol. Network protocol used by external packet data networks that communicate with a GPRS network. IP is an example of a PDP supported by GPRS. Refers to a set of information (such as a charging ID) that describes a mobile wireless service call or session, which is used by mobile stations and GSNs in a GPRS network to identify the session.

PDU

protocol data unit. OSI term for packet. See also *Bpdu* and *packet*.

peak cell rate

See *PCR*.

peak rate

Maximum rate, in kilobits per second, at which a virtual circuit can transmit.

peer

Router or device that participates as an endpoint in IPsec and IKE.

peer group

Collection of ATM nodes that share identical topological databases and exchange full link state information with each other. Peer groups are arranged hierarchically to prevent excessive PTSP traffic. See also *parent peer group* and *PTSP*.

peer group leader

See *PGL*.

peer-to-peer computing

Calls for each network device to run both client and server portions of an application. Also describes communication between implementations of the same OSI reference model layer in two different network devices. Compare with *client/server computing*.

PEM

privacy enhanced mail. Internet e-mail that provides confidentiality, authentication, and message integrity using various encryption methods. Not widely deployed in the Internet.

penetration

Successful, repeatable, unauthorized access to a protected system resource.

performance management

One of five categories of network management defined by ISO for management of OSI networks. Performance management subsystems are responsible for analyzing and controlling network performance, including network throughput and error rates. See also *accounting management*, *configuration management*, *fault management*, and *security management*.

peripheral node

In SNA, a node that uses local addresses and therefore is not affected by changes to network addresses. Peripheral nodes require boundary function assistance from an adjacent subarea node.

permanent calls

Private line calls used for fixed point-to-point calls, for connections between PBXs (E&M to E&M), or for remote telephone extensions (FXO to FXS).

permanent virtual circuit

See *PVC*.

permanent virtual circuit interface priority queueing

Interface-level priority queueing scheme in which prioritization is based on destination PVC rather than packet contents.

permanent virtual connection

See *PVC*.

permanent virtual path

See *PVP*.

permit processing

See *traffic policing*.

Personal Communications Service

See *PCS*.

Personal Computer Memory Card International Association

Standard used for credit-card-sized computer peripherals. Type 1 devices are very thin memory cards, Type 2 devices include most modems and interfaces, and Type 3 devices are used for disk drives and thicker components.

PFS

perfect forward secrecy. Cryptographic characteristic associated with a derived shared secret value. With PFS, if one key is compromised, previous and subsequent keys are not compromised because subsequent keys are not derived from previous keys.

PG

peripheral gateway. Computer and process within the ICM system that communicates directly with the ACD, the PBX, or the VRU at the call center. The PG reads status information from the peripheral and sends it to the Central Controller. In a private network configuration, the PG sends routing requests to the Central Controller and receives routing information in return.

PGL

peer group leader. In ATM, a node in a peer group that performs the functions of the LGN. Peer group leaders exchange PTSPs with peer nodes in the parent peer group to inform those nodes of the peer group's attributes and reachability and to propagate information about the parent group and the parent group's parents to the nodes in the peer group. See also *peer group* and *PTSP*.

PGM

Pragmatic General Multicast. Reliable multicast transport protocol for multicast applications that require reliable, ordered, duplicate-free multicast data delivery from multiple sources to multiple receivers.

PGP

Pretty Good Privacy. Public-key encryption application that allows secure file and message exchanges. There is some controversy over the development and the use of this application, in part due to U.S. national security concerns.

phase

Location of a position on an alternating wave form.

phase shift

Situation in which the relative position in time between the clock and data signals of a transmission becomes unsynchronized. In systems using long cables at higher transmission speeds, slight variances in cable construction, temperature, and other factors can cause a phase shift, resulting in high error rates.

PHY

1. physical sublayer. One of two sublayers of the FDDI physical layer. See also *PMD*.
2. physical layer. In ATM, the physical layer provides for the transmission of cells over a physical medium that connects two ATM devices. The PHY is comprised of two sublayers: PMD and TC. See also *PMD* and *TC*.

physical address

See *MAC address*.

physical control layer

Layer 1 in the SNA architectural model. This layer is responsible for the physical specifications for the physical links between end systems. Corresponds to the *physical layer* of the OSI model. See also *data flow control layer*, *data-link control layer*, *path control layer*, *presentation services layer*, *transaction services layer*, and *transmission control layer*.

physical layer

Layer 1 of the OSI reference model. The physical layer defines the electrical, mechanical, procedural, and functional specifications for activating, maintaining, and deactivating the physical link between end systems. Corresponds with the *physical control layer* in the SNA model. See also *application layer*, *data-link layer*, *network layer*, *presentation layer*, *session layer*, and *transport layer*.

physical layer convergence procedure

See *PLCP*.

physical layer interface module

See *PLIM* in the "Cisco Systems Terms and Acronyms" section.

physical media

See *media*.

physical medium

See *media*.

physical medium dependent

See *PMD*.

physical sublayer

See *PHY*.

physical unit

See *PU*.

Physical Unit 2

See *PU 2*.

Physical Unit 2.1

See *PU 2.1*.

Physical Unit 4

See *PU 4*.

Physical Unit 5

See *PU 5*.

Physics Network

See *PHYSNET*.

PHYSNET

Physics Network. Group of many DECnet-based physics research networks, including HEPnet. See also *HEPnet*.

PIAFS

Personal Handyphone Internet Access Forum Standard. PHS Internet Access Forum Standard. ITU-T standard for support by ISDN of data terminal equipment with V-series type interfaces.

PIC

1. point in call. Phase within a call. Examples of PIC are Answered, Long Duration, Released, and so on.

2. pre-subscribed inter-exchange carrier.

piggyback attack

Form of active wiretapping in which the attacker gains access to a system via intervals of inactivity in another user's legitimate communication connection. Sometimes called a "between-the-lines" attack.

piggybacking

Process of carrying acknowledgments within a data packet to save network bandwidth.

PIM

See *PIM* in the "Cisco Systems Terms and Acronyms" section.

PIM

Protocol Independent Multicast. Multicast routing architecture that allows the addition of IP multicast routing on existing IP networks. PIM is unicast routing protocol independent and can be operated in two modes: dense and sparse. See also *PIM dense mode* and *PIM sparse mode*.

PIM dense mode

One of the two PIM operational modes. PIM dense mode is data-driven and resembles typical multicast routing protocols. Packets are forwarded on all outgoing interfaces until pruning and truncation occurs. In dense mode, receivers are densely populated, and it is assumed that the downstream networks want to receive and will probably use the datagrams that are forwarded to them. The cost of using dense mode is its default flooding behavior. Sometimes called dense mode PIM or PIM DM. Contrast with *PIM sparse mode*. See also *PIM*.

PIM DM

See *PIM dense mode*.

PIM SM

See *PIM sparse mode*.

PIM sparse mode

One of the two PIM operational modes. PIM sparse mode tries to constrain data distribution so that a minimal number of routers in the network receive it. Packets are sent only if they are explicitly requested at the RP (rendezvous point). In sparse mode, receivers are widely distributed, and the assumption is that downstream networks will not necessarily use the datagrams that are sent to them. The cost of using sparse mode is its reliance on the periodic refreshing of explicit join messages and its need for RPs. Sometimes called sparse mode PIM or PIM SM. Contrast with *PIM dense mode*. See also *PIM* and *rendezvous point*.

ping

packet internet groper. ICMP echo message and its reply. Often used in IP networks to test the reachability of a network device.

ping of death

Attack that sends an improperly large ICMP [R0792] echo request packet (a “ping”) with the intent of overflowing the input buffers of the destination machine and causing it to crash.

ping sweep

Attack that sends ICMP [RFC 0792] echo requests (“pings”) to a range of IP addresses with the goal of finding hosts that can be probed for vulnerabilities.

ping-ponging

Phrase used to describe the actions of a packet in a two-node routing loop.

PINX

private integrated services network exchange. A PBX or key system which, in a BRI voice application, uses QSIG signaling.

PKCS

Public-Key Cryptography Standards. Series of specifications published by RSA Laboratories for data structures and algorithm usage for basic applications of asymmetric cryptography.

PKI

public-key infrastructure. System of CAs (and, optionally, RAs and other supporting servers and agents) that perform some set of certificate management, archive management, key management, and token management functions for a community of users in an application of asymmetric cryptography.

PKI

public key infrastructure.

plain old telephone service

See *POTS*.

plaintext

Data that is input to and transformed by an encryption process, or that is output by a decryption process.

PLAR

private line, automatic ringdown. Leased voice circuit that connects two single endpoints together. When either telephone handset is taken off-hook, the remote telephone automatically rings.

plar-opx

Specifies a PLAR Off-Premises eXtension connection. Using this option, the local voice port provides a local response before the remote voice port receives an answer. On FXO interfaces, the voice port will not answer until the remote side answers.

PLCP

physical layer convergence procedure. Specification that maps ATM cells into physical media, such as T3 or E3, and defines certain management information.

plesiochronous transmission

Term describing digital signals that are sourced from different clocks of comparable accuracy and stability. Compare with *asynchronous transmission*, *isochronous transmission*, and *synchronous transmission*.

PLIM

See *PLIM* in the “Cisco Systems Terms and Acronyms” section.

PLMN

public land mobile network. Generic name for all mobile wireless networks that use earth-based stations rather than satellites. PLMN is the mobile equivalent of the PSTN.

PLP

packet level protocol. Network layer protocol in the X.25 protocol stack. Sometimes called X.25 Level 3 and X.25 Protocol. See also *X.25*.

PLSP

PNNI link state packets.

PLU

Primary Logical Unit. The LU that is initiating a session with another LU. See also *LU*.

PM

performance monitoring. Provides a variety of automatic functions to aid in the maintenance and operation of the network. PM is continuous, in-service monitoring of transmission quality that uses software-provisionable performance parameters. Performance parameters are measured for all four layers of the SONET signal: physical, section, line, and STS path.

PMD

1. polarization mode dispersion. An inherent property of all optical media, caused by the difference in the propagation velocities of light in the orthogonal principal polarization states of the transmission medium.

2. physical medium dependent. Sublayer of the FDDI physical layer that interfaces directly with the physical medium and performs the most basic bit transmission functions of the network. See also *PHY*.

PNNI

1. Private Network-Network Interface. ATM Forum specification for distributing topology information between switches and clusters of switches that is used to compute paths through the network. The specification is based on well-known link-state routing techniques and includes a mechanism for automatic configuration in networks in which the address structure reflects the topology.

2. Private Network Node Interface. ATM Forum specification for signaling to establish point-to-point and point-to-multipoint connections across an ATM network. The protocol is based on the ATM Forum UNI specification with additional mechanisms for source routing, crankback, and alternate routing of call setup requests.

PNNI Link State Packets

See *PLSP*.

PNNI topology state element

See *PTSE*.

PNO

Public Network Operator. See also *PTT*.

POET

packet over E3/T3.

point of presence

See *POP*.

point-to-multipoint

See *p2mp*.

point-to-multipoint connection

One of two fundamental connection types. In ATM, a point-to-multipoint connection is a unidirectional connection in which a single source end-system (known as a root node) connects to multiple destination end-systems (known as leaves). Compare with *point-to-point connection*.

point-to-point

See *p2p*.

point-to-point connection

One of two fundamental connection types. In ATM, a point-to-point connection can be a unidirectional or bidirectional connection between two ATM end-systems. Compare with *point-to-multipoint connection*.

Point-to-Point Protocol

See *PPP*.

poison reverse updates

Routing updates that explicitly indicate that a network or a subnet is unreachable, rather than implying that a network is unreachable by not including it in updates. Poison reverse updates are sent to defeat large routing loops.

POL

Provisioning Object Library.

policy

Any defined rule that determines the use of resources within the network. A policy can be based on a user, a device, a subnetwork, a network, or an application.

policy decision point

Server that makes policy decisions. It has global knowledge of network policies, and is consulted by network devices (like routers) that enforce the policies.

policy enforcement point

Device on which policy decisions are carried out. Usually a network node like a router or a switch.

policy routing

Routing scheme that forwards packets to specific interfaces based on user-configured policies. Such policies might specify that traffic sent from a particular network should be forwarded out one interface, and all other traffic should be forwarded out another interface.

policy server

Server (at least one in each QoS domain) that holds policies for reference by and decision over client routers and switches.

policy-based routing

See *policy routing*.

poll/final bit

See *P/F*.

polling

Access method in which a primary network device inquires, in an orderly fashion, whether secondaries have data to transmit. The inquiry occurs in the form of a message to each secondary that gives the secondary the right to transmit.

POM

Provisioning Object Manager.

POP

1. point of presence. In OSS, a physical location where an interexchange carrier installed equipment to interconnect with a *local exchange carrier (LEC)*.
2. Post Office Protocol. Protocol that client e-mail applications use to retrieve mail from a mail server.

port

1. Interface on an internetworking device (such as a router).
2. In IP terminology, an upper-layer process that receives information from lower layers. Ports are numbered, and each numbered port is associated with a specific process. For example, SMTP is associated with port 25. A port number is also called a well-known address.
3. To rewrite software or microcode so that it runs on a different hardware platform or in a different software environment than that for which it was originally designed.

port address translation

Translation method that allows the user to conserve addresses in the global address pool by allowing source ports in TCP connections or UDP conversations to be translated. Different local addresses then map to the same global address, with port translation providing the necessary uniqueness. When translation is required, the new port number is picked out of the same range as the original following the convention of Berkeley Standard Distribution (SD).

This prevents end stations from seeing connection requests with source ports apparently corresponding to the Telnet, HTTP, or FTP daemon, for example. As a result, Cisco IOS PAT supports about 4000 local addresses that can be mapped to the same global address.

port concentrator switch

See *PCS*.

port scan

Attack that sends client requests to a range of server port addresses on a host with the goal of finding an active port and exploiting a known vulnerability of that service.

port snooping

See *circuit steering*.

portware

Software running on a MICA technology HMM or DMM.

POSI

Promoting Conference for OSI. Group of executives from the six major Japanese computer manufacturers and Nippon Telephone and Telegraph that sets policies and commits resources to promote OSI.

POST

power-on self test. Set of hardware diagnostics that runs on a hardware device when that device is powered up.

Post Office Protocol

See *POP*.

Post, Telephone, and Telegraph

See *PTT*.

POTS

plain old telephone service. See *PSTN*.

POTS dial peer

Dial peer connected via a traditional telephony network. POTS peers point to a particular voice port on a voice network device.

POTS splitter

A device (or one part of a larger device) that enables both a DSL data device (for example, a Cisco 1400 series router) and a standard analog device (such as a telephone) to share the same ADSL line.

power-on self test

See *POST*.

power-on servicing

Feature that allows faulty components to be diagnosed, removed, and replaced while the rest of the device continues to operate normally. Sometimes abbreviated POS. Sometimes called hot swapping. See also *OIR*.

PPP

Point-to-Point Protocol. Successor to SLIP that provides router-to-router and host-to-network connections over synchronous and asynchronous circuits. Whereas SLIP was designed to work with IP, PPP was designed to work with several network layer protocols, such as IP, IPX, and ARA. PPP also has built-in security mechanisms, such as CHAP and PAP. PPP relies on two protocols: LCP and NCP. See also *CHAP*, *LCP*, *NCP*, *PAP*, and *SLIP*.

PPS

packet per second.

PPTP

Point-to-Point Tunneling Protocol. RFC 2637 describes the PPTP protocol.

PQ

priority queuing.

PQ/CBWFQ

priority queueing/class-based weighted fair queueing (PQ/CBWFQ). Feature that brings strict priority queueing to CBWFQ. Strict priority queueing allows delay-sensitive data, such as voice, to be dequeued and sent first (before packets in other queues are dequeued), giving delay-sensitive data preferential treatment over other traffic.

precedence order

Determines which value of an option is applied to a cable modem. Options defined in the most specific option set scopings take precedence over the same options defined in more general scopings. Within an option set, common options always have a lower precedence order than a specific service tuple if the cable modem has an associated service package. If a service package is not associated with the cable modem, the TFTP server uses the common options.

precloning

Cloning a specified number of virtual access interfaces from a virtual template at system startup or when the command is configured.

presentation layer

Layer 6 of the OSI reference model. This layer ensures that information sent by the application layer of one system will be readable by the application layer of another. The presentation layer also is concerned with the data structures used by programs and therefore negotiates data transfer syntax for the application layer. Corresponds roughly with the *presentation services layer* of the SNA model. See also *application layer*, *data-link layer*, *network layer*, *physical layer*, *session layer*, and *transport layer*.

presentation services layer

Layer 6 of the SNA architectural model. This layer provides network resource management, session presentation services, and some application management. Corresponds roughly with the *PQ* of the OSI model. See also *data flow control layer*, *data-link control layer*, *path control layer*, *physical control layer*, *transaction services layer*, and *transmission control layer*.

preshared key

Shared secret key that is used during IKE authentication.

Pretty Good Privacy

See *PGP*.

PRI

Primary Rate Interface. ISDN interface to primary rate access. Primary rate access consists of a single 64-kbps D channel plus 23 (T1) or 30 (E1) B channels for voice or data. Compare with *BRI*. See also *BISDN*, *ISDN*, and *N-ISDN*.

primary

See *primary station*.

Primary LU

See *PLU*.

Primary Rate Interface

See *PRI*.

primary ring

One of the two rings that make up a FDDI or CDDI ring. The primary ring is the default path for data transmissions. Compare with *secondary ring*.

primary station

In bit-synchronous data link layer protocols, such as HDLC and SDLC, a station that controls the transmission activity of secondary stations and performs other management functions, such as error control through polling or other means. Primary stations send commands to secondary stations and receive responses. Also called, simply, a primary. See also *secondary station*.

print server

Networked computer system that fields, manages, and executes (or sends for execution) print requests from other network devices.

priority queue

Routing feature in which frames in an output queue are prioritized based on various characteristics, such as packet size and interface type.

Privacy Enhanced Mail

See *PEM*.

private branch exchange

See *PBX*.

private cable modem

Each subscriber/account pair is associated with a single cable modem, which services one or more CPEs also associated with the subscriber/account.

private key

Secret component of a pair of cryptographic keys used for asymmetric cryptography.

Private Network Node Interface

See *PNNI*.

Private Network-Network Interface

See *PNNI*.

privilege

Authorization or set of authorizations to perform security-relevant functions, especially in the context of a computer operating system.

privileged process

Computer process that is authorized (and, therefore, trusted) to perform some security-relevant functions that ordinary processes are not.

PRMD

Private Management Domain. X.400 Message Handling System private organization mail system (for example, NASAmail).

probe

Probe is an intrusive analysis technique that uses the information obtained during scanning to more fully interrogate each network device. The probe uses well known exploitation techniques to fully confirm each suspected vulnerability as well as to detect any vulnerabilities that cannot be found using nonintrusive techniques.

process switching

See *process switching* in the “Cisco Systems Terms and Acronyms” section.

programmable read-only memory

See *PROM*.

PROM

programmable read-only memory. ROM that can be programmed using special equipment. PROMs can be programmed only once. Compare with *EPROM*.

propagation delay

Time required for data to travel over a network from its source to its ultimate destination.

proprietary

Refers to information (or other property) that is owned by an individual or an organization and for which the use is restricted by that entity.

protected checksum

Checksum that is computed for a data object by means that protect against active attacks that would attempt to change the checksum to make it match changes made to the data object.

protected distribution system

Wireline or fiber-optic system that includes sufficient safeguards (acoustic, electric, electromagnetic, and physical) to permit its use for unencrypted transmission of (cleartext) data.

protection ring

One of a hierarchy of privileged operation modes of a system that gives certain access rights to processes authorized to operate in that mode.

protocol

Formal description of a set of rules and conventions that govern how devices on a network exchange information.

protocol address

See *network address*.

protocol control information

See *PCI*.

protocol converter

Enables equipment with different data formats to communicate by translating the data transmission code of one device to the data transmission code of another device.

protocol data unit

See *PDU*.

Protocol Independent Multicast

See *PIM*.

protocol stack

Set of related communications protocols that operate together and, as a group, address communication at some or all of the seven layers of the OSI reference model. Not every protocol stack covers each layer of the model, and often a single protocol in the stack addresses a number of layers at once. TCP/IP is a typical protocol stack.

protocol suite

Complementary collection of communication protocols used in a computer network.

protocol translator

Network device or software that converts one protocol into another similar protocol.

provider edge router

Router that is part of a service provider's network and is connected to a customer edge (CE) router.

provisioning

Creation of an active subscriber account, or modification of parameters for an existing subscriber account. Provisioning of a subscriber account includes subscriber account registration and device activation.

proxy

1. Entity that, in the interest of efficiency, essentially stands in for another entity.
2. Special gateways that relay one H.323 session to another.

proxy Address Resolution Protocol

See *proxy ARP*.

proxy ARP

proxy Address Resolution Protocol. Variation of the ARP protocol in which an intermediate device (for example, a router) sends an ARP response on behalf of an end node to the requesting host. Proxy ARP can lessen bandwidth use on slow-speed WAN links. See also *ARP*.

proxy explorer

Technique that minimizes exploding explorer packet traffic propagating through an SRB network by creating an explorer packet reply cache, the entries of which are reused when subsequent explorer packets need to find the same host.

proxy polling

See *proxy polling* in the "Cisco Systems Terms and Acronyms" section.

proxy server

Intermediary program that acts as both a server and a client for the purpose of making requests on behalf of other clients. Requests are serviced internally or by passing them on, possibly after translation, to other servers. A proxy interprets, and, if necessary, rewrites a request message before forwarding it.

PSDN

packet-switched data network. See *PSN*.

PSE

packet switch exchange. Essentially, a switch. The term PSE generally is used in reference to a switch in an X.25 packet switch. See also *switch*.

PSN

packet-switched network. Network that uses packet-switching technology for data transfer. Sometimes called a PSDN. See also *packet switching*.

PSTN

public switched telephone network. General term referring to the variety of telephone networks and services in place worldwide. Sometimes called *POTS*.

PTI

payload type identifier. 3-bit descriptor in the ATM cell header indicating the type of payload that the cell contains. Payload types include user and management cells; one combination indicates that the cell is the last cell of an AAL5 frame.

PTSE

PNNI topology state element. Collection of PNNI information that is flooded among all logical nodes within a peer group. See also *peer group* and *PNNI*.

PTSP

PNNI topology state packet. Type of PNNI routing packet used to exchange reachability and resource information among ATM switches to ensure that a connection request is routed to the destination along a path that has a high probability of meeting the requested QoS. Typically, PTSPs include bidirectional information about the transit behavior of particular nodes (based on entry and exit ports) and current internal state. See also *PNNI* and *QoS*.

PTT

Post, Telephone, and Telegraph. Government agency that provides telephone services. PTTs exist in most areas outside North America and provide both local and long-distance telephone services.

PU

physical unit. SNA component that manages and monitors the resources of a node, as requested by an SSCP. There is one PU per node.

PU 2

Physical Unit 2. SNA peripheral node that can support only DLUs that require services from a VTAM host and that are capable only of performing the secondary LU role in SNA sessions.

PU 2.1

Physical Unit type 2.1. SNA network node used for connecting peer nodes in a peer-oriented network. PU 2.1 sessions do not require that one node reside on VTAM. APPN is based upon PU 2.1 nodes, which also can be connected to a traditional hierarchical SNA network.

PU 4

Physical Unit 4. Component of an IBM FEP capable of full-duplex data transfer. Each such SNA device employs a separate data and control path into the transmit and receive buffers of the control program.

PU 5

Physical Unit 5. Component of an IBM mainframe or host computer that manages an SNA network. PU 5 nodes are involved in routing within the SNA path control layer.

public data network

See *PDN*.

public key

Publicly disclosable component of a pair of cryptographic keys used for asymmetric cryptography.

Public Switched Telephone Network

See *PSTN*.

public-key certificate

Digital certificate that binds a system entity's identity to a public key value, and possibly to additional data items; a digitally signed data structure that attests to the ownership of a public key.

Public-Key Cryptography Standards

See *PKCS*.

pulse amplitude modulation

See *PAM*.

pulse code modulation

See *PCM*.

pulse density

See *ones density*.

PUP

PARC Universal Protocol. Protocol similar to IP developed at PARC.

PVC

permanent virtual circuit (or connection). Virtual circuit that is permanently established. PVCs save bandwidth associated with circuit establishment and tear down in situations where certain virtual circuits must exist all the time. In ATM terminology, called a permanent virtual connection. Compare with *SVC*. See also *virtual circuit*.

PVP

permanent virtual path. Virtual path that consists of PVCs. See also *PVC* and *virtual path*.

PVP tunneling

permanent virtual path tunneling. Method of linking two private ATM networks across a public network using a virtual path. The public network transparently trunks the entire collection of virtual channels in the virtual path between the two private networks.

PVST+

per-VLAN spanning tree. Support for Dot1q trunks to map multiple spanning trees to a single spanning tree.

