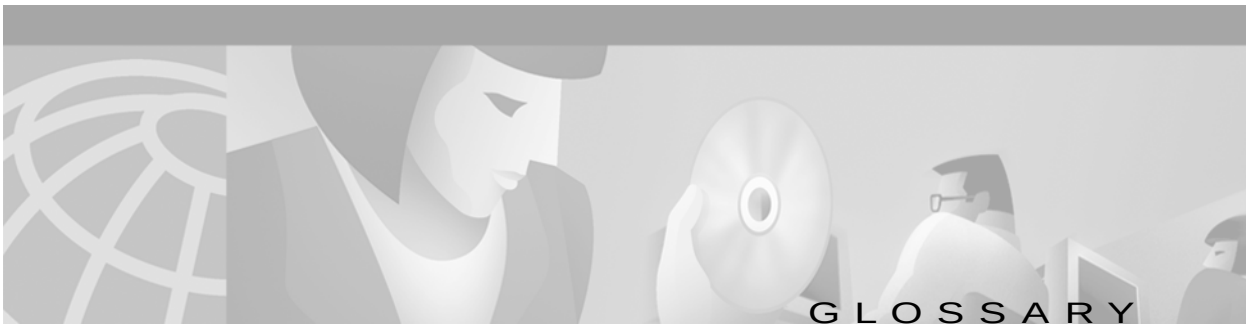

A

active logs These log files contain data that has not yet written into the database. It is important to keep active log files until they become redundant. *See also* redundant logs and removable logs.

administrator user interface The administrative application used to manage and configure broadband network devices.

agent A process that resides in all managed devices and reports the values of specified variables to management stations.

alert Message notifying an operator or administrator of a network problem.

API Application programming interface. Specification of function-call conventions that defines an interface to a service.

C

cable Transmission medium of copper wire or optical fiber wrapped in a protective cover.

cable modem termination system *See* CMTS.

caching Form of replication in which information learned during a previous transaction is used to process later transactions.

client class Device groupings determined by a service provider's service definitions.

CMTS Cable modem termination system. A CMTS is a component that exchanges digital signals with cable modems on a cable network. The CMTS is usually located in the cable provider's local office.

CMTS shared secret *See* shared secret.

configuration file A file containing configuration parameters for the DOCSIS cable modem.

CPE Customer premises equipment. Terminating equipment, such as telephones and modems, supplied and installed at a customer location.

customer premises equipment *See* CPE.

D

Data-Over-Cable Systems Interface Specifications *See* DOCSIS.

demonstration interface A program that demonstrates how to call the provisioning API to perform various tasks, through a web-based interface.

device provisioning engine *See* DPE.

DHCP Dynamic Host Configuration Protocol (RFC 2131). The DHCP server dispenses and maintains IP addresses. DHCP associates an IP address with a device in a lease that grants use of the IP address for a specified period of time.

DHCP Option 14 The merit dump file option that contains signaling type, port number, call agent qualifier, and other information used in the provisioning of an xGCP port on a DOCSIS modem.

DHCP Option 82 The relay agent option that can contain a circuit ID suboption used for device detection and a remote ID suboption used to send provisioning information back to a device.

digital set top box *See* DSTB.

digital video broadcast *See* DVB.

DOCSIS Data-Over-Cable Systems Interface Specifications. Defines technical specifications for equipment at both subscriber locations and cable operators' headends. Adoption of this specification will accelerate deployment of data-over-cable services and ensure interoperability of equipment throughout system operators' infrastructures.

downstream traffic Services travel as downstream traffic from the headend to devices (cable modems and DSTBs). The network may also support upstrean traffic from devices to the headend. Upstream traffic includes requests for special services such as pay-for-view events.

DPE Device provisioning engine. A device communicating with the DHCP and is the first point of BPR contact for a device to receive its configuration. The DPE caches device information to ensure BPR scalability and handles configuration requests including downloading configuration files to devices.

DSTB Digital set-top box. A device that enables a television to become a user interface to the Internet and to receive and decode digital television signals.

Dynamic Host Configuration Protocol *See* DHCP.

E

extension point Network Registrar extension points are the interface between Network Registrar and CSRC BPR. They allow CSRC BPR to inject information such as client class into the Network Registrar flow.

external file An external file is a file outside of the CSRC BPR file system. External file types include templates.

F

FQDN Fully qualified domain name. FQDN is the full name of a system, rather than just its hostname. For example, cisco is a hostname and www.cisco.com is an FQDN.

fully qualified domain name *See* FQDN.

G

Gateway Control Protocol Gateway Control Protocols (xGCPs), such as the Simple Gateway Control Protocol (SGCP) for residential voice services.

H

high-speed data *See* HSD.

HSD A high-speed data service, such as DOCSIS.

I

Internet Largest global internetwork, connecting tens of thousands of networks worldwide and having a “culture” that focuses on research and standardization based on real-life use. Many leading-edge network technologies come from the Internet community. The Internet evolved in part from ARPANET.

IOS images These are images stored in firmware for a Cisco device. The Cisco device can upload the image to upgrade its functionality. BPR treats this file type like any other binary file.

IP address An IP address is a 32-bit number that identifies each sender or receiver of information that is sent in packets across the Internet.

M

MAC Media access control. Lower of the two sublayers of the data link layer defined by the IEEE. The MAC sublayer handles access to shared media, such as whether token passing or contention will be used.

MAC address Standardized data link layer address that is required for every port or device that connects to a LAN. Other devices in the network use these addresses to locate specific ports in the network and to create and update routing tables and data structures. MAC addresses are 6 bytes long and are controlled by IEEE, Also known as hardware address, MAC-layer address, or physical address. Compare with *network address*.

Management Information Base *See* MIB.

Media Access Control *See* MAC.

Media Terminal Adapter *See* MTA.

Message Integrity Check *See* MIC.

MIB Management information base. An object defined by SNMP and used by DOCSIS cable modems for functions such as reset.

MIC Message integrity check. A message that helps validate transmissions between cable modems and the CMTS.

modem Modulator-demodulator. Device that converts digital and analog signals. At the source, a modem converts digital signals to a form suitable for transmission over analog communication facilities. At the destination, the analog signals are returned to their digital form. Modems allow data to be transmitted over voice-grade telephone lines.

MSO Multiple system operator. A company that operates more than one cable TV or broadband system.

MTA Media Terminal Adapter. Equipment at the customer end of a broadband network.

multiple service operator *See* MSO.

N

NAT Network address translation. Mechanism for reducing the need for globally unique IP addresses. NAT allows an organization with addresses that are not globally unique to connect to the internet by translating those addresses into globally routeable address space. This is also known as Network Address Translator.

network address Network layer address referring to a logical, rather than physical, network device. Compare with *MAC address*.

network address translation *See* NAT.

network administrator Person responsible for operation, maintenance, and management of a network. *See also* network operator.

network operator Person who routinely monitors and controls a network, performing such tasks as reviewing and responding to alarms, monitoring throughput, configuring new circuits, and resolving problems. *See also* network administrator.

Network Registrar *See* NR.

NR Cisco Network Registrar. A software product that provides IP addresses, configuration parameters, and DNS names to DOCSIS cable modems and PCs, based on network and service policies.

O

open system interconnection *See* OSI.

operations support system *See* OSS.

OSI Open system interconnection. Network architectural model developed by ISO and ITU-T. The model consists of seven layers, each of which specifies particular network functions such as addressing, flow control, error control, encapsulation, and reliable message transfer. The lowest layer (the physical layer) is closest to the media technology. The lower two layers are implemented in the hardware and software, while the upper five layers are implemented only in software. The highest layer (the application layer) is closest to the user. The OSI reference model is used universally as a method for teaching and understanding network functionality.

OSS Operations support system. Network management system supporting a specific management function, such as alarm surveillance and provisioning, in a carrier network. Many OSSs are large centralized systems running on mainframes or minicomputers.

P

packet internet groper *See* ping.

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

port An IP terminology, and 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.

provisioning API A series of functions that programs can use to make the operating system perform various functions.

provisioning groups Groupings of DPE and Network Registrar, based on either network topology or geography, to improve network performance.

publishing Copying provisioning information to an external datastore in real time. Publishing plug-ins must be developed to write data to a datastore.

Q

QoS Quality of Service. Measure of performance for a transmission system that reflects its transmission quality and service availability.

Quality of Service *See* QoS.

R

RDU Regional distribution unit. The RDU is the primary server in the BPR provisioning system. It manages generation of device configurations, forwards all API requests, and manages the BPR system.

redundancy In internetworking, the duplication of devices, services, or connections so that, in the event of a failure, the redundant devices, services, or connections can perform the work of those that failed.

redundant logs Log files become redundant once its data has been written into the database. *See also* active logs and removable logs.

reload The event of a Cisco router or piece of software rebooting, or the command that causes the router or software to reboot.

removable logs Log files become removable after either being backed up, or when the complete database that contains data for this log file has been backed up. *See also* active logs and redundant logs.

response file A file that contains the values for parameters required to install the BPR packages. The installer uses the values in the response file instead of prompting for the information.

S

scope A range of IP addresses associated by means of selection tags with client classes, usually two client classes for unprovisioned cable modems and CPEs, and two for provisioned cable modems and CPEs.

selection tags Selection tags associated with Network Registrar scopes. An identifier for provisioning components, such as *provisioned cable modem* or *unprovisioned CPE*, used to help determine scopes.

shared secret A password known only to the remote DOCSIS device and the CSRC BPR administrator. This password is checked to authenticate messages between the device and the CSRC administrator. It works in conjunction with the CMTS MIC in order to prevent services from being stolen. The CMTS MIC option, when enabled, lets the CMTS validate the cable modem.

Simple Network Management Protocol *See* SNMP.

SNMP Simple Network Management Protocol is is the standard operations and maintenance protocol for the Internet and is a network management protocol used almost exclusively in TCP/IP networks. SNMP provides a means to monitor and control network devices, and to manage configurations, statistics collection, performance, and security.

SNMP community strings

The SNMP community strings are clear-text strings in SNMP packets that serve as simple passwords. The community strings help control which SNMP managers (such as servers that want to reset cable modems) have read-only, read-write, or no access to the SNMP agent in devices (for example, DOCSIS cable modems). This mechanism provides minimal protection to prevent a neighbor from resetting a subscriber's device.

- The SNMP Community Write String controls which SNMP managers have write access to the SNMP agent in devices (for example, DOCSIS cable modems).
- The SNMP Community Read String controls which SNMP managers have read-only, read-write, or no access to the SNMP agent in devices (for example, DOCSIS cable modems).

static configuration files

These files are used as a configuration file for a device. For example, a static configuration file called gold.cm would identify the gold DOCSIS class of service. BPR treats this file type like any other binary file.

T

Telnet

Standard terminal emulation protocol in the TCP/IP protocol stack. Telnet is used for remote terminal connection, enabling users to log in to remote systems and use resources as if they were connected to a local system. Telnet is defined in RFC 854.

template files

Text files that contain DOCSIS options and values that, when used in conjunction with a DOCSIS class of service, provide dynamic DOCSIS file generation

TFTP

Trivial File Transfer Protocol. Simplified version of file transfer protocol (FTP) that allows files to be transferred from one computer to another over a network.

TOD

Time-of-Day (TOD) server. This server provides the time required by some technologies, such as DOCSIS.

trivial file transfer protocol

See TFTP.

U

uBr

Universal Broadband Router (also known as the Cisco 7246 or 7223 router). The Cisco router implementation of a DOCSIS CMTS.

URL

Universal resource locator. Standardized addressing scheme for accessing hypertext documents and other services using a browser. *See also* browser.

V

Voice over IP

See VoIP.

VoIP

Voice over IP. VoIP is the ability to make telephone calls and send faxes over IP-based data networks with a suitable quality of service (QoS) and superior cost/benefit.

W

WWW World Wide Web. The large network of Internet servers providing hypertext and other services to terminals running client applications such as a browser. *See also* browser.

X

XGCP A Gateway Control Protocol used to pass data between networks. This includes that M (for Media) GCP and S (for Simple) GCP.