

Glossary

ACO

Alarm cut-off switch. The alarm cut-off switch on the Cisco 6200 DSLAM is located on the management processor card (MPC). It cuts off audible alarms.

ADSL

Asymmetric digital subscriber line. ADSL is designed to deliver more bandwidth downstream (from the central office to the customer site) than upstream. Downstream rates range from 1.5 to 9 Mbps; upstream bandwidth ranges from 16 kbps to 1 Mbps. ADSL transmissions work at distances up to 18,000 feet over a single copper wire twisted pair. See also *DSL*.

agent

Generally, software that processes queries and returns replies on behalf of an application. In the context of network management, an agent is a process that resides in all managed devices and reports the values of specified variables to management stations.

alarm

A status condition that shows that the module or port is experiencing an abnormal operating condition. See also *critical alarm*, *major alarm*, and *minor alarm*.

Asynchronous Transfer Mode

See *ATM*.

ATM

Asynchronous Transfer Mode. A broad-bandwidth, low-delay cell relay switching and multiplexing technique.

backplane

A printed circuit board at the rear of the Cisco 6200 DSLAM chassis that provides internal busing to distribute data, clocking, and power among the various modules.

CAP

Carrierless amplitude modulation/phase modulation. An encoding method used by modems in some DSL equipment. For example, the SLC-8CAP module in the Cisco 6200 DSLAM and some CPE devices use CAP. See also *DMT*.

cell

The basic data unit for ATM switching and multiplexing. Each cell contains an identifier that specifies the data stream to which it belongs. Each cell consists of a 5-byte header and 48 bytes of payload. See also *cell relay*.

cell relay

Network technology based on the use of small, fixed-size packets, or cells. Because cells are fixed length, they can be processed and switched in hardware at high speeds. Cell relay is the basis for many high-speed network protocols including ATM, IEEE 802.6, and SMDS. See also *cell*.

Cisco IOS software

Cisco Internetwork Operating System software. System software that provides common functionality, scalability, and security for all products under the CiscoFusion architecture. Cisco IOS software allows centralized, integrated, and automated installation and management of internetworks and ensures support for a wide variety of protocols, media, services, and platforms.

CPE

Customer premises equipment. Terminating equipment at the subscriber's side of the local telephone loop. CPE is often supplied by the telephone company and is always connected to the telephone company's network. Examples of CPE include telephones, POTS splitters, terminals, modems, and the Cisco 676 router.

critical alarm

An alarm condition that affects most or all subscribers that connect to the reporting node. See also *major alarm* and *minor alarm*.

customer premises equipment

See *CPE*.

digital subscriber line

See *DSL*.

digital subscriber line access multiplexer

See *DSLAM*.

DMT modulation

Discrete multitone modulation. An encoding method used by modems in some DSL equipment. For example, the SLC-8DMT module in the Cisco 6200 and some CPE devices use DMT. See also *CAP*.

downstream

Pertaining to the movement of data traffic from a service provider to a subscriber. See also *upstream*.

DSL

Digital subscriber line. A public network technology that delivers high bandwidth over conventional copper wiring (such as telephone lines) at limited distances. There are five types of DSL: ADSL, HDSL, IDSL, SDSL, and VDSL. All are provisioned through modem pairs, with one modem located at a central office and the other at the customer site. Because most DSL technologies do not use the whole bandwidth of the twisted pair, there is room left for a voice channel. See also *ADSL*.

DSLAM

Digital subscriber line access multiplexer. A device that connects many digital subscriber lines to a network by multiplexing the DSL traffic onto one or more network trunk lines.

EQF

Equipment failure. A SONET status indication.

faceplate

The front panel of a plug-in module (card).

field-replaceable unit

See *FRU*.

FRU

Field-replaceable unit. A component that can be removed from a network device and replaced in the field. Cisco 6200 DSLAM FRUs include all cards (MPCs, NTCs, and SLCs), power entry modules, and the fan tray.

IOS

See *Cisco IOS software*.

L2TP

Layer 2 tunneling protocol.

LAIS

Line Alarm Indication Signal. A SONET port status indicator that activates when an LAIS defect occurs and does not clear throughout the alarm integration period, which is typically 2.5 seconds. An LAIS defect occurs when bits 6, 7, and 8 of the K2 byte are 111 for three consecutive frames. This occurrence begins the alarm integration period. If this period elapses without the detection of three consecutive frames in which K2 bits 6, 7, and 8 show any pattern other than 111, the LAIS indicator activates. The LAIS indicator clears when an LAIS defect does not occur for a time interval equal to the alarm deactivation period (typically 10 seconds).

LED

Light-emitting diode. A visual status indicator on a hardware device.

Line Alarm Indication Signal

See *LAIS*.

Line Remote Failure Indication

See *LRFI*.

LOCD

Loss of Cell Delineation. A SONET port status indicator that activates when an LOCD defect occurs and does not clear for an interval of time equal to the alarm integration period, which is typically 2.5 seconds. An LOCD defect occurs when an out-of-cell-delineation (O OCD) condition occurs and does not clear for more than 4 ms. This occurrence begins the alarm integration period. (O OCD occurs when seven consecutive cells do not contain a valid header error check (HEC). O OCD clears when six consecutive HEC-valid cells are detected.) The LOCD indicator clears when an LOCD defect is not detected for a time interval that is equal to the alarm deactivation period (typically 10 seconds).

LOF

Loss of Frame. A SONET port status indicator that activates when an LOF defect occurs and does not clear for an interval of time equal to the alarm integration period, which is typically 2.5 seconds. An LOF defect occurs when an out-of-frame (O OF) condition occurs and does not clear for more than 3 ms. This occurrence begins the alarm integration period. (O OF occurs when four consecutive frames do not contain a valid frame word. O OF clears when two valid consecutive frames are detected.) The LOF indicator clears when an LOF defect is not detected for a time interval that is equal to the alarm deactivation period (typically 10 seconds).

loop

The connection between a service-providing network and the subscriber; also called distribution loop or subscriber loop.

LOP

Loss of Pointer. A SONET port status indicator that activates when an LOP defect occurs and does not clear throughout the alarm integration period, which is typically 2.5 seconds. An LOP defect occurs when eight consecutive frames do not contain a valid pointer. This occurrence begins

the alarm integration period. If this period elapses without the detection of three consecutive frames with a valid pointer, the LOP indicator activates. The LOP indicator clears when an LOP defect does not occur for a time interval equal to the alarm deactivation period (typically 10 seconds).

LOS

Loss of Signal. A SONET port status indicator that activates when an LOS defect occurs and does not clear throughout the alarm integration period, which is typically 2.5 seconds. An LOS defect occurs when the OC3 port receives all zeros for 20 microseconds (+.3 microseconds). This occurrence begins the alarm integration period. If this period elapses without the detection of two consecutive frames in which there are no 20-microsecond periods of signal loss, the LOS indicator activates. The LOS indicator clears when an LOS defect is not detected for an interval equal to the alarm deactivation period (typically 10 seconds).

Loss of Cell Delineation

See *LOCD*.

Loss of Frame

See *LOF*.

Loss of Pointer

See *LOP*.

Loss of Signal

See *LOS*.

Loss of Synchronization

See *LOST*.

LOST

A SONET port status indicator that activates when a LOST defect occurs and does not clear throughout the alarm integration period, which is typically 2.5 seconds. A LOST defect occurs when a valid clock signal cannot be extracted from the configured timing source. This occurrence begins the alarm integration period. If this period elapses without the detection of a valid clock signal for a period of 125 to 250 microseconds,

the LOST indicator activates. The LOST indicator clears when a LOST defect does not occur for a period of time equal to the alarm deactivation period (typically 10 seconds).

LRFI

Line Remote Failure Indication. A SONET port status indicator that activates when an LRFI defect occurs and does not clear throughout the alarm integration period, which is typically 2.5 seconds. An LRFI defect occurs when bits 6, 7, and 8 of the K2 byte are 110 for three consecutive frames. This occurrence begins the alarm integration period. If this period elapses without the detection of three consecutive frames in which K2 bits 6, 7, and 8 show any pattern other than 110, the LRFI indicator activates. The LRFI indicator clears when an LAIS defect does not occur for a time interval equal to the alarm deactivation period (typically 10 seconds).

major alarm

One of a group of alarm conditions that are considered the second most severe of all reportable alarms. Major alarms affect several subscribers who connect to the reporting node. See also *critical alarm* and *minor alarm*.

Management Information Base

See *MIB*.

management processor card

See *MPC*.

MB

Megabyte (approximately 1,000,000 bytes).

Mb

Megabit (approximately 1,000,000 bits).

Mbps

Megabits per second, a measurement of transmission speed.

MIB

A database of network management information used by Common Management Information Protocol (CMIP) and Simple Network Management Protocol (SNMP).

minor alarm

One of a group of alarm conditions that are considered the third most severe of all reportable alarms. Minor alarms affect a single or small number of subscribers who connect to the reporting node. See also *critical alarm* and *major alarm*.

MPC

Management processor card. A hardware module that performs management and control functions in the Cisco 6200 DSLAM.

network trunk card

See *NTC*.

NTC

Network trunk card. A service interface module that connects the Cisco 6200 node to an OC-3c or STM-1 fiber optic channel from the service-providing ATM network.

OC-3c

A physical protocol for SONET optical signal transmissions. OC-3c puts STS frames onto a fiber-optic line at 155.52 Mbps.

PAIS

Path Alarm Indication Signal. A SONET port status indicator that activates when an PAIS defect occurs and does not clear throughout the alarm integration period, which is typically 2.5 seconds. A PAIS defect occurs when an LOS, LOF, LAIS, or LOP is detected on the incoming signal of an upstream network element. The PAIS is signalled to downstream elements. This occurrence begins the alarm integration period. The PAIS indicator clears when a PAIS defect does not occur for a time interval equal to the alarm deactivation period (typically 10 seconds).

Path Alarm Indication Signal

See *PAIS*.

Path Remote Failure Indication

See *PRFI*.

PCMCIA card

A portable, nonvolatile storage device that is roughly the size of a credit card. PCMCIA cards use Flash technology to store read/write data.

Cisco 6200 software and configuration files can be stored on PCMCIA cards. PCMCIA stands for Personal Computer Memory Card International Association, which sets the standard for this technology.

PEM

Power entry module. A Cisco 6200 hardware module that distributes DC power to the chassis.

POTS

Plain old telephone service. See also *PSTN*.

POTS splitter

A frequency-based filter that separates (or combines) voice signals and data signals travelling on the same telephone line.

power entry module

See *PEM*.

PRFI

Path Remote Failure Indication. A SONET port status indicator that activates when a Path Remote Defect Indication (PRDI) occurs and does not clear throughout the alarm integration period, which is typically 2.5 seconds. A PRDI occurs when bit 5 of the G1 byte is set to 1 for 10 consecutive frames. This occurrence begins the alarm integration period. If this period elapses without the detection of 10 consecutive frames in which all G1 bit 5s are set to 0, the PRFI indicator activates. The PRFI indicator clears when a PRDI does not occur for a time interval equal to the alarm deactivation period (typically 10 seconds).

PSTN

Public switched telephone network. General term referring to the various telephone networks and services in place worldwide. Sometimes called plain old telephone service (POTS).

public switched telephone network

See *PSTN*.

shelf

The chassis or container that houses the internal modular circuitry of the Cisco 6200. The shelf consists of slots that hold each module and a backplane that interconnects all modules.

Signal Label Mismatch

See *SLM*.

Simple Network Management Protocol

See *SNMP*.

SLC

Subscriber line card. A line module in the Cisco 6200 that provides data and voice communication between the Cisco 6200 node and up to eight subscribers over copper telephone lines. The SLC is available in DMT and CAP versions.

SLM

Signal Label Mismatch. A SONET port status indicator that activates when an SLM defect occurs and does not clear throughout the alarm integration period, which is typically 2.5 seconds. An SLM defect occurs when the received path signal label is not set for either the Equipped-Non Specific (0x01) or ATM (0x13) code for five consecutive samples within a 250 ms window. This occurrence begins the alarm integration period. If this period elapses without a valid code being detected (that is, 0x01 or 0x13) for five consecutive samples within a 250 ms window, the SLM indicator activates. The SLM indicator clears when an SLM defect does not occur for a time interval equal to the alarm deactivation period (typically 10 seconds).

SNMP

Simple Network Management Protocol. The 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.

SONET

Synchronous Optical Network. High-speed (up to 2.5 Gbps) synchronous network specification developed by Bellcore and designed to run on optical fiber. STS-1 is the basic building block of SONET.

STM-1

Synchronous Transport Module level 1. One of a number of SDH formats that specifies the frame structure of the 155.52-Mbps lines used to carry ATM cells.

subscriber

The party who requests and pays for various network services. Also called end user.

subscriber line card

See *SLC*.

uninvestigated

A status condition that shows that a module or port has experienced a new alarm that the operator has not yet checked out.

unshielded twisted pair

See *UTP*.

upstream

Pertaining to the movement of data traffic from a subscriber to a service provider. See also *downstream*.

UTP

Unshielded twisted pair. The wiring that is used for standard voice service between a subscriber and a Telco.

VC

Virtual channel. A defined route between two end points in an ATM network. A VC may traverse several virtual paths.

Virtual channel

See *VC*.

Virtual path

See *VP*.

VP

Virtual path. A group of virtual channels, which can support multiple virtual circuits.