

Glossary

3270 data stream—A type of data stream developed by IBM for use with communication between mainframe applications and end users. The data stream includes control characters that instruct the receiving device how to format or display the information. The control characters allow the application to use the entire screen, as opposed to a single command line, to display information in and receive input from various areas of the screen, called partitions.

ACTLU—(activate logical unit) In SNA, a command used to start a session on a logical unit.

ACTPU—(activate physical unit) In SNA, a command used to start a session on a physical unit.

APAR—(authorized program analysis report) Problem tracking mechanism used by IBM.

APPN—(Advanced Peer-to-Peer Networking) Enhancement to the original IBM SNA architecture. APPN handles session establishment between peer nodes, dynamic transparent route calculation, and traffic prioritization for APPC traffic.

ARP—(Address Resolution Protocol) An Internet protocol used to map an IP address to a MAC address. Defined in RFC 826.

Bus-and-tag—IBM channel, developed in the 1960s, incorporating copper multiwire technology. Replaced by the ESCON channel.

channel-attached router—Any Cisco router that is connected to a mainframe via a channel connection using either the CIP or CPA.

CICS—(Customer Information Control System) IBM application subsystem allowing transactions entered at remote terminals to be processed concurrently by user applications.

CIP—Channel Interface Processor.

Client—(also referred to as an end client or TN3270 client) The remote users that access the TN3270 Server.

CMCC—(Cisco Mainframe Channel Connection) Any of the Cisco router CIP and CPA feature cards (interface processors or port adapters) that allows a user to establish a channel connection between the router and a mainframe.

CMOS—Complementary Metal Oxide Semiconductor.

CoS—(class of service) An indication of how an upper-layer protocol requires a lower-layer protocol to treat its messages. In SNA subarea routing, CoS definitions are used by subarea nodes to determine the optimal route to establish a given session. A CoS definition comprises a virtual route number and a transmission priority field. Also called ToS.

CP—(control point) In SNA networks, element that identifies the APPN networking components of a PU 2.1 node, manages device resources, and provides services to other devices. In APPN, CPs are able to communicate with logically adjacent CPs using CP-to-CP sessions.

CPA—Channel Port Adapter.

CSNA—Cisco SNA.

DDDLU—(Dynamic Definition of Dependent LU) A feature of VTAM that allows LUs to be created as needed and not be predefined under a switched PU. The CIP TN3270 Server supports DDDLU.

DHCP—(Dynamic Host Configuration Protocol) A mechanism for allocating IP addresses dynamically so that addresses can be reused when hosts no longer need them.

Direct PU—A PU type 2 that has its own LLC2 link to the owning VTAM. Several direct PUs can share a local SAP, but each must have a unique local/remote MAC/SAP quadruple.

DLSw—(data-link switching) An interoperability standard, described in RFC 1434, that provides a method for forwarding SNA and NetBIOS traffic over TCP/IP networks using data-link layer switching and encapsulation. DLSw uses SSP instead of SRB, eliminating the major limitations of SRB, including hop-count limits, broadcast and unnecessary traffic, timeouts, lack of flow control, and lack of prioritization schemes.

DLU—(dynamic LU) An LU that is dynamically created using DDDLU.

DLUR—(Dependent LU Requester) A feature of APPN that allows traditional 3270 traffic to be routed over the APPN network. The DLUR feature in the CIP creates an LU 6.2 session (pipe) with DLUS (Dependent LU Server) in VTAM (VTAM V4R2 or higher). DLUR is defined as a separate switched PU to VTAM. All 3270 session control traffic (SSCP-to-PU and SSCP-to-LU) flows over this DLUR-DLUS pipe. Session data traffic, however, can be routed directly from LU to LU using APPN routing. The CIP DLUR is implemented as an APPN end node (EN).

DLUR PU—A PU 2 that uses the DLUR-DLUS pipe to send and receive all session control traffic. It does not use its own source SAP because it uses the DLUR SAP. Similarly, it does not have its own LLC session to the mainframe gateway because it rides on top of the DLUR LLC link.

DLUS—(Dependent LU Server) The server half of the Dependent LU Requester/Server enhancement to APPN. The DLUS component provides SSCP services to DLUR nodes over an APPN network.

DNS—(Domain Name System) The system used in the Internet for translating names of network nodes into addresses.

DRP—(Director Response Protocol) A protocol used by the DistributedDirector feature in IP routing.

EN—(end node) An APPN end system that implements the PU 2.1, provides end-user services, and supports sessions between local and remote CPs. ENs are not capable of routing traffic and rely on an adjacent NN for APPN services.



ESCON—(Enterprise Systems Connection) IBM's fiber optic serial channel for attaching mainframes to peripherals such as storage devices, backup units, and network interfaces. This channel incorporates fiber channel technology. The ESCON channel replaces the bus-and-tag channel.

FEP—(front-end processor) A device or board that provides network interface capabilities for a networked device. In SNA, an FEP is typically an IBM 3745 device.

HSRP—(Hot Standby Router Protocol) A protocol that provides high network availability and transparent network topology changes. HSRP creates a Hot Standby router group with a lead router that services all packets sent to the Hot Standby address. The lead router is monitored by other routers in the group, and if it fails, one of these standby routers inherits the lead position and the Hot Standby group address.

ICN—Interchange node.

IMS—(Information Management System) A database/data communication (DB/DC) system from IBM that is used to manage complex databases and networks.

INCLUD0E—A feature of VTAM that allows the actual LU to be sent in the ACTLU. Normally, for direct PUs, the LOCADDR number (2 hexadecimal characters) is sent to the CIP with the ACTLU. However, if a parameter called INCLUD0E=YES is coded on the PU statement, then VTAM also sends the actual LU name to the channel-attached router with the ACTLU. INCLUD0E is not relevant to DLUR PUs because DLUS sends the LU name to the channel-attached router by default. INCLUD0E was first supported by XCA in VTAM 4.4 (plus PTFs). If the Direct PU connects to VTAM via an FEP, then the FEP also needs to support INCLUD0E.

IPM—(Internetwork Performance Monitor) A Cisco workstation-based network management product that provides data about response times between devices.

ISM—(Internetwork Status Monitor) A Cisco mainframe-based network management product that allows users to manage their Cisco routers from their mainframe network management application (NetView for OS/390 or SOLVE:Netmaster).

ISP—(Internet Service Provider) A company that provides Internet access to other companies and individuals.

JES—(job entry subsystem) An IBM licensed program that receives jobs into the system and processes all output data produced by the jobs.

LEN node—(low-entry networking node) In SNA, a PU 2.1 that supports LU protocols, but whose CP cannot communicate with other nodes. Because there is no CP-to-CP session between a LEN node and its NN, the LEN node must have a statically defined image of the APPN network.

LLC—(Logical Link Control) Higher of the two data link layer sublayers defined by the IEEE. The LLC sublayer handles error control, flow control, framing, and MAC-sublayer addressing. The most prevalent LLC protocol is IEEE 802.2, which includes both connectionless and connection-oriented variants.

LOCADDR—Local address.

LPAR—Logical partition.

LPD—(line printer daemon) The protocol used to send print jobs between UNIX systems.

LU—(logical unit) A type of addressable unit in an SNA network. The LU is the port through which the end user accesses both the SSCP provided services, and communicates with other LUs at other nodes.

LU nailing—A method by which you can associate a client's connection request with a specific LU.

LSAP—(link service access point) In the IBM Token Ring network, the logical point at which an entity in the logical link control sublayer provides services to the next higher layer.

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.

MVS—(Multiple Virtual Storage) Operating system for IBM mainframes.

NAU—(network addressable unit) An SNA term to describe the three entities which are addressable in an SNA network: SSCP, PU and LU.

NCP—(Network Control Program) In SNA, a program that routes and controls the flow of data between a communications controller (in which it resides) and other network resources.

NMVT—(Network Management Vector Transport) An SNA message consisting of a series of vectors conveying network management information.

NN —(network node) An SNA intermediate node that provides connectivity, directory services, route selection, intermediate session routing, data transport, and network management services to LEN nodes and ENs. The NN contains a CP that manages the resources of both the NN and those of the ENs and LEN nodes in its domain. NNs provide intermediate routing services by implementing the APPN PU 2.1 extensions.

Non-E Client—An end-user workstation, usually a PC, that is running TN3270 client software that does not support the functions of TN3270E.

OSPF—(Open Shortest Path First) Link-state, hierarchical IGP routing algorithm proposed as a successor to RIP in the Internet community. OSPF features include least-cost routing, multipath routing, and load balancing. OSPF was derived from an early version of the IS-IS protocol.

PLU—(primary logical unit) In SNA, the LU that sends the Bind to activate a session with its partner LU.

PU—(physical unit) A type of addressable unit in an SNA network. Each node in the network has a PU, which provides services to control the physical configuration and the communication system resources associated with the node, and also to collect maintenance and operational statistics.

PSID—(product-set identification) In SNA, a technique for identifying the hardware and software products that implement a network component.

PTF—(program temporary fix) Interim program fixes offered by IBM.

QLLC—(Qualified Logical Link Control) Data link layer protocol defined by IBM that allows SNA data to be transported across X.25 networks.

QoS—Quality of Service.

RMAC—Remote MAC.

RSAP—Remote SAP.

RSRB—(remote source-route bridging) A method of encapsulating SRB traffic over WAN links.

RTR—(response-time reporter) A feature of Cisco IOS software that provides round trip time measurements between devices.

SAP—(service access point) A logical address that allows a system to route data between a remote device and the appropriate communications support.



SLU—(secondary logical unit) In SNA, the LU that contains the secondary half-session for a particular LU-to-LU session. An LU can contain secondary and primary half-sessions for different active LU-to-LU sessions.

SNA—(Systems Network Architecture) An architecture designed by IBM to provide a unified systems design for their communication network products.

SNAP—(Subnetwork Access Protocol) Internet protocol that operates between a network entity in the subnetwork and a network entity in the end system. SNAP specifies a standard method of encapsulating IP datagrams and ARP messages on IEEE networks. The SNAP entity in the end system makes use of the services of the subnetwork and performs three key functions: data transfer, connection management, and QoS selection.

SNMP—(Simple Network Management Protocol) 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.

SRB—(source-route bridging) Method of bridging originated by IBM and popular in Token Ring networks. In an SRB network, the entire route to a destination is predetermined, in real time, prior to the sending of data to the destination.

SR/TLB—(source-route translational bridging) Method of bridging where source-route stations can communicate with transparent bridge stations with the help of an intermediate bridge that translates between the two bridge protocols.

Static LU—An LU that is hard-coded in the VTAM PU definition in the switched major node. When the PU is activated, VTAM activates the static LUs by sending an ACTLU to the channel-attached router for each statically defined LOCADDR.

SSCP—(system services control points) A type of addressable unit in an SNA network. The SSCP provides services to manage the network and respond to network requests from network operators and terminal operators.

SSCPFM—(system services control point format) A parameter of the LUGROUP major node that specifies the data stream format to be used for communication between the client and the mainframe.

switched PU—An SNA physical unit that is defined in a VTAM switched major node. All TN3270 Server PUs are switched PUs.

SWMN—(switched major node) In VTAM, a major node that contains minor nodes that are PUs and LUs attached by switched Synchronous Data Link Control (SDLC) links.

TACACS—(Terminal Access Controller Access Control System) Authentication protocol, developed by the DDN community, that provides remote access authentication and related services, such as event logging. User passwords are administered in a central database rather than in individual routers, providing an easily scalable network security solution.

TN3270E client—A workstation that is running TN3270 client software that supports RFC 2355 functions. These functions include the ability to request a specific LU name and support for printers (LU 1 and LU 3) in addition to LU 2 support.

TN3270 Server—The channel-attached router function that converts TN3270 traffic into native SNA upstream to the host and converts native SNA to TN3270 traffic going back to the client.

ToS—Type of service.

TTL—Time-to-Live.

USSTAB—(unformatted system services tables) A parameter of the LUGROUP major node that specifies which table to use for determining the definitions of operator messages and certain commands.

VTAM—(Virtual Telecommunications Access Method) Set of programs that control communication between LUs. VTAM controls data transmission between channel-attached devices and performs routing functions.

XID—(eXchange IDentification) A command that is sent from one communication node to another to establish a communication link between the two nodes and to exchange node configuration parameters. IBM has defined four formats for XIDs: formats 0, 1, 2, and 3. These formats are used between different types of nodes. But all of these formats share a common identification field consisting of an IDBLK and IDNUM.

XCA—External Communications Adapter.