

3270 data stream. The commands, control codes, orders, attributes, and data or structured fields for 3270 devices that are transmitted between an application program and a terminal. data being transferred from or to an allocated primary or tertiary device, or to the host system, as a continuous stream of data and 3270 information display system control elements in character form.

A

abend. See abnormal end.

abend dump. A kind of dump produced when a program ends abnormally.

abnormal end (abend). Abnormal end of task. End of a task, a job, or a subsystem because of an error condition that cannot be resolved by recovery facilities while the task is performed. See also abnormal termination.

access. The ability to read, update, or otherwise use a resource. Access to protected resources is usually controlled by system software.

access authority. An authority that relates to a request for a type of access to protected resources. In RACF, the access authorities are NONE, READ, UPDATE, ALTER, and EXECUTE.

access list. A list within a profile of all authorized users and their access authorities.

access method. A technique for moving data between main storage and input/output devices.

ACID properties. The properties of a transaction: atomicity, consistency, isolation, and durability. In CICS, the ACID properties apply to a unit of work (UOW). See also atomicity, consistency, isolation, durability.

address. The unique code assigned to each device, workstation or system connected to a network.

Address Resolution Protocol (ARP). In the Internet suite of protocols, the protocol that dynamically maps an IP address to an address used by a supporting metropolitan or local area network such as Ethernet or token-ring.

address space. A range of contiguous virtual storage addresses that the system creates for the user, batch job, or system task. Unlike a data space, an address space contains user data and programs, as well as system data and programs, some of which are common to all address spaces. Instructions execute in an address space, not a data space. See also *data space*.

addressing mode (AMODE). An attribute that refers to the address length that a routine (CSECT or load module) is prepared to handle upon entry. Addresses may be 24, 31, or 64 bits in length.

adjacent link station (ALS). In SNA, a link station directly connected to a given node by a link connection over which network traffic can be carried.

adjacent node. In SNA, a node connected to another node by at least one path that connects no other node. (T)

adjacent subarea. A subarea connected by one or more links to another subarea with no intervening subareas. See also *subarea*.

administrator. A person responsible for administrative tasks such as access authorization and content management. Administrators can also grant levels of authority to users.

Advanced Peer-to-Peer Networking (APPN). An extension to SNA featuring (a) greater distributed network control that avoids critical hierarchical dependencies, thereby isolating the effects of single points of failure; (b) dynamic exchange of network topology information to foster ease of connection, reconfiguration, and adaptive route selection; (c) dynamic definition of network resources; and (d) automated resource registration and directory lookup. APPN extends the LU 6.2 peer orientation for end-user services to network control and supports multiple LU types, including LU 2, LU 3, and LU 6.2.

Advanced Peer-to-Peer Networking (APPN) end node. A node that provides a broad range of end-user services and supports sessions between its local control point (CP) and the CP in an adjacent network node. It uses these sessions to dynamically register its resources with the adjacent CP (its network node server), to send and receive directory search requests, and to obtain management services. An APPN end node can also attach to other end nodes.

Advanced Peer-to-Peer Networking (APPN) network node. A node that offers a broad range of end-user services and that can provide the following:

Advanced Program-to-Program Communication (APPC). An implementation of the SNA LU 6.2 protocol that allows interconnected systems to communicate and share the processing of programs.

alert. To cause the user's terminal to give some audible or visual indication that an error or some other event has occurred.

alias. An alternate label; for example, a label and one or more aliases may be used to refer to the same data element or point in a computer program.

allocate. To assign a resource for use in performing a specific task.

ALLOCATE command. In z/OS, the TSO/E command that serves as the connection between a file's logical name (the ddname) and the file's physical name (the data set name).

alphanumeric character. A letter or a number.

American Standard Code for Information Interchange (ASCII). A standard code used for information exchange among data processing systems, data communication systems, and associated equipment. ASCII uses a coded character set consisting of 7-bit control and symbolic characters. See also *Extended Binary Coded Decimal Interchange Code (EBCDIC)*.

amode. See addressing mode.

anonymous user. A portal user who has not logged in to the portal with a valid user ID and password.

APAR. See authorized program analysis report.

application layer. In the Open Systems Interconnection (OSI) reference model, the layer that provides means for application processes residing in open systems to exchange information and that contains the application-oriented protocols by which these processes communicate. (T)

application program. A collection of software components used to perform specific types of work on a computer, such as a program that does inventory control or payroll.

APPN end node. See *Advanced Peer-to-Peer Networking (APPN) end node*.

APPN network node. See *Advanced Peer-to-Peer Networking (APPN) network node*.

APPN network. A collection of interconnected network nodes and their client end nodes.

area border router (ABR). Routers that attach to more than one area. All area border routers are part of the backbone, so they must either attach directly to a backbone IP subnet or be connected to another backbone router over a virtual link.

ARP. See *Address Resolution Protocol (ARP)*.

ARPANET. A network established by the United States Department of Defense Advanced Research Projects Agency (now the Defense Advanced Research Projects Agency).

ASCII. See *American Standard Code for Information Interchange (ASCII)*.

assembler. A computer program that converts assembler language instructions into binary machine language (object code).

assembler language. A symbolic programming language that comprises instructions for basic computer operations which are structured according to the data formats, storage structures, and registers of the computer.

asynchronous processing. A series of operations that are done separately from the job in which they were requested; for example, submitting a batch job from an interactive job at a work station. See also synchronous processing.

Asynchronous Transfer Mode (ATM). A transfer mode in which the information is organized into cells; it is asynchronous in the sense that the recurrence of cells containing information from an individual user is not necessarily periodic. ATM is specified in international standards such as ATM Forum UNI 3.1.

audit. To review and examine the activities of a data processing system mainly to test the adequacy and effectiveness of procedures for data security and data accuracy.

authentication. In computer security, verification of the identity of a user or process and the construction of a data structure that contains the privileges that were granted to the user or process.

authority. The right to access objects, resources, or functions.

authorization. The process of granting a user either complete or restricted access to an object, resource, or function.

authorization checking. The action of determining whether a user is permitted access to a RACF-protected resource.

authorized program analysis report (APAR). A request for correction of a problem caused by a defect in a current unaltered release of a program.

authorized program facility (APF). A facility that permits identification of programs authorized to use restricted functions.

automated operations. Automated procedures to replace or simplify actions of operators in both systems and network operations.

automatic call. The process used by the linkage editor to resolve external symbols left undefined after all the primary input has been processed. See also automatic call library.

automatic call library. Contains load modules or object decks that are to be used as secondary input to the linkage editor to resolve external symbols left undefined after all the primary input has been processed.

automation. A program or facility that performs certain operations automatically in response to system events or user preferences.

auxiliary storage. All addressable storage other than processor storage. See also memory.

availability. The degree to which a system or resource is ready when needed to process data; the percentage of time a system, network, or component can be utilized, within a certain time frame. Generally, the percentage is derived by dividing actual availability time by scheduled availability time. Scheduled outages (no service periods) are not counted against the availability measurement. A service may be unavailable even though the components used to provide the service are all available and vice-versa.

B

backbone. A set of nodes and their interconnecting links providing the primary data path across a network.

backout. A request to remove all changes to resources since the last commit or backout or, for the first unit of recovery, since the beginning of the application. Backout is also called rollback or abort.

backup host. A host that is designated as a backup in the event that the distributing host should malfunction. The backup host takes over the IP address of the distributing host when required. See also *distributing host*.

backup. (1) Pertaining to a system, device, file, or facility that can be used in the event of a malfunction or loss of data. (2) The process of creating a copy of a data set to ensure against accidental loss.

bandwidth. The difference, expressed in hertz, between the highest and the lowest frequencies of a range of frequencies.

basic information unit (BIU). In SNA, the unit of data and control information passed between half-sessions. It consists of a request/response header (RH) followed by a request/response unit (RU).

batch job. A predefined group of processing actions submitted to the system to be performed with little or no interaction between the user and the system. See also interactive job.

batch message processing (BMP) program. An IMS batch processing program that has access to online databases and message queues. BMPs run online, but like programs in a batch environment, they are started with job control language (JCL).

batch processing. A method of running a program or a series of programs in which one or more records (a batch) are processed with little or no action from the user or operator.

batch processing. A method of running a program or a series of programs in which one or more records (a batch) are processed with little or no action from the user or operator. Contrast with interactive processing.

batch. A group of records or data processing jobs brought together for processing or transmission. Pertaining to activity involving little or no user action. Contrast with interactive.

binary data. (1) Any data not intended for direct human reading. Binary data may contain unprintable characters, outside the range of text characters. (2) A type of data consisting of numeric values stored in bit patterns of 0s and 1s. Binary data can cause a large number to be placed in a smaller space of storage.

bind. (1) To combine one or more control sections or program modules into a single program module, resolving references between them. (2) In SNA, a request to activate a session between two logical units (LUs).

binder. The z/OS program that processes the output of the language translators and compilers into an executable program (load module or program object). It replaces the linkage editor and batch loader used in earlier forms of the z/OS operating system, such as MVS and OS/390.

BLK. A subparameter of the SPACE parameter in a DD statement. It specifies that space is allocated by blocks.

block size. (1) The number of data elements in a block. (2) A measure of the size of a block, usually specified in units such as records, words, computer words, or characters. (3) Synonymous with block length. (4) Synonymous with physical record size.

border node. An APPN network node that interconnects APPN networks having independent topology databases in order to support LU-LU sessions between these networks. See *extended border node* and *peripheral border node*.

boundary function (BF). In SNA, a capability of a subarea node to provide protocol support for attached peripheral nodes, such as: (a) interconnecting subarea path control and peripheral

bridge. A functional unit that interconnects multiple LANs (locally or remotely) that use the same logical link control protocol but that can use different medium access control protocols. A bridge forwards a frame to another bridge based on the medium access control (MAC) address.

broadcast Transmission of the same data to all destinations. (T)

broadcast search. The propagation of a search request, when the location of a resource is unknown to the requester, to all network nodes in an APPN network. Contrast with *directed Locate search*.

buffer pool. An area of memory into which data pages are read, modified, and held during processing.

buffer. An area of storage that compensates for the different speeds of data flow or timings of events by temporarily holding a block of data that is waiting to be processed or written to an I/O device.

bus. A facility for transferring data between several devices located between two end points, only one device being able to transmit at a given moment.

byte multiplexer channel. A multiplexer channel that interleaves bytes of data.

byte. The basic unit of storage addressability. It has a length of 8 bits.

C

C language. A high-level language used to develop software applications in compact, efficient code that can be run on different types of computers with minimal change.

cache structure. A coupling facility structure that enables high-performance sharing of cached data by multisystem applications in a sysplex. Applications can use a cache structure to implement several different types of caching systems, including a store-through or a store-in cache.

cache. A random access electronic storage in selected storage controls used to retain frequently used data for faster access by the channel.

cage. See *I/O cage*.

called routine. A routine or program that is invoked by another.

capacity. A measure of how much volume can be handled by a specific resource.

carriage control character. An optional character in an input data record that specifies a write, space, or skip operation.

carriage return (CR). (1) A keystroke generally indicating the end of a command line. (2) In text data, the action that indicates to continue printing at the left margin of the next line. (3) A character that will cause printing to start at the beginning of the same physical line in which the carriage return occurred.

Carrier Sense Multiple Access with Collision Detection (CSMA/CD). A media access method that monitors another station's transmissions. If the data station detects another signal during transmission, it stops transmitting, sends a jam signal, then waits for a variable time before trying again.

case-sensitive. Pertaining to the ability to distinguish between uppercase and lowercase letters.

catalog. (1) A directory of files and libraries, with reference to their locations. (2) To enter information about a file or a library into a catalog. (3) The collection of all data set indexes that are used by the control program to locate a volume containing a specific data set.

cataloged procedure. A set of job control language (JCL) statements placed in a library and retrievable by name.

CCL. See *Communications Controller for Linux (CCL)*.

CDRM. See *cross-domain resource manager (CDRM)*.

CEMT. The CICS-supplied transaction that allows checking of the status of terminals, connections, and other CICS entities from a console or from CICS terminal sessions.

central directory server. A network node that provides a repository for information on network resource locations; it also reduces the number of network searches by providing a focal point for queries and broadcast searches and by caching the results of network searches to avoid later broadcasts for the same information.

central processor (CP). The part of the computer that contains the sequencing and processing facilities for instruction execution, initial program load, and other machine operations.

central processor complex (CPC). A physical collection of hardware that includes main storage, one or more central processors, timers, and channels.

channel connection address (CCA). The input/output (I/O) address that uniquely identifies an I/O device to the channel during an I/O operation.

channel interface. The circuitry in a storage control that attaches storage paths to a host channel.

channel path. In mainframe computing, the interconnection between a channel and its associated control units.

channel subsystem (CSS). A collection of subchannels that directs the flow of information between I/O devices and main storage, relieves the processor of communication tasks, and performs path management functions.

channel. In mainframe computing, the part of a channel subsystem that manages a single I/O interface between a channel subsystem and a set of control units.

channel-to-channel (CTC). The communication (transfer of data) between programs on opposite sides of a channel-to-channel adapter (CTCA).

channel-to-channel adapter (CTCA). An input/output device that is used a program in one system to communicate with a program in another system.

character. A letter, digit, or other symbol. A letter, digit, or other symbol that is used as part of the organization, control, or representation of data. A character is often in the form of a spatial arrangement of adjacent or connected strokes.

checkpoint write. Any write to the checkpoint data set. A general term for the primary, intermediate, and final writes that update any checkpoint data set.

checkpoint. (1) A place in a routine where a check, or a recording of data for restart purposes, is performed. (2) A point at which information about the status of a job and the system can be recorded so that the job step can be restarted later.

CHPID. Channel path identifier.

CICS. An online transaction processing (OLTP) system that provides specialized interfaces to databases, files and terminals in support of business and commercial applications. CICS enables transactions entered at remote terminals to be processed concurrently by user-written application programs.

circuit switching. (1) A process that, on demand, connects two or more data terminal equipment (DTEs) and permits the exclusive use of a data circuit between them until the connection is released. (I) (A) Synonymous with *line switching*. See also *packet switching*.

client. A system or process that is dependent on another system or process (usually called the server) to provide it with access to data, services, programs, or resources. See also *server*.

client-server. In TCP/IP, the model of interaction in distributed data processing in which a program at one site sends a request to a program at another site and awaits a response. The requesting program is called a client; the answering program is called a server.

CLIST. Command list. A language for performing TSO tasks.

CLIST. TSO/E command list.

CLOB. Character large object.

CLPA. Create link pack area.

cluster. A group of interconnected computers that are working together as one unit.

CMS. See conversational monitor system.

COBOL. COmmon Business-Oriented Language. A high-level language, based on English, that is primarily used for business applications.

code page. (1) An assignment of graphic characters and control function meanings to all code points; for example, assignment of characters and meanings to 256 code points for an 8-bit code, assignment of characters and meanings to 128 code points for a 7-bit code. (2) A particular assignment of hexadecimal identifiers to graphic characters.

code point. A 1-byte code representing one of 256 potential characters.

coexistence. Two or more systems at different levels (for example, software, service or operational levels) that share resources. Coexistence includes the ability of a system to respond in the following ways to a new function that was introduced on another system with which it shares resources: ignore a new function; terminate gracefully; support a new function.

collision. An unwanted condition that results from concurrent transmissions on a channel, causing the transmissions to be unintelligible.

command and response token (CART). A parameter on WTO, WTOR, MGCRE, and certain TSO/E commands and REXX execs that allows you to link commands and their associated message responses.

command prefix. A one- to eight-character command identifier. The command prefix distinguishes the command as belonging to an application or subsystem rather than to z/OS.

command. A request to perform an operation or run a program. When parameters, arguments, flags, or other operands are associated with a command, the resulting character string is a single command.

COMMAREA. A communication area made available to applications running under CICS.

commit. A request to make all changes to resources since the last commit or backout or, for the first unit of recovery, since the beginning of the application.

Common Business-Oriented Language. See COBOL.

common service area (CSA). In z/OS, a part of the common area that contains data areas that are addressable by all address spaces.

communication controller. A type of communication control unit whose operations are controlled by one or more programs stored and executed in the unit. It manages the details of line control and the routing of data through a network.

communication line. Deprecated term for *telecommunication line*.

communication. The process of sending or receiving data between two points of a network.

Communications Controller for Linux (CCL). A software product for mainframe servers that emulates the IBM 3745 Communication Controller hardware.

Communications Server. IBM software that supports (a) the development and use of application programs among two or more connected systems or workstations, (b) multiple concurrent connections that use a wide range of protocols, and (c) several application programming interfaces (APIs) that may be called concurrently and that are designed for client/server and distributed application programs. Communications Server includes the necessary interfaces for network management and is available on several operating systems (such as AIX, OS/2 Warp, z/OS, and Windows NT). z/OS Communications Server is not available as a stand-alone product. Rather, it is an element of the z/OS operating system. z/OS Communications Server includes the function of these former IBM products: TCP/IP for MVS/ESA and VTAM for MVS/ESA. The VTAM for MVS/ESA function is called Communications Server - SNA Services, and the TCP/IP for MVS/ESA function is called Communications Server - IP Services.

communications storage manager (CSM). In z/OS Communications Server, a buffer management technology that reduces performance overhead resulting from the movement of large amounts of data. CSM enables authorized host application programs to put data in buffers that can be addressed and accessed by other authorized host application programs without any need to copy the data.

compatibility. Ability to work in the system or ability to work with other devices or programs.

compilation unit. A portion of a computer program sufficiently complete to be compiled correctly.

compiler options. Keywords that can be specified to control certain aspects of compilation. Compiler options can control the nature of the load module generated by the compiler, the types of printed output to be produced, the efficient use of the compiler, and the destination of error messages. Also called compiler-time options.

compiler. A program that translates a source program into an executable program (an object deck).

complementary metal-oxide semiconductor (CMOS). A technology that combines the electrical properties of positive and negative voltage requirements to use considerably less power than other types of semiconductors.

component. A functional part of an operating system; for example, the scheduler or supervisor.

composite network node. A type 5 node and its subordinate type 4 nodes that support APPN network node protocols and appear to an attached APPN or LEN node as a single network node.

concentrator. (1) In data transmission, a functional unit that permits a common transmission medium to serve more data sources than there are channels currently available within the transmission medium. (T)

condition code. A code that reflects the result of a previous input/output, arithmetic, or logical operation.

configuration. A set of hardware units that can support a single operating system.

connection. In data communications, an association established between functional units for conveying information.

connection. In TCP/IP, the path between two protocol applications that provides reliable data stream delivery service. In Internet communications, a connection extends from a TCP application on one system to a TCP application on another system.

connectionless protocol. A transport protocol, such as UDP, that does not require a connection to be established prior to data transfer.

connection-oriented protocol. A protocol requiring establishment of a session prior to data transfer.

connectivity. (1) The capability of a system or device to be attached to other systems or devices without modification. (T)

consistent copy. A copy of data entity (for example, a logical volume) that contains the contents of the entire data entity from a single instant in time.

console group. In z/OS, a group of consoles defined in CNGRPxx, each of whose members can serve as an alternate console in console or hardcopy recovery or as a console to display synchronous messages.

console. An input/output device on a computer, reserved for communication between the computer operator or maintenance engineer and the computer.

control block. A storage area used by a computer program to hold control information.

control interval (CI). A fixed-length area or disk in which VSAM stores records and creates distributed free space. Also, in a key-sequenced data set or file, the set of records that an entry in the sequence-set index record points to. The control interval is the unit of information that VSAM transmits to or from disk. A control interval always includes an integral number of physical records.

control section (CSECT). The part of a program specified by the programmer to be a relocatable unit, all elements of which are to be loaded into adjoining main storage locations.

control statement. In programming languages, a statement that is used to alter the continuous sequential execution of statements; a control statement can be a conditional statement, such as IF, or an imperative statement, such as STOP. In JCL, a statement in a job that is used in identifying the job or describing its requirements to the operating system.

control unit address. The high order bits of the storage control address, used to identify the storage control to the host system.

control unit. A device that coordinates and controls the operation of one or more input/output devices, and synchronizes the operation of such devices with the operation of the system as a whole. Synonymous with *controller*.

controller. See *control unit*.

convergence. The recognition of changes in a network by a dynamic routing protocol.

conversation. A logical connection between two programs over an LU type 6.2 session that allows them to communicate with each other while processing a transaction.

conversational monitor system (CMS). A virtual machine operating system that provides general interactive time sharing, problem solving, and program development capabilities, and operates only under the control of the VM/370 control program.

conversational. Pertaining to a program or a system that carries on a dialog with a terminal user, alternately accepting input and then responding to the input quickly enough for the user to maintain a train of thought.

couple data set. A data set that is created through the XCF couple data set format utility and, depending on its designated type, is shared by some or all of the z/OS systems in a sysplex. See also sysplex couple data set.

coupling facility channel. A high bandwidth fiber optic channel that provides the high-speed connectivity required for data sharing between a coupling facility and the central processor complexes directly attached to it.

coupling facility. A special logical partition that provides high-speed caching, list processing, and locking functions in a sysplex.

coupling services. In a sysplex, the functions of XCF that transfer data and status between members of a group residing on one or more z/OS systems in the sysplex.

CP. Central processor.

CPC. Central processor complex.

CP-CP session. A parallel session between two control points, using LU 6.2 protocols and a mode name of CPSVCMG, on which network services requests and replies are exchanged. Each CP of a given pair has one contention-winner session and one contention-loser session with the other.

create link pack area (CLPA). An option that is used during IPL to initialize the link pack pageable area.

cross-domain resource manager (CDRM). In VTAM, the function in the system services control point (SSCP) that controls initiation and termination of cross-domain sessions.

cross-memory linkage. A method for invoking a program in a different address space. The invocation is synchronous with respect to the caller.

cross-system coupling facility (XCF). A component of z/OS that provides functions to support cooperation between authorized programs running within a sysplex. Software that allows programs to communicate channel-to-channel, peer-to-peer, across a sysplex. XCF supports program communication and sends program status and signal information between z/OS system images in a sysplex.

cross-system extended services (XES). A set of z/OS services that allow multiple instances of an application or subsystem, running on different systems in a Sysplex environment, to implement high-performance, | high-availability data sharing by using a coupling facility.

cryptographic key. A parameter that determines cryptographic transformations between plaintext and ciphertext.

cryptography. The transformation of data to conceal its meaning.

CSA. Common service area.

CSCL. See *carrier-supplied communication line*.

CSECT. See control section.

CSM. See *communications storage manager (CSM)*.

CSMA/CD. See *Carrier Sense Multiple Access with Collision Detection (CSMA/CD)*.

cumulative service tape. A tape sent with a new function order, containing all current PTFs for that function.

Customer Information Control System. See CICS.

D

daemon. In UNIX systems, a long-lived process that runs unattended to perform continuous or periodic system-wide functions, such as network control. Some daemons are triggered automatically to perform their task; others operate periodically. An example is the cron daemon, which periodically performs the tasks listed in the crontab file. The z/OS equivalent is a started task.

DASD. Direct access storage device.

DASD volume. A DASD space identified by a common label and accessed by a set of related addresses. See also volume.

data class. A collection of allocation and space attributes, defined by the storage administrator, that are used that are used when allocating a new SMS-managed data set.

data control block (DCB). A control block used by access method routines in storing and retrieving data.

data definition (DD) statement. A job control statement that describes a data set associated with a particular job step.

data definition name (ddname). (1) The name of a data definition (DD) statement that corresponds to a data control block that contains the same name. (2) The symbolic representation for a name placed in the name field of a data definition (DD) statement.

data division. In COBOL, the part of a program that describes the files to be used in the program and the records contained within the files. It also describes any WORKING-STORAGE data items, LINKAGE SECTION data items, and LOCAL-STORAGE data items that are needed.

Data Facility Sort (DFSORT). An IBM licensed program that is a high-speed data-processing utility. DFSORT provides a method for sorting, merging, and copying operations, as well as providing versatile data manipulation at the record, field, and bit level.

data in transit. The update data on application system DASD volumes that is being sent to the recovery system for writing to DASD volumes on the recovery system.

data integrity. The condition that exists as long as accidental or intentional destruction, alteration, or loss of data does not occur.

data integrity. The condition that exists when accidental or intentional destruction, alteration, or loss of data does not occur.

data link control (DLC). A set of rules used by nodes on a data link (such as an SDLC link or a token ring) to accomplish an orderly exchange of information.

data link layer. In the Open Systems Interconnection reference model, the layer that provides services to transfer data between entities in the network layer over a communication link. The data link layer detects and possibly corrects errors that may occur in the physical layer.

data link switching (DLSw). A method of transporting network protocols that use IEEE 802.2 logical link control (LLC) type 2. SNA and NetBIOS are examples of protocols that use LLC type 2. See also *encapsulation* and *spoofing*.

data set backup. Backup to protect against the loss of individual data sets.

data set label. (1) A collection of information that describes the attributes of a data set and is normally stored on the same volume as the data set. (2) A general term for data set control blocks and tape data set labels.

data set. In z/OS, a named collection of related data records that is stored and retrieved by an assigned name. Equivalent to a file.

data sharing. The ability of concurrent subsystems (such as DB2 or IMS DB) or application programs to directly access and change the same data, while maintaining data integrity.

data space. MVS shared memory, parallel to shared memory regions in POSIX. A data space contains data only, which can be shared by multiple address spaces (users) without inadvertently being modified.

data stream. (1) All information (data and control commands) sent over a data link usually in a single read or write operation. (2) A continuous stream of data elements being transmitted, or intended for transmission, in character or binary-digit form, using a defined format.

data type. The properties and internal representation that characterize data.

data warehouse. A system that provides critical business information to an organization. The data warehouse system cleanses the data for accuracy and currency, and then presents the data to decision makers so that they can interpret and use it effectively and efficiently.

database administrator (DBA). An individual who is responsible for designing, developing, operating, safeguarding, maintaining, and using a database.

database management system (DBMS). A software system that controls the creation, organization, and modification of a database and the access to the data that is stored within it.

database. A collection of tables, or a collection of table spaces and index spaces.

datagram. In packet switching, a self-contained packet, independent of other packets, that carries information sufficient for routing from the originating data terminal equipment (DTE) to the destination DTE without relying on earlier exchanges between the DTEs and the network.

DB2 data sharing group. A collection of one or more concurrent DB2 subsystems that directly access and change the same data while maintaining data integrity.

DB2. DATABASE 2; generally, one of a family of IBM relational database management systems and, specifically, the system that runs under z/OS.

DBCS. Double-byte character set.

DBMS. Database management system.

DCB. Data control block. A control block used by access method routines in storing and retrieving data.

DCLGEN. Declarations generator.

DD card. Deprecated term for *DD statement*.

DD statement. Data definition statement.

DD statement. In z/OS, the data definition statement. A JCL control statement that serves as the connection between a file's logical name (the ddname) and the file's physical name (the data set name).

ddname. See data definition name.

deadlock. (1) An error condition in which processing cannot continue because each of two elements of the process is waiting for an action by or a response from the other. (2) Unresolvable contention for the use of a resource. (3) An impasse that occurs when multiple processes are waiting for the availability of a resource that does not become available because it is being held by another process that is in a similar wait state.

deallocate. To release a resource that is assigned to a specific task.

declarations generator (DCLGEN). A subcomponent of DB2 that generates SQL table declarations and COBOL, C, or PL/I data structure declarations that conform to the table. The declarations are generated from DB2 system catalog information.

default. Pertaining to an attribute, value, or option that is assumed when no alternative is explicitly specified.

dependent LU requester (DLUR). An APPN end node or network node that (a) owns dependent LUs in its local node or in adjacently attached nodes and (b) obtains SSCP services for these dependent LUs from a dependent LU server (DLUS) located elsewhere in an APPN network. The flows of SSCP services between DLUR and DLUS are encapsulated in APPN formats and carried over a special pair of LU 6.2 sessions (referred to as a CP-SVR pipe).

dependent LU server (DLUS). An APPN network node that provides SSCP services for dependent LUs owned by dependent LU requesters (DLURs) located elsewhere in an APPN network.

dependent LU. See *SSCP-dependent LU*.

destination node. The node that provides application services to an authorized external user.

destination. (1) Any point or location, such as a node, station, or a particular terminal, to which information is to be sent.

device address. The field of an ESCON device-level frame that selects a specific device on a control unit image. The one or two leftmost digits are the address of the channel to which the device is attached. The two rightmost digits represent the unit address.

device control unit. A hardware device that controls the reading, writing, or displaying of data at one or more input/output devices or terminals.

device number. A four-hexadecimal-character identifier, for example 13A0, that you associate with a device to facilitate communication between the program and the host operator. The device number that you associate with a subchannel.

Device Support Facilities program (ICKDSF). A program used to initialize DASD volumes at installation and perform media maintenance.

device type. The general name for a kind of device; for example, 3330.

device. A computer peripheral or an object that appears to the application as such.

DFSMSHsm. An IBM product used for backing up and recovering data, and managing space on volumes in the storage hierarchy.

DFSORT. See Data Facility Sort.

digital certificate. An electronic document used to identify an individual, server, company, or some other entity, and to associate a public key with the entity. A digital certificate is issued by a certification authority and is digitally signed by that authority.

Dijkstra's shortest path algorithm. An algorithm named after E.W. Dijkstra that finds the shortest path from a source to a destination.

direct access storage device (DASD). A device in which the access time is effectively independent of the location of the data.

Direct Memory Access (DMA). The system facility that allows a device to get direct access to the system or bus memory without the intervention of the system processor.

directed Locate search. A search request sent to a specific destination node known to contain a resource, such as a logical unit, to verify the continued presence of the resource at the destination node and to obtain the node's connectivity information for route calculation. Contrast with *broadcast search*. Synonymous with *directed search*.

directory. (1) A type of file containing the names and controlling information for other files or other directories. Directories can also contain subdirectories, which can contain subdirectories of their own. (2) A file that contains directory entries. No two directory entries in the same directory can have the same name. (POSIX.1). (3) A file that points to files and to other directories. (4) An index used by a control program to locate blocks of data that are stored in separate areas of a data set in direct access storage.

disabled wait state. Pertaining to a state of a processing unit that prevents the occurrence of certain types of interruptions.

disaster recovery. Recovery after a disaster, such as a fire, that destroys or otherwise disables a system. Disaster recovery techniques typically involve restoring data to a second (recovery) system, then using the recovery system in place of the destroyed or disabled application system. See also recovery, backup, and recovery system.

display console. In z/OS, an MCS console whose input/output function you can control.

distributed computing. Computing that involves the cooperation of two or more machines communicating over a network. Data and resources are shared among the individual computers.

distributed data. Data that resides on a DBMS other than the local system.

Distributed directory services, including registration of its domain resources to a central directory server

distributing host. The designated contact (point of entry) for a sysplex. The distributing host is the normal owner of the IP address that clients out in the network use to connect to the sysplex.

distribution libraries. IBM-supplied partitioned data sets on tape containing one or more components that the user restores to disk for subsequent inclusion in a new system.

distribution zone. In SMP/E, a group of VSAM records that describe the SYSMODs and elements in the distribution libraries.

DLIB. Distribution library.

DLL. See dynamic link library.

DLSw. See *data link switching (DLSw)*.

DLUR. See *dependent LU requester (DLUR)*.

DLUS. See *dependent LU server (DLUS)*.

domain name server. In the Internet suite of protocols, a server program that supplies name-to-address translation by mapping domain names to IP addresses. Synonymous with *name server*.

domain. (1) In SNA communications, the network resources under control of a particular system services control point (SSCP).

double-byte character set (DBCS). A set of characters in which each character is represented by a two-bytes code. Languages such as Japanese, Chinese, and Korean, which contain more symbols than can be represented by 256 code points, require double-byte character sets. Because each character requires two bytes, the typing, display, and printing of DBCS characters requires hardware and programs that support DBCS. Contrast with single-byte character set.

doubleword. A sequence of bits or characters that comprises eight bytes (two 4-byte words) and is referenced as a unit.

downwardly compatible. The ability of applications that have been compiled and linked with Language Environment to run on previous releases of OS/390. In order for an application to be downwardly compatible, it must not have exploited any new Language Environment function unavailable in the targeted release.

drain. Allowing a printer to complete its current work before stopping the device.

driving system. The system used to install the program. Contrast with target system.

dsname. Data set name.

DSORG. Data set organization. It is specified in the JCL as "DSORG=."

dual copy. A high availability function made possible by the nonvolatile storage in cached IBM storage controls. Dual copy maintains two functionally identical copies of designated DASD volumes in the logical storage subsystem, and automatically updates both copies every time a write operation is issued to the dual copy logical volume.

dump. (1) To copy the contents of all or part of storage for the purpose of collecting error information.

duplex pair. A volume comprised of two physical devices within the same or different storage subsystems that are defined as a pair by a dual copy, PPRC, or XRC operation, and are in neither suspended nor pending state. The operation records the same data onto each volume.

duplex. Pertaining to communication in which data can be sent and received at the same time. Synonymous with *full-duplex*. Contrast with *half-duplex*.

DVIPA. See *dynamic VIPA (DVIPA)*.

dynamic link library (DLL). A file containing executable code and data bound to a program at run time. The code and data in a dynamic link library can be shared by several applications simultaneously.

dynamic routing protocol. A protocol that adjusts automatically to network topology or traffic changes.

dynamic VIPA (DVIPA). A function that allows the system to move IP addresses in event of an application, TCP/IP stack, or LPAR failure.

dynamic VPN. A type of virtual private network that requires a separate server to support the exchange of the keys that are used to encrypt data at each end point.

E

EB. See *exabyte*.

EBCDIC. See *Extended Binary Coded Decimal Interchange Code (EBCDIC)*.

e-business. (1) The transaction of business over an electronic medium such as the Internet. (2) The transformation of key business processes through the use of Internet technologies.

encapsulation. (1) In communications, a technique used by layered protocols by which a layer adds control information to the protocol data unit (PDU) from the layer it supports. In this respect, the layer encapsulates the data from the supported layer. In the Internet suite of protocols, for example, a packet would contain control information from the physical layer, followed by control information from the network layer, followed by the application protocol data. See also *data link switching (DLSw)*.

enclave. A transaction that can span multiple dispatchable units (SRBs and tasks) in one or more address spaces and is reported on and managed as a unit.

end node. See *Advanced Peer-to-Peer Networking (APPN) end node*.

Enterprise Extender. An extension of SNA High Performance Routing that provides encapsulation of SNA application traffic within UDP frames.

Enterprise System Connectivity (ESCON). A peripheral interface for an Enterprise Systems Architecture/390 and mainframe computer. The I/O interface uses ESA/390 logical protocols over a serial interface that configures attached units to a communication fabric.

Enterprise Systems Connection (ESCON). A set of products and services that provides a dynamically connected environment using optical cables as a transmission medium.

enterprise. The composite of all operational entities, functions, and resources that form the total business concern.

entry area. In z/OS, the part of a console screen where operators can enter commands or command responses.

entry name. In assembler language, a programmer-specified name within a control section that identifies an entry point and can be referred to by any control section. See also entry point.

entry point name. The symbol (or name) that represents an entry point. See also entry point.

entry point. The address or label of the first instruction that is executed when a routine is entered for execution. Within a load module, the location to which control is passed when the load module is invoked.

ephemeral port number. In some TCP/IP implementations, a temporary port number assigned to a process for the duration of a call. Ephemeral port numbers are typically assigned to client processes that must provide servers with a client port number so that the server can respond to the correct process.

ESCON channel. A mainframe channel that supports ESCON protocols.

ESCON. See *Enterprise System Connectivity (ESCON)*.

Ethernet. A packet-based networking technology for local area networks (LANs) that allows multiple access and handles contention by using Carrier Sense Multiple Access with Collision Detection (CSMA/CD) as the access method. Ethernet is standardized in the IEEE 802.3 specification.

ETR. External Time Reference. See also Sysplex Timer®.

exabyte. For processor, real and virtual storage capacities and channel volume: 1 152 921 504 606 846 976 bytes or 2(60).

executable program. (1) A program in a form suitable for execution by a computer. The program can be an application or a shell script. (2) A program that has been link-edited and can therefore be run in a processor. (3) A program that can be executed as a self-contained procedure. It consists of a main program and, optionally, one or more subprograms. (4) See also executable file, load module.

executable. A load module or program object which has yet to be loaded into memory for execution.

explicit route. In SNA, a series of one or more transmission groups that connect two subarea nodes. An explicit route is identified by an origin subarea address, a destination subarea address, an explicit route number, and a reverse explicit route number. Contrast with *virtual route (VR)*.

Extended Binary Coded Decimal Interchange Code (EBCDIC). A group of coded character sets that consists of eight-bit coded characters. EBCDIC coded character sets map specified graphic and control characters onto code points, each consisting of 8 bits. EBCDIC is an extension of BCD (Binary-Coded Decimal), which uses only 7 bits for each character.

extended border node. A border node that interconnects (a) APPN networks having different network identifiers or (b) separate partitions of the same APPN network, where the partitioning is to allow isolated topology subnetworks (or clusters). An extended border node supports intermediate network routing, allowing it to support LU-LU sessions that do not terminate in its native network. Contrast with *peripheral border node*.

extended MCS console. In z/OS, a console other than an MCS console from which operators or programs can issue system commands and receive messages. An extended MCS console is defined through an OPERPARM segment.

extended remote copy (XRC). A hardware- and software-based remote copy service option that provides an asynchronous volume copy across storage subsystems for disaster recovery, device migration, and workload migration.

extended subnetwork boundary. Term1 definition.

external reference. In an object deck, a reference to a symbol, such as an entry point name, defined in another program or module.

F

Fast Ethernet. An Ethernet standard that provides a data rate of 100 Mbps.

feature code. A four-digit code used by IBM to process hardware and software orders.

feature. A part of an IBM product that may be ordered separately by a customer.

fetch. The dynamic load of a procedure.

FID. See *format identification field (FID, FID field)*.

File Transfer Protocol (FTP). In TCP/IP, an application protocol used for transferring files to and from host computers.

file. A named collection of related data records that is stored and retrieved by an assigned name. Equivalent to a z/OS data set.

FILEDEF. File definition statement.

firewall. A network configuration, usually both hardware and software, that prevents unauthorized traffic into and out of a secure network.

first failure support technology (FFST) dump. A dump produced by First Failure Support Technology, a licensed program that captures information about a potential problem when it occurs.

fix. A correction of an error in a program, usually a temporary correction or bypass of defective code.

FlashCopy. A point-in-time copy services function that can quickly copy data from a source location to a target location.

FMID. See function modification identifier.

foreign key. A column or set of columns in a dependent table of a constraint relationship. The key must have the same number of columns, with the same descriptions, as the primary key of the parent table. Each foreign key value must either match a parent key value in the related parent table or be null.

format identification field (FID, FID field). In SNA, a field in each transmission header (TH) that indicates the format of the TH; that is, the presence or absence of certain fields. TH formats differ in accordance with the types of nodes between which they pass.

Fortran. A high-level language used primarily for applications involving numeric computations. In previous usage, the name of the language was written in all capital letters, that is, FORTRAN.

forward explicit route. Explicit routes originating in the host.

forwarding. The act of moving a datagram between two different networks or subnetworks.

frame relay. A protocol for routing frames through the network based on the address field (data link connection identifier) in the frame and for managing the route or virtual connection.

frame. For a mainframe microprocessor cluster, a frame contains one or two central processor complexes (CPCs), support elements, and AC power distribution. For networking, the block of information transmitted between two or more stations in the data link layer of a network. It includes delimiters, control characters, information, and checking characters.

FTP. See *File Transfer Protocol (FTP)*.

full screen mode. A form of screen presentation in which the contents of an entire terminal screen can be displayed at once. Full-screen mode is often used for fill-in-the-blanks prompting.

full-duplex. See *duplex*.

fullword boundary. A storage location whose address is evenly divisible by 4.

fullword. A sequence of bits or characters that comprises four bytes (one word) and is referenced as a unit.

function modification identifier (FMID). A code that identifies the release levels of a program product.

function. A routine that is invoked by coding its name in an expression. The routine passes a result back to the invoker through the routine name.

G

gateway node. A node that is an interface between networks.

gateway. A device or program used to connect networks or systems with different network architectures. The systems may have different characteristics, such as different communication protocols, different network architecture, or different security policies, in which case the gateway performs a translation role as well as a connection role.

GB. Gigabyte (1 073 741 824 bytes).

Gbps. Gigabits per second.

GDG. Generation data group.

generalized trace facility (GTF). In a z/OS environment, a service program that records significant system events, such as supervisor calls and start I/O operations, for the purpose of problem determination.

generation data set. One generation of a generation data group.

Gigabit Ethernet. A variation of the Ethernet protocol that is capable of transmitting data at one billion bits per second.

global access checking. The ability to allow an installation to establish an in-storage table of default values for authorization levels for selected resources.

global resource serialization complex. One or more z/OS systems that use global resource serialization to serialize access to shared resources (such as data sets on shared DASD volumes).

global resource serialization. A function that provides a z/OS serialization mechanism for resources (typically data sets) across multiple z/OS images.

gratuitous ARP. An unsolicited ARP response.

Gregorian calendar. The calendar in use since Friday, 15 October 1582 throughout most of the world.

group. A collection of RACF users who can share access authorities for protected resources.

GTF. See *generalized trace facility (GTF)*.

guest. An operating system, such as Linux or z/OS, running in a virtual machine managed by the z/VM Control Program (CP).

H

half-duplex. In data communication, pertaining to transmission in only one direction at a time. Contrast with *duplex*.

handshake. In Transport Layer Security (TLS), the initial setup of a TLS connection.

hardcopy log. In systems with multiple console support or a graphic console, a permanent record of system activity.

hardware configuration dialog. In z/OS, a panel program that is part of the hardware configuration definition. The program allows an installation to define devices for z/OS system configurations.

Hardware Management Console (HMC). A console used to monitor and control hardware such as the zSeries z990 processors.

hardware unit. A central processor, storage element, channel path, device, and so on.

hardware. Physical equipment, as opposed to the computer program or method of use; for example, mechanical, magnetic, electrical, or electronic devices. Contrast with software.

hexadecimal. A base 16 numbering system. Hexadecimal digits range from 0 through 9 (decimal 0 to 9) and uppercase or lowercase A through F (decimal 10 to 15) and A through F, giving values of 0 through 15.

high-level language (HLL). A programming language above the level of assembler language and below that of program generators and query languages. Examples are C, C++, COBOL, Fortran, and PL/I.

highly parallel. Refers to multiple systems operating in parallel, each of which can have multiple processors. See also n-way.

HiperSocket. A technology that provides high-speed TCP/IP connectivity within a central processor complex. It eliminates the need for any physical cabling or external networking connection between servers running in different LPARs.

HLL. High-level language.

hop. In APPN, a portion of a route that has no intermediate nodes. It consists of only a single transmission group connecting adjacent nodes.

host. A computer that is connected to a network and provides an access point to that network. The host can be a client, a server, or both a client and server simultaneously.

HTTP server. A program that enables a computer that uses the Hypertext Transfer Protocol (HTTP) to serve objects by responding to requests from other programs, such as browsers.

hub. In a network, a point at which circuits are either connected or switched. For example, in a star network, the hub is the central node; in a star/ring network, it is the location of wiring concentrators.

I

I/O cage. A physical area of the processor frame where connections to the central processor complex are made.

I/O. Input/output.

IBM Security Server. An IBM security management product that provides access control by identifying users to the system; verifying users of the system; authorizing access to protected resources; logging detected, unauthorized attempts to enter the system; and logging detected accesses to protected resources. Also known as Resource Access Control Facility (RACF).

IBM Support Center. The IBM department responsible for software service.

IBM systems engineer (SE). An IBM service representative who performs maintenance services for IBM software in the field.

ICMP. See *Internet Control Message Protocol (ICMP)*.

IDCAMS. An IBM program that is used to process access method services commands. It can be invoked as a job or job step, from a TSO terminal, or from within a user's application program.

image. A single instance of the z/OS operating system.

IMS DB data sharing group. A collection of one or more concurrent IMS DB subsystems that directly access and change the same data while maintaining data integrity.

IMS. Information Management System. The IMS product supports hierarchical databases, data communication, translation processing, and database backout and recovery.

independent LU. See *SSCP-independent LU*.

initial program load (IPL). The initialization procedure that causes the z/OS operating system to begin operation. During IPL, system programs are loaded into storage and z/OS is made ready to perform work. Synonymous with boot, load.

installation exit. The means by which an IBM software product may be modified by a customer's system programmers to change or extend the functions of the product.

instruction line. In z/OS, the part of the console screen that contains messages about console control and input errors.

Integrated Services Digital Network (ISDN). An international communications standard for sending voice, video, and data over digital telephone lines.

interactive problem control system (IPCS). A component of z/OS that permits online problem management, interactive problem diagnosis, online debugging for dumps, problem tracking, and problem reporting.

Interactive System Productivity Facility (ISPF). A dialog manager for interactive applications. It provides control and services to permit execution of dialogs.

interactive. Pertaining to a program or system that alternately accepts input and responds. In an interactive system, a constant dialog exists between user and system. Contrast with batch.

interchange node. (1) A node that acts as both an APPN network node and a type 5 subarea node to transform APPN protocols to subarea protocols and vice versa.

internal reader. A facility that transfers jobs to the job entry subsystem (JES2 or JES3).

Internet Control Message Protocol (ICMP). An Internet protocol that is used by a gateway to communicate with a source host, for example, to report an error in a datagram.

Internet Protocol (IP). A protocol that routes data through a network or interconnected networks. Internet Protocol (IP) acts as an intermediary between the higher protocol layers and the physical network.

Internet. The worldwide collection of interconnected networks that use the Internet suite of protocols and permit public access.

interrupt. A suspension of a process, such as the execution of a computer program, caused by an event external to that process, and performed in such a way that the process can be resumed.

interruption. Synonym for interrupt.

intranet. A private network that integrates Internet standards and applications (such as Web browsers) with an organization's existing computer networking infrastructure.

intrusion detection service. Software that detects attempts or successful attacks on monitored resources that are part of a network or host system.

IP address. The unique 32-bit address (or, for IP version 6, the 128-bit address) that specifies the location of each device or workstation in the Internet. For example, 9.67.97.103 is an IP address. The address field contains two parts: the first part is the network address; the second part is the host number.

IP layer. Synonym for *network layer*.

IP network. A network that consists of subnetworks that are connected through the Internet Protocol.

IP route. A network path between any two IP addressable points in a network.

IP Security Architecture. A collection of Internet Engineering Task Force (IETF) standards that define an architecture at the Internet Protocol (IP) layer to protect IP traffic by using various security services.

IPCS. Interactive problem control system.

IPL. Initial program load.

IPsec. See *IP Security Architecture*.

ISDN. See *Integrated Services Digital Network (ISDN)*.

ISPF. Interactive System Productivity Facility.

J

JCL. Job control language.

JES. Job entry subsystem.

JES2. A z/OS subsystem that receives jobs into the system, converts them to internal format, selects them for execution, processes their output, and purges them from the system. In an installation with more than one processor, each JES2 processor independently controls its job input, scheduling, and output processing. Contrast with JES3.

JES3. A z/OS subsystem that receives jobs into the system, converts them to internal format, selects them for execution, processes their output, and purges them from the system. In complexes that have several loosely-coupled processing units, the JES3 program manages processors so that the global processor exercises centralized control over the local processors and distributes jobs to them via a common job queue. Contrast with JES2.

job control language (JCL). A sequence of commands used to identify a job to an operating system and to describe a job's requirements.

job entry subsystem (JES). A system facility for spooling, job queueing, and managing I/O.

job separator pages. Those pages of printed output that delimit jobs.

job step. The job control (JCL) statements that request and control execution of a program and that specify the resources needed to run the program. The JCL statements for a job step include one EXEC statement, which specifies the program or procedure to be invoked, followed by one or more DD statements, which specify the data sets or I/O devices that might be needed by the program.

job. A unit of work for an operating system. Jobs are defined by JCL statements.

Julian date. A date format that contains the year in positions 1 and 2, and the day in positions 3 through 5. The day is represented as 1 through 366, right-adjusted, with zeros in the unused high-order position.

K

Kbps. Kilobits per second.

kernel. The part of an operating system that performs basic functions such as allocating hardware resources.

key ring. In computer security, a file that contains public keys, private keys, trusted roots, and certificates.

key-sequenced data set. A VSAM file or data set whose records are loaded in ascending key sequence and controlled by an index. Records are retrieved and stored by keyed access or by addressed access, and new records are inserted in key sequence by means of distributed free space. Relative byte addresses can change because of control interval or control area splits.

keyword. A part of a command operand or SYS1.PARMLIB statement that consists of a specific character string (such as NAME= on the CONSOLE statement of CONSOLxx).

KSDS. Key-sequenced data set. See also VSAM.

L

LAN segment. (1) Any portion of a LAN (for example, a bus or ring) that can operate independently, but that is connected to other parts of the network by means of bridges.

Language Environment. Short form of z/OS Language Environment. A set of architectural constructs and interfaces that provides a common run-time environment and run-time services for C, C++, COBOL, Fortran, PL/I, VisualAge PL/I, and Java applications compiled by Language Environment-conforming compilers.

LCSS. See *logical channel subsystem (LCSS)*.

LEN end node. See *low-entry networking (LEN) end node*.

LEN node. See *low-entry network (LEN) node*.

library. A collection of functions, subroutines, or other data.

LIFO. Last in, first out method of access. A queuing technique in which the next item to be retrieved is the item most recently placed in the queue.

line switching. Synonym for *circuit switching*.

link layer. See *data link layer*.

link pack area (LPA). An area of virtual storage that contains reenterable routines that are loaded at IPL (initial program load) time and can be used concurrently by all tasks in the system.

link state. In routing protocols, the advertised information about the usable interfaces and reachable neighbors of a router or network. The protocol's topological database is formed from the collected link-state advertisements.

link station. In SNA, a named resource within an APPN or a subarea node that represents the connection to another APPN or subarea node that is attached by an APPN or a subarea link. In the resource hierarchy in a subarea network, the link station is subordinate to the subarea link.

link. In data communications, a transmission medium and data link control component that together transmit data between adjacent nodes.

linkage editor. An operating system component that resolves cross-references between separately compiled or assembled modules and then assigns final addresses to create a single relocatable load module. The linkage editor then stores the load module in a load library on disk.

linked list. A list in which the data elements may be dispersed but in which each data element contains information for locating the next. Synonymous with chained list.

link-edit. To create a loadable computer program by means of a linkage editor or binder.

list structure. A Coupling Facility structure that enables multisystem applications in a sysplex to share information organized as a set of lists or queues. A list structure consists of a set of lists and an optional lock table, which can be used for serializing resources in the list structure. Each list consists of a queue of list entries.

load balancing. The monitoring and management of the workload on servers. If one server exceeds its workload, requests are forwarded to another server with more capacity.

load module. A collection of one or more routines that have been stored in a library by the linkage editor or binder after having been compiled or assembled. External references have usually been--but are not necessarily--resolved. When the external references have been resolved, the load module is in a form suitable for execution.

local area network (LAN). A network that connects several devices in a limited area (such as a single building or campus) and that can be connected to a larger network.

local topology database. A database in an APPN or LEN node containing an entry for each transmission group (TG) having at least one end node for an endpoint. In an end node, the database has one entry for each TG connecting to the node. In a network node, the database has an entry for each TG connecting the network node to an end node. Each entry describes the current characteristics of the TG that it represents. A network node has both a local and a network topology database while an end node has only a local topology database.

Locate search. The means directory services in a node uses to find a resource that is not in that node. The Locate search enables directory services to ask the directory services components in other APPN nodes for information on the target resource. See also *broadcast search* and *directed Locate search*.

lock structure. A Coupling Facility structure that enables applications in a sysplex to implement customized locking protocols for serialization of application-defined resources. The lock structure supports shared, exclusive, and application-defined lock states, as well as generalized contention management and recovery protocols.

logical channel subsystem (LCSS). A channel subsystem structure that provides channel path and subchannel controls for configuring from one to four channel subsystem images. Each channel subsystem image can be configured with up to 256 channel paths, and each logical partition has access to one channel subsystem image.

logical partition (LPAR). A subset of the processor hardware that is defined to support an operating system. An LPAR contains resources (processors, memory, and input/output devices) and operates as an independent system. If hardware requirements are met, multiple logical partitions can exist within a system.

logical partitioning. A function of an operating system that enables the creation of logical partitions.

logical subsystem. The logical functions of a storage controller that allow one or more host I/O interfaces to access a set of devices. The controller aggregates the devices according to the addressing mechanisms of the associated I/O interfaces. One or more logical subsystems exist on a storage controller. In general, the controller associates a given set of devices with only one logical subsystem.

logical unit (LU). An access point through which a user or application program accesses the SNA network to communicate with another user or application program, and through which the end user accesses the functions provided by system services control points (SSCPs).

logical unit type 6.2. The SNA logical unit type that supports general communication between programs in a cooperative processing environment.

loosely coupled. A multisystem structure that requires a low degree of interaction and cooperation between multiple z/OS images to process a workload. See also **tightly coupled**.

low entry networking (LEN) end node. A LEN node receiving network services from an adjacent APPN network node.

low entry networking (LEN) node. A node that provides a range of end-user services, attaches directly to other nodes using peer protocols, and derives network services implicitly from an adjacent APPN network node, that is, without the direct use of CP-CP sessions.

LPA. Link pack area.

LPAR mode. The processor complex mode that is available on the Configuration (CONFIG) frame when the PR/SM feature is installed. LPAR mode allows the operator to allocate the hardware resources of the processor complex among several logical partitions.

LPAR. See *logical partition (LPAR)*.

LRECL. Logical record length.

LU-LU session. A logical connection between two logical units (LUs) in an SNA network that typically provides communication between two users.

M

MAC address. A standardized data link layer address required for every port or device that connects to a local-area network (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 the IEEE.

MAC. See *medium access control (MAC)*.

machine readable. Pertaining to data a machine can acquire or interpret (read) from a storage device, a data medium, or other source.

macro instruction. An instruction in a source language that is to be replaced by a defined sequence of instructions in the same source language and that may also specify values for parameters in the replaced instructions.

main task. In the context of z/OS multitasking, the main program in a multitasking environment.

mainframe. A computer, usually in a computer center, with extensive capabilities and resources to which other computers may be connected so that they can share facilities.

major node. In VTAM, a set of resources that can be activated and deactivated as a group. See also *minor node*.

master trace. A centralized data tracing facility of the master scheduler, used in servicing the message processing portions of z/OS.

Mb. Megabit.

MB. Megabyte; 1 048 576 bytes.

Mbps. Megabits per second.

MCS console. A non-SNA device defined to z/OS that is locally attached to a z/OS system and is used to enter commands and receive messages.

medium access control (MAC). In LANs, the sublayer of the data link control layer that supports medium-dependent functions and uses the services of the physical layer to provide services to the logical link control (LLC) sublayer. The MAC sublayer includes the method of determining when a device has access to the transmission medium.

megabyte (MB). 1,048,576 bytes.

member. A partition of a partitioned data set (PDS) or partitioned data set extended (PDSE).

memory dump. See *dump*.

message processing facility (MPF). A facility used to control message retention, suppression, and presentation.

message queue. A queue of messages that are waiting to be processed or waiting to be sent to a terminal.

message text. The part of a message consisting of the actual information that is routed to a user at a terminal or to a program.

metropolitan area network (MAN). (1) A network formed by the interconnection of two or more networks which may operate at higher speed than those networks, may cross administrative boundaries, and may use multiple access methods. (T) Contrast with *local area network (LAN)* and *wide area network (WAN)*.

microprocessor. A processor implemented on one or a small number of chips.

MIF. See *multiple image facility (MIF)*.

migration data host. (1) A node that acts as both an APPN end node and a type 5 subarea node.

minor node. In VTAM, a uniquely defined resource within a major node.

mixed complex. A global resource serialization complex in which one or more of the systems in the global resource serialization complex are not part of a multisystem sysplex.

modem (modulator-demodulator). A device that converts digital data from a computer to an analog signal that can be transmitted on a telecommunication line, and converts the analog signal received to data for the computer.

module. The object that results from compiling source code. A module cannot be run. To be run, a module must be bound into a program.

Monitor I, II and III. Components of the Resource Measurement Facility (RMF).

multi-access spool (MAS). A complex of multiple processors running z/OS and JES2 that share a common JES2 spool and JES2 checkpoint data set.

multicast. Transmission of the same data to a selected group of destinations. (T)

multiple console support (MCS). The operator interface in a z/OS system.

multiple image facility (MIF). A facility that allows multiple logical partitions to share ESCON channels (and FICON channels) and optionally to share any of the control units and associated I/O devices configured to these shared channels. The sharing can reduce channel requirements, improve channel utilization, and improve I/O connectivity.

multiplexer channel. A channel designed to operate with a number of I/O devices simultaneously. Several I/O devices can transfer records at the same time by interleaving items of data.

multiprocessing. The simultaneous execution of two or more computer programs or sequences of instructions. See also parallel processing.

multiprocessor (MP). A CPC that can be physically partitioned to form two operating processor complexes.

multisystem application. An application program that has various functions distributed across z/OS images in a multisystem environment.

multisystem console support. Multiple console support for more than one system in a sysplex. Multisystem console support allows consoles on different systems in the sysplex to communicate with each other (send messages and receive commands)

multisystem environment. An environment in which two or more z/OS images reside in one or more processors, and programs on one image can communicate with programs on the other images.

multisystem sysplex. A sysplex in which two or more z/OS images are allowed to be initialized as part of the sysplex.

multitasking. Mode of operation that provides for the concurrent, or interleaved, execution of two or more tasks, or threads. Synonym for multithreading.

MVS. n operating system that ran on IBM mainframes, superseded by z/OS. In z/OS, the term MVS refers to those services and functions that are provided by the Base Control Program (BCP), a base element of z/OS.

N

name server. In the Internet suite of protocols, synonym for *domain name server*.

NAU. See *network accessible unit (NAU)*.

network accessible unit (NAU). A logical unit (LU), physical unit (PU), control point (CP), or system services control point (SSCP). It is the origin or the destination of information transmitted by the path control network. Synonymous with *network addressable unit*.

network administrator. A person who manages the use and maintenance of a network.

network controller. A concentrator and protocol converter used with SDLC links. By converting protocols, which manage the way data is sent and received, the IBM 3710 Network Controller allows the use of non-SNA devices with an SNA host processor.

Network File System. A component of z/OS that allows remote access to z/OS host processor data from workstations, personal computers, or any other system on a TCP/IP network that is using client software for the Network File System protocol.

network hardware technician. A person with specific skills and tools for supporting the physical network.

network ID. In TCP/IP, that part of the IP address that defines a network. The length of the network ID depends on the type of network class (A, B, or C).

network interface card (NIC). A printed circuit board that plugs into a personal computer, server, or workstation. It controls the exchange of data over a network and provides the electronic functions for the data link protocol or access method, such as token ring or Ethernet.

network layer. In Open Systems Interconnection (OSI) architecture, the layer that is responsible for routing, switching, and link-layer access across the OSI environment.

network node (NN). See *Advanced Peer-to-Peer Networking (APPN) network node*.

network node server. An APPN network node that provides network services for its local LUs and client end nodes.

network operator. A person who controls the operation of all or part of a network.

network protocol. A communications protocol from the network layer of the Open Systems Interconnect (OSI) network architecture, such as the Internet Protocol (IP).

network topology database. The representation of the current connectivity between the network nodes within an APPN network. It includes (a) entries for all network nodes and the transmission groups interconnecting them and (b) entries for all virtual routing nodes to which network nodes are attached.

network. In data communications, a configuration in which two or more locations are physically connected for the purpose of exchanging data.

next sequential instruction. The next instruction to be executed in the absence of any branch or transfer of control.

nonreentrant. A type of program that cannot be shared by multiple users.

nonstandard labels. Labels that do not conform to American National Standard or IBM System/370 standard label conventions.

nucleus initialization program (NIP). The stage of z/OS that initializes the control program; it allows the operator to request last minute changes to certain options specified during initialization.

null. Empty, having no meaning.

n-way. The number (n) of CPs in a CPC. For example, a 6-way CPC contains six CPs.

O

object deck. A collection of one or more control sections produced by an assembler or compiler and used as input to the linkage editor or binder. Also called object code or simply OBJ.

offline. Pertaining to equipment or devices not under control of the processor.

offset. The number of measuring units from an arbitrary starting point in a record, area, or control block, to some other point.

OMPROUTE server. The routing daemon on z/OS capable of handling both OSPF and RIP interfaces concurrently.

online. Pertaining to a user's ability to interact with a computer.

Open Shortest Path First (OSPF). In the Internet suite of protocols, a function that provides intradomain information transfer. An alternative to the Routing Information Protocol (RIP), OSPF allows the lowest-cost routing and handles routing in large regional or corporate networks.

Open Systems Adapter. An integrated IBM mainframe hardware feature that combines the functions of an I/O channel with the functions of a network port to provide direct connectivity between mainframe applications and their clients on the attached network.

Open Systems Interconnection (OSI). The interconnection of open systems in accordance with standards of the International Organization for Standardization (ISO) for the exchange of information.

operating system. Software that controls the running of programs; in addition, an operating system may provide services such as resource allocation, scheduling, input/output control, and data management. Although operating systems are predominantly software, partial hardware implementations are possible.

operations log. In z/OS, the operations log is a central record of communications and system problems for each system in a sysplex.

OS/390. An earlier form of the z/OS operating system.

OSA. See *Open Systems Adapter*.

OSI. See *Open Systems Interconnection (OSI)*.

OSPF. See *Open Shortest Path First (OSPF)*.

overlay. To write over existing data in storage.

P

packet mode operation. See *packet switching*.

packet switching. (1) The process of routing and transferring data by means of addressed packets so that a channel is occupied only during transmission of a packet. On completion of the transmission, the channel is made available for transfer of other packets. (1)

packet. In data communication, a sequence of binary digits, including data and control signals, that is transmitted and switched as a composite whole. See also *frame*.

parallel channel. A channel having a System/360 and System/370 channel-to-control-unit I/O interface that uses bus-and-tag cables as a transmission medium. Contrast with *ESCON channel*.

parallel OEMI. A reference to an older IBM standard for a computer peripheral interface, which defines the IBM S/360 and S/370 channel to control unit interface. This interface uses ESA/390 logical protocols over a common bus that configures attached units in a multi-drop bus topology.

parallel processing. The simultaneous processing of units of work by many servers. The units of work can be either transactions or subdivisions of large units of work (batch). See also *highly parallel*.

parallel sysplex. A sysplex that uses one or more coupling facilities.

parameter (parm). A value or reference passed to a function, command, or program that serves as input or controls actions. The value is supplied by a user or by another program or process.

parmlib. All the members in the SYS1.PARMLIB partitioned data set that contain parameters setting the limits and controlling the behavior of z/OS.

partially qualified data set name. A data set name in which the qualifiers are not spelled out. Asterisks and percent signs are used in place of the undefined qualifiers.

partitionable CPC. A CPC that can be divided into two independent CPCs. See also *physical partition*, *single-image mode*, *MP*, *side*.

partitioned data set (PDS). A data set in direct access storage that is divided into partitions, called members, each of which can contain a program, part of a program, or data. Synonymous with *program library*. Contrast with *sequential data set*.

partitioned data set extended (PDSE). A system-managed data set that contains an indexed directory and members that are similar to the directory and members of partitioned data sets. A PDSE can be used instead of a partitioned data set.

partitioning. The process of forming multiple configurations from one configuration.

password. A unique string of characters known to a computer system and to a user, who must specify the character string to gain access to a system and to the information stored within it.

path control elements, (b) performing session sequence numbering for low-function peripheral nodes, and (c) providing session-level pacing support.

path information unit (PIU). A message unit consisting of a transmission header (TH) alone, or a TH followed by a basic information unit (BIU) or a BIU segment.

peer network. A network in which every resource is self-contained and controls its own resources.

percolate. The action taken by the condition manager when the returned value from a condition handler indicates that the handler could not handle the condition, and the condition will be transferred to the next handler.

peripheral border node. A border node that interconnects adjacent APPN networks having different network identifiers in order to support LU-LU sessions that have one partner LU in its native network. Contrast with *extended border node*.

peripheral device. Any device that can communicate with a particular computer; for example, input/output units, auxiliary storage.

peripheral node. A node that uses local addresses for routing and therefore is not affected by changes in network addresses. A peripheral node requires boundary-function assistance from an adjacent subarea node. A peripheral node can be a type 1, 2.0, or 2.1 node connected to a subarea boundary node.

peripheral subnetwork boundary. A connection over a subnetwork boundary between a border and a network node with no border node function.

permanent data set. A user-named data set that is normally retained for longer than the duration of a job or interactive session. Contrast with temporary data set.

PFK capability. On a display console, indicates that program function keys are supported and were specified at system generation.

physical channel ID (PCHID). A number assigned by the machine to a physical channel location.

physical layer. In the Open Systems Interconnection reference model, the layer that provides the mechanical, electrical, functional, and procedural means to establish, maintain, and release physical connections over the transmission medium.

physical partition. Part of a CPC that operates as a CPC in its own right, with its own copy of the operating system.

physical unit (PU). In SNA, one of three types of network addressable units. A physical unit exists in each node of an SNA network to manage and monitor the resources (such as attached links and adjacent link stations) of a node, as requested by a system services control point logical unit (SSCP-LU) session.

physically partitioned (PP) configuration. A system configuration that allows the processor controller to use both central processor complex (CPC) sides as individual CPCs. The A-side of the processor controller controls side 0; the B-side of the processor controller controls side 1. Contrast with single-image (SI) configuration.

PL/I. A general purpose scientific/business high-level language. PL/I is a powerful procedure-oriented language especially well suited for solving complex scientific problems or running lengthy and complicated business transactions and record-keeping applications.

point of presence. A system that has been identified as a contact point for another subnetwork for the purposes of collecting topology information.

pointer. A data element that indicates the location of another data element.

point-to-multipoint network. A network in which there are many hosts directly attached within the scope of a single network ID.

point-to-point network. Pertaining to data transmission between two locations without the use of any intermediate display station or computer.

policy. A set of rules that are applied to managed resources.

POP. See *point of presence*.

port number. The part of a socket address that identifies a port within a host.

port. An access point for data entry or exit.

portability. The ability to transfer an application from one platform to another with relatively few changes to the source code.

Portable Operating System Interface (POSIX). Portable Operating System Interface for computing environments, an interface standard governed by the IEEE and based on UNIX. POSIX is not a product. Rather, it is an evolving family of standards describing a wide spectrum of operating system components ranging from C language and shell interfaces to system administration.

POSIX. Portable Operating System Interface.

power-on reset. A key sequence that restarts the operating system (or other program) without turning off the electrical power of the system.

preprocessor. A routine that examines application source code for preprocessor statements that are then executed, resulting in the alteration of the source.

Print Services Facility™ (PSF). The access method that supports the 3800 Printing Subsystem Models 3 and 8. PSF can interface either directly to a user's application program or indirectly through the job entry subsystem (JES) of z/OS.

printer. A device that writes output data from a system on paper or other media.

procedure. A set of self-contained high-level language (HLL) statements that performs a particular task and returns to the caller. Individual languages have different names for this concept of a procedure. In C, a procedure is called a function. In COBOL, a procedure is a paragraph or section that can only be performed from within the program. In PL/I, a procedure is a named block of code that can be invoked externally, usually via a call.

processor controller. Hardware that provides support and diagnostic functions for the central processors.

Processor Resource/Systems Manager™ (PR/SM). The feature that allows the processor to use several z/OS images simultaneously and provides logical partitioning capability. See also LPAR.

production system. A system where application programs that are already developed and tested run on a regular basis.

profile. Data that describes the significant characteristics of a user, a group of users, or one or more computer resources.

program function key (PFK). A key on the keyboard of a display device that passes a signal to a program to call for a particular program operation.

program interruption. The interruption of the execution of a program due to some event such as an operation exception, an exponent-overflow exception, or an addressing exception.

program level. The modification level, release, version, and fix level.

program management. The functions within the system that provide for establishing the necessary activation and invocation for a program to run in the applicable run-time environment when it is called.

program mask. In bits 20 through 23 of the program status word (PSW), a 4-bit structure that controls whether each of the fixed-point overflow, decimal overflow, exponent-overflow, and significance exceptions should cause a program interruption. The bits of the program mask can be manipulated to enable or disable the occurrence of a program interruption.

program number. The seven-digit code (in the format xxxx-xxx) used by IBM to identify each program product.

program object. All or part of a computer program in a form suitable for loading into virtual storage for execution. Program objects are stored in PDSE program libraries and have fewer restrictions than load modules. Program objects are produced by the binder.

program status word (PSW). A 64-bit structure in real storage used to control the order in which instructions are executed, and to hold and indicate the status of the computing system in relation to a particular program. See also program mask.

program temporary fix (PTF). A temporary solution or bypass of a problem diagnosed by IBM as resulting from a defect in a current unaltered release of the program.

protocol stack. A set of network protocol layers and software that work together to process the protocols.

protocol suite. A set of protocols that cooperate to handle the transmission tasks for a communication system.

protocol. (1) The meaning of, and the sequencing rules for, requests and responses used for managing a network, transferring data, and synchronizing the states of network components.

PSW. Program status word.

PTF. See *program temporary fix (PTF)*.

Q

qualified name. A data set name consisting of a string of names separated by periods; for example, "TREE.FRUIT.APPLE" is a qualified name.

qualifier. A modifier in a qualified name other than the rightmost name. For example, "TREE" and "FRUIT" are qualifiers in "TREE.FRUIT.APPLE."

queued direct I/O (QDIO). A hardware channel architecture for direct data exchange with I/O devices, where both the I/O device and the program running on the server reference main storage directly through a set of data queues. The QDIO architecture is used by Open Systems Adapter-Express (OSA-Express), HiperSockets, and Fiber Channel Protocol (FCP) channels.

queued sequential access method (QSAM). An extended version of the basic sequential access method (BSAM). Input data blocks awaiting processing or output data blocks awaiting transfer to auxiliary storage are queued on the system to minimize delays in I/O operations.

R

RACF. See *IBM Security Server*.

read access. Permission to read information.

reason code. A return code that describes the reason for the failure or partial success of an attempted operation.

RECEIVE processing. An SMP/E process necessary to install new product libraries. During this process, the code, organized as unloaded partition data sets, is loaded into temporary SMPTLIB data sets. SMP/E RECEIVE processing automatically allocates the temporary partitioned data sets that correspond to the files on the tape, and loads them from the tape.

RECFM. Record format.

recording format. For a tape volume, the format of the data on the tape, for example, 18, 36, 128, or 256 tracks.

recoverability. The degree or extent to which the system can be restored to an operational condition after a system failure.

recovery system. A system that is used in place of a primary application system that is no longer available for use. Data from the application system must be available for use on the recovery system. This is usually accomplished through backup and recovery techniques, or through various DASD copying techniques, such as remote copy.

recovery. The process of rebuilding data after it has been damaged or destroyed, often by using a backup copy of the data or by reapplying transactions recorded in a log.

recovery. The process of rebuilding data after it has been damaged or destroyed, often by restoring a backup version of the data or by reapplying transactions recorded in a log.

recursive routine. A routine that can call itself or be called by another routine that it has called.

redundancy. The use of several identical functional units, such as several disk drives or power supply systems, within one computer system in order to provide data security and a certain degree of fault tolerance in case of hardware failures.

redundant array of independent disk (RAID). A disk subsystem architecture that combines two or more physical disk storage devices into a single logical device to achieve data redundancy.

reenterable. reentrant

reentrant. The attribute of a routine or application that allows more than one user to share a single copy of a load module.

register save area (RSA). Area of main storage in which contents of registers are saved.

register. Special processing areas that hold a specific amount of data and can process, load, and store this data quickly.

reliability. A measurement of the ability of a system to continue processing without failure.

remote copy. A storage-based disaster recovery and workload migration function that can copy data in real time to a remote location. Two options of remote copy are available. See peer-to-peer remote copy and extended remote copy.

remote operations. Operation of remote sites from a host system.

Request For Comment (RFC). In Internet communications, a document that describes a part of the Internet suite of protocols and related experiments. All Internet standards are documented as RFCs.

request header (RH). The control information that precedes a request unit (RU).

request unit (RU). A message unit that contains control information, end-user data, or both.

resolver. In TCP/IP, a program or subroutine that obtains information from a domain name server or a local table for use by an application program.

Resource Access Control Facility. See *IBM Security Server*.

Resource Measurement Facility (RMF). Software that measures and reports on the performance and availability of a system.

resource recovery services (RRS). The z/OS system component that provides the services that a resource manager calls to protect resources. RRS is the z/OS system level syncpoint manager.

response unit (RU). A message unit that acknowledges a request unit. It may contain prefix information received in a request unit. If positive, the response unit may contain additional information (such as session parameters in response to BIND SESSION). If negative, the response unit contains sense data defining the exception condition.

restructured extended executor (REXX). A general-purpose, procedural language for end-user personal programming, designed for ease by both casual general users and computer professionals. It is also useful for application macros. REXX includes the capability of issuing commands to the underlying operating system from these macros and procedures. Features include powerful character-string manipulation, automatic data typing, manipulation of objects familiar to people, such as words, numbers, and names, and built-in interactive debugging.

resynchronization. A track image copy from the primary volume to the secondary volume of only the tracks which have changed since the volume was last in duplex mode.

return code. A code produced by a routine to indicate its success or failure. It may be used to influence the execution of succeeding instructions or programs.

reverse explicit route. Explicit routes that terminate in the host and must use the same set of subarea nodes and transmission groups as their corresponding forward explicit route.

RFC. See *Request for Comment (RFC)*.

RIP. See *Routing Information Protocol (RIP)*.

RMODE. Residence mode. Provided by the linkage editor, the attribute of a load module that specifies whether the module, when loaded, must reside below the 16MB virtual storage line or may reside anywhere in virtual storage.

rollback. The process of restoring data changed by an application to the state at its last commit point.

route selection services (RSS). A subcomponent of the topology and routing services component that determines the preferred route between a specified pair of nodes for a given class of service.

router. A computer that determines the path of network traffic flow. The path selection is made from several paths based on information obtained from specific protocols, algorithms that attempt to identify the shortest or best path, and other criteria such as metrics or protocol-specific destination addresses.

routine. 1) A program or sequence of instructions called by a program. Typically, a routine has a general purpose and is frequently used. CICS and programming languages use routines. (2) A database object that encapsulates procedural logic and SQL statements, is stored on the database server, and can be invoked from an SQL statement or by using the CALL statement. The three main classes of routines are procedures, functions, and methods. See also function, method. (3) In REXX, a series of instructions called with the CALL instruction or as a function. A routine can be either internal or external to a user's program. (4) A set of statements in a program that causes the system to perform an operation or a series of related operations.

routing code. A code assigned to an operator message and used to route the message to the proper console.

Routing Information Protocol (RIP). In the Internet suite of protocols, a protocol used to exchange intradomain routing information and to determine optimum routes between internet hosts. This protocol determines optimum routes on the basis of route metrics, not link transmission speed.

routing protocol. A technique used by a router to find other routers and to remain up to date about the best way to get to reachable networks.

routing table. A collection of routes used to direct datagram forwarding or to establish a connection. The information is passed among routers to identify network topology and destination feasibility.

routing. The assignment of the communications path by which a message will reach its destination.

RSA. Register save area.

run time. Any instant at which a program is being executed. Synonymous with execution time.

run. To cause a program, utility, or other machine function to be performed.

run-time environment. A set of resources that are used to support the execution of a program. Synonymous with execution environment.

S

SAF. See *System Authorization Facility (SAF)*.

SAF. System authorization facility.

save area. Area of main storage in which contents of registers are saved.

scan attack. An attack in which a host on the network is trying to determine what ports are open on the target host. The host doing the scan may later be the same host that does a more virulent attack.

SDLC. See *Synchronous Data Link Control (SDLC)*.

SDSF. See *system display and search facility*.

SDUMP macro instruction. An MVS macro instruction that can be invoked by authorized programs to take a fast unformatted dump of virtual storage to a data set.

Secure Sockets Layer (SSL). A security protocol that provides communication privacy. With SSL, client/server applications can communicate in a way that is designed to prevent eavesdropping, tampering, and message forgery.

security administrator. A programmer who manages, protects, and controls access to sensitive information.

sendmail. The mail server that uses the Simple Mail Transfer Protocol (SMTP) to route mail from one host to another on the network.

sequential data set. (1) A data set whose records are organized on the basis of their successive physical positions, such as on magnetic tape. Contrast with direct data set. (2) A data set in which the contents are arranged in successive physical order and are stored as an entity. The data set can contain data, text, a program, or part of a program. Contrast with partitioned data set (PDS).

server. (1) A functional unit that provides shared services to workstations over a network; for example, a file server, a print server, a mail server. (T)

service access point (SAP). (1) In Open Systems Interconnection (OSI) architecture, the point at which the services of a layer are provided by an entity of that layer to an entity of the next higher layer. (T)

service level agreement (SLA). A written agreement of the information systems (I/S) service to be provided to the users of a computing installation.

session activation request. In SNA, a request that activates a session between two network accessible units (NAUs) and specifies session parameters that control various protocols during session activity; for example, BIND and ACTPU.

Session services for its local LUs and client end nodes

session. (1) A logical connection between two network accessible units (NAUs) that can be activated, tailored to provide various protocols, and deactivated, as requested. Each session is uniquely identified in a transmission header (TH) accompanying any transmissions exchanged during the session.

severity code. A part of operator messages that indicates the severity of the error condition (I, E, or S).

shared DASD option. An option that enables independently operating computing systems to jointly use common data residing on shared direct access storage devices.

shared storage. An area of storage that is the same for each virtual address space. Because it is the same space for all users, information stored there can be shared and does not have to be loaded in the user region.

shell. A program that interprets sequences of text input as commands. It may operate on an input stream, or it may interactively prompt and read commands from a terminal.

side. One of the configurations formed by physical partitioning.

single point of control. The characteristic a sysplex displays when you can accomplish a given set of tasks from a single workstation, even if you need multiple IBM and vendor products to accomplish that particular set of tasks.

single system image. The characteristic a product displays when multiple images of the product can be viewed and managed as one image.

single-image (SI) mode. A mode of operation for a multiprocessor (MP) system that allows it to function as one CPC. By definition, a uniprocessor (UP) operates in single-image mode. Contrast with physically partitioned (PP) configuration.

single-system sysplex. A sysplex in which only one z/OS system is allowed to be initialized as part of the sysplex. In a single-system sysplex, XCF provides XCF services on the system but does not provide signalling services between z/OS systems. See also multisystem sysplex.

small computer system interface (SCSI). A standard hardware interface that enables a variety of peripheral devices to communicate with one another.

SMF. System management facilities.

SMP/E. System Modification Program/Extended.

SNA network interconnection (SNI). The connection, by gateways, of two or more independent SNA networks to allow communication between logical units in those networks. The individual SNA networks retain their independence.

SNA. See *Systems Network Architecture (SNA)*.

socket. A unique host identifier created by the concatenation of a port identifier with a TCP/IP address.

software. (1) All or part of the programs, procedures, rules, and associated documentation of a data processing system. (2) A set of programs, procedures, and, possibly, associated documentation concerned with the operation of a data processing system. For example, compilers, library routines, manuals, circuit diagrams. Contrast with hardware.

sort/merge program. A processing program that can be used to sort or merge records in a prescribed sequence.

source code. The input to a compiler or assembler, written in a source language.

source program. A set of instructions written in a programming language that must be translated to machine language before the program can be run.

spoofing. For data links, a technique in which a protocol initiated from an end station is acknowledged and processed by an intermediate node on behalf of the final destination. In IBM 6611 data link switching, for example, SNA frames are encapsulated into TCP/IP packets for transport across a non-SNA wide area network, unpacked by another IBM 6611, and passed to the final destination. A benefit of spoofing is the prevention of end-to-end session time-outs.

SSCP. See *system services control point (SSCP)*.

SSCP-dependent LU. An LU that requires assistance from a system services control point (SSCP) in order to initiate an LU-LU session. It requires an SSCP-LU session.

SSCP-independent LU. An LU that is able to activate an LU-LU session (that is, send a BIND request) without assistance from an SSCP. It does not have an SSCP-LU session. Currently, only an LU 6.2 can be an independent LU.

SSCP-LU session. In SNA, a session between a system services control point (SSCP) and a logical unit (LU). The session enables the LU to request the SSCP to help initiate LU-LU sessions.

SSCP-SSCP session. In SNA, a session between the system services control point (SSCP) in one domain and the SSCP in another domain. An SSCP-SSCP session is used to initiate and terminate cross-domain LU-LU sessions.

stand-alone dump. A kind of dump produced by an operator using a stand-alone dump program, a special program that can run by itself when an operating system is disabled.

star topology. In network architecture, a network topology in which every node on the network is connected to a central node or “hub,” through which they communicate with each other.

start option. In VTAM, a user-specified or IBM-supplied option that determines certain conditions that are to exist during the time a VTAM system is operating. Start options can be predefined or specified when VTAM is started.

started task. In MVS, an address space that runs unattended as the result of a START command. Started tasks are generally used for critical applications. The UNIX equivalent is a daemon.

state-oriented protocol. A characteristic of the OSPF protocol, in which interfaces and neighboring routers are always classified as being in a particular state. Events on the network causes these states to change in a pre-determined way, providing a predictability and control to the OSPF routers on the network.

static routing. A method of setting paths between hosts, networks, or both, by manually entering routes into the routing table. Static routes are not affected by routing daemons and must be updated manually.

status-display console. An MCS console that can receive displays of system status but from which an operator cannot enter commands.

storage administrator. A person in the data processing center who is responsible for defining, implementing, and maintaining storage management policies.

storage class. A collection of storage attributes that identify performance goals and availability requirements, defined by the storage administrator, used to select a device that can meet those goals and requirements.

storage group. A collection of storage volumes and attributes, defined by the storage administrator. The collections can be a group of DASD volume or tape volumes, or a group of DASD, optical, or tape volumes treated as single object storage hierarchy.

Storage Management Subsystem (SMS). A facility used to automate and centralize the management of storage. Using SMS, a storage administrator describes data allocation characteristics, performance and availability goals, backup and retention requirements, and storage requirements to the system through data class, storage class, management class, storage group, and ACS routine definitions.

storage management. The activities of data set allocation, placement, monitoring, migration, backup, recall, recovery, and deletion. These can be done either manually or by using automated processes. The Storage Management Subsystem automates these processes for you, while optimizing storage resources. See also Storage Management Subsystem.

storage subsystem. A storage control and its attached storage devices.

structure. A construct used by z/OS to map and manage storage on a Coupling Facility. See cache structure, list structure, and lock structure.

subarea network. Interconnected subareas, their directly attached peripheral nodes, and the transmission groups that connect them.

subarea. A portion of the SNA network consisting of a subarea node, attached peripheral nodes, and associated resources. Within a subarea node, all network accessible units (NAUs), links, and adjacent link stations (in attached peripheral or subarea nodes) that are addressable within the subarea share a common subarea address and have distinct element addresses.

subnet. Synonym for *subnetwork*.

subnetwork. (1) Any group of nodes that have a set of common characteristics, such as the same network ID.

subpool storage. All of the storage blocks allocated under a subpool number for a particular task.

subsystem interface (SSI). A component that provides communication between z/OS and its job entry subsystem.

subsystem. A secondary or subordinate system, or programming support, usually capable of operating independently of or asynchronously with a controlling system. Examples are CICS and IMS.

subtask. In the context of z/OS multitasking, a task that is initiated and terminated by a higher order task (the main task). Subtasks run the parallel functions, those portions of the program that can run independently of the main task program and each other.

supervisor call (SVC). A request that serves as the interface into operating system functions, such as allocating storage. The SVC protects the operating system from inappropriate user entry. All operating system requests must be handled by SVCs.

support element (SE). (1) An internal control element of a processor that assists in many of the processor operational functions.

suspended state. When only one of the devices in a dual copy or remote copy volume pair is being updated because of either a permanent error condition or an authorized user command. All writes to the remaining functional device are logged. This allows for automatic resynchronization of both volumes when the volume pair is reset to the active duplex state.

SVC dump. Term1 definition.

SVC routine. A control program routine that performs or begins a control program service specified by a supervisor call instruction.

SVC. See *supervisor call (SVC)*.

SVC. Supervisor call. A request that serves as the interface to certain functions, such as the allocation of storage.

switched multimegabit data service (SMDS). A high-speed technology offered by telephone companies in the United States.

symmetry. The characteristic of a sysplex where all systems, or certain subsets of the systems, have the same hardware and software configurations and share the same resources.

SYN flood. A type of denial of service attack in which a series of SYN packets are received in a short period of time. A SYN is the first packet received when a remote host is attempting a TCP connection.

synchronization. An initial volume copy. This is a track image copy of each primary track on the volume to the secondary volume.

Synchronous Data Link Control (SDLC). A protocol for managing synchronous information transfer over a data link connection.

synchronous messages. WTO or WTOR messages issued by a z/OS system during certain recovery situations.

syncpoint manager. A function that coordinates the two-phase commit process for protected resources, so that all changes to data are either committed or backed out. In z/OS, RRS can act as the system level syncpoint manager. A syncpoint manager is also known as a transaction manager, syncpoint coordinator, or a commit coordinator.

syntax. The rules governing the structure of a programming language and the construction of a statement in a programming language.chronous operation.

sysplex couple data set. A couple data set that contains sysplex-wide data about systems, groups, and members that use XCF services. All z/OS systems in a sysplex must have connectivity to the sysplex couple data set. See also couple data set.

sysplex distributor. A software function in z/OS that increases availability through a combination of dynamic VIPA and the z/OS workload manager.

Sysplex Timer. An IBM unit that synchronizes the time-of-day (TOD) clocks in multiple processors or processor sides.

sysplex. A set of z/OS systems communicating and cooperating with each other through certain multisystem hardware components and software services to process customer workloads. See also Parallel Sysplex.

SYSRES. System residence disk

system abend. An abend caused by the operating system's inability to process a routine; may be caused by errors in the logic of the source routine.

System Authorization Facility (SAF). An interface defined by z/OS that enables programs to use system authorization services in order to protect access to resources such as data sets and z/OS commands. The IBM Security Server is a product that uses the SAF interface.

system console. In z/OS, a console attached to the processor controller used to initialize a z/OS system.

system control element (SCE). Hardware that handles the transfer of data and control information associated with storage requests between the elements of the processor.

system data. The data sets required by z/OS or its subsystems for initialization.

system display and search facility. Part of z/OS that that provides detailed information about the jobs and resources in the system, including the job entry subsystem, JES2.

system library. A collection of data sets or files in which the parts of an operating system are stored.

system management facilities (SMF). A part of z/OS that provides the means for gathering and recording information that can be used to evaluate system usage.

System Modification Program Extended (SMP/E). An IBM licensed program used to install software and software changes on z/OS systems. SMP/E is the primary means of installing, changing, and controlling changes to the operating system.

system operator. The person responsible for performing system-oriented procedures.

system programmer. A programmer who plans, generates, maintains, extends, and controls the use of an operating system with the aim of improving overall productivity of an installation.

system services control point (SSCP). A focal point in an SNA network for managing configuration, coordinating network-operator and problem-determination requests, and providing directory support or other session services for network users. Multiple SSCPs, cooperating as peers, can divide the network into domains of control, with each SSCP controlling the physical and logical units in its domain.

system. A z/OS image together with its associated hardware, which collectively are often referred to simply as a system, or z/OS system.

system-managed data set. A data set that has been assigned a storage class.

system-managed storage. Storage managed by the Storage Management Subsystem. SMS attempts to deliver required services for availability, performance, space, and security to applications.

Systems Network Architecture (SNA). A description of the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of networks.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through, and controlling the configuration and operation of, networks. The layered structure of SNA allows the ultimate origins and destinations of information, that is, the users, to be independent of and unaffected by the specific SNA network services and facilities used for information exchange.

T

tape volume. Storage space on tape, identified by a volume label, which contains data sets or objects and available free space. A tape volume is the recording space on a single tape cartridge or reel. See also volume.

target libraries. In SMP/E, a collection of data sets in which the various parts of an operating system are stored. These data sets are sometimes called system libraries.

target zone. In SMP/E, a collection of VSAM records describing the target system macros, modules, assemblies, load modules, source modules, and libraries copied from DLIBs during system generation, and the SYSMODs applied to the target system.

task control block (TCB). A data structure that contains information and pointers associated with the task in process.

task. In a multiprogramming or multiprocessing environment, one or more sequences of instructions treated by a control program as an element of work to be accomplished by a computer.

TCB. Task control block.

TCP. See *Transmission Control Protocol (TCP)*.

telecommunication line. (1) The portion of a data circuit external to a data circuit-terminating equipment (DCE) that connects the DCE to a data-switching exchange (DSE), that connects a DCE to one or more other DCEs, or that connects a DSE to another DSE. (T)

Telnet. In the Internet suite of protocols, a protocol that provides remote terminal connection service. It allows users of one host to log on to a remote host and interact as directly attached terminal users of that host.

temporary data set. A data set that is created and deleted in the same job.

terminal user. In systems with time-sharing, anyone who is eligible to log on.

terminal. A device, usually equipped with a keyboard and some kind of display, capable of sending and receiving information over a link.

throughput. A measure of the amount of information transmitted over a network in a given period of time. Throughput is a measure of performance. It is generally measured in bits per second (bps), kilobits per second (Kbps), megabits per second (Mbps), or gigabits per second (Gbps).

tightly coupled multiprocessor. Any CPU with multiple CPUs.

tightly coupled. Multiple CPUs that share storage and are controlled by a single copy of z/OS. See also loosely coupled, tightly coupled multiprocessor.

Time Sharing Option/Extensions (TSO/E). The facility in z/OS that allows interactive time sharing from remote terminals.

timeout. The time in seconds that the storage control remains in a “long busy” condition before physical sessions are ended.

TLIB. Target library.

TLS. See *Transport Layer Security (TLS)*.

token ring network. (1) According to IEEE 802.5, network technology that controls media access by passing a token (special packet or frame) between media-attached stations.

topology database update (TDU). A message about a new or changed link or node that is broadcast among APPN network nodes to maintain the network topology database, which is fully replicated in each network node. A TDU contains information that identifies the following:

- ▶ The node and link characteristics of various resources in the network
- ▶ The sending node
- ▶ The sequence number of the most recent update for each of the resources described.

topology database. See *local topology database* and *network topology database*.

transaction. A unit of processing consisting of one or more application programs, affecting one or more objects, that is initiated by a single request, often from a terminal.

transaction. A unit of work performed by one or more transaction programs, involving a specific set of input data and initiating a specific process or job.

Transmission Control Protocol (TCP). A communications protocol used in the Internet and in any network that follows the U.S. Department of Defense standards for internetwork protocol. TCP provides a reliable host-to-host protocol between hosts in packet-switched communications networks and in interconnected systems of such networks. It uses the Internet Protocol (IP) as the underlying protocol.

transmission group (TG). (1) A connection between adjacent nodes that is identified by a transmission group number.

transmission header (TH). Control information, optionally followed by a basic information unit (BIU) or a BIU segment, that is created and used by path control to route message units and to control their flow within the network. See also *path information unit*.

transmission line. See *telecommunication line*.

transmission priority. A rank assigned to a message unit that determines its precedence for being selected by the path control component in each node along a route for forwarding to the next node in the route.

Transport Layer Security (TLS). A protocol standard that uses encryption to provide confidentiality and authentication between two TCP/IP applications.

transport layer. A network service that provides end-to-end communications between two parties, while hiding the details of the communications network. The TCP and ISO TP4 transport protocols provide full-duplex virtual circuits on which delivery is reliable, error free, sequenced, and duplicate free. UDP provides no guarantees (the connectionless RPC protocol provides some guarantees on top of UDP).

transport protocol. A specification of the rules governing the exchange of information between components of a transport network.

TRK. A subparameter of the SPACE parameter in a DD statement. It specifies that space is to be allocated by tracks.

trunk. In telephony, circuits that connect two switching systems, as opposed to connecting a customer line to a switching system.

TSO/E. Time Sharing Option Extensions. A z/OS component that permits interactive compiling, link-editing, executing, and debugging of programs.

twisted pair. A transmission medium that consists of two insulated electrical conductors twisted together to reduce noise.

U

UCLIN. In SMP/E, the command used to initiate changes to SMP/E data sets. Actual changes are made by subsequent UCL statements.

UDP. See *User Datagram Protocol (UDP)*.

uniprocessor (UP). A processor complex that has one central processor.

unit of recovery (UR). A set of changes on one node that is committed or backed out as part of an ACID transaction. A UR is implicitly started the first time a resource manager touches a protected resource on a node. A UR ends when the two-phase commit process for the ACID transaction changing it completes.

UNIX. See *z/OS UNIX System Services*.

upwardly compatible. The ability for applications to continue to run on later releases of z/OS, without the need to recompile or relink.

user abend. A request made by user code to the operating system to abnormally terminate a routine. Contrast with system abend.

User Datagram Protocol (UDP). In the Internet suite of protocols, a protocol that provides unreliable, connectionless datagram service. It enables an application program on one machine or process to send a datagram to an application program on another machine or process. UDP uses the Internet Protocol (IP) to deliver datagrams.

user exit. A routine that takes control at a specific point in an application. User exits are often used to provide additional initialization functions and termination functions.

usermod. User modification.

V

vendor. A person or company that provides a service or product to another person or company.

VIPA. See *virtual IP address (VIPA)*.

virtual private network (VPN). A general term to describe a secure tunnel (data stream) between two endpoints. The term does not describe a protocol. The industry standard protocol for a VPN is an architecture called IP Security Architecture (IPSec).

virtual route (VR). (1) In SNA, either (a) a logical connection between two subarea nodes that is physically realized as a particular explicit route or (b) a logical connection that is contained wholly within a subarea node for intranode sessions. A virtual route between distinct subarea nodes imposes a transmission priority on the underlying explicit route, provides flow control through virtual route pacing, and provides data integrity through sequence numbering of path information units (PIUs).

Virtual Storage Access Method (VSAM). An access method for direct or sequential processing of fixed-length and varying-length records on direct access devices. The records in a VSAM data set or file can be organized in logical sequence by a key field (key sequence), in the physical sequence in which they are written on the data set or file (entry-sequence), or by relative-record number.

virtual storage. (1) The storage space that can be regarded as addressable main storage by the user of a computer system in which virtual addresses are mapped into real addresses. The size of virtual storage is limited by the addressing scheme of the computer system and by the amount of auxiliary storage available, not by the actual number of main storage locations. See also storage.

virtual telecommunications access method (VTAM). A set of programs that maintain control of the communication between terminals and application programs running under z/OS, currently called Communications Server - SNA Services.

VOLSER. Volume serial number.

volume backup. Backup of an entire volume to protect against the loss of the volume.

volume serial number. A number in a volume label that is assigned when a volume is prepared for use in the system.

volume table of contents (VTOC). A table on a direct access storage device (DASD) volume that describes the location, size, and other characteristics of each data set on the volume.

volume. (1) The storage space on DASD, tape or optical devices, which is identified by a volume label. (2) That portion of a single unit of storage which is accessible to a single read/write mechanism, for example, a drum, a disk pack, or part of a disk storage module. (3) A recording medium that is mounted and demounted as a unit, for example, a reel of magnetic tape or a disk pack.

VPN. See *virtual private network (VPN)*.

VSAM. Virtual storage access method. A high-performance mass storage access method. Three types of data organization are available: entry sequenced data sets (ESDS), key sequenced data sets (KSDS), and relative record data sets (RRDS).

VTAM. See *Virtual Telecommunications Access Method (VTAM)*.

VTOC. volume table of contents.

W

wait state. Synonymous with waiting time.

waiting time. (1) The condition of a task that depends on one or more events in order to enter the ready condition. (2) The condition of a processing unit when all operations are suspended.

well-known port. In Internet communications, one of a set of preassigned protocol port numbers that address specific functions used by transport level protocols (for example, TCP and UDP).

wide area network (WAN). A network that provides communication services between devices in a geographic area larger than that served by a local area network (LAN) or a metropolitan area network (MAN).

workload manager (WLM). A z/OS component that prioritizes workloads running on z/OS and matches workloads with available resources.

wrap mode. The console display mode that allows a separator line between old and new messages to move down a full screen as new messages are added. When the screen is filled and a new message is added, the separator line overlays the oldest message and the newest message appears immediately before the line.

write-to-operator (WTO) message. A message sent to an operator console informing the operator of errors and system conditions that may need correcting.

write-to-operator-with-reply (WTOR) message. A message sent to an operator console informing the operator of errors and system conditions that may need correcting. The operator must enter a response.

X

XCF. See *cross-system coupling facility (XCF)*.

XPG4. This term refers to the XPG4 interface standard. The XPG4 standard is described in detail in *X/Open Specification Issue 4*.

Z

z/OS. A widely used operating system for IBM mainframe computers that uses 64-bit real storage.

z/OS Language Environment. An IBM software product that provides a common run-time environment and common run-time services for conforming high-level language compilers.

z/OS UNIX System Services (z/OS UNIX). The set of functions provided by the SHELL and UTILITIES, kernel, debugger, file system, C/C++ Run-Time Library, Language Environment, and other elements of the z/OS operating system that allow users to write and run application programs that conform to UNIX standards.

zFS. zSeries File System.

zSeries File System (zFS). A z/OS UNIX file system that stores files in VSAM linear data sets.

Sources:

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