

Glossary of terms and abbreviations

This glossary defines technical terms and abbreviations used in the z/OS® Basic Skills Information Center.

If you do not find the term you are looking for, refer to the IBM® Glossary of Computing Terms, available from: <http://www.ibm.com/ibm/terminology>.

The following cross-references are used in this glossary:

- ▶ **Contrast with:** This refers to a term that has an opposed or substantively different meaning.
- ▶ **See:** This refers the reader to (a) a related term, (b) a term that is the expanded form of an abbreviation or acronym, or (c) a synonym or more preferred term.
- ▶ **Synonym for:** This indicates that the term has the same meaning as a preferred term, which is defined in its proper place in the glossary.
- ▶ **Synonymous with:** This is a reference from a defined term to all other terms that have the same meaning.
- ▶ **Obsolete term for:** This indicates that the term should not be used and refers the reader to the preferred term.

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A

abend. abnormal end.

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

abnormal end. 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 *abnormal termination*.

abnormal termination. (1) The end of processing prior to scheduled termination. (2) A system failure or operator action that causes a job to end unsuccessfully. Synonymous with *abend*, *abnormal end*.

ABR. area border node.

ACB. access control block.

accept. In SMP/E, to install SYSMODs in the distribution libraries. This is done with the ACCEPT command.

ACCEPT command. The SMP/E command used to install SYSMODs in the distribution libraries.

accepted SYSMOD. A SYSMOD that has been successfully installed by the SMP/E ACCEPT command. Accepted SYSMODs do not have the ERROR flag set and are found as SYSMOD entries in the distribution zone.

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 control. In computer security, ensuring that the resources of a computer system can be accessed only by authorized users in authorized ways.

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 I/O 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).

ACK. acknowledgment field.

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

address space. A range of contiguous virtual storage addresses that the system creates for the user, batch job, or system task. In z/OS, an address space can range up to 16 exabytes of contiguous virtual storage addresses that the system creates for the user. An address space contains user data and programs, as well as system data and programs, some of which are common to all address spaces. See *virtual address space*, *data space*.

addressing mode (AMODE). A program attribute that refers to the address length that is expected to be in effect when the program is entered. In z/OS, addresses can 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. (1) In SNA, a node connected to another node by at least one path that connects no other node. (2) In OSI, a node that is attached to the same subnetwork as the local node. An adjacent node can be either a destination node or a relay node.

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

ADJSSCP. adjacent SSCP table.

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 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.

AID. attention identifier.

AIW. APPN Implementation Workshop.

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

AMODE. addressing mode.

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

ANR. automatic network routing.

ANSI. American National Standards Institute.

AOR. application-owning region.

APAR. authorized program analysis report.

APAR fix. A temporary correction of a defect in an IBM system control program or licensed program that affects a specific user. An APAR fix is usually replaced later by a permanent correction called a PTF. APAR fixes are identified to SMP/E by the ++APAR statement.

APF. authorized program facility.

APF-authorized. A type of system authorization using the authorized program facility (APF) that allows an installation to identify system or user programs that can use sensitive system functions. To maintain system security and integrity, a program must be authorized by the APF before it can access restricted functions, such as supervisor calls (SVC) or SVC paths.

API. application programming interface.

APPC. advanced program-to-program communications.

application. A program or set of programs that performs a task; some examples are payroll, inventory management, and word processing applications.

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.

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.

application programming interface (API). A software interface that enables applications to communicate with each other. An API is the set of programming language constructs or statements that can be coded in an application program to obtain the specific functions and services provided by an underlying operating system or service program.

application-instance DVIPA. A dynamic VIPA activated by an application that explicitly issues a bind() function call to the IP address.

application-owning region (AOR). In a CICSplex® configuration, a CICS region devoted to running applications.

apply. In SMP/E, to install SYSMODs in the target libraries. This is done with the APPLY command.

APPLY command. The SMP/E command used to install SYSMODs in the target libraries.

APPN. Advanced Peer-to-Peer Network.

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. See *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:

- ▶ Distributed directory services, including registration of its domain resources to a central directory server
- ▶ Topology database exchanges with other APPN network nodes, enabling network nodes throughout the network to select optimal routes for LU-LU sessions based on requested classes of service
- ▶ Session services for its local LUs and client end nodes.

See *Advanced Peer-to-Peer Networking*.

APPN network. A collection of interconnected network nodes and their client end nodes. See *Advanced Peer-to-Peer Networking*.

APPN node. An APPN network node or an APPN end node.

ARB flow. adaptive rate-based flow.

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.

ARM. automatic restart management.

ARP. Address Resolution Protocol.

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

ASCII. American Standard Code for Information Interchange.

ASID. address space identifier.

ASSEM entry. An SMP/E entry containing assembler statements that can be assembled to create an object module.

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 *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.

ATM. (1) Asynchronous Transfer Mode. (2) automatic teller machine.

AT-TLS. Application Transparent Transport Layer Security.

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. The correction is called an *APAR fix*.

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 *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. The automatic call library can be:

- ▶ Libraries containing object decks, with or without linkage editor control statements
- ▶ Libraries containing load modules
- ▶ The library containing Language Environment® runtime routines.

automatic library call. Automatic call. See *automatic call library*.

automatic restart. A restart that takes place during the current run, that is, without resubmitting the job. An automatic restart can occur within a job step or at the beginning of a job step. Contrast with *deferred restart*. See *checkpoint restart*.

automatic restart management. A z/OS recovery function that improves the availability of batch jobs and started tasks. When a job fails, or the system on which it is running unexpectedly fails, z/OS can restart the job without operator intervention.

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.

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. (1) A set of nodes and their interconnecting links providing the primary data path across a network. (2) In a local area network multiple-bridge ring configuration, a high-speed link to which the rings are connected by means of bridges or routers. A backbone may be configured as a bus or as a ring. (3) In a wide area network, a high-speed link to which nodes or data switching exchanges (DSEs) are connected.

background. (1) In multiprogramming, the environment in which low-priority programs are executed. (2) Under TSO/E the environment in which jobs submitted through the SUBMIT command or SYSIN are executed. One job step at a time is assigned to a region of central storage, and it remains in central storage to completion. Contrast with *foreground*.

background job. (1) A low-priority job, usually a batched or non-interactive job. (2) Under TSO, a job entered through the SUBMIT command or through SYSIN. Contrast with *foreground job*.

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*.

backplane. A circuit board that connects several connectors in parallel to each other, so that each pin of each connector is linked to the same relative pin of all the other connectors, forming a computer bus.

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.

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 *distributing host*.

BAL. Basic Assembler Language.

bandwidth. (1) The capacity of a communications line, normally expressed in bits per second (bps). (2) A measure of the capacity of a communication transport medium (such as a TV cable) to convey data. (3) Data rate transfer in K bits, K bytes, M bits, and M bytes per second. (4) In asynchronous transfer mode (ATM), the capacity of a virtual channel, expressed in terms of peak cell rate (PCR), sustainable cell rate (SCR), and maximum burst size (MBS).

base function. In SMP/E, a SYSMOD defining elements of the base z/OS system or other products that were not previously present in the target libraries. Base functions are identified to SMP/E by the ++FUNCTION statement. SMP/E itself is an example of a base function of z/OS.

base level system. In SMP/E, the level of the target system modules, macros, source, and DLIBs created by system generation, to which function and service modifications are applicable.

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. Contrast with *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. 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*.

BCP. base control program.

BEX. branch extender.

big endian. A format for the storage of binary data in which the most significant byte is placed first. Big endian is used by most hardware architectures including the z/Architecture™. Contrast with *little endian*.

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) A connection between systems or logical units. (3) 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.

BLKSIZE. block size.

BLOB. binary large object.

block. (1) A set of consecutive pages on disk. (2) A unit of data storage on a device. (3) A set of contiguous pages in a buffer pool. (4) A string of data elements that is recorded or transmitted as a unit. (5) A sequence of text, commands, or records that are read, written, or processed as a unit.

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. Synonymous with *block length* and *physical record size*.

book package. In IBM mainframes, a pre-assembled collection of physical hardware that is installed in the central processor complex (CPC) cage. This hardware collection consists of processor chips, memory cards, and adapter cards that connect the processors and memory to input/output devices.

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*, *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.

BPAM. basic partitioned access method.

branch extender. An extension to the APPN network architecture that appears as a network node to the downstream end nodes in low entry networks and as an end node to the wide area network.

branch network node (BrNN). See *branch extender*.

BrEx. branch extender.

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.

BrNN. branch network node.

broadcast. (1) Transmission of the same data to all destinations. (2) Simultaneous transmission of data to more than one destination. (3) Contrast with *multicast*.

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*.

BSAM. basic sequential access method.

buffer. (1) A portion of storage used to hold input or output data temporarily. (2) 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.

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

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

BX. branch extender.

bypass. In SMP/E, to circumvent errors that would otherwise cause SYSMOD processing to fail. This is done by using the BYPASS operand on an SMP/E command.

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

byte stream. A simple sequence of bytes stored in a stream file. Contrast with *record data*.

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.

CA. certificate authority.

cabinet. Housing for panels organized into port groups of patchports, which are pairs of fibre adapters or couplers. Cabinets are used to organize long, complex cables between processors and controllers, which may be as far away as another physical site. Also known as *fiber management cabinets*.

cable “in inventory.” Unused cables.

cache. A special-purpose buffer storage, smaller and faster than main storage, used to hold a copy of instructions and data obtained from main storage and likely to be needed next by the processor.

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.

cage. An area within a frame that contains hardware elements required for either processing or input/output (I/O) capability. 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.

CART. command and response token.

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 data set. A data set that is represented in an index or hierarchy of indexes that provide the means for locating it.

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

CCL. Communications Controller for Linux®.

CCW. channel command word.

CDLC. Channel Data Control Link protocol.

CDRM. cross-domain resource manager.

CDRSC. cross-domain resource.

CDS. central directory server.

CEC. central electronic complex.

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 electronic complex (CEC). Obsolete term for *central processor complex (CPC)*.

central processing unit (CPU). Synonymous with *processor*.

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 consists of main storage, one or more central processors, timers, and channels.

central storage. (1) In z/OS, the storage of a computing system from which the central processing unit can directly obtain instructions and data, and to which it can directly return results. (Formerly referred to as “real storage”.) (2) Synonymous with *processor storage*.

CF. coupling facility

CFRM. coupling facility resource management.

CGI. Common Gateway Interface.

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. Each channel is an independent unit that transfers data concurrently with other channels and the CPU. For example, in a 64-channel computer, 64 streams of data are transferred simultaneously. In contrast, the bus in a desktop computer is a shared channel between all devices plugged into it.

channel adapter. A device that groups two or more controller channel interfaces electronically.

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 path identifier. The logical equivalent of channels in the physical processor.

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-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.

channel-to-channel connection. A connection between two CHPIDs on the same or different processors, either directly or through a switch. When connecting through a switch, both CHPIDs must be connected through the same or a chained switch.

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. (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.

checkpoint data set. A data set in which information about the status of a job and the system can be recorded so that the job step can be restarted later.

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.

CHPID. channel path identifier.

CI. control interval.

CICS. Customer Information Control System.

CICSplex. A configuration of interconnected CICS systems in which each system is dedicated to one of the main elements of the overall workload. See *application owning region* and *terminal owning region*.

CIP. channel interface processor.

circuit switching. 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. Synonymous with *line switching*. See *packet switching*.

CKD. count-key data.

CLAW. Common Link Access to Workstation.

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 *client-server*, *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.

CLOB. character large object.

CLPA. create link pack area.

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

CMOS. complementary metal-oxide semiconductor.

CMS. Conversational Monitor System.

CMT. CHPID mapping tool.

CNN. composite network node.

COBOL. Common Business-Oriented Language.

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. 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.

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.

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 (COBOL). A high-level language, based on English, that is primarily used for business applications.

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*.

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

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.

complementary metal oxide semiconductor (CMOS). A technology that combines the electrical properties of n-type semiconductors and p-type semiconductors.

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

component trace. A service that provides a way for z/OS components to collect problem data about events.

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. (2) Any device that combines incoming messages into a single message (concentration) or extracts individual messages from the data sent in a single transmission sequence (deconcentration).

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

configuration. The arrangement of a computer system or network as defined by the nature, number, and chief characteristics of its functional units.

connection. (1) In data communications, an association established between functional units for conveying information. (2) 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. (2) The capability to attach a variety of functional units without modifying them.

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

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.

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 region. The main storage region that contains the subsystem work manager or subsystem resource manager control program.

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 (CU). 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. Each physical controller contains one or more logical control units, channel and device interfaces, and a power source. Controllers can be divided into segments, or grouped into subsystems. Synonymous with *controller* or *device control unit*.

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

controller. Synonymous with *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. 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.

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.

CORBA. Common Object Request Broker Architecture.

corequisite SYSMODs. SYSMODs each of which can be installed properly only if the other is present. Corequisites are defined by the REQ operand on the ++VER statement.

corrective service. Any SYSMOD used to selectively fix a system problem. Generally, corrective service refers to APAR fixes.

CoS. class of service.

count-key data. A disk storage device for storing data in the format: count field normally followed by a key field followed by the actual data of a record. The count field contains, in addition to other information, the address of the record in the format: CCHHR (where CC is the two-digit cylinder number, HH is the two-digit head number, and R is the record number) and the length of the data. The key field contains the record's key.

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 *sysplex couple data set*.

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

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 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. (1) central processor. (2) control point.

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.

CPU. central processing unit.

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

crossbar switch. A static switch that can connect controllers to processors with parallel (bus and tag) interfaces. The crossbar contains a number of channel interfaces on its top, which can connect to objects above it such as processors or other crossbars. The crossbar switch also contains a number of control unit interfaces on its side, which can connect to objects below it such as controllers or other crossbars.

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 allows authorized 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.

cross-system restart. If a system fails, automatic restart management restarts elements on another eligible system in the sysplex.

CRU. customer-replaceable unit.

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. carrier-supplied communication line.

CSECT. control section.

CSI. consolidated software inventory data set.
See *SMPCSI*.

CSM. Communications Storage Manager.

CSMA/CD. carrier sense multiple access with collision detection.

CSS. channel subsystem.

CTC. channel-to-channel.

CTC connection. channel-to-channel connection.

CTRACE. component trace.

CU. control unit.

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

Customer Information Control System (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.

customer-replaceable unit (CRU). An assembly or part that a customer can replace in its entirety when any of its components fail. See *field-replaceable unit*.

cylinder. (1) A unit of storage on a count-key-data (CKD) device with a fixed number of tracks. (2) On a magnetic disk or in an assembly of disks, the set of all tracks that can be accessed by all the magnetic heads of a comb in a given position, without repositioning the access mechanism.

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.

DAF. destination address field.

DASD. direct access storage device.

DASD volume. A DASD space identified by a common label and accessed by a set of related addresses. See *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 communication. The process of sending or receiving data between two points of a network.

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

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 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).

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 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 *encapsulation*, *spoofing*.

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 in other operating systems.

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 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. z/OS shared memory, somewhat like 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) A continuous stream of data elements being transmitted, or intended for transmission, in character or binary-digit form, using a defined format. (2) All information (data and control commands) sent over a data link usually in a single read or write operation. For example, a data stream is used to send displays and to receive displays from a workstation device.

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. A collection of interrelated or independent data items that are stored together to serve one or more applications.

database administrator (DBA). (1) A person who is responsible for the design, development, operation, security, maintenance, and use of a database. (2) A DB2 UDB user with DBADM authority.

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 in it.

datagram. In packet switching, a self-contained packet, independent of other packets, which 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. DATABASE 2; an IBM relational database management system.

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.

DBCS. double-byte character set.

DBMS. database management system.

DC. data communication.

DCB. data control block.

DCLGEN. declarations generator.

DD card. Deprecated term for DD statement.

DD statement. data definition statement.

ddname. 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.

dedicated. Pertaining to the assignment of a system resource—a device, a program, or a whole system—to an application or purpose.

default. A value that is used or an action that is taken when no alternative is explicitly specified by the user.

deferred restart. A restart performed by the system when a user resubmits a job. The operator submits the restart deck to the system through a system input reader. See *checkpoint restart*. Contrast with *automatic restart*.

deleted function. In SMP/E, a function that was removed from the system when another function was installed. This is indicated by the DELBY subentry in the SYSMOD entry for the deleted function.

dependent LU. See *SSCP-dependent LU*.

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.

destination. (1) A combination of a node name and one of the following: a user ID, a remote printer or punch, a special local printer, or LOCAL (the default if only a node name is specified). (2) Any point or location, such as a node, station, or a particular terminal, to which information is to be sent. (3) An external logical unit (LU) or application program to which messages or other data are directed.

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

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

device address. The field of an ESCON® device-level frame that selects a specific device on a control unit image. The one or two left-most 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 I/O 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, 3390.

DFS™. Distributed File Service.

DFSMS. Data Facility Storage Management Subsystem.

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

DFSORT. Data Facility Sort.

dialog. An interactive pop-up window containing options that allow you to browse or modify information, take specific action relating to selected objects, or access other dialogs. For example, HCM provides a series of dialogs to help you create, edit, delete, and connect objects, as well as manipulate the configuration diagram.

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 *recovery, backup, recovery system*.

disk. A storage device that includes one or more flat, circular plates with magnetic or optical surfaces on which information is stored.

DISP. Disposition; a JCL DD parameter.

dispatch. (1) To allocate processing time on a specific device for a job that is ready to run. (2) In CICS, to schedule a task for execution. Dispatching is done by CICS task control. See *service request block*.

dispatching priority. A number assigned to tasks, used to determine the order in which they are to use the processor in a multitasking environment such as z/OS.

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 Computing Environment (DCE). A comprehensive, integrated set of services that supports the development, use, and maintenance of distributed applications. DCE is independent of the operating system and network; it provides interoperability and portability across heterogeneous platforms.

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

Distributed File Service (DFS). A DCE component. DFS joins the local file systems of several file server machines making the files equally available to all DFS client machines. DFS allows users to access and share files stored on a file server anywhere in the network, without having to consider the physical location of the file. Files are part of a single, global namespace, so that a user can be found anywhere in the network by means of the same name.

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 library (DLIB). A library that contains the master copy of all the elements in a system. A distribution library can be used to create or back up a target library.

distribution zone. In SMP/E, a group of records in a CSI data set that describes the SYSMODs and elements in a distribution library.

DLIB. distribution library.

DLL. dynamic link library.

DLSw. data link switching.

DLU. destination logical unit.

DLUR. dependent LU requester.

DLUS. dependent LU server.

DMA. direct memory access.

DNS. domain name server.

domain. (1) In SNA communications, the network resources under control of a particular system services control point (SSCP). (2) A part of a network that is administered as a unit with a common protocol.

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*.

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 to run on previous releases of z/OS.

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*.

DS DB. directory services database.

dsname. data set name.

DSORG. Data set organization (parameter of DCB and DD and in a data class definition).

dump. (1) A report showing the contents of storage. Dumps are typically produced following program failures, for use as diagnostic aids. (2) To copy the contents of all or part of storage for the purpose of collecting error information. (3) Data that has been dumped.

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. Dynamic Virtual IP Address.

dynamic allocation. Assignment of system resources to a program at the time the program is executed rather than at the time it is loaded into central storage.

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

dynamic reconfiguration. The ability to make changes to the channel subsystem and to the operating system while the system is running.

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.

dynamic XCF links. Links using the cross-system coupling facility that can be automatically generated any time TCP/IP becomes active within a sysplex.

E

EB. exabyte.

EBCDIC. Extended Binary Coded Decimal Interchange Code.

EBN. extended border node.

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.

EC. engineering change.

ECSA. extended common service area.

EDT. eligible device table.

element. In SMP/E, part of a product, such as a macro, module, dialog panel, or sample code.

eligible device table (EDT). An installation defined representation of the devices that are eligible for allocation. The EDT defines the esoteric and generic relationship of these devices. During IPL, the installation identifies the EDT that z/OS uses. After IPL, jobs can request device allocation from any of the esoteric device groups assigned to the selected EDT. An EDT is identified by a unique ID (two digits), and contains one or more esoterics and generics.

EN. end node.

encapsulation. 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 *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.

encrypt. To systematically encode data so that it cannot be read without knowing the coding key.

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

endian. An attribute of data representation that reflects how certain multi-octet data is stored in memory. See *big endian, little endian*.

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

Enterprise Extender. A means for sending SNA data over an IP network. Enterprise Extender is an extension of SNA High Performance Routing that provides encapsulation of SNA application traffic within UDP frames.

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

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 *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.

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

EOF. End of file.

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.

ER. explicit route.

ESCON. Enterprise Systems Connection.

ESCON channel. A channel that supports ESCON protocols.

ESCON Director (ESCD). A switch for ESCON optical channels that provides connectivity capability and control for the attachment of any two links to each other. See *ESCON Manager*.

ESCON Manager (ESCM). A licensed program that provides host control and intersystem communication capability for ESCON Director connectivity operations. See *ESCON Director*.

ESCON multiple image facility (EMIF). In mainframe computing, a function that enables logical partitions (LPARs) to share an ESCON channel path by providing each LPAR with its own channel-subsystem image.

esoteric. An installation-defined and named grouping of I/O devices of usually the same device group. Eligible device tables (EDTs) define the esoteric and generic relationship of these devices. The name you assign to an esoteric is used in the JCL DD statement. The job then allocates a device from that group instead of a specific device number or generic device group. Synonymous with *esoteric device group*.

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.

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

exception SYSMOD. A SYSMOD that is in error or that requires special processing before it can be installed. ++HOLD and ++RELEASE statements identify exception SYSMODs.

EXCP. execute channel programs.

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

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. See *executable*, *load module*.

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). An encoding scheme that is used to represent character data in the z/OS environment. Contrast with *ASCII* and *Unicode*.

extended border node (EBN). 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.

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

External Time Reference (ETR). Obsolete term for *Sysplex Timer@*.

F

failover. (1) A transparent operation that switches to a redundant or standby system when services fail. (2) A cluster event where the primary database server or application server switches over to a backup system due to the failure of the primary server. (3) The routing of all transactions to a second controller when the first controller fails.

fanout. A single output that becomes input to multiple branches.

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

FDDI. Fiber Distributed Data Interface.

feature. Part of a product that is either included with the product or can be ordered separately.

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

FEP. front-end processor.

fetch. The dynamic loading of a procedure.

FFST. First Failure Support Technology.

Fiber Connection Environment (FICON®).

An optical fiber communication method offering channels with high data rate, high bandwidth, increased distance and a large number of devices per control unit for mainframe systems. It can work with, or replace, ESCON links.

Fiber Distributed Data Interface. An American National Standards Institute (ANSI) standard for a 100-Mbps LAN using fiber optic cables.

fiber link. The physical fiber optic connections and transmission media between optical fiber transmitters and receivers. A fiber link can comprise one or more fiber cables and patchports in fiber management cabinets. Each connection in the fiber link is either permanent or mutable.

fiber optic cable. A fiber or bundle of fibers in a structure built to meet optic, mechanical, and environmental specifications.

fibrec-channel connection (FICON). A fibre-channel communication protocol designed for IBM mainframe computers and peripherals.

FICON. fibre channel connection.

FID. format identifier.

field-replaceable unit (FRU). An assembly that is replaced in its entirety when any one of its components fails. See *customer-replaceable unit*.

FIFO. first-in-first-out.

file. A collection of related data that is stored and retrieved by an assigned name. A file can include information that starts a program (program-file object), contains text or graphics (data-file object), or processes a series of commands (batch file). See *data set*.

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

FILEDEF. file definition statement.

FIN. no more data from sender.

firewall. (1) A network configuration, usually both hardware and software, that prevents unauthorized traffic into and out of a secure network. (2) An intermediate server that functions to isolate a secure network from an insecure 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.

first-in-first-out (FIFO). A queuing technique in which the next item to be retrieved is the oldest item in the queue.

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

fixed-length record. A record having the same length as all other records with which it is logically or physically associated. Contrast with *variable-length record*.

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

FMID. function modification identifier.

footprint. (1) The amount of computer storage that is occupied by a computer program. For example, if a program occupies a large amount of storage, it has a large footprint. (2) Amount of floor space occupied by a piece of equipment.

foreground. (1) in multiprogramming, the environment in which high-priority programs are executed. (2) Under TSO, the environment in which programs are swapped in and out of central storage to allow CPU time to be shared among terminal users. All command processor programs execute in the foreground. Contrast with *background*.

foreground job. (1) A high-priority job, usually a real-time job. (2) Under TSO, any job executing in a swapped region of central storage, such as a command processor or a terminal user's program. Contrast with *background job*.

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.

fork. To create and start a child process. Forking is similar to creating an address space and attaching. It creates a copy of the parent process, including open file descriptors.

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. (1) The hardware support structure, covers, and all electrical parts mounted there that are packaged as one entity for shipping. For a mainframe microprocessor cluster, a frame contains one or two central processor complexes (CPCs), support elements, and AC power distribution. (2) In 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.

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.

FRSN. flow reduction sequence number.

FRU. field-replaceable unit.

FTP. File Transfer Protocol.

FTPD. FTP daemon.

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

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

function. In SMP/E, a product (such as a system component or licensed program) that can be installed in a user's system if desired. Functions are identified to SMP/E by the ++FUNCTION statement. Each function must have a unique FMID.

function modification identifier (FMID). A code that identifies the release levels of a z/OS licensed program.

G

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.

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

Gb. gigabit.

GB. gigabyte.

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. Like system trace, GTF gathers information used to determine and diagnose problems that occur during system operation. Unlike system trace, however, GTF can be tailored to record very specific system and user program events.

generation data group (GDG). A collection of historically related non-VSAM data sets that are arranged in chronological order; each data set is called a generation data set.

generic. A z/OS-defined grouping of devices with similar characteristics. For example: the device types 3270-X, 3277-2, 3278-2, -2A, -3, -4, and 3279-2a, -2b, -2c, -3a, -3b belong to the same generic. Every generic has a generic name that is used for device allocation in the JCL DD statement. z/OS interprets this name as "take any device in that group." In a given z/OS configuration, each eligible device table (EDT) has the same list of generics.

Geographically Dispersed Parallel Sysplex™ (GDPS®). An application that integrates Parallel Sysplex technology and remote copy technology to enhance application availability and improve disaster recovery. GDPS topology is a Parallel Sysplex cluster spread across two sites, with all critical data mirrored between the sites. GDPS manages the remote copy configuration and storage subsystems; automates Parallel Sysplex operational tasks; and automates failure recovery from a single point of control.

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

gigabyte. In decimal notation, 1 073 741 824 bytes when referring to memory capacity; in all other cases, it is defined as 1 000 000 000 bytes.

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

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 zone. A group of records in a CSI data set used to record information about SYSMODs received for a particular system. The global zone also contains information that (1) enables SMP/E to access target and distribution zones in that system, and (2) enables you to tailor aspects of SMP/E processing.

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. generalized trace facility.

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

GUI. graphical user interface.

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

hardware configuration definition (HCD). An interactive interface in z/OS that is used to define hardware configurations to the operating system and the channel subsystem.

Hardware Management Console (HMC). A console used to monitor and control hardware such as the IBM System z9™ processors.

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

HASP. Houston Automatic Spooling Priority.

HCD. hardware configuration definition.

head of string. The first unit of devices in a string. It contains the string interfaces which connect to controller device interfaces.

heat sink. A metal base or plate onto which one or more components are mounted to absorb, carry away, or radiate the heat generated by the components. Overheating can result in the malfunction or destruction of the parts generating the heat or might cause damage to other parts of the circuit.

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.

HFS. hierarchical file system.

hierarchical file system (HFS) data set. A data set that contains a POSIX-compliant hierarchical file system, which is a collection of files and directories organized in a hierarchical structure, that can be accessed using z/OS UNIX System Services facilities.

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 *n-way*.

HiperSockets™. 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.

HMC. Hardware Management Console.

HOLDDATA. In SMP/E, one or more MCSs used to indicate that certain SYSMODs contain errors or require special processing before they can be installed. ++HOLD and ++RELEASE statements are used to define HOLDDATA. SYSMODs affected by HOLDDATA are called exception SYSMODs.

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.

hot plug. To install a hardware component without turning off the system.

hot-swap. Pertaining to a device that is capable of being replaced while the system is on.

Houston Automatic Spooling Priority (HASP). A computer program that provides supplementary job management, data management, and task management functions, such as: control of job flow, ordering of tasks, and spooling. See *JES2*.

HPR. high performance routing.

HTTP. Hypertext Transfer Protocol.

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. Input/output.

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

I/O cluster. A sysplex that owns a managed channel path for a logically partitioned processor configuration.

I/O device. A printer, tape drive, hard disk drive, and so on. Devices are logically grouped inside units, which are in turn grouped into strings. The first unit, known as the head of string, contains string interfaces which connect to controller device interfaces and eventually to processor CHPIDs. Devices are represented as lines of text within the appropriate unit object in the configuration diagram.

IAC. Interpret As Command.

IBM. International Business Machines Corporation.

IBM Security Server. An IBM licensed program 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* or *RACF*.

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

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

ICMP. Internet Control Message Protocol.

ICN. interchange network node.

ICSF. Integrated Cryptographic Service Facility.

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

IDS. intrusion detection services.

IEEE. Institute of Electrical and Electronic Engineers.

IETF. Internet Engineering Task Force.

IKE. Internet Key Exchange.

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

IMS. Information Management System.

IMS DB. Information Management System Database Manager.

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.

independent LU. See *SSCP-independent LU*.

Information Management System (IMS).

IBM product that supports hierarchical databases, data communication, translation processing, and database backout and recovery.

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*.

initial storage allocation. The amount of central and expanded storage to be assigned to a logical partition.

initiator. That part of an operating system that reads and processes operation control language statements from the system input device.

initiator/terminator. The job scheduler function that selects jobs and job steps to be executed, allocates input/output devices for them, places them under task control, and at completion of the job, supplies control information for writing job output on a system output unit.

input/output. Pertaining to a device, process, channel, or communication path involved in data input, data output, or both.

input/output configuration data set (IOCDs). A file that contains different configuration definitions for the selected processor. Only one IOCDs is used at a time. The IOCDs contains I/O configuration data for the files associated with the processor controller on the host processor, as it is used by the channel subsystem. The channel subsystem (CSS) uses the configuration data to control I/O requests. The IOCDs is built from the production IODF.

input/output definition file (IODF). A VSAM linear data set that contains I/O definition information, including processor I/O definitions and operating system I/O definitions, including all logical objects and their connectivity in the hardware configuration.

install. In SMP/E, to apply a SYSMOD to the target libraries or to accept a SYSMOD into the distribution libraries.

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. (2) Contrast with *migration data host*.

internal reader. A facility that transfers jobs to JES.

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.

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.

IOCDs. input/output configuration data set.

IOCP. input/output configuration program.

IODF. input/output definition file.

IOP. input/output program.

IP. Internet Protocol.

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.

IPA. IP network availability.

IPCS. Interactive Problem Control System.

IPL. initial program load.

IPSec. IP Security.

IPv4. Internet Protocol version 4.

IPv6. Internet Protocol Version 6.

IQDIO. Internal Queued Direct I/O.

ISC. inter-system coupling.

ISDN. Integrated Services Digital Network.

ISMF. Interactive storage management facility.

ISPF. Interactive System Productivity Facility.

ISPF/PDF. Interactive System Productivity Facility/Program Development Facility.

ITSO. International Technical Support Organization.

IVP. installation verification procedure.

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 through a common job queue. Contrast with *JES2*.

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

job class. Any one of a number of job categories that can be defined. With the classification of jobs and direction of initiator/terminators to initiate specific classes of jobs, it is possible to control the mixture of jobs that are performed concurrently.

job control language (JCL) statements. Statements placed into an input stream to define work to be done, methods to be used, and the resources needed.

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 priority. A value assigned to a job that is used as a measure of the job's relative importance while the job contends with other jobs for system resources.

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.

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.

jumper cable. Fiber used to make mutable connections between patchports.

K

Kb. kilobit.

KB. kilobyte.

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 (KSDS). 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 that consists of a specific character string (such as DSNAME=).

KSDS. key-sequenced data set.

L

LAN. local area network.

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. (2) A ring or bus network without bridges.

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

last-in-first-out (LIFO). A queuing technique in which the next item to be retrieved is the item most recently placed in the queue.

LCSS. logical channel subsystem.

LCU. logical control unit.

LDAP. Lightweight Directory Access Protocol.

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

library. A partitioned data set (PDS) that contains a related collection of named members. See *partitioned data set*.

LIC. Licensed Internal Code.

licensed internal code (LIC). Microcode that IBM does not sell as part of a machine, but licenses to the customer. LIC is implemented in a part of storage that is not addressable by user programs. Some IBM products use it to implement functions as an alternative to hard-wired circuitry.

licensed program. A software package that can be ordered from the program libraries, such as IBM Software Distribution (ISMD). IMS and CICS are examples of licensed programs.

LIFO. last-in-first-out.

Lightweight Directory Access Protocol (LDAP). An Internet protocol standard, based on the TCP/IP protocol, which allows the access and manipulation of data organized in a Directory Information Tree (DIT).

line switching. Synonym for *circuit switching*.

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

link layer. See *data link layer*.

link library. A data set containing link-edited object modules.

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.

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.

little endian. A format for storage of binary data in which the least significant byte is placed first. Little endian is used by the Intel® hardware architectures. Contrast with *big endian*.

LLC. logical link control.

LMOD. In SMP/E, an abbreviation for load module.

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. An executable program stored in a partitioned data set program library. See *program object*.

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 system queue area (LSQA). In z/OS, one or more segments associated with each virtual storage region that contain job-related system control blocks.

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 which 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 *broadcast search, 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 control unit (LCU). A single control unit (CU) with or without attached devices, or a group of one or more CUs that share devices. In a channel subsystem (CSS), an LCU represents a set of CUs that physically or logically attach I/O devices in common.

logical partition (LPAR). A subset of a single system that contains resources (processors, memory, and input/output devices). A logical partition operates as an independent system. If hardware requirements are met, multiple logical partitions can exist within a system. See *logically partitioned (LPAR) mode*.

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. An LU can support at least two sessions—one with an SSCP and one with another LU—and may be capable of supporting many sessions with other LUs.

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

logically partitioned (LPAR) mode. A central processor complex (CPC) power-on reset mode that enables use of the PR/SM™ feature and allows an operator to allocate CPC hardware resources (including central processors, central storage, expanded storage, and channel paths) among logical partitions.

logoff. (1) The procedure by which a user ends a terminal session. (2) In VTAM, a request that a terminal be disconnected from a VTAM application program.

logon. (1) The procedure by which a user begins a terminal session. (2) In VTAM, a request that a terminal be connected to a VTAM application program.

LOGREC. Log recording data set.

loop. A situation in which an instruction or a group of instructions execute repeatedly.

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

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.

LP. logical partition.

LPA. link pack area.

LPAR. logically partitioned (mode).

LRECL. logical record length.

LSPR. Large System Performance Reference.

LSQA. local system queue area

LU. logical unit.

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

M

MAC. media access control (MAC).

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.

machine check interruption. An interruption that occurs as a result of an equipment malfunction or error.

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

macro. An instruction in a source language that is to be replaced by a defined sequence of instructions in the same source language.

macro instruction. Obsolete term for *macro*.

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 *minor node*.

MAS. multi-access spool configuration.

master catalog. A catalog that contains extensive data set and volume information that VSAM requires to locate data sets, to allocate and deallocate storage space, to verify the authorization of a program or operator to gain access to a data set, and to accumulate usage statistics for data sets.

master IODF. A centrally kept IODF containing I/O definitions for several systems or even for a complete enterprise structure. Master IODFs help to maintain consistent I/O data and can provide comprehensive reports.

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.

Mbps. megabits per second.

MCS. (1) Multiple console support. (2) Modification control statement (in SMP/E).

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.

MDH. migration data host.

media access control (MAC). In LANs, the sublayer of the data link control layer that supports media-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). 220 bytes, 1 048 576 bytes.,048,576 bytes.

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

memory dump. Synonymous with *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). 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. Contrast with *local area network (LAN)* and *wide area network (WAN)*.

microcode. Stored microinstructions, not available to users, that perform certain functions.

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

MIF. multiple image facility.

migration data host. A node that acts as both an APPN end node and a type 5 subarea node. Contrast with *interchange node*.

migration. Refers to activities, often performed by the system programmer, that relate to the installation of a new version or release of a program to replace an earlier level. Completion of these activities ensures that the applications and resources on a system will function correctly at the new level.

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.

MLTG. multilink transmission group.

MNLB. multi-node load balancing.

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.

modification control statement (MCS). An SMP/E control statement used to package a SYSMOD. MCSs describe the elements of a program and the relationships that program has with other programs that may be installed on the same system.

modification level. A distribution of all temporary fixes that have been issued since the previous modification level. A change in modification level does not add new functions or change the programming support category of the release to which it applies. Contrast with *release* and *version*. Whenever a new release of a program is shipped, the modification level is set to 0. When the release is reshipped with the accumulated services changes incorporated, the modification level is incremented by 1.

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, III. Components of the Resource Measurement Facility (RMF™).

monoplex. A sysplex consisting of one system that uses a sysplex couple data set.

MPC. multipath channel.

MSU. million service units. See *service unit*.

MTU. maximum transmission unit.

multi-access spool configuration. Multiple systems sharing the JES2 input, job and output queues (through a checkpoint data set or coupling facility).

multicast. (1) Transmission of the same data to a selected group of destinations. (2) A special form of broadcast in which copies of a packet are delivered to only a subset of all possible destinations. (3) Contrast with *broadcast*.

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.

Multiple Virtual Storage (MVS). An earlier form of the z/OS operating system. In current usage, the term MVS refers to those services and functions of z/OS other than z/OS UNIX system services, such as those provided by the base control program (BCP), a base element of z/OS.

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 *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. Synonymous with *multithreading*.

mutable connection. Connections made with fiber jumper cables between patchports in a cabinet or between cabinets and active objects such as CHPIDs, switches, converters and controllers with ESCON or FICON interfaces. Mutable connections are broken when the patchports they connect are not in use.

MVS. Multiple Virtual Storage.

MVS/ESA. Multiple Virtual Storage/Enterprise Systems Architecture.

N

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

nanosecond (ns). One billionth of a second; a common measurement of read or write access time to random access memory (RAM).

NAU. Network accessible unit.

NCP. Network Control Program.

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

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.

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. (1) In TCP/IP, that part of the IP address that defines a network. (2) A 1- to 8-byte customer-selected name or an 8-byte IBM-registered name that uniquely identifies a specific subnetwork.

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 job entry (NJE). A JES2 facility that provides for the passing of selected jobs, system output data, operator commands, and messages between communicating job entry subsystems connected by binary-synchronous communication lines, channel-to-channel adapters, and shared queues.

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. (1) A person who controls the operation of all or part of a network. (2) In a multiple-domain network, a person or program responsible for controlling all domains. (3) A VTAM application program authorized to issue network operator commands.

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.

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

NFS. network file system.

NFTP. NetView® File Transfer.

NHDR. network layer header.

NIC. network interface card.

NIP. nucleus initialization program

NLP. network layer packet.

NN. network node.

nonpageable region. In z/OS, a subdivision of the nonpageable dynamic area that is allocated to a job step or system task that is not to be paged during execution. In a nonpageable region, each virtual address is identical to its real address. *Synonymous with V=R region.*

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.

NPM. NetView Performance Monitor.

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.

nucleus. That portion of a control program that always remains in central storage.

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

OAF. origin address field.

object deck. A module that is the output from a language translator (such as a compiler or an assembler) and used as input to the linkage editor or binder. An object deck is in relocatable format with machine code that is not executable. Before an object deck can be executed, it must be processed by the link-edit utility. 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.

OLTP. online transaction processing.

OLU. originating logical unit.

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 (OSA). 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.

OpenSSH. Open Secure Shell.

operating system. Software that controls the running of programs; in addition, an operating system may provide services such as resource allocation, scheduling, I/O 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.

operator commands. Statements that system operators use to get information, alter operations, initiate new operations, or end operations.

operator message. A message from an operating system directing the operator to perform a specific function, such as mounting a tape reel; or informing the operator of specific conditions within the system, such as an error condition.

ORB. operation request block.

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

OSA. Open Systems Adapter.

oscillator. A circuit within a computer that creates a series of pulses that pace the computer's electronic system. The oscillator clock synchronizes, paces and coordinates the operations of the computer's circuit.

OSI. Open Systems Interconnection.

OSN. OSA for NCP.

OSPF. Open Shortest Path First.

output group. A set of a job's output data sets that share output characteristics, such as class, destination, and external writer.

output writer. A part of the job scheduler that transcribes specified output data sets onto a system output device independently of the program that produced the data sets.

overlay. To write over existing data in storage.

P

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

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. (2) Synonymous with *packet mode operation*. See *circuit switching*.

page. (1) In virtual storage systems, a fixed-length block of instructions, data, or both, that can be transferred between central storage and external page storage. (2) To transfer instructions, data, or both, between central storage and external page storage.

page fault. In z/OS, a program interruption that occurs when a page that is marked “not in central storage” is referred to by an active page.

pageable region. In z/OS, a subdivision of the pageable dynamic area that is allocated to a job step or a system task that can be paged during execution. Synonymous with *V=V region*.

paging. In z/OS, the process of transferring pages between central storage and external page storage.

paging device. In z/OS, a direct access storage device on which pages are stored.

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 System/360 and System/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 *highly parallel*.

Parallel Sysplex. A sysplex that uses one or more coupling facilities.

parameter. 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. Synonymous with *parm*.

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

parmlib member. A member in the SYS1.PARMLIB data set.

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 *physical partition, single-image mode, 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.

patch panel. A hardware assembly of port locations in a communications system. In a network, a patch panel interconnects computers within a local area network (LAN) for connection to the Internet or a wide area network (WAN). A patch panel uses a cable called a patch cord to create each interconnection.

patchport. A pair of fibre adapters or couplers. Any number of patchports can participate in a fiber link. To determine the total number of patchports in a cabinet, you must add the number of patchports of each defined panel of the cabinet.

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.

PC. personal computer.

PCHID. physical channel identifier.

PCOM. IBM Personal Communications.

PE. See *program error PTF*.

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

peer-to-peer remote copy (PPRC). Direct connection between DASD controller subsystems that is used primarily to provide a hot standby capability. These connections can be point-to-point from one DASD controller to another, or they can pass through switches, just as connections from CHPIDs to control units can.

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.

performance administration. The process of defining and adjusting workload management goals and resource groups based on installation business objectives.

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. The equipment that can communicate directly with a particular processing unit.

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 connection. Permanent connections are usually made between cabinets with fiber trunk cables. Patchports that are permanently connected remain so even when they are not in use.

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. program function key.

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 channel identifier (PCHID). The physical address of a channel path in the hardware. Logical CHPIDs have corresponding physical channels. Real I/O hardware is attached to a processor through physical channels. Channels have a physical channel identifier (PCHID) which determines the physical location of a channel in the processor. The PCHID is a three hexadecimal digit number and is assigned by the processor.

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) mode. The state of a processor complex when its hardware units are divided into two separate operating configurations or sides. 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*.

PIN. personal identification number.

PIU. path information unit.

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.

platform. The operating system environment in which a program runs.

PLPA. pageable link pack area.

PLU. primary logical unit.

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

pointer. An address or other indication of location.

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.

port. An access point for data entry or exit.

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

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.

PoS. point-of-sale.

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.

PPRC. peer-to-peer remote copy.

PPT. program properties table.

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

preventive service. (1) The mass installation of PTFs to avoid rediscoveries of the APARs fixed by those PTFs. (2) The SYSMODs delivered on the program update tape.

preventive service planning (PSP). Installation recommendations and HOLDDATA for a product or a service level. PSP information can be obtained from the IBM Support Center.

primary key. One or more characters within a data record used to identify the data record or control its use. A primary key must be unique.

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

Problem Management. Problem Management investigates the underlying cause of incidents with the aim of preventing incidents of a similar nature from recurring. By removing errors, which often requires a structural change to the IT infrastructure in an organization, the numbers of incidents are reduced over time.

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 through a call.

processor. The physical processor, or machine, has a serial number, a set of channels, and a logical processor associated with it. The logical processor has a number of channel path IDs, or CHPIDs, which are the logical equivalent of channels. The logical processor may be divided into a number of logical partitions.

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 *LPAR*.

processor storage. Synonymous with *central storage*.

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 error PTF (PE-PTF). A PTF that has been found to contain an error. A PE-PTF is identified on a ++HOLD ERROR statement, along with the APAR that first reported the error.

program fetch. A program that prepares programs for execution by loading them at specific storage locations and readjusting each relocatable address constant.

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 library. A partitioned data set or PDSE that always contains named members.

program management. The task of preparing programs for execution, storing the programs, load modules, or program objects in program libraries, and executing them on the operating system.

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 module. The output of the binder. A collective term for program object and load module.

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

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 central 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 *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. 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.

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.

PSH. push data function.

PSP. preventive service planning.

PSS. process scheduling services.

PSW. program status word.

PTF. program temporary fix.

PU. physical unit.

PUT. program update tape.

Q

QDIO. queued direct I/O.

QSAM. queued sequential access method.

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."

queue. A line or list formed by items in a system waiting for processing.

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. Resource Access Control Facility.

raised floor. Total area of controlled-access space devoted to a company's computing equipment. This space usually includes cooling units, electrical panels, fire suppression equipment, and other support equipment.

RAS. reliability, availability, serviceability.

RDW. record descriptor word.

read access. Permission to read information.

reader. A program that reads jobs from an input device or data base file and places them on the job queue.

real address. In virtual storage systems, the address of a location in central storage.

real storage. Synonymous with *central storage*.

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

receive. In SMP/E, to read SYSMODs and other data from SMPPTFIN and SMPHOLD and store them on the global zone for subsequent SMP/E processing. This is done with the RECEIVE command.

RECEIVE command. The SMP/E command used to read in SYSMODs and other data from SMPPTFIN and SMPHOLD.

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.

record. (1) A group of related data, words, or fields treated as a unit, such as one name, address, and telephone number. record. (2) A self-contained collection of information about a single object. A record is made up of a number of distinct items, called fields. A number of shell programs (for example, awk, join, and sort) are designed to process data consisting of records separated by newlines, where each record contains a number of fields separated by spaces or some other character. awk can also handle records separated by characters other than newlines. See *fixed-length record*, *variable-length record*.

record data. Data sets with a record-oriented structure that are accessed record by record. This data set structure is typical of data sets on z/OS and other mainframe operating systems. Contrast with *byte stream*.

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

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

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.

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.

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. The reusability attribute that allows a program to be used concurrently by more than one task. A reenterable module can modify its own data or other shared resources, if appropriate serialization is in place to prevent interference between using tasks. See *reusability*, *reentrant*.

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

refreshable. The reusability attribute that allows a program to be replaced (refreshed) with a new copy without affecting its operation. A refreshable module cannot be modified by itself or any other module during execution. See *reusability*.

register. An internal computer component capable of storing a specified amount of data and accepting or transferring this data rapidly.

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

related installation materials (RIMs). In IBM custom-built offerings, task-oriented documentation, jobs, sample exit routines, procedures, parameters, and examples developed by IBM.

release. A distribution of a new product or new function and APAR fixes for an existing product. Contrast with *modification level* and *version*.

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 job entry (RJE). Submission of job control statements and data from a remote terminal, causing the jobs described to be scheduled and executed as though encountered in the input stream.

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.

reserved storage allocation. The amount of central and expanded storage that you can dynamically configure online or offline to a logical partition.

residency mode (RMODE). The attribute of a program module that specifies whether the module, when loaded, must reside below the 16MB virtual storage line or may reside anywhere in virtual storage.

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 (RACF). An IBM security manager product that provides for access control by identifying and verifying the users to the system, authorizing access to protected resources, logging the detected unauthorized attempts to enter the system and logging the detected accesses to protected resources. See *IBM Security Server*.

Resource Management Facility (RMF). IBM software product 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 uses 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.

restore. In SMP/E, to remove applied SYSMODs from the target libraries by use of the RESTORE command.

RESTORE command. The SMP/E command used to remove applied SYSMODs from the target libraries.

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.

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.

reusability. The attribute of a module or section that indicates the extent to which it can be reused or shared by multiple tasks within the address space. See *refreshable*, *reenterable*, *serially reusable*.

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. request for comment.

RH. request/response header.

RIM. related installation material.

RIP. Routing Information Protocol.

RJE. remote job entry.

RMF. Resource Measurement Facility.

RMODE. residency mode.

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. (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 is to reach its destination.

RRI. request/response indicator.

RSA. register save area.

RSN. resource sequence number.

RST. reset the connection.

RTP. rapid transport protocol.

RTT. round trip time.

RU. request/response unit.

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

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

runtime environment. A set of resources that are used to support the execution of a program. Synonymous with *execution environment*.

S

SAF. system authorization facility.

SAP. (1) System Assistance Processor. (2) service access point.

SATF. shared access transport facility.

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

scalability. The ability of a system to expand as resources, such as processors, memory, or storage, are added.

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. synchronous data link control.

SDSF. System Display and Search Facility.

SDUMP macro. A z/OS macro that can be invoked by authorized programs to take a fast unformatted dump of virtual storage to a data set.

SE. Support Element.

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.

sense code. A diagnostic code that helps in problem determination.

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)*.

serially reusable. The reusability attribute that allows a program to be executed by more than one task in sequence. A serially reusable module cannot be entered by a new task until the previous task has exited. See *reusability*.

server. (1) In a network, hardware or software that provides facilities to clients. Examples of a server are a file server, a printer server, or a mail server. (2) A computer that contains programs, data, or provides the facilities that other computers on the network can access. (3) The party that receives remote procedure calls. Contrast with *client*.

server address space. Any address space that does work on behalf of a transaction manager or a resource manager. For example, a server address space could be a CICS AOR, or an IMS control region.

service. PTFs and APAR fixes.

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. (2) A logical point made available by an adapter where information can be received and transmitted. A single service access point can have many links terminating in it. (3) A logical address that allows a system to route data between a remote device and the appropriate communications support. (4) The identification of the services provided by a specific communication service provider to one of its users. For example, the Internet Protocol (IP) uses the services of a token-ring adapter. The service access point, in this case, is the name by which IP knows the adapter that is the token-ring address.

service level. The FMID, RMID, and UMID values for an element. The service level identifies the owner of the element, the last SYSMOD to replace the element, and all the SYSMODs that have updated the element since it was last replaced.

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

service provider. (1) In the OSI reference model, a layer that provides services to the next higher layer. (2) Any company that provides services for a fee to its customers, such as telecommunication companies, application service providers, enterprise IT, and Internet service providers.

service processor. The part of a processor complex that provides for the maintenance of the complex.

service request block (SRB). In z/OS, a dispatchable unit. See *dispatch*.

service unit. The amount of service consumed by a work request as calculated by service definition coefficients and CPU, SRB, I/O, and storage service units.

session. (1) The period of time during which a user of a terminal can communicate with an interactive system; usually, the elapsed time from when a terminal is logged on to the system until it is logged off the system. (2) The period of time during which programs or devices can communicate with each other. (3) 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. (2) A logical or virtual connection between two stations, programs, or devices on a network that allows the two elements to communicate and exchange data, or the activities that occur during the establishment, maintenance, and release of the connection. A session can be activated and deactivated as requested. See *transaction*.

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.

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

sftp. secure FTP.

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.

SIGA. signal adapter.

SIGP. signal processor.

simultaneous peripheral operations online (spool). The reading and writing of input and output streams on auxiliary storage devices, concurrently while a job is running, in a format convenient for later processing or output operations.

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-processor complex. A processing environment in which only one processor (computer) accesses the spool and comprises the entire node.

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 *multisystem sysplex*.

SLA. service level agreement.

SLU. secondary logical unit.

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.

SMPCSI. The SMP/E data set that contains information about the structure of a user's system as well as information needed to install the operating system on a user's system. The SMPCSI DD statement refers specifically to the CSI that contains the global zone. This is also called the master CSI.

SMS. Storage Management Subsystem.

SMTP. Simple Mail Transfer Protocol.

SNA. Systems Network Architecture.

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.

SNASw. SNA Switching Services.

SNI. SNA network interconnection.

SNMP. Simple Network Management Protocol.

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.

spin data set. A data set that is deallocated (available for printing) when it is closed. Spin off data set support is provided for output data sets just prior to the termination of the job that created the data set.

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.

spool. simultaneous peripheral operations online.

spooled data set. A data set written on an auxiliary storage device and managed by JES.

spooling. The reading and writing of input and output streams on auxiliary storage devices, concurrently with job execution, in a format convenient for later processing or output operations.

SPUFI. SQL Processing Using File Input.

SQA. system queue area.

SQL. Structured Query Language.

SREL. system release identifier.

SRM. system resources manager.

SSCH. start subchannel.

SSCP. system services control point.

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.

SSH. Secure Shell.

SSID. subsystem identifier.

SSL. Secure Socket Layer.

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 z/OS, 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.

step restart. A restart that begins at the beginning of a job step. The restart may be automatic or deferred, where deferral involves resubmitting the job. Contrast with *checkpoint restart*.

STI. self-timed interface.

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 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. 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 *storage management subsystem*.

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. See *storage management*.

string. A collection of one or more I/O devices. The term usually refers to a physical string of units, but may mean a collection of I/O devices which are integrated into a control unit.

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

stub area. In the OSPF protocol, a routing area for which packets can flow into and out of, but not through.

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.

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

subchannel set. Installation-specified structure that defines the placement of devices either relative to a channel subsystem or to an operating system.

subnet. Synonym for *subnetwork*.

subnetwork. (1) Any group of nodes that have a set of common characteristics, such as the same network ID. (2) A distinct partitioned piece of an internet network represented by two or more sets of addresses that are subsets of the network's range of addresses. (3) Synonymous with *subnet*.

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

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.

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

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.

superuser. (1) A system user who operates without restrictions. A superuser has the special rights and privileges needed to perform administrative tasks. The z/OS equivalent is a user in privileged, or supervisor, mode. (2) A system user who can pass all z/OS UNIX security checks. A superuser has the special rights and privileges needed to manage processes and files.

superuser authority. The unrestricted ability to access and modify any part of the operating system, usually associated with the user who manages the system.

supervisor. The part of z/OS that coordinates the use of resources and maintains the flow of processing unit operations.

supervisor call (SVC). An instruction that interrupts a program being executed and passes control to the supervisor so that it can perform a specific service indicated by the instruction.

support element (SE). (1) An internal control element of a processor that assists in many of the processor operational functions. (2) A hardware unit that provides communications, monitoring, and diagnostic functions to a central processor complex (CPC).

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. supervisor call.

SVC dump. A dump generated by a supervisor call (SVC).

SVC interruption. An interruption caused by the execution of a supervisor call instruction, causing control to be passed to the supervisor.

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

SWA. scheduler work area.

swap data set. A data set dedicated to the swapping operation.

swapping. A z/OS paging operation that writes the active pages of a job to auxiliary storage and reads pages of another job from auxiliary storage into central storage.

switch. A device that provides connectivity capability and control for attaching any two ESCON or FICON links together.

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

SYN. synchronize sequence numbers.

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.

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.

SYSIN. A system input stream; also, the name used as the data definition name of a data set in the input stream.

SYSLIB. (1) A subentry used to identify the target library in which an element is installed. (2) A concatenation of macro libraries to be used by the assembler. (3) A set of routines used by the link-edit utility to resolve unresolved external references.

SYSLOG. system log.

SYSMOD. system modification.

SYSOUT. A system output stream; also, an indicator used in data definition statements to signify that a data set is to be written on a system output unit.

SYSOUT class. A category of output with specific characteristics and written on a specific output device. Each system has its own set of SYSOUT classes, designated by a character from A to Z, a number from 0 to 9, or a *.

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 *Parallel Sysplex*.

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 *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. A hardware device that synchronizes the time-of-day (TOD) clocks in multiple processors or processor sides.

SYSRES. system residence disk.

system. The combination of a configuration (hardware) and the operating system (software). Often referred to simply as the z/OS system.

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 board. In a personal computer (PC), the main circuit board that supports a variety of basic system devices, such as a keyboard or a mouse, and provides other basic system functions.

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 (SDSF). A panel-based product that provides detailed information about jobs and job output, devices (printers, punches, initiators, lines, spool offloaders and spool volumes) and other resources in a z/OS system.

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

system management facilities (SMF). A z/OS component that provides the means for gathering and recording information for evaluating system usage.

system modification (SYSMOD). In SMP/E, the input data that defines the introduction, replacement, or updating of elements in the operating system and associated distribution libraries to be installed. A system modification is defined by a set of modification control statements (MCSs).

System Modification Program Extended (SMP/E). An IBM program product, or an element of OS/390 or z/OS, used to install software and software changes on z/OS systems. SMP/E consolidates installation data, allows more flexibility in selecting changes to be installed, provides a dialog interface, and supports dynamic allocation of data sets. SMP/E is the primary means of controlling changes to the z/OS operating system.

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

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

system queue area (SQA). In z/OS, an area of virtual storage reserved for system-related control blocks.

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

system-managed storage. Storage managed by the storage management subsystem (SMS) of z/OS.

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

T2.0. type 2.0 node.

T2.1. type 2.1 node.

T4. type 4 node.

T5. type 5 node.

tailgate. The lower portion of the hardware frame. The tailgate allows access to the I/O and other types of wiring and cables from internal mainframe parts. This internal wiring and cabling emerges from the tailgate and usually is routed underneath the raised floor.

tape. A thin, flexible magnetic strip on which data can be stored.

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 *volume*.

target library. 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. 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.

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

TB. terabyte.

TCB. task control block.

TCO. total cost of ownership.

TCP. Transmission Control Protocol.

TCP/IP. Transmission Control Protocol/Internet Protocol.

TDM. topology database manager.

TDU. topology data update.

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. (2) Any physical medium, such as a wire or microwave beam, that is used to transmit data. Synonymous with *transmission line*.

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.

terabyte. For processor storage, real and virtual storage, and channel volume, 2 to the 40th power or 1 099 511 627 776 bytes. For disk storage capacity and communications volume, 1 000 000 000 000 bytes.

terminal. In data communication, a device, usually equipped with a keyboard and display device, capable of sending and receiving information.

terminal owning region (TOR). A CICS region devoted to managing the terminal network.

TG. transmission group.

TGTLIB. target library.

TGV. transmission group vector.

TH. transmission header.

third generation language (3GL). A high-level programming language that was designed to run on the third generation of computer processors, built on integrated circuit technology roughly from 1965 to 1970. C, FORTRAN, Basic and Pascal are examples of third-generation languages still in use today.

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

tightly coupled multiprocessing. Two computing systems operating simultaneously under one control program while sharing resources.

tightly coupled multiprocessor. Any CPU with multiple CPs.

Time Sharing Option/Extensions (TSO/E). The facility in z/OS that allows users to interactively share computer time and resources.

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

TLIB. target library.

TLS. Transport Layer Security.

TN3270. Telnet/3270.

TN3270E. Telnet/3270 Enhanced.

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. (2) A FDDI or IEEE 802.5 network with a ring topology that passes tokens from one attaching ring station (node) to another. (3) See *local area network*.

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:

topology database. See *local topology database*, *network topology database*.

ToS. type of service.

total cost of ownership (TCO). A methodology for calculating the actual cost of owning a product over the period of ownership and use based on combining costs of acquisition or leasing, training, deployment, support, residual equipment values, return on investment, time to market, and so forth.

TP. transmission priority.

track. A circular path on the surface of a disk or diskette on which information is magnetically recorded and from which recorded information is read.

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.

transistor. A small solid-state device used in semiconductors to amplify an electrical signal, and switch electrical current on and off.

transit area. In the OSPF protocol, a routing area that can have traffic passing through it.

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 Control Protocol/Internet Protocol (TCP/IP). A hardware independent communication protocol used between physically separated computers. It was designed to facilitate communication between computers located on different physical networks.

transmission group (TG). (1) A connection between adjacent nodes that is identified by a transmission group number. (2) In a subarea network, a single link or a group of links between adjacent nodes. When a transmission group consists of a group of links, the links are viewed as a single logical link, and the transmission group is called a multilink transmission group (MLTG). A mixed-media multilink transmission group (MMMLTG) is one that contains links of different medium types (for example, token-ring, switched SDLC, nonswitched SDLC, and frame-relay links).

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 *path information unit*.

transmission line. Synonymous with *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. 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 Layer Security (TLS). A protocol standard that uses encryption to provide confidentiality and authentication between two TCP/IP applications.

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.

TRL. transport resource list.

TRLE. transport resource list element.

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

trunk cable. Cables used to make permanent connections between cabinets and which remain in place even when not in use.

TSO. Time-sharing option. See *Time Sharing Option/ Extensions (TSO/E)*.

TSO/E. Time Sharing Option/Extensions.

TSR. target service responsiveness.

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

U

UCB. unit control block.

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

UDP. User Datagram Protocol.

UID. user identifier.

UIM. unit information module.

Unicode. (1) A universal character encoding standard that supports the interchange, processing, and display of text that is written in any of the languages of the modern world. It also supports many classical and historical texts in a number of languages. The Unicode standard has a 16-bit international character set defined by ISO 10646. (2) An international character encoding scheme that is a subset of the ISO 10646 standard. Each character supported is defined using a unique 2-byte code. See *Extended Binary Coded Decimal Interchange Code, American Standard Code for Information Interchange*.

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 file system. A section of the UNIX file tree that is physically contained on a single device or disk partition and that can be separately mounted, dismounted, and administered. See *hierarchical file system, zSeries® File System*.

UNIX operating system. An operating system, developed by Bell Laboratories, that features multiprogramming in a multiuser environment. The UNIX operating system was originally developed for use on minicomputers, but has been adapted for mainframes and microcomputers. The AIX operating system is IBM's implementation of the UNIX operating system. See *z/OS UNIX System Services*.

unload. In SMP/E, to copy data out of SMP/E data set entries in the form of UCL statements, by use of the UNLOAD command.

UNLOAD command. The SMP/E command used to copy data out of SMP/E data set entries in the form of UCL statements.

unused cable. Physical cables that have been recently disconnected, but not yet placed in inventory.

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

URG. urgent flag.

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

user catalog. An optional catalog used in the same way as the master catalog and pointed to by the master catalog. It also lessens the contention for the master catalog and facilitates volume portability.

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 and termination functions.

user ID. user identification.

user identification (user ID). A 1-8 character symbol identifying a system user.

user modification (USERMOD). In SMP/E, a change constructed by a user to modify an existing function, add to an existing function, or add a user-defined function. USERMODs are identified by the ++USERMOD statement.

USERMOD. user modification.

UTP. unshielded twisted pair.

V

V=R region. Synonymous with *nonpageable region*.

V=V region. Synonymous with *pageable region*.

variable-length record. A record having a length independent of the length of other records with which it is logically or physically associated. Contrast with *fixed-length record*.

VB. Variable blocked.

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

version. A separate licensed program that is based on an existing licensed program and that usually has significant new code or new functions. Contrast with *release* and *modification level*.

VIO. virtual input/output.

VIPA. virtual IP address.

virtual address space. In virtual storage systems, the virtual storage assigned to a job, terminal user, or system task. See *address space*.

virtual input/output (VIO). The allocation of data sets that exist in paging storage only.

virtual IP address (VIPA). An IP address that is not associated with any physical interface.

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. (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. (2) An addressing scheme that allows external disk storage to appear as main storage.

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

VIT. VTAM internal trace.

VLAN. virtual LAN.

VM. Virtual Machine.

VOLSER. volume serial number.

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.

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.

VPN. virtual private network.

VR. virtual route.

VRN. virtual routing node.

VSAM. virtual storage access method.

VTAM. Virtual Telecommunications Access Method.

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.

WAN. wide area network.

WAP. wireless access point.

WCC. write control character.

WebSphere®. An IBM brand name that encompasses tools for developing e-business applications and middleware for running Web applications.

WebSphere Application Server. Web application server software that runs on a Web server and that can be used to deploy, integrate, execute, and manage e-business applications.

WebSphere MQ. A family of IBM licensed programs that provides message queuing services.

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).

Wi-Fi. wireless fidelity.

wild carding. The use of an asterisk (*) as a multiple character replacement in classification rules.

WLM. workload management.

work request. A piece of work, such as a request for service, a batch job, an APPC, CICS, or IMS transaction, a TSO LOGON, or a TSO command.

workload. A group of work to be tracked, managed and reported as a unit.

workload management (WLM). A z/OS component that prioritizes workloads and matches them 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.

WSF. write structured field.

WTO. write-to-operator.

WTOR. write-to-operator-with-reply.

X

XA. Extended Architecture.

XCA. external communication adapter.

XCF. cross-system coupling facility.

XID. exchange ID.

Z

z/Architecture. An IBM architecture for mainframe computers and peripherals. The zSeries family of servers uses the z/Architecture.

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

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

z/OS UNIX System Services (z/OS UNIX). z/OS services that support a UNIX-like environment. Users can switch between the traditional TSO/E interface and the shell interface. UNIX-skilled users can interact with the system, using a familiar set of standard commands and utilities. z/OS-skilled users can interact with the system, using familiar TSO/E commands and interactive menus to create and manage hierarchical file system files and to copy data back and forth between z/OS data sets and files. Application programmers and users have both sets of interfaces to choose from and, by making appropriate trade-offs, can choose to mix these interfaces.

zAAP. zSeries Application Assist Processor.

zFS. zSeries file system.

zSeries. IBM enterprise servers based on z/Architecture.

zSeries Application Assist Processor (zAAP). A specialized processing assist unit configured for running Java programming on selected zSeries machines.

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

Numerics

16MB boundary. A notional boundary in virtual storage. Addresses below the 16MB boundary can be accessed by 24-bit or 31-bit addressing. Addresses on or above the 16MB boundary can be accessed only by 31-bit addressing. The numerical value of 16MB is 2 to the power of 24, or 16,777,216.

16 megabyte line. Synonym for *16MB boundary*.

3270 application. An application on a host system accessed by a 3270 terminal device. Typically, 3270 applications run under CICS or IMS.

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.

3270 pass-through mode. A mode that lets a program running from the z/OS shell send and receive a 3270 data stream or issue TSO/E commands.

3GL. third generation language.

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