

# Systems glossary





# ESCALA

## Systems glossary

### Hardware

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## Power Systems glossary

This glossary includes terms and definitions for the IBM® Power Systems servers.

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The following cross-references are used in this glossary:

- *See* refers the reader from a term to a preferred synonym, or from an acronym or abbreviation to the defined full form.
- *See also* refers the reader to a related or contrasting term.

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To view additional IBM terminology, go to IBM Terminology  (<http://www.ibm.com/ibm/terminology>).



## **Power Systems glossary**





## **Chapter 1. Power Systems glossary**



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## Chapter 2. A

**ac.** See alternating current.

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

**active.** Pertaining to a resource that is currently operational.

**adapter.** A mechanism for connecting two unlike parts or machines, or for electrically or physically connecting a device to a computer or to another device.

**Advanced Peer-to-Peer Networking® (APPN).** An extension to SNA that features distributed network control, dynamic definition of network resources, automated resource registration, and automated directory lookup. This network architecture supports the routing of data in a network between two or more Advanced Peer-to-Peer Communication (APPC) systems that do not need to be directly connected.

**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.

**AIX®.** A UNIX® operating system developed by IBM that is designed and optimized to run on POWER® microprocessor-based hardware such as servers, workstations, and blades.

**alphanumeric.** Pertaining to a character set that contains letters, digits, and usually other characters, such as punctuation marks.

**alternate console.** A twinaxial console that acts as a backup console and is used only to determine why the system console failed. An alternate console cannot be used to install the system. The alternate console can manage the system only when the system console is defined as the twinaxial console during a manual IPL.

**alternate installation device.** A tape device that is used to load Licensed Internal Code from the tape device to the load-source disk unit during a restore or installation operation. The alternate installation device can be on a different bus unit or on a different input/output processor (IOP) than the load-source disk unit.

**alternate installation IPL.** A special type of installation IPL (a D-mode IPL) in which the system uses the installation device to IPL itself. The system then copies the Licensed Internal Code from the alternate installation device to the load-source disk unit.

**alternate IPL.** The process of loading code into main storage from a designated input/output device instead of from the load-source disk unit for the system, and of preparing for system operations. An alternate IPL is a type D IPL.

**alternating current (ac).** An electric current that reverses its direction at regularly recurring intervals.

**alternative sector.** A sector on the disk that is reserved by the system and then made available when a sector is damaged or defective.

**American National Standards Institute (ANSI).** A private, nonprofit organization whose membership includes private companies, U.S. government agencies, and professional, technical, trade, labor, and consumer organizations. ANSI coordinates the development of voluntary consensus standards in the U.S.

**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.

**analog.** Pertaining to data that consists of continuously variable physical quantities.

**ANSI.** See American National Standards Institute.

**APAR.** See authorized program analysis report.

**API.** See application programming interface.

**APPC.** See Advanced Program-to-Program Communication.

**application programming interface (API).** An interface that allows an application program that is written in a high-level language to use specific data or functions of the operating system or another program.

**APPN.** See Advanced Peer-to-Peer Networking.

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

**ASP.** See auxiliary storage pool.

**attachment.** An entire device or feature attached to a processing unit, including required adapters.

**attended mode.** An Operations Console state that requires the local console operator to approve each remote request for control of a System i<sup>®</sup> product when the local console is in control.

**attended mode IPL.** A type of IPL in which the IPL stops at the dedicated service tools (DST) environment, allowing the user to make changes to the system or to debug a problem with the system.

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

**authorize.** To allow a user to communicate with or make use of an object, resource, or function.

**authorized program analysis report (APAR).** A request for correction of a defect in a supported release of an IBM-supplied program.

**auxiliary storage.** All addressable storage other than main storage. See also memory.

**auxiliary storage pool (ASP).**

1. A group of disk units defined from the auxiliary storage devices.
2. One or more storage units that are defined from the storage devices or storage device subsystems that make up auxiliary storage. An ASP provides a way of organizing data to limit the effect of storage-device failures and to reduce recovery time.

## Chapter 3. B

**back up.** To save information or objects on a system, usually to tape or diskette, for safekeeping.

**backplane.** A hardware part that has (in one or more planes) logic paths, low-voltage distribution paths, and grounding paths of a section of a machine.

**backup.**

1. A tape, diskette, or save file containing saved objects.
2. Pertaining to a system, device, file, or facility that can be used in the event of a malfunction or loss of data.

**backup console.** A console that, in the event of a failure, can be used as the system console that manages the operating system.

**Basic Input/Output System (BIOS).** The code that controls basic hardware operations, such as interactions with diskette drives, hard disk drives, and the keyboard.

**battery power unit.** A source of electrical power that can be used when the normal utility power fails.

**BIOS.** See Basic Input/Output System.

**boot.** To load an operating system or start the system.

**British thermal unit (Btu).** The amount of heat required to raise a pound of water by 1 degree Fahrenheit.

**British thermal unit per hour (Btu/hr).** An English unit of measure for heat produced in one hour.

**broadcast storm.** A situation where one message that is broadcast across a network results in multiple responses. Each response generates more responses, causing excessive transmission of broadcast messages. Severe broadcast storms can block all other network traffic, but they can usually be prevented by carefully configuring a network to block illegal broadcast messages.

**Btu.** See British thermal unit.

**Btu/hr.** See British thermal unit per hour.

**bus-level partitioning.** The dedicated allocation of an entire bus and all accompanying resources (input/output processors and input/output devices) to a particular logical partition.



## Chapter 4. C

**CA.** See certificate authority.

**capacity on demand (CoD).** The ability of a computing system to increase or decrease its performance capacity as needed to meet fluctuations in demand.

**capped partition.** A logical partition in a shared processor pool whose processor use never exceeds its assigned processing capacity.

**card.** An electronic circuit board that is plugged into a slot in a system to give it added capabilities.

**CD.** See compact disc.

**CD-ROM.** See compact-disc read-only memory.

**Celsius.** Pertaining to a thermometric scale at which water boils at 100 degrees and freezes at 0 degrees in standard atmospheric pressure.

**certificate authority (CA).** A trusted third-party organization or company that issues the digital certificates. The certificate authority typically verifies the identity of the individuals who are granted the unique certificate.

**CLI.** See command-line interface.

**client.** A software program or computer that requests services from a server. See also host.

**client logical partition.** A logical partition that uses the I/O resources of another logical partition, for example, a logical partition that uses the resources of a Virtual I/O Server logical partition.

**CoD.** See capacity on demand.

**command line.** The blank line on a display where commands, option numbers, or selections can be entered.

**command-line interface (CLI).** A type of computer interface in which the input command is a string of text characters.

**commercial processing workload (CPW).** An application that is run on System i models and processors to determine processor performance. The CPW workload is representative of commercial applications, particularly those that do significant database processing in conjunction with journaling and commitment control.

**communication adapter.** A device that allows network communication.

**compact disc (CD).** An optical disc that stores digital data.

**compact-disc read-only memory (CD-ROM).** High-capacity read-only memory in the form of an optically read compact disc.

**concurrent.** Pertaining to the shared use of resources by multiple interactive users or application programs at the same time.

**concurrent maintenance.** Service that is performed on a hardware unit while it is operational.

**conduit.** A pipe for protecting electric wires or cables.

**configuration.**

1. The manner in which the hardware and software of a system, subsystem, or network are organized and interconnected.
2. See topology.

**configure.**

1. To describe setting up auxiliary storage pools and checksum protection.

2. To describe the interconnected arrangement of the devices, programs, communications, and optional features installed on a system.

**control panel.** A panel that contains lights and switches that are used to observe status and to operate or service the system.

**controller.** A device that coordinates and controls the operation of one or more input/output devices (such as workstations) and synchronizes the operation of such devices with the operation of the system as a whole.

**CPC.** See current processor capacity.

**CPW.** See commercial processing workload.

**current processor capacity (CPC).** The amount of processor capacity (in units of 1/100 of a physical processor) that is assigned to a logical partition.

**cursor.**

1. A movable symbol on a display, often a blinking or solid block of light, that identifies a choice to select, indicates where user interaction with the keyboard will appear, or indicates a position of interest on the display surface.
2. A named control structure used by an application program to point to and select a row of data from a set.



## Chapter 5. D

**data center.** A centralized repository of data and information relating to a particular field of knowledge.

**data migration.** The movement of data when the software is upgraded or the data is transferred to a different hardware server or model.

**dB.** See decibel.

**DD.** See device driver.

**decibel (dB).** A unit of signal strength or loudness, such as the signal on a data communications channel.

**dedicated service tools (DST).** Service functions that are available only from the console and that can run when the operating system is not available, as well as when the operating system is available.

**device.** A piece of equipment. Devices can be workstations, printers, disk drives, tape units, or remote systems.

**device configuration.** The physical placement of display stations, printers, and so forth; and the configuration descriptions that describe the physical configuration to the system and describe how the configuration will be used by the system.

**device driver (DD).** A program that provides an interface between a specific device and the application program that uses the device.

**DHCP.** See Dynamic Host Configuration Protocol.

**digital.** Pertaining to data in the form of digits. See also analog.

**digital video disc (DVD).** An optical disc that has the same overall dimensions of a CD-ROM, but has significantly higher capacities than a CD-ROM. DVDs are also double sided, whereas CD-ROMs are single sided.

**DIMM.** See dual inline memory module.

**disk drive.** The mechanism used to read and write information on a disk.

**disk unit enclosure.** A physical enclosure containing one or more disk units.

**diskette.** A thin, flexible magnetic plate that is permanently sealed in a protective cover. It can be used to store information copies from the disk or another diskette.

**display station.** A device, usually equipped with a keyboard and a display device, capable of sending and receiving information over a communications line.

**DLPAR.** See dynamic LPAR.

**domain name.** In Internet communications, a name of a host system. A domain name consists of a sequence of subnames that are separated by a delimiter character, for example, www.ibm.com.

**DST.** See dedicated service tools.

**dual inline memory module (DIMM).** A small circuit board with memory-integrated circuits containing signal and power pins on both sides of the board.

**DVD.** See digital video disc.

**Dynamic Host Configuration Protocol (DHCP).** A communications protocol that is used to centrally manage configuration information. For example, DHCP automatically assigns IP addresses to computers in a network.

**dynamic IP address.** A temporary IP address for a transient device or logical unit on a network: for example, a personal computer. See also IP address.

**dynamic LPAR (DLPAR).** The ability to move processors, memory, and interactive performance between logical partitions without restarting a logical partition or the server.

## Chapter 6. E

**EIA.** See Electronic Industries Association.

**EIA unit.** A unit of measure, established by the Electronic Industries Association, equal to 44.45 millimeters (1.75 inches).

**electronic customer support.** A part of the operating system that allows a customer to access the question-and-answer (Q & A) function; problem analysis, reporting, and management; IBM product information; and technical information exchange.

**Electronic Industries Association (EIA).** An organization of electronics manufacturers that advances the technological growth of the industry, represents the views of its members, and develops industry standards.

**electrostatic discharge (ESD).** The flow of current that results when objects having a static charge come into close enough proximity to discharge.

**emulation.** The use of software, hardware, or both by one system to imitate another system. The imitating system accepts the same data, runs the same programs, and achieves the same results as the imitated system.

**Enhanced 5250 Emulation.** A program that allows a personal computer and a printer to be attached to a System i product and perform the functions of one or two 5250 workstations on one twinaxial cable. The workstations can be one display station, two display stations, or one display station and one printer.

**entitled memory.** The maximum amount of physical memory that is guaranteed to be available for I/O mapping by a logical partition at any given time.

**ESD.** See electrostatic discharge.

**Ethernet.** A packet-based networking technology for local area networks (LANs) that supports 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.

**expansion unit.** A machine type or feature that can be connected to a system unit to provide additional storage and processing capacity. This expansion unit may contain I/O hardware such as cards, tapes, and disk drives.



## Chapter 7. F

**facsimile machine (fax machine).** A functional unit that converts images to signals for transmission over a telephone system or that converts received signals back to images.

**failover.** An automatic operation that switches to a redundant or standby system in the event of a software, hardware, or network interruption.

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

**fax.**

1. The printed copy received from a facsimile machine.
2. To transmit an image, using a telephone system and facsimile machines.

**fax machine.** See facsimile machine.

**FC.** See fibre channel.

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

**feature code.** A code used by IBM to process hardware and software orders.

**fibre channel (FC).** A technology for transmitting data between computer devices. It is especially suited for attaching computer servers to shared storage devices and for interconnecting storage controllers and drives.

**file.** A collection of related data that is stored and retrieved by an assigned name.

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

**flash memory.** A computer chip with a read-only memory that retains its data when the power is turned off and that can be electronically erased and reprogrammed without being removed from the circuit board.

**full paging.** The final phase of the IPL sequence, in which all functions can access all data on all disk units in the ASP.



## Chapter 8. G

**gencode.** A program that is used to download microcode to a specific adapter or device. This program is provided with a microcode update, when the microcode update is available before the Diagnostics Download Microcode Service Aid for the specific adapter or device is provided in AIX.

**graphical user interface (GUI).** A type of computer interface that presents a visual metaphor of a real-world scene, often of a desktop, by combining high-resolution graphics, pointing devices, menu bars and other menus, overlapping windows, icons and the object-action relationship.

**GUI.** See graphical user interface.





## Chapter 9. H

**HACMP™.** See High-Availability Cluster Multi-Processing.

**hard disk.** A nonremovable storage medium used for storage of data on a personal computer.

**Hardware Management Console (HMC).** A system that controls managed systems, including the management of logical partitions and use of Capacity on Demand. Using service applications, the HMC communicates with managed systems to detect and consolidate information, which is then sent to IBM for analysis.

**hardware service manager.** A tool for displaying and working with system hardware from both a logical and a packaging viewpoint, for debugging input/output processors (IOPs) and devices, and for fixing failing and missing hardware.

**HBA.** See host bus adapter.

**HEA.** See Host Ethernet Adapter.

**hexadecimal.** Pertaining to a numbering system that has a base of 16.

**High-Availability Cluster Multi-Processing (HACMP).** Software that provides host clustering, so that jobs are moved to other hosts within the cluster if one host fails.

**high-speed link (HSL).** A hardware connectivity architecture that links system processors to system I/O buses and other systems.

**high-speed link loop.** The system-to-expansion-unit connectivity technology that is required to implement switchable independent disk pools residing on an expansion unit. The servers and expansion units in a cluster that uses resilient devices on an external expansion unit must be on an HSL loop that is connected with HSL cables.

**HMC.** See Hardware Management Console.

**HMC 5250 console.** An emulation session to a logical partition's operating system.

**host.**

1. A computer that is connected to a network and that provides an access point to that network. The host can be a client, a server, or both a client and server simultaneously.
2. The controlling or highest-level system in a data communications configuration.

**host bus adapter (HBA).** An interface card that connects a host bus, such as a peripheral component interconnect (PCI) bus, to the storage area network.

**Host Ethernet Adapter (HEA).** A physical Ethernet adapter that is integrated directly into the GX+ bus on a managed system. HEAs offer high throughput, low latency, and virtualization support for Ethernet connections.

**host name.** In Internet communication, the name given to a computer. The host name might be a fully qualified domain name such as mycomputer.city.company.com, or it might be a specific subname such as mycomputer. See also IP address.

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

**HSL.** See high-speed link.



## Chapter 10. I

**I/O adapter.** See input/output adapter.

**I/O processor.** See input/output processor.

**I/O server.** Software that provides I/O service to other logical partitions on the same system.

**i5/OS®.** The IBM licensed program that was used as the operating system for System i servers. The predecessor to i5/OS was Operating System/400® (OS/400®). See also System i.

**IBM i.** The IBM licensed program that is used as the principal operating system for Power Systems® products. The predecessor to IBM i was i5/OS, which was preceded by Operating System/400 (OS/400). See also System i.

**icon.** A graphical representation of a choice or object for the user to select. An icon can represent something a user wants to work with, such as a document, file, application, or user-created object or list. An icon can also represent an action a user wants to do.

**initial program load (IPL).** The process that loads the system programs from the system auxiliary storage, checks the system hardware, and prepares the system for user operations.

**input/output adapter (I/O adapter, IOA).** A functional unit or a part of an I/O controller that connects devices to an I/O processor.

**input/output data.** Data provided to the computer or data resulting from computer processing.

**input/output processor (I/O processor, IOP).** A processor dedicated to controlling channels or communication links.

**Integrated Virtual Ethernet adapter (IVE adapter).** See Host Ethernet Adapter.

**Integrated Virtualization Manager (IVM).** A browser-based management interface that is used to manage a System p® or blade server. The IVM can be used to create logical partitions, manage virtual resources such as storage, and view service information related to the server.

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

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

**interrupt.** A signal sent by an I/O device to the processor when an error has occurred or when assistance is needed to complete I/O. An interrupt usually suspends the running of the program that is currently running.

**intranet.** An organization's internal network that uses the IP protocol.

**IOA.** See input/output adapter.

**IOP.** See input/output processor.

**IOP-level partitioning.** A dedicated allocation of the input/output processor (IOP) and all accompanying resources (input/output devices) to a particular logical partition. IOPs on a single bus may be dedicated to different logical partitions. The bus resources that contain these IOPs must be shared.

**IP.** See Internet Protocol.

**IP address.** A unique address for a device or logical unit on a network that uses the Internet Protocol standard. See also host name.

**IPL.** See initial program load.

**iSeries® Navigator.** See System i Navigator.

**isolation procedure.** Written information used by service representatives to repair IBM equipment. An isolation procedure contains yes/no questions and procedures that direct the user to the failing part of the equipment.

**IVE adapter.** See Integrated Virtual Ethernet adapter.

**IVM.** See Integrated Virtualization Manager.

## Chapter 11. J

**jumper.** A small piece of plastic-covered metal that is used to connect two contacts and complete a circuit.



## Chapter 12. K

**kernel.** In OSI, a session-layer functional unit that supports the basic session services required to establish connections, transfer normal data, and release connections.

**key.** A cryptographic mathematical value that is used to digitally sign, verify, encrypt, or decrypt a message.

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

**key ring file.** A binary file that is protected by a password and stores one or more certificates on the server hard drives. There are two types of key ring files: server and CA.

**Kilovolt ampere (kVA).** A unit of power.

**kVA.** See Kilovolt ampere.





## Chapter 13. L

**LAN.** See local area network.

**license.** A legal agreement that authorizes the use of proprietary information including, but not limited to, copyrighted or patented information.

**Licensed Internal Code.** The layered architecture below the machine interface (MI). The Licensed Internal Code is a proprietary system design that carries out many functions. These functions include but are not limited to storage management, pointers and addressing, program management functions, exception and event management, data functions, I/O managers, and security.

**Licensed Internal Code fix.** A temporary solution to, or bypass of, a defect in a current release of the Licensed Internal Code.

**licensed program (LP).** A separately priced program and its associated materials that bear a copyright and are offered to customers under the terms and conditions of a licensing agreement.

**limited paging.** A phase of the IPL sequence that takes place prior to full paging during which only the data on the load-source disk unit can be accessed by the normal Licensed Internal Code functions.

**line description.** An object that contains information describing a particular communications line that is attached to the system. The system-recognized identifier for the object type is \*LIND.

**load-source disk unit.** The disk unit that contains the Licensed Internal Code for the system. This unit is always identified as unit number 1 in the disk configuration displays.

**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.

**logical memory.** The address space, assigned to a logical partition, that the operating system perceives as its main storage. For a shared memory partition, a subset of the logical memory is backed up by physical main storage, and the contents of the remaining logical memory are kept in secondary storage.

**logical partition (LPAR).** One or more subsets of a single system that contains hardware resources and operates as an independent system.

**logical partition firmware.** The code that is loaded into an AIX or Linux® logical partition from the server firmware.

**logical partitioning.** A function of an operating system that creates segments of resources that can be run on copies, or instances, of the operating system and associated applications.

**logical unit number (LUN).** In the Small Computer System Interface (SCSI) standard, a unique identifier used to differentiate devices, each of which is a logical unit (LU).

**LP.** See licensed program.

**LPAR.** See logical partition.

**LUN.** See logical unit number.



## Chapter 14. M

**main storage.** See memory.

**main storage dump (MSD).** A process of collecting data from the system's main storage. It can be done automatically by the service processor as a result of a system failure, or it can be performed manually by the operator when there appears to be a system failure.

**managed system.** A system that is being controlled by a given system management application.

**manual IPL.** See attended mode IPL.

**MB.** See megabyte.

**media.** Magnetic disks, magnetic tapes, compact discs (CDs), and digital video disks (DVDs).

**megabyte (MB).** For processor storage, real and virtual storage, and channel volume, 2 to the 20th power or 1 048 576 bytes. For disk storage capacity and communications volume, 1 000 000 bytes.

**memory.** Program-addressable storage from which instructions and other data can be loaded directly into registers for subsequent running or processing. See also auxiliary storage.

**memory affinity.** A feature available in AIX to allocate memory attached to the same multiple chip module (MCM) on which the process runs. Memory affinity improves the performance of applications on IBM System p servers.

**memory weight.** A relative value that is one of the factors in determining the allocation of physical memory to the shared memory partitions. A higher value relative to the values set for other shared memory partitions increases the probability of the hypervisor allocating more physical memory to the shared memory partition.

**menu.** A displayed list of items from which a user can make a selection.

**MES.** See miscellaneous equipment specification.

**MFIOP.** See multifunction IOP.

**migrate.**

1. To install a new version or release of a program to replace an earlier version or release.
2. To move data from one location to another.

**miscellaneous equipment specification (MES).** A hardware change that is made after the time of the initial order.

**MSD.** See main storage dump.

**multifunction IOP (MFIOP).** A system processor that as a unit contains more than one processor function such as a diskette controller, a storage device controller, and a communications controller.



## Chapter 15. N

**n-core.** Any valid configuration of processors for a system that is capable of supporting 1 - n processors.

**NAT.** See network address translation.

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

**network address translation (NAT).**

1. In a firewall, the conversion of secure Internet Protocol (IP) addresses to external registered addresses. This enables communications with external networks but masks the IP addresses that are used inside the firewall.
2. The conversion of a network address that is assigned to a logical unit in one network into an address in an adjacent network.

**network administrator.** A person who defines the network configuration and other network-related information. This person controls how an enterprise or system uses its network resources.

**network boot.** The process of starting a computer directly over the network rather than from a disk.

**Network Installation Management (NIM).** An environment that provides installation and configuration of software within a network interface.

**network server description (NWSD).** An object that contains a description of the characteristics of a file server I/O processor that is attached to the system.

**NIM.** See Network Installation Management.

**node.**

1. In communications, an end point of a communication link or a junction common to two or more links in a network. Nodes can be processors, communication controllers, cluster controllers, terminals, or workstations. Nodes can vary in routing and other functional capabilities.
2. In networking, a point capable of sending and receiving data. A node can be a device, such as printer or workstation, a system, or a storage location on a disk.

**nonprogrammable workstation (NWS).** A workstation that does not have processing capability and does not allow the user to change its functions.

**NWS.** See nonprogrammable workstation.

**NWSD.** See network server description.



## Chapter 16. O

**OEM.** See original equipment manufacturer.

**ohm.** A unit of measure of electrical resistance.

**operating system (OS).** A collection of system programs that control the overall operation of a computer system.

**Operating System/400 (OS/400).** The IBM licensed program that was used as the operating system for iSeries servers.

**Operations Console.** A feature of System i Access for Windows® that provides the ability for a System i console to be either a local or a remote personal computer. With Operations Console, a system administrator, for example, can access the console from home.

**operator panel.** See control panel.

**optical device.** Either a CD-ROM drive, a digital video disc (DVD), or both.

### **OptiConnect.**

1. A System i system area network (SAN) that allows high-speed links between systems in a System i cluster. OptiConnect provides three hardware technologies (SPD OptiConnect, high-speed link (HSL) OptiConnect, and virtual OptiConnect) that can exist simultaneously on a single cluster node.

2. A feature of the IBM i operating system that allows a user to connect multiple System i systems by using SPD bus, high-speed link (HSL) loop, or virtual interpartition technologies.

**option.** See feature.

**original equipment manufacturer (OEM).** A manufacturer of equipment that can be marketed by another manufacturer.

**OS.** See operating system.

**OS/400.** See Operating System/400.





## Chapter 17. P

**paging space.** Area of nonvolatile storage used to hold portions of the shared memory partition's logical memory that are not resident in the shared memory pool.

**paging space device.** A physical or logical device that is used by the Virtual I/O Server to provide the paging space for a shared memory partition.

**partition.** A logical division of storage on a fixed disk.

**password.** In computer and network security, a specific string of characters used by a program, computer operator, or user to access the system and the information stored within it.

**PCI.** See Peripheral Component Interconnect.

**PCI bridge.** A device that connects one or more subordinate PCI buses to a primary PCI bus. The PCI bus that is closest to the system processor is the primary PCI bus, and the subordinate buses are secondary PCI buses.

**PCI bridge set.** A set of PCI card positions.

**PCI Express™ (PCIe).** A local serial interface that provides a high-speed data path between the processor and attached devices. Unlike previous PCI implementations that used a parallel bus architecture, PCI Express uses point-to-point serial links called lanes.

**PCI host bridge (PHB).** A device that merges data from PCI bridges for delivery to the system processor.

**PCI-X.** See Peripheral Component Interconnect-X.

**PCIe.** See PCI Express.

**PDF.** See Portable Document Format.

**Peripheral Component Interconnect (PCI).** A local bus that provides a high-speed data path between the processor and attached devices.

**Peripheral Component Interconnect-X (PCI-X).** An enhancement to the Peripheral Component Interconnect (PCI) architecture. PCI-X enhances the Peripheral Component Interconnect (PCI) standard by doubling the throughput capability and providing additional adapter-performance options while maintaining backward compatibility with PCI adapters.

**PHB.** See PCI host bridge.

**physical device.** An I/O device that is assigned to a logical partition and that is used directly.

**platform.** The combination of an operating system and hardware that makes up the operating environment in which a program runs.

**Point-to-Point Protocol (PPP).** A data-link protocol for communication between two computers that use a serial interface, typically a personal computer connected by telephone line to a server.

**port.** A hardware interface to which an I/O device is attached for the purpose of sending and receiving data.

**Portable Document Format (PDF).** A standard specified by Adobe® Systems, Incorporated, for the electronic distribution of documents. PDF files are compact; can be distributed globally via e-mail, the Web, intranets, or CD-ROM; and can be viewed with the Acrobat Reader.

**power cord.** The electrical connection between the AC power source and the computer.

**power down.** A CL command to turn the power off and bring an orderly end to system operation.

**power-on light.** The light on the operator panel that indicates that the DC power in the system is functioning.

**PowerVM™ Active Memory™ Sharing.** A technology that enables logical partitions to share the memory in the shared memory pool.

**PPP.** See Point-to-Point Protocol.

**preloaded system.** A system that is shipped with the licensed programs and program temporary fixes (PTFs) already installed on the disk.

**prestatic paging.** A phase of the IPL sequence that takes place prior to static paging, where normal Licensed Internal Code functions cannot access data from any disk (neither load-source nor non-load-source disk units).

**private key.** In secure communication, an algorithmic pattern used to encrypt messages that only the corresponding public key can decrypt. The private key is also used to decrypt messages that were encrypted by the corresponding public key. The private key is kept on the user's system and is protected by a password.

**private network.** A network established and operated by a private organization or corporation for users within that organization or corporation.

**problem analysis.** The process of finding the cause of a problem. For example, a program error, device error, or user error.

**processor.** A device for processing data from programmed instructions. It may be part of another unit.

**program temporary fix (PTF).** For System i, System p, and System z® products, a fix that is tested by IBM and is made available to all customers.

**programmable workstation.** A workstation that has some degree of processing capability and allows the user to change its functions.

**prompt.** A message or a displayed symbol that requests information or user action. The user must respond to allow the program to proceed.

**PTF.** See program temporary fix.

**public key.** In secure communication, an algorithmic pattern used to decrypt messages that were encrypted by the corresponding private key. A public key is also used to encrypt messages that can be decrypted only by the corresponding private key. Users broadcast their public keys to everyone with whom they must exchange encrypted messages.

**public network.** Generically, a network operated by common carriers or telecommunications administrators for the provision of circuit-switched, packet-switched, and nonswitched lines to the public.

## Chapter 18. R

**rack.** A free-standing structure or frame that can hold multiple servers and expansion units.

**rack stabilizer.** A plate that holds the rack stable or steady when a device is pulled out for service.

**RAID.** See Redundant Array of Independent Disks.

**RAID 5.** A form of parity RAID in which the disks operate independently, the data stripe size is no smaller than the exported block size, and parity check data is distributed across the array's disks.

**RAID 6.** A form of RAID that can continue to process read and write requests to all of an array's virtual disks in the presence of two concurrent disk failures.

**rail.** Hardware attached inside a rack to hold devices that are designated as installable in a rack.

**receptacle.** A hollowed electrical fitting that contains the live parts of a circuit.

**Redundant Array of Independent Disks (RAID).** A collection of two or more physical disk drives that present to the host an image of one or more logical disk drives. In the event of a physical device failure, the data can be read or regenerated from the other disk drives in the array due to data redundancy.

**reference code.** A group of characters that identifies the machine status or a specific error condition.

**release.** A distribution of a new product or new function and authorized program analysis report (APAR) fixes for an existing product. The first version of a product is announced as release 1 modification level 0.

**remote.** Pertaining to a system, program, or device that is accessed through a communication line.

**remote control panel.** A graphical interface that is provided by Operations Console that allows control panel operations to be performed from a remote location. This interface allows personal computer access to the control panel that controls operating or servicing the system.

**remote input/output (RIO).** A type of hardware architecture that facilitates faster input/output connection speeds between a system and expansion units.

**removable media.** Volumes that can be removed from the hardware devices (such as tape cartridges and optical disks) where they are read and written.

**RIO.** See remote input/output.



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## Chapter 19. S

**SAS.** See serial-attached SCSI.

**SCSI.** See Small Computer System Interface.

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

**serial-attached SCSI (SAS).** A type of SCSI that uses a point-to-point serial protocol, which replaces the traditional, parallel SCSI bus technology.

**server.** A software program or a computer that provides services to other software programs or other computers. See also host.

**server firmware.** The code that resides in system flash memory, and includes a number of subcomponents, including POWER Hypervisor™, power control, service processor, and logical partition firmware that is loaded into either AIX or Linux logical partitions.

**server-side include (SSI).** A facility for including dynamic information in documents sent to clients, such as current date, the last modification date of a file, and the size or last modification of other files.

**service action log.** A utility that displays entries requiring action by a service representative.

**service authority.** A special authority that allows the user to perform the alter function in the service functions.

**Service Focal Point™.** An application on the Hardware Management Console (HMC) that collects problems from the system and from logical partitions. It is used to view problems and to take action on problems.

**service processor.**

1. The interface to the Hardware Management Console (HMC) that provides hardware control and logical partition (LPAR) support for IBM Power Systems.
2. The logic that contains the processor function to start the system processor and handle error conditions.

**service provider.** 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 request number (SRN).** A group of numbers used by service technicians or the customer to determine the failing area of the system.

**service tools device ID.** A programming object used by both the PC and the IBM System i model as a means to authenticate the network connection between the two. A service tools device ID is unique to that PC and server connection. The service tools device ID can be managed by authorized users in dedicated service tools (DST) or system service tools (SST). The default service tools device ID is QCONSOLE.

**shared memory.** Physical memory that is assigned to a shared memory pool and shared among multiple logical partitions.

**shared memory pool.** A defined collection of physical memory blocks that are managed as a single memory pool by the hypervisor.

**shared processor pool.** A group of physical processors that provide processing capacity that can be shared among multiple logical partitions. Processing capacity from the shared processor pool can be assigned to each of the logical partitions in partial processor increments. The sum of the assigned processing capacity across all logical partitions in the shared processor pool cannot exceed the total processing capacity of the shared processor pool.

**short host name.** The system or machine name portion of a fully qualified host name; for example, in the fully qualified host name "system1.mysite.mycompany.com," the short host name is "system1."

**SIMM.** See single inline memory module.

**single inline memory module (SIMM).** In computer hardware, a small circuit card that carries a number of surface-mounted memory chips in a space-saving configuration with the connector pins protruding in a single line from the edge of the card. Varying numbers of SIMMs can be plugged easily into slots in a memory board to expand random access memory.

**Small Computer System Interface (SCSI).** A standard hardware interface that enables a variety of peripheral devices to communicate with one another.

**SMS.** See system management services.

**SNA.** See Systems Network Architecture.

**source server.** A server that is being upgraded with new hardware or software or whose data is being migrated.

**SRC.** See system reference code.

**SRN.** See service request number.

**SSI.** See server-side include.

**SST.** See system service tools.

**static IP address.** A fixed IP address for a persistent device or logical unit on a network that uses the IP standard. See also IP address.

**static NAT.** See static network address translation.

**static network address translation (static NAT).** A one-to-one mapping of IP addresses that allows a user to map an IP address on an internal network to an IP address that is to be made public. If static NAT is used, traffic can be initiated from either side of the connection.

**static paging.** A phase of the IPL sequence that takes place prior to limited paging during which only predefined areas of the load-source disk unit can be accessed.

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

**system.** A computer and its associated devices and programs.

**system ASP.** The auxiliary storage pool where system programs and system data reside. It can also include user programs and user data. The system ASP (ASPL) always exists.

**system console.** The device that is in control of the operating system after the system has been shut down and when the system is in a restricted state. Only one device can be the system console at one time.

**System i.** A family of IBM systems distinguished by their object-oriented architecture, integrated relational database, and high-level machine interface. System i systems support the IBM i, i5/OS, Operating System/400, AIX, and Linux operating systems.

**System i Navigator.** A no-charge feature of IBM i Access for Windows that is bundled with the IBM i operating system. System i Navigator provides a graphical user interface to common System i management functions. Some of the common management functions include basic operations, TCP/IP configuration, job management, users and groups, database management, and Management Central.

**system management services (SMS).** An interface that provides information about a system or logical partition and that performs tasks such as changing the boot list and setting the network parameters. This interface is used for AIX or Linux logical partitions.

**System Manager Security.** An application on the Hardware Management Console (HMC) that ensures that the HMC can operate securely in the client/server mode.

**system port.** A serial port that is available for specifically supported functions. This port is limited to serial-connected TTY console functions and use of approved call-home modems, and, in some cases, an uninterruptible power supply.

**system processor.** The logic that contains the processor function to translate and process the operating system commands and application program commands.

**system reference code (SRC).** An alphanumeric string of characters (code) that contains information, such as a failing field-replaceable unit, for a service representative, customer engineer, or customer to use for servicing a system.

**system service tools (SST).** The part of the service function used to service the system while the operating system is running.

**system unit.** The part of a computer that contains the processing unit, and may contain devices such as disk units and tape units.

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





## Chapter 20. T

**target server.**

1. A database that contains replication target tables.
2. In upgrades, the planned hardware configuration and software level that exists when the upgrade is completed.

**TCP.** See Transmission Control Protocol.

**TCP/IP.** See Transmission Control Protocol/Internet Protocol.

**Thin Console.** An appliance that provides a 5250-based operating system console for the IBM i operating system. This appliance connects directly to the server using one of the HMC Ethernet ports (labeled HMC 1 and HMC 2) on the back of the server.

**topic.** A single Web page at any level within an information center hierarchy.

**topic collection.** A functional group of Web pages. A topic collection can be a grouping at any level within an information center hierarchy.

**topology.** The physical or logical mapping of the location of networking components or nodes within a network. Common network topologies include bus, ring, star, and tree.

**Transmission Control Protocol (TCP).** A communication protocol used in the Internet and in any network that follows the Internet Engineering Task Force (IETF) standards for internetwork protocol. TCP provides a reliable host-to-host protocol in packet-switched communication networks and in interconnected systems of such networks.

**Transmission Control Protocol/Internet Protocol (TCP/IP).** An industry-standard, nonproprietary set of communication protocols that provides reliable end-to-end connections between applications over interconnected networks of different types.

**twinaxial cable.** A cable made of two twisted wires inside a shield.

**twinaxial console.** A 5250-based workstation using a twinaxial cable to connect to the system. The twinaxial console and the Operations Console can be a backup console for each other.



## Chapter 21. U

**unattended mode IPL.** An IPL mode that automatically loads the operating system without any user interaction. See also attended mode IPL.

**uncapped partition.** A logical partition that uses a shared processor pool whose assigned current processing capacity might be exceeded when the shared processor pool has any unused processing power. The value assigned to the uncapped partition determines the percentage of unused processing power that a logical partition receives when more than one uncapped partition is contending for the processing power in the shared processor pool.

**uncapped weight.** A number in the range of 0 through 255 that can be set for each logical partition in the shared processor pool. Based on these values, any available unused capacity is distributed to contending logical partitions in proportion to the normalized values of their uncapped weight.

**uninterruptible power supply.** A source of power from a battery installed between the commercial power and the system that keeps the system running, if a commercial power failure occurs, until it can complete an orderly end to system processing.

**unit.** The defined space within disk units that is addressed by the system.

**update.** To apply fixes to a system.

**upgrade.**

1. Any hardware or software change to a later release, or any hardware addition or software addition.
2. To install a new version or release of a product to replace an earlier version or release of the same product.

**user ASP.**

1. One or more auxiliary storage pools used to isolate journals, journal receivers, and save files from the other system objects stored in the system ASP.
2. One or more storage units used to isolate some objects from the other objects that are stored in the system ASP and other user ASPs. User ASPs are defined by the user.

**user ID.** See user identification.

**user identification (user ID).** The name used to associate the user profile with a user when a user signs on to a system.



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## Chapter 22. V

**vary off.** To make a device, control unit, or line unavailable for its normal intended use.

**vary on.** To make an independent disk pool available for its normal, intended use. All of the primary and secondary disk pools in a disk pool group will vary on together.

**version.** A separately licensed program that usually has significant new code or new function.

**VIOS.** See Virtual I/O Server.

**virtual fibre channel adapter.** A virtual adapter that provides client logical partitions with a fibre channel connection to a storage area network through the Virtual I/O Server logical partition. The framework uses N\_Port ID Virtualization (NPIV) and each virtual fibre channel adapter has a pair of unique Worldwide Port Names (WWPNs) associated with it.

**Virtual I/O Server (VIOS).** Software that facilitates the sharing of physical I/O resources between client logical partitions within the server.

**virtual private network (VPN).** An extension of a company's intranet over the existing framework of either a public or private network. A VPN ensures that the data that is sent between the two endpoints of its connection remains secure.

**virtual processor.** A setting that defines the assigned processing capacity represented to the operating system. Virtual processors represent a processing capacity less than that of a physical processor. A logical partition in the shared processor pool must have at least as many virtual processors as its assigned processing capacity.

**virtual SCSI client adapter.** A virtual adapter in one logical partition that communicates with a virtual SCSI server adapter in another partition. A virtual SCSI client adapter allows a logical partition to access a storage device being made available by another logical partition.

**virtual SCSI server adapter.** An adapter in one logical partition that is available to a virtual SCSI client adapter in another logical partition. A logical partition to which a storage device is assigned can map that device to a virtual SCSI server adapter.

**virtual service processor (VSP).** The firmware that controls the powering on and powering off of a logical partition, including loading the firmware that controls the I/O slots and initializing the memory space of the logical partition.

**virtual terminal.** A system object, created and controlled by an application program, that provides a functional representation or simulation of a physical display station.

**virtualization.** The substitution of virtual resources for actual resources, where the virtual resources have the same functions and external interfaces as their counterparts, but differ in attributes, such as size, performance, and cost. Virtualization is commonly applied to physical hardware resources by combining multiple physical resources into shared pools from which users receive virtual resources.

**vital product data (VPD).** Information that uniquely defines system, hardware, software, and microcode elements of a processing system.

**VPD.** See vital product data.

**VPN.** See virtual private network.

**VSP.** See virtual service processor.



## Chapter 23. W

**Web.** See World Wide Web.

**Web site.** A related collection of files available on the Web that is managed by a single entity (an organization or an individual) and contains information in hypertext for its users. A Web site often includes hypertext links to other Web sites.

**wizard.** User assistance that is an alternate path usually through complex and infrequently performed tasks. Presented sequentially, the panels of the wizard prompt the user for responses, and then take that data and perform the task. Wizards complete a single task and are usually self-contained.

**workstation.** A terminal or microcomputer at which a user can run applications and that is usually connected to a mainframe or a network.

**World Wide Web (Web, WWW).** A network of servers that contain programs and files. Many of the files contain hypertext links to other documents available through the network.

**WWW.** See World Wide Web.





## Chapter 24. Symbols and Numerics

**5250 display.** Any display device that uses the 5250 data stream.

**5250 emulation.** Any one of many licensed programs that allow a personal computer to perform like a 5250 display station or printer and to use the functions of an IBM i operating system.



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