

# Glossary

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This glossary provides a brief list of commonly used technical terms and their definitions.

**10BaseT/100BaseT.** Standard local area networking protocols, which run at speeds of 10Mbps and 100Mbps, respectively. Most older networks use 10BaseT, while newer networks use 100BaseT.

**Access point.** The bridge between a wired network and wireless devices.

**Access rate.** The speed at which users connect to the network. This is generally measured in bits per second, kilobits per second, or megabits per second.

**Adapter card.** A device that provides network communication capabilities when installed in a computer. Sometimes called a “network interface card.”

**Bit.** A single unit of data. See byte and gigabyte.

**BOOTP (Bootstrap Protocol).** An Internet protocol that allows a diskless workstation to discover its own IP address.

**Broadband.** A high-speed connection to the Internet, typically defined as starting at 384 Kbps. It allows large files and rich media content (content that uses video, audio or complex graphics like those used in high-end computer games) to quickly flow across the network to and from the user's computer.

**Browser.** A computer program that opens and displays Web pages, including Microsoft® Internet Explorer and Netscape Communicator. You need a Web browser to access the Web.

**Byte.** On almost all modern computers, a byte is equal to 8 bits. Large amounts of memory are indicated in terms of kilobytes (1,024 bytes), megabytes (1,048,576 bytes), and gigabytes (1,073,741,824 bytes). See bit and gigabyte.

**Data stream.** A sequence of digitally encoded signals used to represent information in transmission.

**DHCP (dynamic host configuration protocol).** A protocol for assigning dynamic IP addresses to devices on a network that allows a device to have a different IP address every time it connects to the network.

**Dial-up.** An Internet connection made via a telephone line.

**Download.** To copy a file from a computer on the Internet to your personal computer. All Web pages are downloaded from the Internet. When you enter a URL into your Web browser, the files that accompany that URL are copied and sent to your computer, where they are displayed using your Web browser.

**Driver.** Software that enables the operating system to recognize and operate devices installed in or attached to the computer, such as a printer.

**DSL (digital subscriber line).** A technology that takes advantage of standard copper telephone lines to provide high-speed Internet access.

**DSSS (direct sequence spread spectrum).** A transmission technology used in wireless LAN transmissions where a data signal combines with a higher data rate bit sequence, or chipping code, that divides the user data according to a spreading ratio.

**Ethernet.** A local area network protocol used to connect devices within a single building or campus at speeds up to 10 Mbps.

**Fast Ethernet.** A local area network protocol used to connect devices within a single building or campus at speeds up to 100 Mbps.

**Firewall.** A set of related programs located at the gateway server of a network that protects information contained within the network from users outside the network (on the Internet). A company with an intranet that also allows workers to access to the wider Internet installs a firewall to prevent outsiders from accessing its data resources.

**FTP (file transfer protocol).** A protocol used to send files over the Internet.

**Gateway.** A combination of hardware and software that links two different types of networks.

**Gbps (gigabits per second).** A measure of bandwidth capacity or transmission speed. It represents a billion bits per second.

**Gigabyte.** A billion bytes of data.

**HPNA.** Home Phone Network Alliance.

**Hub.** A common connection point for devices on a network.

**IEEE.** The Institute of Electrical and Electronics Engineers. An organization of engineers, scientists, and students best known for developing standards for the computer and electronics industry.

**IEEE 802.11b.** 802.11 is the family of specifications developed by the IEEE for wireless LAN technology. 802.11b applies to wireless local area networks operating at 11 Mbps transmission rate.

**ISDN (integrated services digital network).** A set of standards for digital transmission capable of carrying data, voice, and video over ordinary telephone copper wire as well as over other media. ISDN protocols are used worldwide for connections to public ISDN networks or to attach ISDN devices to ISDN-capable PBX systems (ISPBXs).

**Interface.** A point of connection between two systems, networks, or devices.

**Internet.** The world's largest computer network, which originated from a research effort initiated by the U.S. Government and was initially used to connect defense contractors and U.S. universities. Today, its nature is more commercial, and it is becoming the preferred method of linking business and individual computers to one another.

**Internet access.** The physical connection between the subscriber and the nearest Internet access node.

**ISP (internet service provider).** A single computer network, connected to the Internet, that provides access for individual computers to the Internet. ISPs provide local dial-up and broadband Internet access for personal computers.

**Intranet.** A local network with internal Web servers that are accessible to computers in the office, but not accessible from outside the company. Many intranets are protected from exterior access by security devices such as firewalls.

**IP Address.** The 32-bit numeric address that identifies a computer or device on a TCP/IP network. An IP address is written as four numbers separated by periods. For example, 1.160.10.240 could be an IP address.

**IPX (internetwork packet exchange).** A networking protocol used for connectionless communications.

**Kbps (kilobits per second).** A measure of bandwidth capacity or transmission speed representing a thousand bits per second.

**Kilobit.** 1,024 bits for technical purposes, such as data storage. 1,000 for general purposes. Data transfer rates are measured in kilobits per second, abbreviated as Kbps, and count a kilo as 1,000 bits.

**Kilobytes.** In decimal systems, kilo stands for 1,000, but in binary systems, a kilo is 1,024 (2 to the 10th power). Technically, therefore, a kilobyte is 1,024 bytes, but it is often used loosely as a synonym for 1,000 bytes. In computer literature, kilobyte is usually abbreviated as K or KB. To distinguish between a decimal K (1,000) and a binary K (1,024), the IEEE has suggested following the convention of using a small k for a decimal kilo and a capital K for a binary kilo, but this convention is by no means strictly followed.

**LAN (local area network).** A data communications network covering a small area, usually within the confines of a building or floors within a building. Common LAN protocols are Ethernet and Token Ring.

**LED (light-emitting diode).** An electronic device that lights up when electricity is passed through it.

**Line sharing.** Allows a consumer to use his or her existing phone line for both normal phone service provided by the local phone company and high-speed digital subscriber line (DSL) Internet access through another provider.

**MAC (media access control) Address.** A unique hardware address that identifies each node of a network.

**Mbps (megabits per second).** A measure of bandwidth capacity or transmission speed. It represents a million bits per second.

**MBps (megabytes per second).** A measure of bandwidth capacity or transmission speed. It represents a million bytes per second.

**Megabit.** When used to describe data storage, 1,024 kilobits. When used to describe data transfer rates, it refers to one million bits. Network speeds are often measured in megabits per second.

**Megabyte.** When used to describe data storage, 1,048,576 bytes. Megabyte is frequently abbreviated as M or MB. When used to describe data transfer rates, as in MBps, it refers to one million bytes.

**Microsoft Windows®.** A computer operating system by Microsoft Corporation,

**Modem (MODulator/DEModulator).** Equipment that converts digital signals to analog signals and vice versa. Modems are used to send data signals (digital) over the telephone network, which is usually analog.

**NDIS (network driver interface specification).** A Windows device driver interface that enables a single network interface card to support multiple network protocols.

**NetBEUI (NetBIOS enhanced user interface).** An enhanced version of the NetBIOS protocol used by network operating systems such as LAN Manager, LAN Server, Windows for Workgroups, Windows 95, and Windows NT.

**NIC (network interface controller).** The circuit board or other form of computer hardware that serves as the interface between a computer (or other form of data terminal equipment) and the communications network. In DSL, a common NIC is an Ethernet NIC, which serves as the interface to the DSL modem from the computer.

**Node.** A processing location such as a computer or other device. Every node has a unique network address.

**OS (operating system).** The interface that permits a person and a computer to “talk” to one another. Microsoft Windows, the most popular operating system, displays icons, menus, and dialog boxes to find out what you want. You use a mouse and keyboard to reply. See Microsoft Windows.

**Packet.** A sub-unit of a data stream.

**Packet switched network.** A network that transmits data in units called packets in a connectionless manner. Data streams are broken into packets at the front end of a transmission, sent over the best available network connection, and then reassembled in their original order at the destination endpoint.

**PCMCIA (Personal Computer Memory Card International Association).** The organization responsible for developing the standard for small, credit card-sized devices, called PC Cards.

**PDF (portable document format).** A file format that has captured all the elements of a printed document as an electronic image, which you can view, navigate, print, or forward to someone else. PDF files are created using Adobe Acrobat, Acrobat Capture, or similar products. To open the files, you need the free Acrobat Reader, which you can easily download. Once you have downloaded the reader, it starts automatically whenever you want to open a PDF file.

**Router.** A device that connects local area networks.

**Server.** A fast, high-power computer that is used as the repository and distributor of data, and to control various applications. Servers can be used for a variety of applications including hosting websites, email databases, and other types of database applications.

**SPX (sequenced packet exchange).** A transport layer protocol used in Novell Netware networks to provide connection-oriented services between two nodes on the network. Used primarily by client/server applications.

**STP (Shielded Twisted Pair).** A type of cable that consists of two shielded wires twisted around each other. It is used extensively for local area networks and telephone connections.

**Switch.** A switch is essentially an intelligent hub. When a packet arrives at the switch, it looks at the packet, determines which computer the packet is directed to, and forwards the packet to that computer. By contrast, a hub regenerates the packet and broadcasts it to every computer connected through it.

**TCP/IP (transmission control protocol/Internet protocol).** A networking protocol that provides communication across interconnected networks, between computers with diverse hardware architectures and various operating systems. TCP and IP are only two protocols in the family of Internet protocols. However, TCP/IP is used to denote the family of common Internet protocols.

**Telnet.** Terminal emulation program for TCP/IP networks that runs on your computer and connects your PC to a server on the network.

**Traffic.** A measure of the quantity of data transferred from one computer to another computer per unit of time. Traffic is normally measured in megabytes.

**Upload.** To transmit files from your computer to another through a network.

**UTP (Unshielded Twisted Pair).** A type of cable that consists of two unshielded wires twisted around each other. It is used extensively for local area networks and telephone connections.

**WECA.** Wireless Ethernet Compatibility Alliance. WECA's mission is to certify interoperability of Wi-Fi (IEEE 802.11 products) and to promote Wi-Fi as the global wireless LAN standard across all market segments.

**WLAN (wireless local area network).** A type of local area network that uses high-frequency radio waves instead of wires to communicate.

**Wi-Fi™ (wireless fidelity).** The standard for wireless fidelity. Certifies interoperability with all other Wi-Fi-certified products.

**Wireless Access Point.** A wireless access point acts as a bridge between wired Ethernet and wireless clients.