

Glossary

N u m e r i c

10Base-2

An adaptation of the Ethernet standard that uses thin coaxial cable and provides data transfer rates of up to 10 Mbps. The maximum effective distance for 10Base-2 is 185 meters. 10Base-2 is also known as *thinnet*.

10Base-5

The original Ethernet standard that uses thick coaxial cable and provides data transfer rates of up to 10 Mbps. The maximum effective distance for 10Base-5 is 500 meters. 10Base-5 is also known as *thicknet*.

10Base-F

An adaptation of the Ethernet standard that uses optical fiber cable and provides data transfer rates of up to 10 Mbps. 10Base-F can transmit data over very long distances with little loss of data integrity.

10Base-T

An adaptation of the Ethernet standard that runs over unshielded twisted-pair wiring and provides data transfer rates of 10 Mbps.

10 Gigabit Ethernet

An emerging high-speed network standard that will use high-capacity cabling to provide data transfer rates up to 10,000 Mbps.

100Base-T (Fast Ethernet)

A high-speed network standard, based on Ethernet, that provides data transfer rates as high as 100 Mbps.

1000Base-T (Gigabit Ethernet)

An emerging high-speed network standard, based on Ethernet, that provides data transfer rates as high as 1000 Mbps.

32-bit

Describes the number of bits used by an operating system to perform an operation. The term also describes the microprocessor on which the operating system runs.

A

AAL

See *ATM Adaptation Layer*.

abend

A message issued by an operating system when it detects a serious problem, such as a hardware or software failure. An abend will stop a NetWare server. This term is derived from *abnormal end*.

access control list (ACL)

In NDS, a comprehensive list of all objects' multivalued properties. Each value contains a complete object (trustee) name, an indication of the type of rights held by the trustee, the specific rights settings, and an indication of whether the rights are inheritable. Any inherited rights filters that have been set on this object are also included.

access method

A technique for moving data between main storage and input/output devices. In a System Network Architecture (SNA) environment, it is the software that controls the flow of information in a network.

accounting

A NetWare option that network administrators use to charge users for network resources and services. Each user can be assigned an account balance that diminishes as the user uses the network.

ACL

See *access control list*.

ActiveX

A set of rules, developed by Microsoft, that define how applications should share information. Similar to Java, ActiveX enables users to create dynamic, interactive Web pages.

adapter

A part that connects two computer devices or systems, physically or electrically, and enables them to work together. A special type of adapter, called an expansion board, can be inserted into a computer to give it added capabilities.

address

An identifier assigned to networks, stations, and other devices so that each device can be separately designated to receive and reply to messages.

Address Resolution Protocol (ARP)

An Internet protocol that dynamically maps Internet addresses to physical (hardware) addresses on local area networks. ARP is limited to networks that support hardware broadcast.

ADSL

See *asymmetric digital subscriber line*.

Advanced Peer-to-Peer Networking (APPN)

A variant of the Systems Network Architecture (SNA) protocol, APPN is used by network nodes to exchange topology information dynamically, leading to simplified parameter definitions.

Advanced Program-to-Program Communications (APPC)

The part of the SNA protocol that establishes communication conditions. Programs use these conditions to communicate across the network without the involvement of a common host system or of terminal emulation.

Advanced Program-to-Program Communications File Transfer Protocol (AFTP)

A protocol used by applications and end users to copy text and binary files between any computers that are running an AFTP server.

Advanced Technical Training (ATT)

A Novell program that provides detailed information about Novell products and technologies. ATT courses are taught by Novell's most skilled networking experts and are designed for Novell customers and partners who have extensive experience with Novell products.

advertising

The process by which services on a network inform other network devices of their existence. The NetWare network operating system (NOS) uses the Service Advertising Protocol (SAP) to do this.

AFP

See AppleTalk Filing Protocol.

AFTP

See Advanced Program-to-Program Communications File Transfer Protocol.

agent

The part of a networked system that prepares and exchanges information on behalf of a software entity.

AIO

See Asynchronous Input/Output.

alarm

An audible or visible warning signal that alerts a network supervisor to a system error or a critical situation on the network.

alert

A message sent by management devices to management consoles to inform network supervisors of thresholds reached and discrepancies on the network.

algorithm

A prescribed set of well-defined rules or processes for arriving at a solution to a problem.

alias

One of several alternative hostnames with the same Internet address. Hostname aliases often indicate that the host with that alias provides a particular network service.

America Online (AOL)

A popular online service that provides its subscribers with a wide variety of information over telecommunications lines.

American National Standards Institute (ANSI)

An organization that establishes many data communications and terminal standards. ANSI is the recognized U.S. representative within ITU and ISO. See also *International Telecommunications Union* and *International Organization for Standardization*.

American Standard Code for Information Interchange (ASCII)

A seven-bit code, intended as a U.S. standard, for the interchange of information among communications devices.

analog

Data in the form of some continuously variable physical quantity. For a communications signal, a continuously variable waveform (as opposed to discretely variable). The public telephone network was designed to transmit voice messages in analog form. Contrast with *digital*.

ANSI

See *American National Standards Institute*.

AOL

See *America Online*.

API

See *application programming interface*.

APPC

See *Advanced Program-to-Program Communications*.

AppleShare

AppleShare is Apple Computer's networking solution. It requires a Macintosh computer as a network server and includes both server and workstation software. It uses the AppleTalk Filing Protocol (AFP).

applet

A small application, such as a utility, usually written in Java and designed to execute from within another application.

AppleTalk

A set of communication protocols (such as IPX/SPX and NCP) that define networking on an AppleShare network. In the OSI model, AppleTalk is comparable to NetWare communications protocols, in that both protocols specify communications, ranging from application interfaces to media access.

AppleTalk Filing Protocol (AFP)

A protocol used to perform distributed file sharing across an AppleTalk network.

application

A software program or program package that makes calls to the operating system and manipulates data files, thus allowing a user to perform a specific job (such as accounting or word processing).

application interface

A set of software routines and associated conventions that permit application programmers to use that interface as a part of any application. For example, the ManageWise application interface lets a programmer use ManageWise file structures and services within an application. See also *application programming interface*.

application layer

The topmost network layer in the OSI reference model; it is responsible for giving applications access to the network.

application programming interface (API)

A set of routines, protocols, and tools used to build software applications. Most operating environments provide APIs so that programmers can write applications consistent with the operating environment.

application provisioning

The act of distributing software from a central data center to a client on demand. See also *application service provider (ASP)*.

application server

A server in a client-server network that runs one or more applications that can be shared by client stations and that also shares the data processing burden with client stations. While application servers share responsibilities with the client stations, other servers, such as file servers, simply send, receive, and store files, requiring client stations to run all applications and process all data.

application service provider (ASP)

Any company that manages and distributes software-based services to other companies and individuals from a central data center, typically across the Internet.

APPN

See *Advanced Peer-to-Peer Networking*.

approval routing

A system of document management that allows only approved documents to be published to the Web. Documents are routed automatically according to an approval model established by the system administrator. This model can be configured in three ways: documents go to a pending folder to await approval before posting, documents are automatically posted upon completion, or documents are automatically rejected.

architecture

The design or structure of computer software, hardware, or networks.

archive

To save a copy of every object in a file system with a separate copy of all changes made to that file. In addition to protecting files from loss, this approach also permits any previous version of a file to be restored, typically by date and time.

ARCnet

See *Attached Resource Computer Network*.

ARP

See *Address Resolution Protocol*.

AS/400

An IBM minicomputer.

ASCII

See *American Standard Code for Information Interchange*.

ASP

See *application service provider*.

asymmetric digital subscriber line (ADSL)

A new technology used to send more data over existing copper telephone lines. ADSL supports data rates of from 1.5 to 9 Mbps when receiving data and from 16 to 640 Kbps when sending data.

asynchronous

Describes a data transmission method in which each character is synchronized individually, usually by means of start and stop elements. The gap between each character is not a fixed length. See also *synchronous*.

Asynchronous Input/Output (AIO)

An I/O model in which processing overlaps input and output.

Asynchronous Transfer Mode (ATM)

A scalable network technology that uses a fixed-size packet, called a cell, to transfer data. Each packet holds 53 bytes, and ATM data transfer rates range from 25 Mbps to 2.4 Gbps.

ATM

See *Asynchronous Transfer Mode*.

ATM Adaptation Layer (AAL)

An ATM layer that converts data packets into ATM cells. Once ATM cells have been transmitted across an ATM network, they are reconverted into data packets by the receiving AAL.

ATT

See *Advanced Technical Training*.

attach

To access a network server; particularly to access additional servers after logging in to one server.

Attached Resource Computer Network (ARCnet)

A proprietary token-bus networking architecture developed by Datapoint Corporation in the late-1960s. ARCnet is widely licensed by third-party vendors and was a popular networking architecture, especially in smaller installations. It has a bandwidth of 2.5 Mbps, is reliable, and supports coaxial, twisted-pair, and optical fiber cable-based implementations.

attenuation

A decrease in the power of a signal, usually occurring as a result of absorption, reflection, diffusion, scattering, deflection, or dispersion.

attributes

A technique for describing access to and properties of files and directories within a filing system. For NetWare files, attributes include Read, Write, Create, Delete, and Execute Only (prevents files from being deleted or copied). For NetWare directories, attributes include Read, Write, Create, Execute, and Hidden (hides information about the directory from file listings, preventing unauthorized access, deletion, or copying).

Audio Video Interleave (AVI)

A file format developed to meet Microsoft's Video for Windows standard. Picture and sound elements are stored in alternating segments within the file, a process referred to as interleaving. See also *MPEG* and *QuickTime*.

authentication

The process of identifying an individual, usually based on a username and password. Authentication ensures that the individual is who he or she claims to be.

AVI

See *Audio Video Interleave*.

B

backbone

A segment that connects two or more local area network (LAN) segments to provide a transmission path between them. A bridge or router usually connects each network segment to the backbone. Backbones in telecommunications generally carry the most traffic.

backbone network

The primary connectivity mechanism of a hierarchical, distributed network. Ensures that all systems that are connected to an intermediate system on the backbone are also connected to one another.

backup

A duplicate of data (file, directory, volume), copied to a storage device (floppy diskette, cartridge tape, hard disk). A backup can be retrieved and restored if the original is corrupted or destroyed.

back up

To copy data (file, directory, or volume) to storage media such as floppy disks, cartridge tapes, hard disks, or other media. Data that is backed up can be restored if the original is corrupted or destroyed.

backup domain controller (BDC)

A Windows NT server that contains a copy of the information stored in the primary domain controller (PDC). A BDC can perform authentication and security services at any time and is particularly useful if the PDC fails. There can be any number of BDCs in a domain.

backward compatible

Software or hardware designed to be compatible with earlier versions of the same product. For example, a word processor that can edit documents created in an earlier release of the same software.

bad block table

A list, kept on a hard disk, of storage locations on the disk that are damaged or physically unable to hold data reliably. Also called “media defect list.” See also *Hot Fix* and *read-after-write verification*.

bandwidth

The carrying capacity of a circuit, usually measured in bits per second for digital circuits, or hertz for analog circuits.

baseband

A network technology that uses a single carrier frequency and requires that all stations attached to a network participate in every transmission.

basic input/output system (BIOS)

A set of programs, usually in firmware, that enables each computer’s CPU to communicate with printers, disks, keyboards, consoles, and other attached input and output devices.

Basic Rate Interface (BRI)

The ISDN configuration that consists of two 64 Kbps B-channels and one D-channel that carries call-control information.

BBS

See *bulletin board system*.

BDC

See *backup domain controller*.

beaconing

In token-ring networks, the state that results when an error condition occurs, preventing communication until the error condition is resolved.

binary

A numbering system in which all numbers are represented by combinations of zero and one.

bindery

A network database, in versions of the NetWare network operating system earlier than 4.0, that contains definitions for entities such as users, groups, and workgroups.

biometrics

Authentication methods that use measurable characteristics of the human body, such as finger and thumbprints, the iris or retina, and voice and facial patterns.

BIOS

See *basic input/output system*.

bit

A binary digit, either a one or a zero.

bitmap (BMP)

A binary representation of a graphics image where rows and columns of dots constitute the image.

bits per second (bps)

The rate at which data is transferred over a serial interface.

bitstream

A continuous stream of data transmitted over a serial communications line.

block

A set of continuous bits or bytes that make up a definable quantity of information, such as a message.

BMP

See *bitmap*.

boot

To start or restart a computer and ready it for use. A “cold” boot is done by turning on the power switch. A “warm” boot resets the computer without turning off the power source.

BOOTP

See *Bootstrap Protocol*.

Bootstrap Protocol (BOOTP)

An Internet protocol used by a diskless workstation to discover its own IP address, the IP address of a BOOTP server on the network, and a file that can be loaded into memory to boot the machine. Using BOOTP, a workstation can boot without a hard or floppy disk drive.

border

Any connecting point between your network and another network—whether the other network is a network within your organization, the public Internet, or another organization’s private network.

BorderManager

The Novell software product that can be used to securely connect a network to the Internet or any other network.

bps

See *bits per second*.

BRI

See *Basic Rate Interface*.

bridge

See *router*.

broadband

A description of any network that multiplexes multiple, independent network carriers on a single cable. Several networks can coexist on a single cable. Traffic from one network does not interfere with traffic from another network because conversations happen on different frequencies.

broadcast

1. A packet delivery service in which all nodes on a network receive a copy of any frame that is designated for broadcast.
2. When used as a verb, to send a message to all nodes.

browse

To scan a collection of items, such as a database, a file manager view, a list box, Web pages, or text files, for items of interest. To browse implies observing rather than changing information.

browser

A utility that combines viewing with the ability to perform other actions, depending on rights or other dependencies. For example, with a Web browser a user can access pages on the World Wide Web; with a NetWare Administrator browser window a user can access the NDS tree.

buffer

A memory area or electronic register where data is stored temporarily while awaiting disposition. A buffer compensates for differences in data-flow rates (for example, between a terminal and its transmission line), and is also used as a data backup mechanism. A buffer can hold data that may be retransmitted if an error is detected during transmission.

bulletin board system (BBS)

An electronic message center. Most bulletin board systems serve specific interest groups and can be accessed with a PC and a modem.

burst

A method of data transfer in which information is sent as a large unit in one high-speed transmission.

bus

In networking, the central cable that connects all the devices on a local-area network (LAN); also called the backbone.

bus topology

The linear LAN used by Ethernet networks.

byte

A sequence of eight binary digits, or bits, that represents a character.

C**CA**

See *Certificate Authority*.

cache

1. A high-speed RAM section that holds blocks of data the CPU is currently using; it minimizes the time the CPU spends accessing memory.
2. A block of high-speed memory at the border of a network and the Internet that holds frequently accessed Internet information, thereby reducing retrieval times for information often requested from the Internet.

Cache Object Store (COS)

A high-performance, scalable file management system designed specifically for caching.

carrier sense multiple access/collision detection (CSMA/CD)

A transmission method in which the sending computer waits for the line to be free before sending a message. If two computers accidentally transmit at the same time and their messages collide, they wait and send again at different times.

CBT

See *computer-based training*.

CCR

See *Continuing Certification Requirement*.

CCITT

See *International Telecommunications Union*.

CD-ROM

See *compact disc read-only memory*.

cell

A fixed-size packet of data. Each cell has a header that contains the path information used to relay it through switching devices or networks. For example, Asynchronous Transfer Mode (ATM) uses cells that are 53 bytes in size.

cell relay

A technology that is used to transmit data in small, fixed-size packets, called cells. Cells contain path information that is used by switching devices to swiftly route cells to their intended destinations.

central processing unit (CPU)

The component of a computer that controls the interpretation and execution of instructions.

certificate

A digital document that verifies that a specific public key belongs to a given individual. It is used to prevent unauthorized users from using phony keys to impersonate legitimate users. Certificates contain, at a minimum, a public key and a name. Normally, they also contain the expiration date of the key, the name of the certifying authority that issued the certificate, and the serial number of the certificate. They can also contain the digital signature of the certificate issuer.

Certificate Authority (CA)

An entity that issues the digital certificates used in public-key cryptography and attests to the identity of the person or organization to whom it issues the certificates. For example, a company may issue certificates to its employees, a university to its students, or a town to its citizens.

CGI

See *Common Gateway Interface*.

Challenge Handshake Authentication Protocol (CHAP)

A type of authentication in which the authentication agent (typically a network server) sends the client program a key that can encrypt the username and password. Using this protocol, the username and password can be transmitted in an encrypted form that protects them against eavesdroppers.

channel

1. A path for transmitting electromagnetic signals; a synonym for line or link.
2. In ZENworks for Servers, a virtual collection of distributions to which a subscriber subscribes.

CHAP

See *Challenge Handshake Authentication Protocol*.

character

A single letter, figure, punctuation mark, or symbol produced by a computer keystroke. Each character is represented by a byte.

CIP

See *Cluster Interconnect Protocol*.

circuit

Any path that can carry an electrical current.

circuit board

A thin, flat plate in the computer that contains chips, integrated circuits and other electronic components. See also *system board*.

circuit-switching network

A network that transmits data over a temporary physical circuit established between two parties on a dedicated line. An example of a circuit-switching network is the telephone system. Contrast with *packet-switching network*.

client

1. A node or workstation (computer) on a computer network that requests services from a network server. Client stations run client software.
2. An executing software program or set of programs through which a client station sends a request to a server and waits for a response.
3. The user end of a client-server connection.

client-server model

1. A data communication model that relies on distributed, intelligent interaction between network servers and individual (client) workstations. Clients request services from servers. Servers receive client requests and return requested data or results. Clients and servers may be any class of computer, but often the client is a desktop computer and servers are powerful microcomputers, “workstation class” computers, or minicomputers.
2. Data communication model in which there is (1) server software that starts execution before communication begins and, after communication begins, continually accepts requests from and returns responses to clients, and (2) client software that periodically sends requests for services to the server and accepts server responses.

client-server network

A network consisting of client nodes (workstations) which have client capabilities only and server nodes which have (usually) server capabilities only. On a client-server network, communication and data sharing between clients is typically arbitrated by the network servers. Each client runs client software and each server runs a client-server operating system. A simple NetWare network with only one server, a file server, is a classic example of a client-server network. See also *client-server operating system*.

client-server operating system

An operating system which runs on a server in a client-server network and which coordinates the use (by clients) of all resources available from that server. Server resources include hardware such as hard disks, RAM, printers, and modems. Resources also include logical systems such as the network file system, network directory services, and the information (data) therein. The NetWare 3 and NetWare 4 operating systems are client-server operating systems. See also *client-server network*.

cluster

1. A group of terminals or workstations attached to a common control unit or server.

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2. A group of several servers that share work and may be able to back each other up if one server fails.

cluster controller

A device that manages the input and output of several devices. For example, a cluster controller can gather and multiplex messages from several terminals and then send them over a single link to the mainframe.

clustering

The act of connecting multiple computers and making them act like a single machine. Organizations often cluster servers to distribute computing-intensive tasks and risks. If one server in a cluster fails, some operating systems can move its processes to another server, allowing end users to continue working while the first server is revived.

Cluster Interconnect Protocol (CIP)

A Novell Cluster Services protocol that verifies the actual status of each node in a cluster.

coaxial cable

A type of cable that uses two conductors: a central, solid wire core, surrounded by insulation, which is then surrounded by a braided wire conductor sheath. This cable is well-suited for networking because it accommodates high bandwidth and is relatively resistant to interference.

collision

The result of simultaneous data transmission by two or more devices. Data is often lost when a collision occurs. The transmitting devices wait a random amount of time before retransmitting the original data.

Common Gateway Interface (CGI)

A standard for interfacing external applications with information servers, such as HTTP, or Web servers. A CGI program is executed in real time, so it can output dynamic information.

Common Object Request Broker Architecture (CORBA)

An architecture that enables communication between objects, regardless of their programming languages or operating platforms.

compact disc read-only memory (CD-ROM)

A type of optical disk that can store large amounts of data, up to 1GB.

compression

A method of compacting data into a smaller number of bits for more efficient transmission or storage.

computer-based training (CBT)

A type of education in which the student learns by completing training programs on a computer.

concentrator

A device with a single bus and multiple connections to computers; it provides a star-wired physical layout.

configuration

The way in which a system or part of a system, such as a piece of software, is set up, based on a number of possible choices.

configuration management

The management of networked applications and their related user access.

connection

A logical communication path between two hosts. TCP modules in each host provide the connection.

connectionless

A model of interconnection in which communication takes place without first establishing a connection.

connectivity

The ability to connect to and communicate with multiple architectures on a single network.

connector

The part of a cable that plugs into a port or interface to connect one device to another.

console

The monitor and keyboard from which you actually view and control server or host activity.

container object

In the NDS hierarchy, containers are objects that are allowed to have subordinate objects (leaf objects). They are typically named after locations, divisions, departments, or workgroups within a company and result in the formation of an NDS tree as other objects are grouped within them.

continuing certification requirement (CCR)

Many of Novell's certifications such as Certified Novell Engineer and Certified Directory Engineer require that periodical refresher courses be taken to maintain the validity of the certification.

controller board

See *adapter*.

CORBA

See *Common Object Request Broker Architecture*.

COS

See *cache object store*.

CPU

See *central processing unit*.

cross-platform

The capability of software or hardware to run identically on different platforms.

crosstalk

An unwanted transfer of energy from one circuit to another, usually interfering with transmission. Crosstalk typically occurs between adjacent circuits.

cryptographic service provider (CSP)

An independent software module that provides your network or system with authentication, encoding, and encryption capabilities.

cryptography

The science of information security. In computer terms, it usually involves converting ordinary text (also called plaintext or cleartext) into ciphertext (scrambled text) and back again, a process called encryption and decryption.

CSMA/CD

See *carrier sense multiple access / collision detection*.

CSP

See *cryptographic service provider*.

D**daisy chain**

A hardware configuration in which devices are connected to one another in a series.

data

A series of electrical charges arranged in patterns to represent information. Data refers to the form of the information (the electrical patterns); it is not the information itself.

database

A collection of data with a given structure for accepting, storing, and providing data for single or multiple users.

database management system (DBMS)

A collection of programs that enables a user to store, modify, and extract information from a database.

data compression device

Any hardware that compresses data into a smaller number of bits, allowing more data to be transmitted per second than the link speed otherwise allows.

Data Encryption Standard (DES)

A standard encryption technique that scrambles data into a code for transmission over a public network.

datagram

One packet of information and associated delivery information that is routed through a packet-switching network.

data-link layer

The second of seven layers of the Open Systems Interconnection (OSI) reference model. The data-link layer packages and addresses information and controls the flow of separate transmissions over communication lines.

data transfer rate

The speed at which data is transmitted from one device to another. Data transfer rates are often measured in megabits per second (Mbps) or megabytes per second (MBps).

data vault

An off-site data storage facility used as a backup to protect data from hardware failure, natural disaster, theft, or other threats.

DBMS

See *database management system*.

DDNS

See *Dynamic Domain Name System*.

debugger

A tool used by developers to identify errors in a program in order to facilitate their removal.

DEC

See *Digital Equipment Corporation*.

decision support system (DSS)

Software that organizes the data that managers can use when making decisions.

decryption

The process of unscrambling or decoding encrypted data. Decryption usually requires a secret key or password.

dedicated

A device that has only one function. For example, a dedicated server can only function as a server; it cannot be used as a workstation. See also *nondedicated*.

dedicated line

A leased or private communications line. See also *dial-up line*.

de facto standard

An open or proprietary standard that has gained enough industry acceptance to be the dominant standard.

delta change

A small quantitative or incremental change. The use of the word “delta” is derived from mathematics, where the Greek letter delta is used to represent very small numbers.

demodulation

The process of recovering information from a previously modulated carrier frequency by converting analog signals into digital signals. See also *modem*.

DEN

See *Directory Enabled Network*.

DENIM

See *Directory-Enabled Net Infrastructure Model*.

Department of Defense (DoD)

The U.S. military body responsible for sponsoring many software engineering standards.

DES

See *Data Encryption Standard*.

desktop computer

A small-scale computer that fits on a desktop and that has a microprocessor system; it is also called a microcomputer or PC. Contrast with *minicomputer* and *mainframe computer*.

desktop operating system

The software that manages a workstation's applications and resources. An operating system controls data storage, recognizes input, sends output, manages peripheral devices, and executes compatible applications. See also *operating system* and *network operating system*.

developer

One who develops software, either for internal use or for commercial sale.

device

A mechanical, electrical, or electronic peripheral with a specific purpose. For example, a printer or a mouse.

device driver

Software or firmware that translates operating system requests (such as input/output requests) into a format that is recognizable by specific hardware, such as adapters.

DHCP

See *Dynamic Host Configuration Protocol*.

dial-up line

A communications line accessible through dial-up facilities, typically the public telephone network. See also *dedicated line*.

digital

The representation of information using ones and zeros. It is discretely variable as opposed to continuously variable. Data characters are coded in discrete electrical pulses, or signal levels. Contrast with *analog*.

Digital Equipment Corporation (DEC)

A leading producer of workstations, servers, and PCs. DEC also developed the AltaVista Internet search engine.

digital identity

User data that is stored centrally in a directory such as NDS eDirectory. Because digital identities are not stored on a PC or on any one server, users can easily access them from anywhere on the network (even on the Internet). Digital identities contain information such as user id, password, phone number, e-mail address, desktop preferences, credit card number, and security access level.

digital subscriber line (DSL)

A digital telecommunications technology for fast two-way data connections over ordinary copper telephone lines.

digital versatile disk (DVD)

An optical disk technology that is expected to rapidly replace the CD-ROM disk. DVDs can contain between 4.7GB and 17GB of data and have access rates of 600 KBps to 1.3 MBps.

directory

An electronic file folder that organizes files into a hierarchical structure.

directory caching

A NetWare feature used to write copies of the file allocation table and the directory entry table into the network server's memory. A file's location can then be read from memory, which is faster than reading it from a disk.

Directory-Enabled Net Infrastructure Model (DENIM)

An architecture that describes how Novell and its industry partners deliver Net services that securely connect internal and external networks, integrate with other services through open standards, and work consistently across all leading operating environments.

Directory Enabled Network (DEN)

A network that can associate users and applications to services available from the network.

directory hashing

A method of indexing file locations on a disk so the time needed to locate a file is reduced. This is a NetWare feature to improve performance.

directory rights

The restrictions specific to a particular directory.

directory services

The network services that provide information about an entity of interest; it is like an electronic phone book to help network clients find services. There are several designs, including the X.500 standard, the Domain Name System, and Novell Directory Services.

disk

A round plate on which data can be encoded. There are two basic types of disks: *magnetic disks* and *optical disks*.

disk driver

Software that transfers or interprets commands between the operating system and the hard disk. The disk driver communicates through an adapter connected by an internal cable to the disk drive.

disk duplexing

A NetWare feature that protects data from failures in network hardware. In disk duplexing, all data on one hard disk is duplicated on a second hard disk on a separate channel. Disk writes to the original disk are also written to the second disk. If the original disk or channel fails, the duplicate disk takes over automatically.

disk mirroring

A NetWare feature that protects data from failures in network hardware. In disk mirroring, all data on one hard disk is duplicated on a second hard disk on the same channel. Disk writes to the original hard disk are also written to the second hard disk. If the original disk fails, the duplicate disk takes over automatically.

disk operating system (DOS)

The software that organizes how an IBM-compatible computer reads, writes, and reacts with its disks and communicates with various input/output devices. The most common versions are MS-DOS, DR DOS, and PC-DOS.

distance-vector routing

A type of routing in which the routers periodically evaluate whether the network configuration has changed. Each router also periodically broadcasts packets that contain current internetwork topology information. The broadcast packets update the routers with information about the best data transfer route between any two devices.

distributed application

An application that operates in a distributed computing environment, where application modules may run on different systems.

distributed computing

A computer operating environment that may involve computers of differing architectures and data representation formats that share data and system resources.

distributed network

A computer network upon which processing is shared by many different parts of the network. Processing may be shared by client (local) computers, file servers, print servers, and application servers, such as database servers. A NetWare network is an excellent example of a distributed network.

distributed processing

Processing that is shared by many different parts of the network. Available processors can be dynamically assigned as either general or job-specific processors, depending on the type of work to be done and the existing work load. Distributed processing also enables duplication and distribution of key services, such as directory services, so that full services remain available regardless of the failure of individual parts of the network.

distribution

A collection of server files and applications that is sent via ZENworks for Servers to subscribing servers.

distributor

A server designated by ZENworks for Servers to assemble and distribute server files and applications. A distributor is represented as an NDS object and managed through ConsoleOne.

DLL

See *Dynamic Link Library*.

DNS

See *Domain Name System*.

document check-in/check-out

A method of document management that ensures no important files can be altered or deleted. In order to modify a file, a user must check out a copy of the file. The modified copy is then saved as version, a process referred to as check-in, leaving the original version unchanged. Document check-in/check-out is a process defined by the WebDAV standard. See also *versioning*.

DoD

See *Department of Defense*.

domain

A group of computers and devices on a network that are administered as a unit with common rules and procedures. Within the Internet, domains are defined by the IP address. All devices that share a common part of the IP address are said to be in the same domain.

Domain Name System (DNS)

The distributed name and address database used on the Internet.

DOS

See *disk operating system*.

download

To copy a file from one computer system to another, usually smaller, computer system such as a PC.

downsizing

The process of moving some applications from proprietary mainframe systems to smaller, less expensive, networked microcomputers.

downtime

Any time a system or network is unavailable.

drag-and-drop function

A mouse pointer operation in which you select an object and place it in a new location. For example, to print a document, you drag its icon to the printer icon and drop it there.

drive

1. Short for “logical drive.” An identifier for a specific directory located on a disk drive. For example, network drives point to a directory on the network, rather than to a local disk.
2. Short for “physical drive.” A storage device that data is written to and read from, such as a disk drive or tape drive. A drive that is physically contained in or attached to a workstation is called a local drive.

driver

See *device driver*.

DSL

See *digital subscriber line*.

DSL Lite

An ADSL installation standard (ITU-T G.992.2) developed by the Universal ADSL Working Group. Also called G.lite, Universal DSL, and splitterless DSL.

DSS

See *decision support system*.

DVD

See *digital versatile disk*.

dynamic

Describes actions that occur at the moment they are needed, rather than in advance. For example, when a program uses dynamic memory allocation, it does not reserve memory ahead of time; memory is only used on demand.

dynamic configuration

In networking, a means of allowing the file server to allocate memory or other resources as needed while the network is running.

dynamic document publication

A means by which Internet or intranet documents can be directly updated without intervention from a network administrator.

Dynamic Domain Name System (DDNS)

A DNS system that automatically updates DNS servers as DHCP assigns new addresses.

Dynamic Host Configuration Protocol (DHCP)

A protocol used to assign dynamic IP addresses to devices on a network.

dynamic inheritance

In directories, administrative rights “flow down” to all objects subordinate to the container in which rights have been granted. With dynamic inheritance only the ACL of the top container will be updated. See also *static inheritance*.

Dynamic Link Library (DLL)

A library of executable functions or data that can be used by a Windows application.

E

EBCDIC

See *Extended Binary Coded Decimal Interchange Code*.

e-business

Any business process (supply-chain management, provisioning, etc.) that has been electronically enhanced or automated. E-business often involves inter-business communication over Internet links.

ECB

See *event control block*.

e-commerce

An e-business process that deals specifically with buying and selling, usually done over the Internet.

eDirectory

See *NDS eDirectory*.

EIA

See *Electronic Industries Association*.

EJB

See *Enterprise JavaBeans*.

ELD

See *electronic license distribution*.

Electronic Industries Association (EIA)

A trade association representing the U.S. high technology community. It has been responsible for developing some important standards, such as the RS-232, RS-422, and RS-423 standards for connecting serial devices.

electronic license distribution (ELD)

The process of distributing licenses to customers over the Internet.

electronic mail

See *e-mail*.

electronic software distribution (ESD)

The process of distributing software to customers over the Internet.

elevator seeking

A NetWare feature in which the disk read-write head retrieves files in the direction it is traveling across the disk rather than picking them up in the order they were requested. This reduces back-and-forth movements of the disk head and minimizes the time spent retrieving files.

e-mail

A method of file transfer and message sending among workstations.

emulation

The ability of a program or device to imitate another program or device.

encapsulation

The technique used by protocols in which a layer adds header information to the data unit from the preceding layer. This technique is also used to envelop one protocol inside another for transmission: for example, IP inside IPX.

encryption

The process of scrambling or coding data for security purposes.

engine

The core of a database or of an application.

ENS

See *Event Notification Services*.

enterprise

Any business organization. In the computer industry, the term is often used to describe a large organization that utilizes computers. An intranet is a good example of an enterprise computing system.

Enterprise JavaBeans (EJB)

An API based on the Java programming language. EJBs perform complex transaction processing, leaving the application developer free to concentrate on business issues, i.e., what the application is supposed to do instead of how it does it.

ESD

See *electronic software distribution*.

Ethernet

A high-speed local area network hardware standard that consists of a cable technology and a series of communication protocols. Ethernet uses a bus topology (configuration) and relies on the CSMA/CD access method. It is the primary communications circuitry used in many mainframe, PC, and UNIX networks.

EtherTalk

AppleTalk packets encapsulated to run on Ethernet cables.

event control block (ECB)

A structure that controls events related to the transmission and reception of IPX and SPX packets. ECBs also control the establishment and termination of SPX sessions.

Event Notification Services (ENS)

A service in NDPS that enables users and administrators to request notification regarding the status of a printer or a print job. Notification services alert you to printing problems such as paper jams and toner shortages.

expansion

Increasing the capability of a microcomputer by adding hardware that performs a task that cannot be done with the basic system.

Extended Binary Coded Decimal Interchange Code (EBCDIC)

An eight-bit code defined by IBM that includes values for control functions and graphics.

Extensible Markup Language (XML)

A new specification designed specifically for Web documents. With XML designers can create customized tags that provide functionality not available in HTML.

extranet

Two or more intranets connected in a way that enables collaboration among businesses that own the separate intranets.

F

failback

The automatic transfer of services and data back to a failed server that has been restored. Contrast with *failover*.

failover

The automatic transfer of services and data from a failed server to functioning servers in the same cluster.

Fast Ethernet

See *100Base-T*.

FAT

See *file allocation table*.

fat client

A PC designed to operate autonomously but that is also connected to a network. It is fully outfitted with disk drives, expansion slots, and other components. See also *thin client*.

fault tolerance

A characteristic of a system or data that has been protected from hazards such as power outages or disk failures. To provide fault tolerance, data can be duplicated on multiple storage devices, or the NDS database can be distributed among several servers. A fault tolerant system contains redundant components so that if one component fails, another component takes over with as little interruption of service as possible.

FDDI

See *Fiber Distributed Data Interface*.

Fiber Distributed Data Interface (FDDI)

A LAN standard for using fiber-optic cable which carries a light source generated by a laser or LED. FDDI standards govern high-speed (100 Mbps) fiber-optic connections and are under the guidance of ANSI Committee X3T9.5.

fiber-optic cable

A high-bandwidth transmission medium that allows data to be transmitted by modulating a light wave through a thin glass or plastic fiber. See also *optical fiber cable*.

fiber channel

A high-speed technology with a data transfer rate of up to 1 Gbps. Fiber channel is most commonly used to connect clustered servers to storage systems.

file

A collection of data or information that is stored as an individual entity with its own name. Files can contain various types of information, such as text, programs, or data.

file allocation table (FAT)

A table that the operating system uses to locate files on a disk. The NetWare network operating system (NOS) divides each volume into blocks and stores files on the volume in these blocks. If the file consists of one or more blocks, the file may be stored in blocks that are not adjacent. The FAT keeps track of the block numbers where different parts of the file are located. To retrieve a file, the NetWare NOS searches through the FAT until it finds the FAT entries and corresponding block numbers for the requested file.

file sharing

A feature of networking that allows more than one user to access the same file at the same time.

file system

The method used by the NetWare server to organize data stored on its hard disks. In this system, files receive filenames and are stored at specific locations in a hierarchical filing system: they can be quickly located and easily retrieved.

File Transfer, Access, and Management (FTAM)

The Open System Interconnection (OSI) model remote file service and application layer protocol.

File Transfer Protocol (FTP)

A client/server protocol used to exchange files with a host computer. FTP is most commonly used on the Internet.

filter

1. The process on a router that selectively discards packets of a certain type, or packets originating from or destined for a certain location.
2. To selectively discard packets of a certain type.

finger

A UNIX command that enables a user to find another user's login name and e-mail address, and sometimes other information. In order to use this command, it is necessary to know the name of the computer where the other person has an account.

firewall

An electronic boundary that prevents unauthorized users from accessing certain files on a network. Firewalls can be implemented in hardware, software, or a combination of both.

Firewire

See *IEEE 1394*.

firmware

Any software that has been written onto read-only memory (ROM).

fractional T1

A communications line that uses only some of the B channels in a T1 line. The data transfer rate on a fractional T1 depends on the number of B channels that are used.

fragmentation

The process that breaks a packet into smaller pieces so it will fit within the size requirements of the physical network.

frame

A data-link layer packet which contains the header and trailer information required for addressing and error checking; it is the basic data transmission unit used in bit-oriented protocols. Network-layer packets are encapsulated to become frames.

frame relay

A network technology that uses packet-switching and high quality phone lines to provide data transfer rates from 56 Kbps to 1.544 Mbps. Frame relay checks packets for errors but does not correct them; end devices, like LAN servers and clients, make corrections when necessary.

front end

The client part of the program in client/server applications. (The server part of the program is called the back end.)

FTAM

See *File Transfer, Access, and Management*.

FTP

See *File Transfer Protocol*.

G**gateway**

A combination of hardware and software that runs on the OSI application layer and allows incompatible protocols to communicate. A gateway usually connects PCs to a host machine, such as an IBM mainframe. Gateways are also employed by NDPS to translate print jobs into vendor-specific printer languages.

GB

See *gigabyte*.

GBIC

See *gigabit interface converter*.

Gbps

See *gigabits per second*.

Generic Routing Encapsulation (GRE)

A protocol used to encapsulate the packets of one protocol so that they can be transported using a different protocol.

Gigabit Ethernet

See *1000Base-T*.

gigabit interface converter (GBIC)

A device used to convert electrical signals into optical signals and optical signals into electrical signals.

gigabits per second (Gbps)

A data transfer rate measurement for high-speed networks that equals one billion bits per second.

gigabyte (GB)

A unit of measure for memory or disk storage capacity. A gigabyte equals 2×10^{30} power (approximately one billion) bytes.

G.lite

An informal name for an ADSL installation standard (ITU-T G.992.2) developed by the Universal ADSL Working Group. Also called Universal DSL, DSL Lite, and splitterless DSL.

graphical user interface (GUI)

A user interface that represents commands, files, and windows as icons that users can access and manipulate using a mouse or other pointing device.

GRE

See *Generic Routing Encapsulation*.

groupware

A type of software that supports the concurrent use of objects (such as documents, calendars, and spreadsheets) by multiple LAN users.

GroupWise

The Novell messaging software product that contains numerous communication and collaboration features.

GUI

See *graphical user interface*.

guided media

In the communication process, a physical path along which electromagnetic waves travel. Examples of guided media are twisted-pair wiring, coaxial cable, and fiber-optic cable, all of which are used in LANs.

H**Handheld Device Markup Language (HDML)**

Similar in purpose to HTML, HDML is used to format text that will be viewed over a wireless Internet connection to a Web-enabled handheld device such as a cellular phone.

hard disk

A computer's primary storage medium. Hard disks have a large storage capacity and can be accessed quickly. A hard disk can store between 10MB and several gigabytes of data, and hard disk access times are measured in milliseconds.

hardware

The physical components of a computer, including computer machinery and equipment. Contrast with *software*.

HDLC

See *High-Level Data-Link Control*.

HDML

See *Handheld Device Markup Language*.

HDSL

See *High bit-rate Digital Subscriber Line*.

header

The information at the beginning of a packet that defines control parameters such as size, memory requirements, and entry point of a program. The header also contains the locations of absolute segment address references in the program.

heterogeneous environment

In local area networking, a communication system capable of accommodating multiple protocols and machine types.

hierarchical

Describes systems that are organized in the shape of a pyramid, with each row of objects linked to objects directly beneath it. For example, many computer file systems contain directories that have files and subdirectories beneath them.

hierarchical proxy caching

The process of configuring Web servers to communicate with each other to determine whether documents missing from one cache might be present in another. In this environment an unlimited number of caches and users can cooperate using industry-standard Internet Cache Protocol (ICP) to speed access to shared content and eliminate redundant Web server requests.

High bit-rate Digital Subscriber Line (HDSL)

A version of DSL in which the upstream and downstream bandwidths are equal.

High-Level Data-Link Control (HDLC)

A transmission protocol defined for high-level, synchronous connections to X.25 packet networks. Similar in almost all respects to SDLC. See also *synchronous*.

High-Level Language/Application Program Interface (HLLAPI)

The application programming interface a PC application uses to communicate with a mainframe computer.

HLLAPI

See *High-Level Language/Application Program Interface*.

host

A networked computer that provides services to another computer beyond simply storing and forwarding information. Examples of hosts include mainframes and minicomputers.

Hot Fix

A NetWare feature that protects data from failures in network hardware. When Hot Fix is activated, a small portion of a hard disk's storage space is set aside as a Hot Fix redirection area. When read-after-write verification determines that there is a bad data block on the disk, Hot Fix redirects data that was to be stored in the bad block to the Hot Fix redirection area. Hot Fix marks the defective block as bad, and the server will not attempt to store data there again.

hot swap

The ability to change a computer's hardware or software without rebooting.

HTML

See *Hypertext Markup Language*.

HTTP

See *Hypertext Transfer Protocol*.

hub

A common connection point for devices in a network, usually a network arranged in a star topology. Hubs vary in the way they route data. Passive hubs are simply data conduits, intelligent hubs monitor data traffic, and switching hubs read the data packet addresses and forward them to the correct ports.

hypertext

A type of text that contains links to other places within the same document, or to other documents stored locally or on Web servers anywhere. This method of storing and presenting information allows almost instantaneous retrieval of information.

hypertext link

A call to a location. The call is embedded in an online document to link to other places within the same document or to other documents stored either locally or on a Web server anywhere. A hypertext link allows readers to move instantaneously from the current location to the location specified by the link.

Hypertext Markup Language (HTML)

The standard language of the World Wide Web, HTML is used to create and recognize hypermedia documents. HTML documents are standard ASCII files with formatting codes that contain information about layout, such as text styles, document titles, paragraphs, lists, and hyperlinks.

Hypertext Transfer Protocol (HTTP)

The language that Web browsers and servers use to communicate with each other. HTTP can handle multiple application protocols that allow users access to many Internet protocols. It also supports multimedia functions.

I**IAB**

See *Internet Activities Board*.

ICMP

See *Internet Control Message Protocol*.

IEEE

See *Institute of Electrical and Electronic Engineers*.

IEEE 1394 (Firewire)

A new, very fast external bus standard that supports data transfer rates of up to 400 Mbps (400 million bits per second).

IETF

See *Internet Engineering Task Force*.

IGRP

See *Internet Gateway Routing Protocol*.

imaging

The process of creating a mirror-image of a disk or system on a network. Imaging can be used to increase fault-tolerance, or for administrative tasks such as installing software upgrades, or restoring desktop workstations.

IMAP

See *Internet Message Access Protocol*.

Industry Standard Architecture (ISA)

A PC expansion bus used for modems, video displays, speakers, and other peripherals.

Information Systems (IS)

In an organization, the name of the department responsible for computers, networking, and data management. See also *Information Technology (IT)*.

Information Technology (IT)

The field of work in which computers are used to create, store, exchange, and use information in its various forms. See also *Information Systems (IS)*.

input/output (I/O)

Any operation, program, or device whose purpose is to enter data into a computer or extract data from a computer.

instant messaging

A communications service in which you communicate with others via a private chat room. Instant messages appear immediately; however, each party must already be online before a conversation can take place.

Institute of Electrical and Electronic Engineers (IEEE)

An organization that creates networking standards for cabling, electrical topology, physical topology, and access schemes.

Integrated Services Digital Network (ISDN)

An ITU standard for sending voice, video, and data across digital telephone lines. ISDN requires special metal wiring and supports data transfer rates of 64 Kbps.

intelligent hub

A device that combines the function of a hub with processing capabilities.

interface

The point at which a connection is made between two or more elements so that they can work together.

Intermediate System to Intermediate System (IS-IS)

The OSI link-state routing protocol which allows intermediate systems to exchange routing information.

International Organization for Standardization (ISO)

Based in Paris, this organization develops standards for international and national data communications.

International Telecommunications Union (ITU)

An organization that recommends standards for communication equipment interfaces, communication protocols, modem modulation methods, and so on. The ITU was formerly known as the CCITT.

Internet

A decentralized, global collection of networks and gateways that use the TCP/IP suite of protocols. As of 1998, the Internet had more than 100 million users. Lowercase, it is an abbreviation for internetwork.

Internet Activities Board (IAB)

A technical advisory group of the Internet Society. The IAB oversees the IETF and the Internet standards process; it also manages and publishes RFCs.

Internet Control Message Protocol (ICMP)

An extension to the Internet Protocol. ICMP supports packets containing error, control, and informational messages.

Internet Engineering Task Force (IETF)

The main standards organization for the Internet. The IETF is a large, open international community of network designers, operators, vendors, and researchers concerned with the evolution of Internet architecture and the smooth operation of the Internet.

Internet Gateway Routing Protocol (IGRP)

A proprietary interior gateway protocol used to exchange routing information between Cisco Systems routers.

Internet Message Access Protocol (IMAP)

A protocol clients use to access e-mail messages that are held on a server.

Internet Printing Protocol (IPP)

An IETF protocol jointly spearheaded by Novell, IBM, and Xerox, it provides the means to print directly to printers over an Internet connection.

Internet Protocol (IP)

The method, or protocol, by which data is sent from one computer to another over the Internet. IP specifies the format and addressing scheme for each packet.

Internet Protocol Security (IPSec)

A developing standard for security at the network layer of network communication.

Internet Protocol Version 6 (IPv6)

The new version of the Internet Protocol (IP) defined by the IETF. IPv6 has better security than the current version of IP and increases the length of Internet addresses from 4 to 16 bytes to accommodate the explosive growth of the Internet. IPv6 is also known as IPng, or Internet Protocol Next Generation.

Internet service provider (ISP)

Any company that provides other companies and individuals with access to the Internet and related services, such as Web site building and hosting.

Internet Society

A non-governmental, non-profit organization dedicated to maintaining and enhancing the Internet. Through its committees, the IAB and the IETF, the Internet Society is responsible for developing and approving new Internet standards and protocols.

internetwork

Two or more networks connected by an internal or external router.

Internetwork Packet Exchange (IPX)

A protocol that allows the exchange of message packets on an internetwork.

interoperability

The ability of devices on a heterogeneous network to transmit and share data.

intranet

An internal corporate network that is enhanced with World Wide Web technology and secured against inappropriate access.

I/O

See *input/output*.

IP

See *Internet Protocol*.

IP Address

A numeric address such as 123.231.32.2 that the domain name server translates into a domain name.

IPP

See *Internet Printing Protocol*.

IPSec

See *Internet Protocol Security*.

IPv6

See *Internet Protocol Version 6*.

IPX

See *Internetwork Packet Exchange*.

IS

See *Information Systems*.

ISA

See *Industry Standard Architecture*.

ISDN

See *Integrated Services Digital Network*.

IS-IS

See *Intermediate System to Intermediate System*.

ISO

See *International Organization for Standardization*.

isochronous

Describes processes where data must be delivered within certain time constraints. For example, multimedia streams require an isochronous transport mechanism to ensure that data is delivered as fast as it is displayed and to ensure that the audio is synchronized with the video. Contrast with asynchronous and synchronous.

ISP

See *Internet service provider*.

IT

See *Information Technology*.

ITU

See *International Telecommunications Union*.

J

jabber

To continuously send random data (garbage). For example, a network adapter is jabbering when it locks up the network with continuous transmissions.

Java

A programming language specifically designed to work with HTML and the World Wide Web. With Java users can create dynamic Web pages and make them interactive.

JavaBeans

A Java component technology with which developers can create reusable software objects. JavaBeans can be developed only in Java, but can run on any platform. They can provide Web pages with interactive capabilities.

Java Database Connectivity (JDBC)

An application programming interface (API) specification that connects programs written in Java to databases that support structured query language (SQL).

Java Naming and Directory Interface (JNDI)

An extension to the Java platform that provides a unified interface to heterogeneous enterprise naming and directory services. Developers can use JNDI to build powerful and portable directory-enabled applications.

JavaScript

A scripting language, developed by Netscape, that can be used to develop interactive Web sites.

Java Virtual Machine (JVM)

A software specification that interprets between Java bytecode and a computer's operating system. The JVM enables you to run Java code on many different computer platforms.

JDBC

See *Java Database Connectivity*.

JNDI

See *Java Naming and Directory Interface*.

journaling

The process of logging system activity; it can be used to recover previous versions of a file before updates were made, or to facilitate a fast restart when needed.

JVM

See *Java Virtual Machine*.

K

KB

See kilobyte.

Kbps

See kilobits per second.

kernel

The core of a network operating system; it provides fundamental operating system services, such as handling interrupts and the I/O system, managing threads and processes, and allocating and scheduling processor resources.

kilobits per second (Kbps)

A unit of measure for data transfer rates that equals one thousand bits per second.

kilobyte (KB)

A unit of measure for memory or disk storage capacity. A kilobyte equals 2×10^{10} power (1,024) bytes.

L

LAN

See local area network.

LAN emulation

See local area network emulation.

LAN interface board

See network adapter.

Large Internet Packets (LIPs)

A NetWare 4 technique used to send large packets of data over bridges and routers. In earlier versions of NetWare, if a router was detected between the server and the workstation sending the packet, the packet size was limited to 576 bytes. LIPs allow network architectures to determine the packet size based on the maximum size supported by their routers and can increase packet size to 65,535 bytes.

latency

The time lag between a request for data and when the data is received.

LCP

See Link Control Protocol.

LDAP

See Lightweight Directory Access Protocol.

LDAP Data Interchange Format (LDIF)

A format that represents directory entries as text: it can import and export entries into and out of local directories.

LDIF

See *LDAP Data Interchange Format*.

leaf object

In the NDS hierarchy, leaf objects are subordinate to container objects. They represent network resources and are depicted as the ends of branches on the NDS tree.

legacy

An adjective used to describe an existing piece of hardware or software in which a company has invested considerable time and money. New hardware or software is often designed to work with legacy resources.

leased line

See *dedicated line*.

Lightweight Directory Access Protocol (LDAP)

A protocol used to access listings in information directories. LDAP is a simplified version of the standard used to gain access to X.500 directories. With LDAP, users can search for e-mail addresses and other directory information on the Internet.

line printer requester/line printer daemon (LPR/LPD)

Two protocols used by UNIX, Macintosh, and some mainframe and minicomputer clients to access printers.

link

1. The line or channel over which data is transmitted.
2. An electronic cross-reference placed into a computer file that allows the user to jump from the current location to another location within the same document or in other documents.
3. A software connection between two files or objects; a change in one is reflected by a change in the other.

Link Control Protocol (LCP)

A protocol that provides procedures for establishing, configuring, testing, and terminating the operation of PPP data-link connections.

link-state routing protocol

A protocol that link-state routers use to track the status of other routers and links. Link-state routing protocols adapt quickly to network topology changes and proficiently manage internetworking on large, complex internetworks.

LIPs

See *Large Internet Packets*.

LLC

See *logical link control*.

load

To make a software program available in memory so that it can be executed. In NetWare, to link to the NetWare operating system.

loadable module

A program that can be loaded and unloaded from a server or a workstation while the operating system is running.

local area network (LAN)

A computer network that spans a relatively small area. Most LANs are confined to a single building or group of buildings. LANs connect PCs and electronic office equipment, enabling users to communicate, share resources, and access remote hosts or other networks.

local area network emulation (LAN emulation)

A MAC sublayer that is used to integrate ATM with Ethernet and token-ring networks, without modifying existing Ethernet or token-ring protocols.

LocalTalk

The shielded twisted-pair cabling scheme introduced by Apple.

logical link control (LLC)

A sublayer of the OSI model's data-link layer. The LLC sublayer ensures the reliability of the network's physical connection.

logical topology

The electronic scheme used to enable network devices to send and receive data across transmission media without interfering with each other. The most common logical topologies are the bus, ring, and star (switching). Contrast with *physical topology*.

Logical Unit (LU)

A terminal emulation program or application in an SNA network. LUs can communicate with host systems and applications (LU Type 0, 1, 2, 3, 4, and 7) or with other LUs of the same type (LU Type 6.0, 6.1, and 6.2 only).

login script

A set of instructions that directs your workstation to perform specific actions when you log in to the network. The network supervisor can create a systemwide login script (which is the same for all users on the network) that instructs all workstations to perform the same actions upon login. The individual login script executes after the systemwide login script, and it specifies individual drive mappings.

LPR/LPD

See *line printer requester/line printer daemon*.

LU

See *Logical Unit*.

M

MAC

See *media access control*.

magnetic disk

A disk on which data is encoded as microscopic magnetized needles. On a magnetic disk, data can be recorded and erased any number of times. Examples of magnetic disks include floppy disks, hard disks, and removable cartridges. See also *disk* and *optical disk*.

mainframe computer

A large, expensive computer that supports hundreds of users and executes multiple tasks simultaneously. Contrast with *minicomputer* and *desktop computer*.

MAN

See *Metropolitan Area Network*.

Management Information Base (MIB)

A database of objects that can be managed by a network management system.

map

To make logical connections between two entities. In NetWare, drives can be mapped to provide direct access to particular locations in the directory structure. For example, the user can simply enter a drive letter that has been assigned to a particular directory instead of typing in a complete pathname.

MAPI

See *Messaging Application Programming Interface*.

MAU

See *Multistation Access Unit*.

MB

See *megabyte*.

Mbps

See *megabits per second*.

media

The plural of medium. The physical paths over which communications flow. Media can be guided or unguided. Guided media are manufactured and include copper wires, coaxial cable, or optical fiber. Unguided media are natural entities, such as the atmosphere and outer space.

media access control (MAC)

The method that determines when each workstation on a network is allowed to use the transmission media.

medium

See *media*.

megabits per second (Mbps)

A unit of measure for data transfer rates that equals approximately one million bits per second.

megabyte (MB)

A unit of measure for memory or disk storage capacity. A megabyte equals 2×10^{20} power (1,048,576) bytes.

megahertz (MHz)

The unit of frequency used to measure the clock speed of a computer. One megahertz represents one million cycles per second.

memory

The internal dynamic storage of a computer that can be addressed by the computer's operating system. Often called RAM, memory accepts and holds binary data.

Message Transfer Agent (MTA)

The program that stores and transfers e-mail messages in the X.400 Message Handling System.

Messaging Application Programming Interface (MAPI)

A program interface that enables different e-mail systems to exchange messages and attachments.

metadata

The data that describes how other data is formatted and collected.

Metropolitan Area Network (MAN)

A network designed for an area as large as a town or a city. Usually characterized by high-speed connections, MANs are larger than LANs, but smaller than WANs.

MHz

See *megahertz*.

MIB

See *Management Information Base*.

microbrowser

An Internet browser designed to work with the small memory and tight bandwidth constraints of handheld, Web-enabled devices such as cellular phones.

microcomputer

A small, relatively inexpensive computer designed for an individual user. The CPU of a microcomputer is a microprocessor, which means that it is contained on a single computer chip. A microcomputer is more commonly known as a personal computer (PC).

migration

1. The process of moving data files and directories from one system to another, usually when a system is upgraded or a different system is installed.
2. The transfer of inactive data from a NetWare volume to tape, optical disk, or other storage media. Data migration lets an administrator move data to a storage device, while NetWare still sees the data as residing on the volume.

MIME

See *Multipurpose Internet Mail Extension*.

minicomputer

A midsize computer that has multiprocessing capabilities. A minicomputer can support from four to approximately 200 users simultaneously. Contrast with *mainframe computer* and *desktop computer*.

Mirrored Server Link (MSL)

A dedicated, high-speed connection between SFT III primary and secondary servers.

mirrored servers

Servers which contain identical data and software components. One server acts as a primary server, while the other acts as a backup server in case the primary server fails.

modem

A device that transmits and receives digital computer data over telephone lines. This term is derived from *modulator/demodulator*.

modulation

The process of converting digital signals into analog signals by varying a carrier frequency. See also *modem*.

mount

1. To make a mass storage device available.
2. To cause a file on a local workstation or server to be accessible by remote users. (Also referred to as publishing or sharing.)

Moving Picture Experts Group (MPEG)

The Moving Picture Experts Group is a working group for the organization called ISO, but the term MPEG usually refers to a family of file formats and standards used for compressing video files. MPEG works by filling in only picture elements that change from frame to frame, rather than reproducing each complete frame. This process is called lossy compression. MPEG is commonly used to download or stream video across the Internet. See also *QuickTime* and *Audio Video Interleave*.

MP3

A coding scheme used to compress audio files, specifically music files. MP3 produces CD-quality sound in a compact file that can be transferred across networks quickly and played back on a multimedia computer equipped with the proper software.

MPEG

See *Moving Picture Experts Group*.

MSL

See *Mirrored Server Link*.

MTA

See *Message Transfer Agent*.

multicast

A transmission method in which only those devices listening for a specified multicast packet address accept the routing information packet.

multimode fiber

An optical fiber with a large diameter that can send multiple transmissions simultaneously.

multiplexing

The process of combining two or more signals into a single signal for transmission over a shared medium, such as a telephone wire.

multiprocessing

A computer's ability to support more than one process or program at the same time. See also *parallel processing* and *symmetric multiprocessing*.

Multipurpose Internet Mail Extension (MIME)

A specification for formatting non-text messages (such as graphics, audio, and video) so that users can send them over the Internet.

Multistation Access Unit (MAU)

A token-ring network device that physically connects network computers in a star topology while retaining the logical ring structure. The MAU has the ability to short out non-operating nodes and maintain the ring structure.

multitasking

The execution of more than one application or thread at a time in order for a computer to perform simultaneous tasks.

multivendor network

A network comprised of components from different vendors.

N

NAL

See *Novell Application Launcher*.

NAT

See *Network Address Translation*.

National Laboratory for Applied Network Research (NLANR)

An independent research and support organization for high-performance networking funded by the National Science Foundation.

native

Describes an application's original, or internal, format. To work with files in other formats, an application must first convert the files to its native format.

NCP

See *NetWare Core Protocol*.

NDK

See *Novell Developer Kit (NDK)*.

NDPS

See *Novell Distributed Print Services*.

NDS

See *Novell Directory Services*.

NDS eDirectory

A full-service, platform-independent directory that serves as the foundation for myriad directory-enabled services.

NDS tree

A hierarchical structure of objects in the NDS database. The NDS tree includes container objects that are used to organize the network and leaf objects that represent resources.

NEPS

See *Novell Enterprise Print Services*.

NETADMIN

The DOS-based version of NetWare Administrator.

NetBEUI

See *NetBIOS Enhanced User Interface*.

NetBIOS

See *Network Basic Input/Output System*.

NetBIOS Enhanced User Interface (NetBEUI)

A network transport protocol that enhances the NetBIOS programming interface. NetBEUI formalizes the frame format that is not specified as part of NetBIOS, and it works well within a single LAN.

Because it does not support message routing to other networks, the NetBEUI interface must be adapted to other protocols such as IPX or TCP/IP.

NetView

IBM network monitoring software for SNA networks.

NetWare

The network operating system developed by Novell, Inc. NetWare is loaded on a server, and it controls all system resources and the way information is processed on the entire network or internetwork.

NetWare Administrator (NWAdmin)

A graphical utility used to create and manage NDS objects, set up printing and licensing services, and assign rights to the file system.

NetWare Core Protocol (NCP)

A set of service protocols that a server's operating system follows to accept and respond to service requests. NCP also provides session control and packet-level error checking between NetWare workstations and routers.

NetWare Enterprise Print Services (NEPS)

A set of NLMs that leverage NDPS, NEPS provides IPP and LPR/LPD support and printer-specific gateways for NDPS in NetWare 5, NetWare 4.2, and NetWare 4.11. NEPS is integrated with NDPS in NetWare 5.1 and above.

NetWare Link Services Protocol (NLSP)

The link-state protocol used by IPX routers and servers to share information about their routes with other devices on the network. Using NLSP, network managers can interconnect small or large IPX networks without routing inefficiencies.

NetWare Loadable Module (NLM)

A software module that can be added to a NetWare 3 or above network operating system to add functionality to a network server. An NLM can be dynamically loaded and unloaded. Types of NLM programs include disk drivers, LAN drivers, management utilities and server applications modules, and name space support.

NetWare shell

A NetWare program loaded into the memory of each workstation. It builds itself around DOS and intercepts the workstation's network requests, rerouting them to a NetWare server.

network

An interconnected collection of devices that are used to store, retrieve, and share information. A network enables a group of computers to communicate with each other, share peripherals (such as hard disks and printers), and access remote hosts or other networks.

network adapter

The expansion boards, or printed circuit boards, that workstations and servers use to connect to the network. See also *adapter*.

Network Address Translation (NAT)

A circuit-level technology that translates private IP addresses to registered IP addresses.

Network Basic Input/Output System (NetBIOS)

A programming interface used by applications on separate computers that allows the applications to communicate within a local area network.

network computing

A multivendor computing environment that integrates local and wide area network technologies to provide enterprise-wide connectivity.

Network File System (NFS)

A distributed file system network protocol developed by Sun Microsystems. With NFS, network users can access shared files stored on computers of different types.

network layer

The third of seven layers in the OSI model. The network layer ensures that information arrives at its intended destination. It also smooths out the differences between network media so that higher layers do not need to account for the distinctions.

network operating system (NOS)

An operating system that includes special functions for connecting computers and devices into a network. The NOS controls all system resources and regulates how information is processed in the network or internetwork. See also *operating system* and *desktop operating system*.

network server

See *server*.

network termination unit (NT-1)

A device that converts the bandwidth on a digital phone line into the B and D channels used on a T1 line. An NT-1 also provides a connection for terminal equipment and aids the phone company in diagnostic testing.

Network Time Protocol (NTP)

The means for networked computers to serve and obtain accurate time on the Internet.

network topology

The arrangement of nodes on a network; usually a star, ring, tree, or bus organization.

NFS

See *Network File System*.

NICE

See *Novell Internet Connection Expert*.

NICI

See *Novell International Cryptographic Infrastructure*.

NLANR

See *National Laboratory for Applied Network Research*.

NLM

See *NetWare Loadable Module*.

NLSP

See *NetWare Link Services Protocol*.

node

A device that is connected to a network and is capable of communicating with other network devices. In NetWare, a node is considered to be an end system, such as a workstation.

NOS

See *network operating system*.

Novell Application Launcher (NAL)

A NetWare utility that allows users to run applications that were previously configured by a network administrator. The applications are displayed as icons. A user can double-click an icon to launch an application.

Novell Client

Novell software that provides basic connectivity and access to NetWare network resources for workstations, and that provides the interface between the network and the workstations.

Novell Developer Kit (NDK)

A user-resource product that contains all of Novell's open application programming interfaces.

Novell Directory Services (NDS)

A multiple-platform distributed database that stores information about the hardware and software resources available on a network.

Novell Distributed Print Services (NDPS)

Print services software that allows network administrators to manage network printing from within NDS. Features include bi-directional feedback, configurable event notification, automatic printer driver download function, protocol independence, and backward compatibility.

Novell International Cryptographic Infrastructure (NICI)

Novell cryptographic security technology incorporated in NetWare products. NICI's hierarchical infrastructure divides cryptographic functionality among four distinct layers. Each layer supports segregation of the digitally-signed modules by authenticating them before loading, and by managing the hierarchy of modules through controlled interfaces.

Novell Internet Connection Expert (NICE)

A tool that simplifies configuring Internet access for modems, ISDN, and DSL connections.

Novell Replication Services (NRS)

NRS is server-based software that enables you to easily manage the distribution of shared information across a network of geographically separated intraNetWare servers.

Novell Storage Services (NSS)

A storage service used by the server to handle billions of volumes containing files up to 8 terabytes in size. NSS can mount and remount volumes in seconds.

NRS

See *Novell Replication Services*.

NSS

See *Novell Storage Services*.

NT-1

See *network termination unit*.

NTP

See *Network Time Protocol*.

NWAdmin

See *NetWare Administrator*.

O

object

1. An icon in a browser view that represents a user, server, printer, or other object in the network.
2. An entity defined in the NDS database. Each object consists of properties and the values for the properties. There are three general categories of NDS objects: container objects, leaf objects, and the [Root] object.

Object Linking and Embedding (OLE)

A standard used to create objects in an application and then link, embed, or execute them in another application.

Object Linking and Embedding Custom Control (OCX)

An independent program module that can be accessed by other programs in a Windows environment. An OCX can provide functions such as manipulating scroll bar movement and resizing windows.

OC

See *Optical Carrier*.

OCX

See *Object Linking and Embedding Custom Control*.

ODBC

See *Open Database Connectivity*.

OLE

See *Object Linking and Embedding*.

OLTP

See *online transaction processing*.

online

1. Describes devices that are turned on and connected. For example, printers are online when they are ready to receive data from the computer.
2. Describes users who are connected to a computer service through a modem.
3. Describes the location of any material that can be accessed through the Internet.

online transaction processing (OLTP)

Real-time business transactions conducted over the Internet. It usually involves accepting orders, verifying and billing to credit card accounts, and securing shipping addresses.

online service

A business that provides its subscribers with a wide variety of data transmitted over telecommunications lines. Online services provide an infrastructure in which subscribers can communicate with one another, either by exchanging e-mail messages or by participating in online conferences (forums). In addition, the service can connect users with an almost unlimited number of third-party information providers. Three of the largest online services are America Online, CompuServe, and MSN.

open architecture

The design of hardware or software that promotes easy connection to devices and programs made by other manufacturers. Open architectures use off-the-shelf components and conform to approved standards.

Open Database Connectivity (ODBC)

A standard database access method that makes it possible to access different database systems with a common language.

Open Shortest Path First (OSPF)

An interior gateway protocol that routes messages according to the shortest and least expensive path. OSPF was developed to replace RIP.

Open Solutions Architecture (OSA)

The Novell strategy that focuses on building directory-enabled applications for the Internet.

open standard

See *open architecture*.

Open Systems Interconnection (OSI) reference model

A seven-layer model for data communication that is the standard network architecture developed by the International Organization for Standardization (ISO). The layers are as follows: physical, data-link, network, transport, session, presentation, and application.

operating system (OS)

The software that manages a computer system. An operating system controls data storage, recognizes input, sends output, manages peripheral devices, and executes compatible applications. See also *desktop operating system* and *network operating system*.

Optical Carrier (OC)

The levels of the SONET technology that define optical signals and their corresponding electrical signals. As the OC level increases, so does the rate at which data is transferred.

optical disk

A disk on which data is recorded by burning microscopic holes on the surface of the disk with a laser. To read the disk, another laser shines on the disk surface and detects the holes by changes in the reflection pattern. Examples of optical disks include CD-ROMs, WORMs, and erasable optical disks. See also *disk* and *magnetic disk*.

optical fiber cable

A high-bandwidth transmission medium that allows data to be transmitted by modulating a light wave through a thin glass or plastic fiber. See also *fiber-optic cable*.

Organizational Unit (OU)

An optional container object in an NDS tree that represents a unit within an organization, such as a department or business unit. It contains the objects that represent the network users and resources in the actual unit, and must reside either immediately under an Organization object or under another Organizational Unit.

OS

See *operating system*.

OS/2

An operating system that uses a graphical user interface and was designed by IBM.

OSA

See *Open Solutions Architecture*.

OSI

See *Open Systems Interconnection reference model*.

OSPF

See *Open Shortest Path First*.

OU

See *Organizational Unit*.

P

PA

See *Printer Agent*.

package object

An entity defined in the NDS database that represents any product or service an application service provider (ASP) wishes to sell to a client. Package objects can be defined in great detail, allowing the ASP to serve the product or service to the client according to the package object's specifications. See also *application service provider*.

packet

The unit of information by which the network communicates. Each packet contains the identities of the sending and receiving stations, error-control information, a request for services, information about how to handle the request, and any necessary data that must be transferred.

Packet Burst

The technology used in NetWare networks that allows clients and servers to transmit multiple packets of information without requiring a response to each packet, thus reducing local and wide area network traffic.

packet-switching network

A network that transmits messages by dividing them into individual packets, routing them randomly over the best available connection, and then reassembling them to form the complete message at the destination. Most modern WAN protocols, including TCP/IP, X.25, and frame relay, are based on packet-switching technologies. Contrast with *circuit-switching network*.

PAM

See *Pluggable Authentication Module*.

parallel port

An interface used to connect an external device, such as a printer, to a computer. A parallel port can transmit multiple bits simultaneously.

parallel processing

The simultaneous use of more than one CPU to execute a program.

partition

1. A section of the Novell Directory Services database. Copying NDS partitions to strategic network locations will simplify user login and resource access at those locations.
2. To divide memory or mass storage into isolated sections.

password

A combination of characters that allows users to log on to a system or to access a program or file. Passwords in the NetWare network operating system are encrypted, which means they are stored on the server in a format only the server can decode.

path

A text string that specifies the hierarchical location or address of a file or folder.

PBX

See *private branch exchange*.

PC

See *personal computer*.

PCMCIA

See *Personal Computer Memory Card International Association*.

PDC

See *primary domain controller*.

peer-to-peer network

A network in which each node (computer) has equivalent client and server capabilities. In a peer-to-peer network, communication and data sharing occurs directly between nodes, rather than through an intermediary node. Personal NetWare is an example of a peer-to-peer network operating system.

performance tuning

To monitor and analyze the net performance of a system, and then adjust its configuration to obtain optimum performance.

peripheral

A device that extends the capabilities of a computer (for example, a printer).

permanent virtual circuit (PVC)

A continuously available communications path that connects two fixed end points. A PVC is similar to a leased line.

personal computer (PC)

A computer, containing a microprocessor, that is used by one person at a time. Also called a microcomputer or a desktop computer.

Personal Computer Memory Card International Association (PCMCIA)

An organization that has developed a standard for small credit card-sized devices called PC cards. PC cards are used to add memory to a computer or to give it faxing or modem capabilities.

Personal Identification Number (PIN)

A password, typically four digits, entered through a telephone keypad or an automated teller machine.

physical layer

The first of seven layers of the OSI model, the physical layer puts data onto and removes data from the network media.

physical topology

The physical layout of a network's guided transmission media (usually network cabling). The most common physical topologies are the bus, the star, and the star-wired ring. Contrast with *logical topology*.

Physical Unit (PU)

A node in an SNA network that supports one or more logical units (LUs) and provides communications, data processing, or both.

PIN

See *Personal Identification Number*.

ping

A basic network program used to determine whether a machine on the network is reachable. It works by sending a packet to the specified network address and waiting for a reply. Ping is used primarily to troubleshoot network connections.

PKCS

See *Public Key Cryptography Standards*.

PKI

See *Public Key Infrastructure*.

PKIS

See *Public Key Infrastructure Services*.

platform

The underlying hardware or software for a system. The platform can refer to the processor and low-level support chips or to the entire operating system.

Pluggable Authentication Module (PAM)

A login framework used by system entry components to authenticate users to a UNIX system.

plug-in

A program designed to enhance a larger, parent program. For example, some Web browser plug-ins add multimedia capabilities such as sound and video.

POA

See *Post Office Agent*.

Point of Presence (POP)

The location of an access point to the Internet. A POP necessarily has a unique IP address. An Internet service provider or online service has a point of presence on the Internet. The number of POPs that an ISP or OSP has is sometimes used as a measure of its size or growth rate.

Point-to-Point Protocol (PPP)

The communications protocol a computer uses to make TCP/IP connections with a regular telephone line and a modem.

Point-to-Point Remote Node Service (PPRNS)

A service that provides PPP support for remote DOS and Windows clients that are using Internetwork Packet Exchange (IPX) software or Internet Protocol (IP).

Point-to-Point Tunneling Protocol (PPTP)

A technology used to create virtual private networks. PPTP ensures that messages transmitted from one VPN node to another are secure.

policy

A rule that describes how any networking process will take place. For example, policies can be set to govern server behavior or to determine which network traffic has the highest priority.

polling

The act of one device requesting data from another device.

POP

See *Point of Presence*.

POP

See *Post Office Protocol*.

port

For hardware, a connecting component that allows a microprocessor to communicate with a compatible peripheral. For software, a memory address that identifies the physical circuit used to transfer information between a microprocessor and a peripheral.

portal

A Web site that serves as a doorway to the World Wide Web. Portal sites usually offer a search engine and news or other services for free. Most portals subsist on advertisements in their displays. Popular portals include Yahoo! and Excite.

Post Office Agent (POA)

A program that delivers messages to users' mailboxes, connects users to their post offices in client/server access mode, updates post office databases, indexes messages and documents, and performs other post-office related tasks for Novell's GroupWise application.

Post Office Protocol (POP)

A protocol used for downloading e-mail messages from the server.

PPP

See *Point-to-Point Protocol*.

PPPRNS

See *Point-to-Point Remote Node Service*.

PPTP

See *Point-to-Point Tunneling Protocol*.

presentation layer

The sixth of seven layers in the OSI model, the presentation layer manages data representation conversions. For example, the presentation layer would be responsible for conversions from EBCDIC to ASCII.

PRI

See *Primary Rate Interface*.

primary domain controller (PDC)

The main Windows NT server on a network. It stores data and sends updated copies of the data to all backup domain controllers (BDCs) in the network.

Primary Rate Interface (PRI)

The ISDN configuration that consists of 23 B-channels (30 in Europe) and one D-channel. This configuration is primarily used by larger organizations.

printer

A computer device used to produce printed material.

Printer Agent (PA)

An NLM in NDPS that represents a printer and which takes over the functions of the printer queue and the print server. Printer Agents can also be embedded in printers.

printer driver

The software that converts an application's printing instructions into language the printer understands. Common printer drivers come with most modern operating systems, but usually they must be installed before you can use the printer.

private branch exchange (PBX)

A private telephone network used within an enterprise. PBX users share a certain number of lines that they can use to make external telephone calls.

private key

A form of encryption in which the sender and the recipient share the same key for encrypting and decrypting data.

profile

A control file that is usually easily modified and is used to customize aspects of a program.

proprietary standard

A standard or protocol created and owned by a private vendor. See also *open standard*.

protocol

A set of rules that network devices must follow in order to communicate. Protocols specify the formatting, timing, sequencing, and error checking of data transmission.

protocol suite

A collection of networking protocols that provides the communications and services computers use to exchange messages and other information. A protocol suite typically manages physical connections, communication services, and application support.

provisioning

The act of supplying a new employee with necessities such as a workstation, office or cubicle, network identity and password, phone mail account, etc.

proxy cache

A cache that acts as a stand-in or substitute for a server, such as a Web server.

proxy server

A server used as a buffer between two networks or to forward traffic between two networks. It is often used as a firewall between an intranet and the Internet, preventing unauthorized inbound traffic and restricting outbound traffic by blocking specific network addresses. It can also log and report URLs for Web sites that users are viewing. In order to speed up downloading, the proxy server may be able to cache frequently-used Web pages locally.

PU

See *Physical Unit*.

public key

A form of encryption that uses two keys, a public key that is known to everyone and a private or secret key known only to the recipient. The user can encrypt outgoing data and decrypt incoming data with the private key, while others can use the public key to encrypt data sent to and decrypt data sent from the user. Additionally, the user can encrypt outgoing data with the recipient's public key, and that recipient can then decrypt the same data with his or her own private key.

Public Key Cryptography Standards (PKCS)

A set of informal, intervender security standards that include many different types of encryption.

Public Key Infrastructure (PKI)

A system of digital certificates, Certificate Authorities, and other registration authorities that verify and authenticate the validity of each party involved in an Internet transaction.

Public Key Infrastructure Services (PKIS)

A set of services that enables a NetWare system to use public-key cryptography and digital certificates.

PVC

See *permanent virtual circuit*.

Q

QoS

See *Quality of Service*.

Quality of Service (QoS)

A phrase describing how overall transmission quality, speed, and reliability improve as data transmission, error, and missing data packet rates are measured and then modified to eliminate problems.

query

The process of extracting data from a database.

queue

A line or list formed by items waiting for service, such as tasks waiting to be performed, stations waiting for connection, or messages waiting for transmission.

QuickTime

A video file format originally developed by Apple Computer for its Macintosh operating system, but now widely supported by PCs as well. QuickTime filenames end in the extension MOV. See also *Moving Picture Experts Group* and *Audio Video Interleave*.

R

RADIUS

See *Remote Authentication Dial-in User Service*.

RAM

See *random access memory*.

random access memory (RAM)

A type of computer memory that temporarily stores any running applications, programs, or information. Information and programs stored in RAM can be accessed randomly, and therefore appear more quickly than information stored in other kinds of memory. RAM is erased once the computer's power is switched off. Contrast with *read-only memory (ROM)*.

RBL

See *Realtime Blackhole List*.

RCONSOLE

An intraNetWare utility used to manage remote servers from almost any network workstation.

read-after-write verification

A NetWare feature that protects data from failures in network hardware. When the NetWare network operating system writes data to a block on the hard disk, it reads back the data and compares it to the original data still in memory. If the data from the disk matches the data in memory, the data in memory is released. If the data does not match, Hot Fix marks that block on the disk as bad and redirects the data to another location on the hard disk.

read-only memory (ROM)

A type of computer memory on which data has been prerecorded. Once data has been written onto a ROM chip, it cannot be removed or modified. ROM retains its contents, even when the computer is switched off. Contrast with *random access memory (RAM)*.

real-time

Describes computer processing that appears to occur instantaneously. Often, a real-time computer system has output that follows its input by only a very short delay.

Realtime Blackhole List (RBL)

A list containing the server IP addresses of ISPs whose customers send and perpetuate Unsolicited Bulk E-mail (UBE).

Real Time Streaming Protocol (RTSP)

A proposed standard for controlling streaming data over the World Wide Web. RTSP is designed to efficiently broadcast audio-visual data to large groups.

record locking

A feature on the network operating system that prevents two users from writing simultaneously to the same record.

redundancy

A duplicate capacity that can be called upon when a failure occurs; the quality of having more than one path to a signal point.

Registered Jack-45 (RJ-45)

An eight-wire connector commonly used to connect a computer onto a LAN, particularly an Ethernet LAN.

remote access

A feature of NetWare that enables remote users of Windows, Mac OS, and DOS to dial into a network and access all available resources including files, databases, Novell Groupware applications, electronic mail, and minicomputer services. It also enables network users to dial out from the network and connect to bulletin boards, information services, and asynchronous minicomputers.

Remote Authentication Dial-in User Service (RADIUS)

An Internet-standard protocol (defined in RFC 2058) that carries a remote user's authentication and configuration information between a network access server and the company's designated authentication server; the authentication server contains a database that stores remote user account information.

remote monitoring (RMON)

A network management protocol that is used to gather network information from a single workstation.

replica

A copy of an NDS database partition's information, which can be stored on several servers. For the NDS database to be distributed across a network, it must be stored on many servers. Rather than storing a copy of the whole NDS database on each server, replicas of each NDS partition are stored on many servers throughout the network.

replication

1. An NDS feature used by administrators to copy portions of the NDS database (called partitions) to other servers on the network. Replication moves data closer to users and provides fault tolerance.
2. A Novell Replication Services feature used by administrators to automatically or manually copy selected volumes and directories—and their subdirectories, files, and associated file system security rights—from a main server to other servers in the same (NDS) tree.

Request for Comments (RFC)

A series of numbered international documents that set standards which are voluntarily followed by many makers of software in the Internet community. Once an RFC becomes a standard, it cannot be modified or deleted. An RFC can be updated by a subsequent RFC with a new number.

Resource Management Services (RMS)

A service employed by NDPS to store network resources such as drivers in a central location and locate them for clients and printers.

restore

1. A retrieval of data previously backed up to storage media. A restore is performed if data has been lost or corrupted since the backup.
2. To reinstate backed up data to the file system.

Restructured Extended Executor (REXX)

A high-level programming language that supports operating system command files, macros, and prototyping. REXX is a versatile language that is easily used in program development, debugging, and maintenance.

Return on Investment (ROI)

A method of comparing the direct and indirect savings that result from a purchase (usually of software or hardware) with the actual cost of the item.

reverse caching

The process of configuring the HTTP proxy to store files that reside on a Web server in the proxy's RAM cache.

REXX

See *Restructured Extended Executor*.

RFC

See *Request for Comments*.

rights

A NetWare security feature that controls which directories and files a user can access and what the user is permitted to do with those directories and files. Rights are assigned to directories and files by the network supervisor.

RIP

See *Routing Information Protocol*.

RJ-45

See *Registered Jack-45*.

RMON

See *remote monitoring*.

RMS

See *Resource Management Services*.

robust

Describes software that handles unusual conditions well. A small problem will not cause robust software to lock up a computer.

ROI

See *Return on Investment*.

ROM

See *read-only memory*.

root object

In the NDS hierarchy, the root object is the start of the NDS tree. All the branches of the tree descend from the root, and each NDS tree contains only one root.

router

A device that connects two or more networks. The router sorts addressed data packets and sends them to the correct destinations. A NetWare router can connect networks that use different network adapters or transmission media as long as both sides of the connection use the same protocols.

Routing Information Protocol (RIP)

A distance-vector protocol that specifies how routers exchange routing table information.

RSA (Rivest-Shamir-Adelman)

A public-key encryption technology.

RTSP

See *Real Time Streaming Protocol*.

S**SAA**

See *System Application Architecture*.

SAN

See *Storage Area Network*.

SAP

See *Service Advertising Protocol*.

SAS

See *Secure Authentication Services*.

scalability

The ability to be made larger or smaller. Scalability describes whether a hardware or software system can adapt to increased demands.

schema

The rules that define how the NDS tree is constructed. These rules define specific types of information that dictate the way information is stored in the NDS database.

SDK

See *Software Developer Kit, Novell*.

SDLC

See *Synchronous Data Link Control*.

SDSL

See *symmetric digital subscriber line*.

Secure Authentication Services (SAS)

A modular framework built into Novell's NDS that supports authentication services, including SSL support and public key technology.

Secure Electronic Transaction (SET)

A standard that uses digital signatures to ensure secure credit card transactions over the Internet.

Secure Multipurpose Internet Mail Extension (S/MIME)

A version of the MIME protocol that supports message encryption.

Secure Sockets Layer (SSL)

A protocol used to encrypt data for transmission over the Internet.

segment

A discrete portion of a network, such as a LAN, without routers or bridges. Bridges and routers can be used to isolate network traffic to specific segments.

SEL

See *Software Evaluation Library*.

self-healing application

A feature of Novell's ZENworks management solution that protects files and applications from accidental deletion or corruption. ZENworks is configured to automatically restore deleted files and correct problems as they arise, without user intervention, so they appear to heal themselves.

Sequenced Packet Exchange (SPX)

A protocol by which two workstations or applications communicate across the network. SPX uses NetWare IPX to deliver the messages, but SPX guarantees delivery of the messages and maintains the order of messages on the packet stream.

Serial Line Internet Protocol (SLIP)

An Internet protocol used to run IP over serial lines, such as telephone circuits, to interconnect two systems.

serial port

An interface that can be used for serial communication, in which only one bit is transmitted at a time. See also *parallel port*.

Serial Storage Architecture (SSA)

IBM's proposed ANSI standard for a high-speed interface to disk clusters and arrays. With SSA, serial data can be transferred at rates of 20 Mbps in each direction.

server

A computer on a network that recognizes and responds to client requests for services. These services can range from basic file and print services to support for complex, distributed applications.

server operating system (SOS)

An operating system that coordinates all the resources and services available from the server on which it is running.

Server Software Package (SSP)

An executable created in ZENworks for Servers that automatically installs an application on a server.

Service Advertising Protocol (SAP)

A NetWare feature that advertises the services available on the applications server.

Service Registration Services (SRS)

A network traffic-reducing service in NDPS through which printers and other services register.

servlet

A Java program that runs on a Web server, much as a Java applet runs on a Web browser.

session layer

The fifth of seven layers in the OSI model. The session layer establishes and maintains communication channels. In practice, this layer is often combined with the transport layer.

session tracking

A way to gather information about the use of a Web site. A session is a connection between a client and a server. By tracking sessions, a Web site operator can determine the number of users visiting the site, the length of time they remain at the site, and the sorts of demands being placed on the system.

SET

See *Secure Electronic Transaction*.

SFT

See *System Fault Tolerance*.

shell

See *NetWare shell*.

shielded twisted pair (STP)

A type of intertwined wiring that is wrapped in a metal sheath to provide extra protection from external, interfering signals.

Simple Mail Transfer Protocol (SMTP)

A protocol for sending e-mail messages in networks that use TCP/IP (such as the Internet).

Simple Network Management Protocol (SNMP)

An industry-standard protocol for communications between a network management console and the network devices that the console monitors. Management information is collected by agents in the devices and recorded in a management information base. The types of collected information include the features of a device, data throughput, traffic overloads, and errors.

single mode fiber

An optical fiber with a small diameter that can send only one transmission at a time.

SLIP

See *Serial Line Internet Protocol*.

smart card

A plastic card, similar in appearance to a credit card, that contains a microchip used to store encoded information. Smart cards can provide access to resources, verify identity, and authorize payments or purchases.

SMDS

See *Switched Multimegabit Data Service*.

S/MIME

See *Secure Multipurpose Internet Mail Extension*.

SMTP

See *Simple Mail Transfer Protocol*.

SNA

See *System Network Architecture*.

SNMP

See *Simple Network Management Protocol*.

socket secure (SOCKS)

A protocol used to communicate through a firewall or proxy server. The SOCKS protocol uses TCP/IP sockets for communication.

SOCKS

See *socket secure*.

software

The programs and instructions that run on computer hardware. Software tells the computer how to access, process, store, and output data. Examples of software include operating systems, office suites, games, and Web browsers. Contrast with *hardware*.

Software Developer Kit, Novell (SDK)

A kit that contains utilities, libraries, documentation, sample code, and open APIs. Developers use these components to access Novell's advanced network, Internet, and management services.

Software Evaluation Library (SEL)

A CD library of Novell software.

SONET

See *Synchronous Optical Network*.

SOS

See *server operating system*.

source-route bridging

A bridging technology that can determine the path on which data is transferred from one workstation to another. Source-route bridges execute the routing instructions placed into each data packet upon assembly.

spanning

A technique for improving I/O performance by placing frequently used segments of a file system or database on separate disks.

spanning tree

A device that specifies only one transmission route. Spanning trees prevent problems resulting from the interconnection of multiple networks by means of parallel transmission paths.

split brain

A chaotic condition in server clusters characterized by a loss of communication between systems.

splitterless DSL

An ADSL installation standard (ITU-T G.992.2) developed by the Universal ADSL Working Group. Also called G.lite, DSL Lite, and Universal DSL.

SPX

See *Sequenced Packet Exchange*.

SQL

See *Structured Query Language*.

SRS

See *Service Registration Services*.

SSA

See *Serial Storage Architecture*.

SSCP

See *System Services Control Point*.

SSL

See *Secure Sockets Layer*.

SSP

See *Server Software Package*.

standalone

A self-contained device that does not require any other devices to function. For example, a standalone computer is not connected to a network.

standard

A set of rules or procedures agreed upon by industry participants.

star topology

A network configuration in which each node is connected to a separate line, and all lines lead to the same central hub. Through the hub, a line can be connected to any other line. An example is a private branch exchange (PBX).

star-wired ring topology

A star-wired ring topology may appear (externally) to be the same as a star topology. Internally, a star-wired ring contains wiring that allows information to pass from one device to another in a circle or ring. The token-ring protocol uses a star-wired ring topology.

stateful filter

A filter that identifies suspicious packets by looking at packet addresses and the context of the session in which the packets are sent.

static inheritance

In directories, administrative rights “flow down” to all objects subordinate to the container in which rights have been granted. With static inheritance the ACL of each affected object will be updated. See also *dynamic inheritance*.

Storage Area Network (SAN)

A high-speed subnetwork of shared storage devices. In a SAN, all storage devices are available to all servers on a LAN or WAN.

STP

See *shielded twisted pair*.

strong encryption

Encryption using ciphers of 64-bit keys or more.

Structured Query Language (SQL)

A language used to create, maintain, and query relational databases.

STS

See *Synchronous Transport Signal*.

subnet

A portion of a network that shares a common address component. Typically, each LAN (or area of the network separated by routers) is a unique subnet. On TCP/IP networks, subnets are defined as all devices whose IP addresses have the same prefix. For example, all devices with IP addresses that start with 100.100.100. would be part of the same subnet.

subnetwork

A collection of OSI end systems and intermediate systems that are under the control of a single administrative domain and that use a single network access protocol. For example, a group of bridged LANs that are part of a WAN is considered a subnetwork.

subscriber

A server designated by ZENworks for Servers to receive and process distributions.

subscription

An association between a ZENworks for Servers subscriber and a ZFS channel.

Super Video Graphics Array (SVGA)

A video display standard for color monitors. SVGA monitors can display 16.7 million different colors and have resolutions up to 1280 pixels by 1024 pixels.

supervisor

Also known as a network administrator, this individual is responsible for the administration and maintenance of a network or database. A supervisor has access rights to all volumes, directories, and files.

supply-chain management

The business process that involves the coordination of materials from suppliers through customers.

SVGA

See *Super Video Graphics Array*.

switch

A network device that selects a path or circuit for sending a unit of data to its destination. A switch may also include the function of a router.

Switched Multimegabit Data Service (SMDS)

A high-speed communication technology that organizations can use to connect geographically separate LANs into a single WAN over public telephone lines.

symmetric digital subscriber line (SDSL)

A new technology used to send more data over existing copper telephone lines. SDSL supports data rates up to 3 Mbps and can operate simultaneously with voice connections over normal telephone lines.

symmetric multiprocessing

A type of processing in which multiple central processing units, residing in one cabinet, share the same memory. Therefore, all processors can perform all tasks and different functions can be processed simultaneously.

synchronization

A Novell Replication Services feature that updates both replicated file system objects (volumes, directories, and files) and the replicas of those objects.

synchronous

Describes a mode of data transfer in which information is transmitted in blocks (frames) of bits separated by equal time intervals. See also *asynchronous*.

Synchronous Data Link Control (SDLC)

An IBM-defined link-control protocol that is code independent.

Synchronous Optical Network (SONET)

A high-speed network technology that provides data transfer rates from 51.8 Mbps to 2.48 Gbps. SONET uses fiber-optic cable to support high-speed digital traffic.

Synchronous Transport Signal (STS)

A standardized electrical signal that is considered the building block of the SONET multiplexing hierarchy.

SYS volume

A mandatory volume in computer systems using Novell NetWare, the SYS volume contains information needed for NetWare to function.

system administrator

An individual responsible for maintaining a multi-user computer system, including a LAN. A system administrator adds and configures new workstations, sets up user accounts, installs system-wide software, allocates mass storage space, and performs anti-virus procedures.

System Application Architecture (SAA)

A set of IBM-defined standards designed to provide a consistent environment for programmers and users across a broad range of IBM equipment, including microcomputers, minicomputers, and mainframes.

system board

The main circuit board of a microcomputer. It typically contains the CPU, BIOS, memory, mass storage interfaces, ports, expansion slots, and controllers. See also *circuit board*.

System Fault Tolerance (SFT)

The duplication of data on multiple storage devices. If one storage device fails, the data is available from another device. Multiple levels of hardware and software system fault tolerance decrease the possibility of data loss.

System Network Architecture (SNA)

A structure that defines how computer equipment connects and communicates. SNA specifies the logical structure, formats, protocols, and operational sequences for transmitting data. SNA has evolved over the years so that it now supports peer-to-peer networks of workstations.

System Services Control Point (SSCP)

A controlling program in an SNA domain.

T

TA

See *terminal adapter*.

TAPI

See *Telephony Applications Programming Interface*.

TB

See *terabyte*.

TCO

See *Total Cost of Ownership*.

TCP/IP

See *Transmission Control Protocol/Internet Protocol*.

Technology Without an Interesting Name (TWAIN)

An interface standard for scanners. TWAIN is used to scan an image directly into the application in which the user wants to manipulate the image.

TED

See *Tiered Electronic Distribution*.

telephony

The science of translating sound into electrical signals, transmitting the signals, and then converting them back into sound.

Telephony Applications Programming Interface (TAPI)

An API that allows interoperability between a client or server running Windows and a telephone service, such as a PBX.

Telephony Services Application Programming Interface (TSAPI)

An API that allows interoperability between a server running NetWare and a telephone service, such as a PBX.

Telnet

A protocol in the TCP/IP suite that governs character-oriented terminal traffic. Telnet supports character terminals, block terminals, and graphics terminals. It is used for remote login on an Internet network.

terabyte (TB)

A unit of measure for memory or disk storage capacity that equals 2×10^{40} power (approximately one trillion) bytes.

terminal

A device, usually equipped with a keyboard and display, that enables a user to communicate with a computer.

terminal adapter (TA)

A device that connects a computer to an ISDN channel. Used instead of a modem, it is either an external unit or a plug-in adapter card.

terminal emulation

The ability of a computer to imitate a different type of terminal. With terminal emulation, a user can access a mainframe or a bulletin board service with a personal computer.

thicknet

See *10Base-5*.

thin client

A PC designed to be dependent on a network. It usually consists only of essential components, lacking diskette drives, expansion slots, CD-ROM drives, etc. Applications typically originate on a server and may or may not be executed on the client. Thin clients are significantly less expensive than autonomous PCs and are therefore an attractive alternative for businesses. See also *fat client*.

thinnet

See *10Base-2*.

thread

An individual sequence of computing instructions within a program. These instructions can execute independently of other parts of the program.

threshold

A preset performance value assigned to a particular agent or group of agents. If one of these agents exceeds a threshold, an alert can be sounded before the system's overall performance is compromised.

throttling

A method to restrict data streams on networks. In ZENworks for Servers, you can configure a subscriber or proxy to receive a limited number of bytes per second, thereby preventing a distribution from dominating the network.

throughput

The net data transfer rate between an information source and destination.

Tiered Electronic Distribution (TED)

The means by which ZENworks for Servers assembles and distributes server data files or SSPs to other network servers. TED employs a series of proxies arranged in "tiers" to speed distribution across LAN or WAN links.

token

A security device about the size of a credit card, a token is used to generate a network ID code. Typically, a user enters a password into the device and then is granted a randomly generated access code that can be used to log onto a network. See also *smart card*.

token-ring topology

A LAN arbitration scheme in which message transmission conflicts are avoided by the granting of “tokens,” which give permission to send. A workstation keeps the token while transmitting its message. Once the message has been sent, or the allotted time has expired, the token is passed to the next workstation.

topology

See *physical topology* and *logical topology*.

Total Cost of Ownership (TCO)

A popular catchphrase that represents how much it actually costs to own a PC. Because the TCO includes the original hardware and software, upgrades, maintenance, technical support, and training, it is estimated to be three or four times the actual purchase cost of the PC.

transaction

A specific, limited sequence of information exchange that is treated as an indivisible action.

Transaction Tracking System (TTS)

A NetWare feature that protects database applications from corruption by backing out of incomplete transactions. Incomplete transactions are sometimes the result of failure in a network component.

transceiver

A device that both transmits and receives analog or digital signals. The term is used most frequently to describe the component in LANs that actually applies signals onto the network wire and detects signals passing through the wire.

Transmission Control Protocol/Internet Protocol (TCP/IP)

A protocol suite and related applications originally developed for the U.S. Department of Defense. It includes TCP (Transmission Control Protocol) as the primary transport protocol and IP (Internet Protocol) as the network layer protocol. Using TCP/IP, different types of computers can communicate and exchange information.

transparent

A system or application which functions in a manner not evident to the user.

transparent bridging

A bridging process whose presence and operation are not apparent to network hosts. When transparent bridges are activated, they learn the network’s topology by analyzing the source addresses of incoming frames from all attached networks.

transport layer

The fourth of seven layers in the OSI model. The transport layer provides reliable, end-to-end delivery and detects transmission sequence errors.

trustee

Any user or group object that has been granted access rights in a directory.

TSAPI

See *Telephony Services Application Programming Interface*.

TTS

See *Transaction Tracking System*.

tunneling

The process of encapsulating a packet within a packet of a different protocol. Using tunneling, two networks based on the same protocol can communicate across a network based on a different protocol. For example, IPX packets can have IP headers attached so that they can be transported across the Internet.

Turbo FAT

A NetWare file index used to quickly access large files. See also *file allocation table*.

TWAIN

See *Technology Without an Interesting Name*.

U

UAM

See *User Account Management*.

UBE

See *Unsolicited Bulk E-mail*.

UDP

See *User Datagram Protocol*.

UNC

See *Universal Naming Convention*.

unguided media

A natural entity that conducts transmitted electromagnetic waves but does not guide them. The atmosphere and outer space are examples of unguided media.

uniform resource locator (URL)

The global address of documents and other resources on the World Wide Web. The first part of the address indicates which protocol to use, and the second part specifies the IP address or the domain name where the resource is located.

uninterruptible power supply (UPS)

A backup power unit that provides continuous power even when the normal power supply is interrupted.

Universal DSL

An ADSL installation standard (ITU-T G.992.2) developed by the Universal ADSL Working Group. Also called G.lite, DSL Lite, and splitterless DSL.

Universal Naming Convention (UNC)

A PC format for specifying the location of resources on a LAN.

Universal Serial Bus (USB)

A new external bus standard that supports data transfer rates of 12 Mbps (12 million bits per second).

UNIX

An operating system developed by AT&T Bell Laboratories. Running UNIX, a computer can manage multiple users and programs simultaneously.

UnixWare operating system (OS)

A UNIX operating system for PCs.

unshielded twisted pair (UTP)

Two unshielded wires, usually loosely intertwined, that help minimize any induced noise in balanced circuits. This type of wiring is commonly used in LANs.

Unsolicited Bulk E-mail (UBE)

Electronic junk mail, also known as spam, that is unrequested and unwanted. UBE usually consists of advertisements and is generally sent to a large group of e-mail addresses. Because it is unsolicited and consumes large amounts of bandwidth, many organizations have taken measures to block UBE from their systems.

upgrade

1. A new version of a product that is released on a periodic basis.
2. To install an improved software version or hardware device, whether from the same or a different manufacturer.

UPS

See *uninterruptible power supply*.

URL

See *uniform resource locator*.

USB

See *Universal Serial Bus*.

user

A person who uses a computer, program, network, or related service.

user account

A NetWare security feature, maintained by the network supervisor, that determines each user's login name, user groups, and trustee assignments.

User Account Management (UAM)

An NDS component that is used to move user and group accounts to NDS.

User Datagram Protocol (UDP)

A connectionless protocol that runs on top of IP networks. UDP/IP is primarily used to broadcast messages over a network.

utility

A simple program that performs a specific task, usually related to managing computer resources.

UTP

See *unshielded twisted pair*.

V**VAX**

A Digital Equipment Corporation minicomputer.

vCard

A standard for electronic business cards.

VDSL

See *Very high bit-rate Digital Subscriber Line*.

versioning

A technique for managing documents that ensures original files are not altered or deleted. Instead, each modification creates a new version of the file. See also *document check-in/check-out*.

Very high bit-rate Digital Subscriber Line

A version of DSL that provides higher speeds over short distances: between 51 and 55 Mbps over lines up to 300 meters long and slower transmission rates for longer lines.

very large database (VLDB)

A database that holds a large amount of information, such as a database that stores records of online commercial transactions, user accounts for ISPs, or data for decision support systems.

VGA

See *video graphics array*.

video conferencing

Real-time, two-way communication involving two or more users who can see and speak with each other via electronic media.

video graphics array (VGA)

A video display standard for color monitors.

virtual

Describes an object that is conceptual or appearance-based rather than an actual physical entity. For example, a virtual book may simulate the appearance of a book, but it is not actually a book.

virtual loadable module (VLM)

A modular executable program that runs at each DOS workstation and enables communication with the NetWare server. Related functions are logically grouped and incorporated into individual VLMs. VLMs can be loaded and unloaded to customize networking environments.

Virtual Memory System (VMS)

An operating system for DEC VAXs.

virtual private network (VPN)

A secure internetwork connection between two geographically separate LANs provided by a public network such as the Internet. The connection emulates a LAN connection, thus reducing or eliminating the need for a private WAN link.

Virtual Terminal Protocol (VTP)

An ISO application for establishing a virtual terminal connection across a network. With VTP a computer system appears to a remote system as if it were a directly attached terminal.

VLDB

See *very large database*.

VLM

See *virtual loadable module*.

VMS

See *Virtual Memory System*.

volume

The highest level in the NetWare directory structure, it resides at the same level as a DOS root directory. A volume represents a physical amount of hard disk storage space.

VPN

See *virtual private network*.

VTP

See *Virtual Terminal Protocol*.

W

WAN

See wide area network.

WAP

See Wireless Application Protocol.

WAV

A digitized sound file format that can be played back on a personal computer. “WAV” is the three-letter extension assigned to this format by Microsoft Windows.

WCCP

See Web Cache Control Protocol.

Web application

An interactive program that runs across your intranet or the Internet and allows you to exchange information with a database.

Web application server

Software used to build, deploy, and manage Web applications.

Web-based Distributed Authoring and Versioning (WebDAV)

A set of extensions to the HTTP protocol that can be used to collaboratively edit and manage files on remote Web servers.

Web browser

An application used to navigate through a wide variety of Internet data, primarily provided by the World Wide Web.

Web Cache Control Protocol (WCCP)

A protocol developed by Cisco Systems, Inc. that transparently redirects HTTP requests to a cache engine, such as Novell ICS. End users cannot tell that the page came from the cache engine rather than the originally requested Web server.

WebDAV

See Web-based Distributed Authoring and Versioning.

Web Proxy Auto Discovery (WPAD)

A protocol that allows browsers to discover caches in their environment without the need for configuration by the administrator.

Web publishing

The process of creating hypertext documents and making them available on the World Wide Web.

Web server

A server used to access and publish information on the Internet or on an intranet. It runs on a computer that serves documents to other computers, which request the documents using Web browsers.

wide area network (WAN)

Two or more LANs in separate geographic locations connected by a remote link.

Wireless Application Protocol (WAP)

A global standard for accessing information over a wireless network connection.

wireless LAN

See *wireless local area network*.

wireless local area network (wireless LAN)

A local area network that users can access through a radio connection. Wireless technologies for the LAN connection also include spread spectrum, microwave, and infrared light.

wizard

A utility within an application that makes the application easier to use by guiding the user through a particular task. For example, a “letter wizard” within a word processing application leads the user through the steps of producing different types of correspondence.

word processing

The electronic process of creating, formatting, editing, proofreading, and printing documents.

workflow

The series of steps required to complete a task or business process. An automated workflow routes a task to the appropriate users at the point in the workflow process for which they are responsible.

workgroup

Two or more individuals on a LAN who share files, databases, and other resources.

workgroup manager

A user classification in the NetWare 3 and above network operating systems. Workgroup managers have supervisory control over any user or user group they create on the network.

workstation

Any individual PC that is connected to a network.

World Wide Web (WWW)

A global collection of text files, multimedia files, and other network services that are interconnected by a system of hypertext documents. The hypertext documents are formatted in HTML and are supported by Internet servers. Web browsers are used to access the World Wide Web.

WORM

See *Write Once, Read Many*.

WPAD

See *Web Proxy Auto Discovery*.

Write Once, Read Many (WORM)

An optical disk technology in which data is written to a disk one time only. Once written to the disk, the data is permanent and can be read multiple times.

WSUPDATE

An automated workstation update utility.

WWW

See *World Wide Web*.

X**X11**

The X Window System, version 11.

X.25

A standard that defines the communications protocol for access to packet-switched networks.

X.400

An ISO and ITU standard for addressing and transporting e-mail messages. It conforms to layer seven of the OSI model and supports several types of transport mechanisms, including Ethernet, X.25, TCP/IP, and dial-up lines.

X.500

An ISO and ITU standard that defines how global directories should be structured. X.500 directories are hierarchical, which means that they have different levels for each category of information, such as country, state, and city. X.500 supports X.400 systems.

X.509

An ITU recommendation that has not been officially defined or approved: it is the most widely used standard for defining digital certificates.

xDSL

A term that refers collectively to all variations of DSL.

X Window System

A standard set of display-handling routines developed at MIT for UNIX workstations; they are used to create hardware-independent graphical user interfaces.

XML

See *Extensible Markup Language*.

Y

Y2K

See *Year 2000*.

Year 2000 (Y2K)

Describes the problem of applications and computers that are programmed to recognize only 20th-century dates.

Z

ZENworks

See *Zero Effort Networks*.

ZENworks for Servers (ZFS)

A Novell software product that is used to deploy server files and applications from a central location. It can also be used to create application installation packages.

Zero Effort Networks (ZENworks)

A Novell software product that is used to deploy applications and manage workstation profiles from a central location.

ZFS

See *ZENworks for Servers*.

zone

A logical grouping of devices that are physically located on one or more networks.

Abbreviations and Acronyms

AAL	ATM Adaptation Layer
ACK	Acknowledge
ACL	access control list
ADA	Administration and Directory Agent
ADSI	Active Directory Services Interface
AEP	AppleTalk Echo Protocol
AFP	AppleTalk Filing Protocol
AFTP	Advanced Program-to-Program Communications File Transfer Protocol
AIO	Asynchronous Input/Output
AIX	Advanced Interactive Executive
ANSI	American National Standards Institute
AOL	America Online
AOT	application object
API	application programming interface
APPC	Advanced Program-to-Program Communications
APPN	Advanced Peer-to-Peer Networking
ARCnet	Attached Resource Computing Network
ARP	Address Resolution Protocol
ASCII	American Standard Code for Information Interchange
ASMP	asymmetric multiprocessing
ASP	Application Service Provider
AT&T	American Telephone & Telegraph
ATM	Asynchronous Transfer Mode; Adobe Type Manager
ATP	AppleTalk Transaction Protocol
ATT	Advanced Technical Training
AVI	Audio Video Interleave
BBS	bulletin board system
BDC	backup domain controller
BIOS	basic input/output system
BMP	bitmap
BNC	Bayonet Neill Concelman
BOOTP	Bootstrap Protocol
BRI	Basic Rate Interface
C3PO	Custom 3rd-Party Object
CA	Certificate Authority
CBT	computer-based training
CCITT	Consultative Committee for International Telegraph and Telephone
CCR	continuing certification requirement
CD-ROM	compact disc read-only memory
CGI	Common Gateway Interface
CHAP	Challenge Handshake Authentication Protocol
CLA	Corporate License Agreement
CLIB	C-Library
CNA	Certified Novell Administrator
CNE	Certified Novell Engineer

CNI	Certified Novell Instructor
CNS	Certified Novell Salesperson
COM	Component Object Model
CORBA	Common Object Request Broker Architecture
COS	Cache Object Store
CPI-C	Common Programming Interface-Communications
CPU	central processing unit
CRC	cyclic redundancy check
CSMA	carrier sense multiple access
CSMA/CD	carrier sense multiple access with collision detection
CSP	cryptographic service provider
CSU	channel service unit
CTK	Compatibility Test Kit, Novell
DAP	Directory Access Protocol
DARPA	Defense Advanced Research Projects Agency
DB	Database
DBMS	database management system
DCB	Data Control Block
DDNS	Dynamic Domain Name System
DDP	Datagram Delivery Protocol
DEC	Digital Equipment Corporation
DEN	Directory-Enabled Network
DES	Data Encryption Standard
DHCP	Dynamic Host Configuration Protocol
DID	direct inward dialing
DLC	Data Link Control
DLL	Dynamic Link Library
DNS	Domain Name System
DoD	Department of Defense
DOS	disk operating system
DSS	decision support system
EAR	Early Access Release
EISA	Extended Industry Standard Architecture
EJB	Enterprise JavaBeans
ELD	electronic license distribution
E-mail	electronic mail
ENS	Event Notification Services
ERP	Enterprise Resource Planning
ESD	electronic software distribution
ESDI	Enhanced Small Disk Interface
EXOS	Extension Outside
FAT	file allocation table
FDDI	Fiber Distributed Data Interface
FSIOP	File Server Input/Output Processor
FTAM	File Transfer, Access, and Management
FTP	File Transfer Protocol
GB	gigabyte
GMT	Greenwich Mean Time

GRE	General Routing Encapsulation
GUI	graphical user interface
HCSS	High Capacity Storage System
HDML	Handheld Device Markup Language
HDSL	High bit-rate Digital Subscriber Line
HLLAPI	High-Level Language Application Programming Interface
HP	Hewlett-Packard
HPR	High Performance Routing
HSM	Hardware Specific Module
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
IBM	International Business Machines
ICL	International Companies Limited
ICMP	Internet Control Message Protocol
ICP	Internet Cache Protocol
ICS	Internet Caching System
ICSA	International Computer Security Association
IDE	Integrated Drive Electronics
IEEE	Institute of Electrical and Electronic Engineers
IETF	Internet Engineering Task Force
IGRP	Internet Gateway Routing Protocol
IMAP	Internet Message Access Protocol
I/O	input/output
IP	Internet Protocol
IPP	Internet Printing Protocol
IPSec	Internet Protocol Security
IPX	Internetwork Packet Exchange
IS	information systems
ISA	Industry Standard Architecture
ISDN	Integrated Services Digital Network
ISIS	Integrated Scientific Information System
IS-IS	Intermediate System to Intermediate System
ISO	International Standards Organization
ISP	Internet service provider
IT	information technology
ITU	International Telecommunications Union
JDBC	Java Database Connectivity
JDK	Java Development Tool
JNDI	Java Naming and Directory Interface
JRE	Java Runtime Environment
JVM	Java Virtual Machine
KB	kilobyte
LAN	local area network
LDAP	Lightweight Directory Access Protocol
LDIF	LDAP Data Interchange Format
LEN	Logical End Node
LIPs	Large Internet Packets
LPD	Line Printer Daemon

LPR	Line Printer Requester
LU	logical unit
LUA	logical unit API
MAC	media access control
MAPI	Messaging Application Programming Interface
MB	megabyte
MCA	Micro Channel architecture
MHS	Message Handling Service
MHz	megahertz
MIB	Management Information Base
MIME	Multipurpose Internet Mail Extension
MLA	Master License Agreement
MPEG	Moving Picture Experts Group
MPR	MultiProtocol Router, NetWare
MS	Microsoft
MSL	Mirrored Server Link
MTA	Message Transfer Agent
MTO	Many-To-One, Novell StandbyServer
NAEC	Novell Authorized Education Center
NAL	Novell Application Launcher
NAS	Network Access Server
NASC	Novell Authorized Service Center
NASI	NetWare Asynchronous Services Interface
NAT	Network Address Translation
NBP	Name Binding Protocol
NCA	Network Computing Architecture
NCF	NetWare Command File
NCP	NetWare Core Protocol; Network Control Program
NCR	National Cash Register
NCSC	National Computer Security Center
NDIS	Network Device Interface Specification
NDK	Novell Developer Kit
NDPS	Novell Distributed Print Services
NDS	Novell Directory Services
NEAP	Novell Education Academic Partner
NEAT	Novell Easy Administration Tool
NEPS	NetWare Enterprise Print Services
NetBIOS	Network Basic Input/Output System
NFS	Network File System
NHAS	Novell High Availability Server
NIAS	Novell Internet Access Server
NICE	Novell Internet Connection Expert
NICI	Novell International Cryptographic Infrastructure
NIS	Network Information Service
NLANR	National Laboratory for Applied Network Research
NLM	NetWare Loadable Module
NLP	NetWare Lite Protocol
NLS	NetWare Licensing Services

NLSP	NetWare Link Services Protocol
NMA	NetWare Management Agent
NNS	NetWare Name Service
NOS	network operating system
NPA	Network Professional Association
NPD	Novell Professional Developer
NRS	Novell Replication Services
NSAPI	Netscape Server Application Programming Interface
NSS	Novell Storage Services
NT-1	network termination unit
NTP	Network Time Protocol
NTSC	National Television Standards Committee
NUI	NetWare Users International
NVT	Novell Virtual Terminal
NWAdmin	NetWare Administrator
OC	Optical Carrier
OCX	Object Linking and Embedding Custom Control
ODBC	Open Database Connectivity
ODI	Open Data-Link Interface
ODMA	Open Document Management Application Programming Interface
OEM	original equipment manufacturer
OLE	Object Linking and Embedding
OLTP	online transaction processing
OS	operating system
OSA	Open Systems Architecture
OSI	Open Systems Interconnection
OSPF	Open Shortest Path First
OU	Organizational Unit
PA	Printer Agent
PAL	Phase Alternating Line
PAM	Pluggable Authentication Module
PAP	Printer Access Protocol; Password Authentication Protocol
PC	personal computer
PCI	Peripheral Component Interface
PCMCIA	Personal Computer Memory Card International Association
PGP	Pretty Good Privacy
PIN	Personal Identification Number
PKCS	Public Key Cryptography Standards
PKI	Public Key Infrastructure
PKIS	Public Key Infrastructure Services
POA	Post Office Agent
POP	Post Office Protocol; Point of Presence
PPP	Point-to-Point Protocol
PPTP	Point-to-Point Tunneling Protocol
PRI	Primary Rate Interface
PROFS	Professional Office System
PU	physical unit
QLLC	Qualified Logical Link Control

QoS	Quality of Service
RAD	Rapid Application Development
RADIUS	Remote Authentication Dial-in User Service
RAID	Redundant Array of Independent Disks
RAM	random access memory
RBL	Realtime Blackhole List
REXX	Restructured Extended Executor
RFC	Request for Comment
RIP	Routing Information Protocol
RLE	Run Length Encoded
RMON	remote monitoring
RMS	Resource Management Services
ROI	Return on Investment
ROM	read-only memory
RSA	Rivest-Shamir-Adleman
RTF	Rich Text Format
RTM	Response Time Monitor
RTMP	Routing Table Maintenance Protocol
RTSP	Real Time Streaming Protocol
SAA	System Application Architecture
SAP	Service Advertising Protocol
SAS	Single Attached Station; Secure Authentication Services
SCSI	Small Computer System Interface
SDK	software developer's kit; Software Developer Kit, Novell
SDLC	Synchronous Data Link Control
SECAM	Sequential Color and Memory
SEL	Software Evaluation Library
SET	Secure Electronic Transaction
SFT	System Fault Tolerance
SLIP	Serial Line Internet Protocol
SLP	Service Location Protocol
SMB	Server Message Block
SMDS	Switched Multimegabit Data Service
S/MIME	Secure Multipurpose Internet Mail Extension
SMP	symmetric multiprocessing
SMS	Storage Management Services
SMTP	Simple Mail Transfer Protocol
SNA	Systems Network Architecture
SNMP	Simple Network Management Protocol
SONET	Synchronous Optical Network
SOS	server operating system
SPX	Sequenced Packet Exchange
SQL	Structured Query Language
SRS	Service Registration Services
SSCP	System Services Control Point
SSI	Server-Side Include
SSL	Secure Sockets Layer
SSP	server software package

STP	shielded twisted-pair wiring
STS	Synchronous Transport Signal
SVGA	Super Video Graphics Array
SYN	Synchronize
TA	terminal adapter
TAPI	Telephony Application Programming Interface
TB	terabyte
TCO	Total Cost of Ownership
TCP/IP	Transmission Control Protocol/Internet Protocol
TEC	TME 10 Enterprise Console
TED	Tiered Electronic Distribution
TFTP	Trivial File Transfer Protocol
TME	Tivoli Management Environment
TP	Transport Protocol
TSAPI	Telephony Services Application Programming Interface
TSR	terminate-and-stay-resident
TTL	Time To Live
TTS	Transaction Tracking System
TWAIN	Technology Without an Interesting Name
UAM	User Account Management
UBE	Unsolicited Bulk E-mail
UDP	User Datagram Protocol
UNC	Universal Naming Convention
URL	uniform resource locator
UTP	unshielded twisted-pair wiring
VAX	Virtual Address Extender
VDSL	Very high bit-rate Digital Subscriber Line
VGA	video graphics array
VHS	Video Home System
VIM	Vendor Independent Messaging
VHF	very high frequency
VLA	Volume License Agreement
VLDB	very large database
VLM	Virtual Loadable Module
VMS	Virtual Memory System
VPN	virtual private network
VT	Virtual Terminal
VTAM	Virtual Telecommunications Access Method
VTP	Virtual Terminal Protocol
WAN	wide area network
WAP	Wireless Application Protocol
WCCP	Web Cache Control Protocol
WebDAV	Web-based Distributed Authoring and Versioning
WORM	write once, read many
WPAD	Web Proxy Auto Discovery
WWW	World Wide Web
XML	Extensible Markup Language
Y2K	Year 2000

ZENworks	Zero Effort Networks
ZFS	ZENworks for Servers