

Red Hat Glossary

#

802.11

Standard protocol for radio-frequency wireless data transmission and networking. Also called Wi-Fi.

A

absolute

Relating to *file systems*, the location of a directory or file that can be accessed regardless of the current working location of a user or program. For example, to access the Samba configuration file regardless of your current working directory, use the following absolute path: `/etc/samba/smb.conf`.

ad-hoc

A wireless networking architecture in which there is no central access point. Nodes act as peers on the network and transmit information directly to recipient nodes.

advanced configuration and power interface (ACPI)

An industry standardized specification that lets an operating system control power management and configuration to PC and server components.

advanced graphics port (AGP)

Hardware interface for the acceleration of graphics to a display such as a monitor. *AGP video cards* display three-dimensional graphics faster than *peripheral component interconnect (PCI) cards*.

advanced power management (APM)

Legacy power control and configuration specification for hardware in PCs and servers. APM as a standard has been replaced by *ACPI*.

Advanced Technology Attachment Packet Interface (ATAPI)

A system-level component interface used to connect CD-ROMs and tape drives to PCs and servers, as defined by the enhanced integrated drive electronics (EIDE) specification.

alias

An alternate name, symbolic link, network configuration, or icon that points to a corresponding file or directory location. Aliases are useful for concatenating long strings or commands into shorter, less complex names.

American Standard Code for Information Interchange (ASCII)

Alphanumeric characters are represented by numbers ranging from 0 to 127 and are translated into a 7-bit binary code. ASCII allows for easy transfer of text-only files between different kinds of computers.

anonymous FTP

A means of transferring and obtaining files that are available for public download from FTP sites. The publicly available files are usually kept in a directory called `/pub/`. See *File Transfer Protocol (FTP)*.

applet

A small application, usually a utility or other simple program, that can be executed on a graphical desktop panel.

architecture

The design, organization, and integration of components within a computer system, primarily determined by the central processing unit that the system employs.

archive

To collect files into one large file for storage or backup purposes. Archives are often used for the purpose of saving disk space.

Asynchronous Transfer Mode (ATM)

A fixed-route network protocol in which transmission packets have direct paths and destinations. ATM is an alternative to TCP/IP, which tags each packet with destination information in the header and can be routed through arbitrary paths on a carrier network such as the Internet.

ASCII

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

ATAPI

see *Advanced Technology Attachment Packet Interface (ATAPI)*.

authentication

Verification of the identity of a username, password, process, or computer system for security purposes.

automount

To automatically access a storage medium such as CD-ROMs and make its contents available to a computer system.

B**backup**

To periodically archive data on a system to mitigate risk of permanent data loss in the event of system or component malfunction or destruction.

backwards compatible

The quality of software to be able to work properly with older versions of the software that may be installed on a machine or communicating with another machine with a lower version of the software.

bash

The default command interpreter, or shell, for Red Hat Linux. `bash` features several enhancements to `sh`, such as built-in file management commands and support for completion of commands and paths using the the [Tab] key.

Basic Input Output System (BIOS)

A set of instructions stored on a ROM CHIP that handles input-output functions and system component management (such as power configuration and interrupt request settings).

Berkeley Internet Name Domain (BIND)

A domain name service implementation developed by the University of California at Berkeley. BIND is distributed with the `named` daemon, which actively listens for requests and queries root name servers to translate IP addresses to corresponding domain names and vice versa.

binary

A code system that uses 2 as its base and 0s and 1s for its notation. Binary code is used by computers as it functions well with digital electronics and Boolean algebra.

BIND

See *Berkeley Internet Name Domain (BIND)*.

BIOS

see *Basic Input Output System (BIOS)*.

bit

Short for binary digit. The smallest unit of information a computer can read and manipulate. The value of a bit is 1 or 0.

boolean

Expression-based system that uses the operators AND, OR, and NOT; operations are based on variables which can be 1 (true) or 0 (false).

boot

The process of loading a computer's operating system. If your system is working properly, the operating system boots when the computer is turned on.

boot diskette

A diskette that loads, or boots, a computer system.

boot loader

Software that is stored on the master boot record of a bootable storage disk; can load one or more operating systems by reading file system information or through a pointer to a disk partition containing operating system files.

boot partition

The partition on a disk where the `/boot` directory is mounted. The boot partition contains the operating system kernel, as well as critical files needed during the boot process.

Bootstrap Protocol (bootp)

A TCP/IP protocol allowing a diskless workstation to find its own IP address at startup.

broadcast

Packets that transmit to all hosts on the network.

browser

See *Web browser*.

bus

Conductors that connect the functional units in a computer (called a bus because it travels to all destinations). Local busses connect elements within the CPU and other busses connect to external memory and peripherals.

byte

The amount of memory space used to store one character; generally 8 bits.

C**cache**

A temporary storage area for currently-used or recently-accessed data. Cache can be system-level (residing in dedicated cache memory on the motherboard or physically etched on the central processing unit) or disk-based (residing in main memory such as a hard disk drive or RAM).

case sensitive

Of or relating to the handling of character casing in data input and output. UNIX™ and UNIX-compatible operating systems (such as Red Hat Linux) are case-sensitive in that they treat the same defined term differently if the terms are not cased identically (such as foo and FOO).

CD-ROM

see *compact disc read-only memory (CD-ROM)*.

central processing unit (CPU)

The component which controls the computation and operation of a computer system. Units within the CPU perform math and logic operations and translate and execute instructions.

character

An object, such as a symbol, that is comprised of one byte of computer storage.

character device

System component or peripheral (such as an Ethernet card or printer) that is accessed without buffer cache memory.

chording

The simultaneous pressing of two or more buttons or keys on an input device such as a keyboard or mouse that produces one set action.

client

In a computer network, a user or process on a node that requests information or service from another node (usually a server).

cluster

1. A physical group of blocks on a computer disk, treated as a single logical unit.
2. A collection of linked computer systems used for high-performance data processing load-balancing.

command

An instruction to execute a process given to a computer via a keyboard, mouse, or voice request. Commands can also be called from another running process or an executable script.

command line

A space provided directly on the screen where users type specific commands. In Linux, you open a shell prompt and type commands at the command line, which generally displays a \$ prompt at the end.

command line option

A selected configuration or setting passed to a command by a user or process that executes the command with a certain feature or pointer that is not available by default.

Common UNIX Printing System (CUPS)

A freely-distributable collection of tools and drivers that allow UNIX and UNIX-compatible operating systems to control printer devices, manage print queues, and process print requests.

compact disc read-only memory (CD-ROM)

An optical disc that contains computer data. Storage capacity is typically 650-700 megabytes. CD-ROMs can usually be read by different kinds of computers, depending on the data stored on the disc.

compact disc recordable (or rewritable) (CD-R(W))

A writable optical disc that contains computer data. CD-Rs can only be written to once, while CD-RWs can be written, erased, and rewritten.

component

A single element within a larger system; it can be hardware or software based and performs essential functions needed by the system.

compression

Special encoding of data to reduce byte size; useful in storing and archiving large (or multiple) files or for transmission of data over a network.

console

Screen or station at which an administrator operates a computer system. Also called a *terminal*, *shell prompt*.

copyleft

Free Software Foundation license notice that details the use and distribution rights of the licensed software and the user of that software.

CPU

see *central processing unit (CPU)*.

CPU cache

A memory bank between the main memory and the CPU, which lets the computer read data and execute instructions faster.

cracker

One who explores and exploits flaws in computer systems and networks for malicious purposes.

cron

A daemon for UNIX and UNIX-compatible operating systems which executes commands and processes at arbitrary times specified by a user or application.

cylinder

A set of tracks on the platters of a hard disk.

D**daemon**

A program that runs continuously in the background, until activated by a particular event. A daemon can constantly query for requests or await direct action from a user or other process.

database

A collection of persistently accessed data that is typically stored for fast and/or arbitrary access. Data stored within a database can be queried, viewed, and manipulated by user applications or Web services such as forms and applets.

defragmentation

The process of relocating broken or separated files from random, non-contiguous locations on a physical disk platter to contiguous locations, which improves the speed and reliability of the disk.

demilitarized zone (DMZ)

Systems or sections of a private local network that are made publicly available and visible from outside networks such as the Internet. Usually, a publicly-accessible resource (such as an HTTP server) is placed on a DMZ to protect the internal network while maintaining proper functionality for outside users.

denial of service (DoS)

A type of network-based attack in which a malicious user sends massive amounts of unsolicited (and sometimes useless) data to a recipient system or network, causing congestion and availability issues for legitimate users.

dependencies

The proper functionality of one package may rely on the existence of another package, meaning there is a dependency. RPM will not normally allow packages with unresolved dependencies to be installed without explicit intervention by the user.

desktop

Visual component of a graphical user interface upon which icons, programs, and other visual components appear.

desktop manager

See *graphical login*.

device driver

See *device module*.

device module

Software that communicates directly with a computer hardware component or peripheral, allowing it to be used by the operating system; also referred to as a *driver*.

dialog box

A graphical box displayed on a desktop that lets the user communicate with the computer. A dialog box can be used to enter information, set options, or run commands.

digital signature

An authentication code used especially in email which can be used as a traditional written signature. Digital signatures cannot be forged because the signature is created with a sender's secret key and can be verified by a recipient using the sender's public key.

diskette

Portable storage medium using magnetic disk of 3 1/2" or 5 1/4" in size and usually storing between 740KB to 1.44MB of data.

distinguished name (DN)

The six (6) fields comprising the certificate signing request in a SSL or TLS transaction.

DN

See *distinguished name (DN)*.

DNS

See *domain name system (DNS)*.

domain

The site's name that an organization uses; for example, Red Hat has a domain name of red-hat.com.

domain name system (DNS)

A service database that translates an IP address into a domain name (like redhat.com).

dongle

1. A connector that attaches a conduit (such as a phone line or Ethernet cable) to a PCMCIA card.
2. A hardware attachment that authorizes a computer system to run a particular application.

dot-matrix

In printing, a type of printer that uses tiny hammers that strike the printer paper to form characters and images.

double-click

To tap the mouse button twice in succession to activate desktop objects.

drive

A device that reads/writes data from/to disks or tapes; for example, a hard drive, diskette drive, CD-ROM, or tape drive.

driver

See device module.

dual-boot

The concept of two operating systems installed on a single computer system.

dynamic

The state or quality of an object that is frequently changed or modified. In computing terminology, dynamic usually applies to files and values that change often, such as IP addresses.

E**email**

Electronic messages (usually plain text or hypertext) sent from one recipient to another over a network. Email is sent using a mail transfer agent and is read using a mail user agent (or email client).

encryption

The process of encoding data such that users and processes with proper authentication credentials can access it, while unauthorized users cannot.

environment variable

A setting that only applies to the current working environment. Environment variables set paths, permissions, and other configurable settings that help users efficiently run their system.

errata

Messages that contain the most recent information about updates, fixes, and corrections for a particular piece of software distributed by a vendor. View and access Red Hat Linux errata at <http://www.redhat.com/errata/>

Ethernet

A network architecture that utilizes radio frequency signals to transmit data via a coaxial cable. Ethernet is most commonly used in local area networks to connect local machines together.

ext2/ext3

ext2 file systems support large drive and disk partitions, along with added speed and reliability enhancements over previous UNIX file systems. Ext3 file systems add support for journalling to the ext2 file system, which alleviates lengthy file system checks (`fsck`) at bootup after a sudden system crash, reset, or power loss.

F**FAT**

see *file allocation table (FAT)*.

file

A piece of data stored as a single addressable object on a file system. Files can be executable, text- or -binary-based, and can also represent computer system hardware to be controlled by the operating system.

file allocation table (FAT)

A special file located in sector 0 on a disk that contains information about the sizes and locations of files stored on a disk.

file name

The name given to a file to distinguish one piece of data from others. Modern operating systems such as Red Hat Linux allow long and descriptive file names with few restrictions (for example, all alphanumeric characters and spaces are allowed).

file system

The method in which an operating system organizes and manages files. Red Hat Linux uses a hierarchical file system in which files are stored in directories and subdirectories.

File Transfer Protocol (FTP)

A protocol used for transferring files between machines on networks such as LANs and the Internet. In a typical FTP session, a client logs onto an FTP server, views directory listings, and downloads files from the server. FTP sessions can either be anonymous or require authentication for access.

firewall

An access system that keeps unauthorized users from accessing resources on a local private network.

floppy disk

See *diskette*.

format

To prepare a disk to operate with a particular operating system by adding a file system such as ext2 to the disk.

FQDN

See *fully qualified domain name (FQDN)*.

Free Software Foundation (FSF)

An organization that sponsors free software projects such as GNU and various free tools and applications. The FSF promotes all free software developments and free documentation efforts.

FTP

see *File Transfer Protocol (FTP)*.

fully qualified domain name (FQDN)

A name that contains a host, second level domain, and a top level domain. For example, ftp.redhat.com is an FQDN.

G**gateway**

A network device or machine that connects a local private network to another network or the Internet.

Gb

see *gigabit*. gigabit.

GB

see *gigabyte*. gigabyte

gigabit

Gb - 1,024 megabits or 1 billion bits of information.

gigabyte

GB - 1,024 megabytes or 1 billion characters of information.

GNU Object Model Environment (GNOME)

A graphical desktop environment for UNIX and Linux that is designed to provide an efficient and user-oriented environment.

GNU's Not UNIX (GNU)

A UNIX-compatible operating system developed by the Free Software Foundation. The design philosophy of GNU is to create a full-featured operating system composed of completely free software. Red Hat Linux combines several parts of GNU along with the Linux kernel.

Grand Unified Bootloader (GRUB)

A small software utility that loads and manages multiple operating systems (and their variants). GRUB is the default bootloader for Red Hat Linux.

graphical login

A graphical interface for logging into a desktop environment. Red Hat Linux uses the GNOME Desktop Manager (GDM) for graphical login; XDM and KDM are also supported.

graphical user interface (GUI)

A visual object that enhances interaction between a computer and a user. A GUI displays windows, icons, menus, labelled buttons, and a virtual desktop. A GUI sends commands to the system via these icons and menus rather than typed commands.

group ID (GID)

A unique identifier for UNIX and Linux groups. Users and files are assigned GIDs to determine permissions and access control.

GRUB

See *Grand Unified Bootloader (GRUB)*.

GUI

see *graphical user interface (GUI)*.

H**hacker**

An individual who is interested in exploring technology, computers, and data/communication networks. The opposite of a hacker is a *cracker*, whose interests in technology are for malicious or destructive aims.

halt

To stop all running processes on a system cleanly. Once the system is halted, you may need to manually turn off your system to complete a system power off.

hang

A situation where a computer system has ceased interactivity due to resource limitation or software/hardware failure. A hung system usually requires user intervention such as stopping offending processes or physical system reboot.

hard drive

Shorthand for hard disk drive, a hard drive is a device that stores, retrieves, and executes computer data and software.

hardware compatibility

The condition wherein a computer component or peripheral is capable of functioning with software or operating systems.

head

The mechanism that reads data from or writes data to a magnetic disk or tape.

Hesiod

Name service for network authentication and access. Replaces local authentication files such as `/etc/passwd` and `/etc/group`.

hidden file

A file with a name that begins with a period (.) on UNIX and Linux systems. They are called hidden because they are not shown by default during a directory listing or in a file manager. For example, user configuration files are often hidden to prevent accidental deletion or modification.

host

A computer system that is connected to a network and communicates with other systems. Hosts are usually assigned unique addresses or names to distinguish one host from another.

hostname

A name assigned or configured to a host on a network.

hover

To place the mouse cursor over the panel or desktop object.

HTML

See *hypertext markup language (HTML)*.

HTTP

See *hypertext transfer protocol (http)*.

hub

Central connectivity device for resources on a network. Computer systems, servers, network storage, printers, and more connect to hubs to communicate with each other. A *switch* and a *router* are two types of hubs.

hypertext markup language (HTML)

A standardized language for the formatting of interactive text on the World Wide Web. HTML uses tags and scripting and is typically rendered on Web browsers.

hypertext transfer protocol (http)

The protocol used to transfer information from Web servers to web browsers. Website addresses begin with `http://` and is rendered on browsers using *hypertext markup language (HTML)*.

I**IDE**

See *Integrated Device Electronics (IDE)*.

IEEE

see *Institute of Electrical and Electronics Engineers (IEEE)*.

IETF

See *Internet Engineering Task Force (IETF)*.

image

An archive file usually with the extension `.iso`, `.img`, or `.raw` that is used to create a CD-ROM, DVD, or diskette.

IMAP

see *Internet Message Access Protocol (IMAP)*.

info page

Info pages give detailed information about a command or file (*man pages* tend to be brief and provide less explanation than info pages). Info pages are interactive with a navigable menu system. Access an info page with the `info` command.

init script

Shorthand for *initialization script*, scripts that are typically run at system boot time. Most start services and set initial system parameters. Init scripts can also be controlled by administrators to start at a specified *runlevel*.

inkjet

A type of printer which uses water-based inks that spray through tiny nozzles onto the printing surface. Inkjet printers are popular for their low cost and high image output quality.

inode

Data structure that contain information about files in a UNIX or UNIX-compatible *file system*.

Institute of Electrical and Electronics Engineers (IEEE)

A worldwide professional association for electrical and electronics engineers, which sets standards for telecommunications and computing applications.

integrated

Two or more commonly separate components, objects, or applications that are developed to work together. For example, a word processing application and a spreadsheet that are designed such that files and objects from one application can be used in the other application are integrated.

Integrated Device Electronics (IDE)

Interface for connecting additional multiple storage drives to a computer system. For example, some hard drives and CD-ROM drives that have integrated device controllers attach to IDE connectors.

International Organization for Standardization (ISO)

A voluntary organization responsible for creating international standards for computers, telecommunications, and other technologies.

Internet Engineering Task Force (IETF)

An industry standards body that governs and oversees Internet research and protocols. The organization is open to individuals, government representatives, and private interests.

Internet Message Access Protocol (IMAP)

Industry standard email retrieval and storage protocol. IMAP servers store email messages that users access and read on the server, as opposed to downloading all messages using the *post office protocol (POP)*.

Internet Protocol (IP)

The protocol used to route a data packet from its source to its destination via the Internet.

Internet Protocol Security (IPSec)

Collection of protocols overseen and approved by the *Internet Engineering Task Force (IETF)* for the secure transmission of data over the Internet.

Internet Relay Chat (IRC)

Real-time internet messaging system that links disparate users internationally. IRC users connect to central servers and join channels of various subjects.

Intranet

TCP/IP based private network in which authorized members of an organization can access resources.

intrusion detection system (IDS)

Software or device that inspects and flags system and network activity for suspicious activity, such as modified files or unauthorized entry.

IP

See *Internet Protocol (IP)*.

IP address

A numeric address used by computer hosts to transmit and receive information over the Internet.

IPChains

The name of the program and associated technology used to create rules controlling network access to and from a particular machine or network. Used to configure firewall rules in the Linux kernel. Ipchains has been superceded by *iptables* in the 2.4 kernel.

iptables

Kernel-level Internet packet filter subsystem for the 2.4 and higher version of the Linux kernel; Rules can be enabled to allow or deny network connections to the system.

IRC

See *Internet Relay Chat (IRC)*.

ISO

See *International Organization for Standardization (ISO)*

ISO-9660

Standard governed by the *International Organization for Standardization (ISO)* for the file structure of *compact disc read-only memory (CD-ROM)*.

J**Java**

Computer programming language developed by Sun Microsystems®; popular because of its ability to be compiled and run on several different computer architectures.

justification

The positioning of text along the document margins in a word processing application.

K**KB**

See *kilobyte (KB)*.

Kb

See *kilobit (Kb)*.

K Desktop Environment (KDE)

Graphical desktop interface designed with free software tools and libraries for the free software community.

KDC

see *key distribution center (KDC)*.

kernel

The critical piece of an operating system; performs the basic functions that more advanced functions depend on. Linux is based on the kernel developed by Linus Torvalds and a group of core developers.

Kerberos

Network authentication system developed by the Massachusetts Institute of Technology to control access to services and applications.

key

Unique identifier used to encrypt or decrypt secure data. Encrypted data must have a key to be decrypted.

key distribution center (KDC)

System that distributes and manages shared and private keys for authentication of network sessions and access to applications.

keyboard

Computer system peripheral that users operate by tapping buttons to display characters on a monitor or other output.

keystroke

Equivalent to one tap of a keyboard or keypad.

kickstart

A method for automatic Red Hat Linux installations based on settings pre-configured in a special *kickstart* file.

kilobit (Kb)

1024 bits of data.

kilobyte (KB)

1024 characters (or bytes) of data.

L**LAN**

see *local area network (LAN)*.

laser printer

Printer technology using laser-based imaging and heating element that bonds toner (powder ink) to the printing medium.

LDAP

see *lightweight Directory Access Protocol (LDAP)*.

library

A collection of routines that perform commonly required operations.

lightweight Directory Access Protocol (LDAP)

An online directory service protocol defined by the *Internet Engineering Task Force (IETF)*. An LDAP directory entry is a collection of attributes with a unique identifier, or distinguished name (DN). The directory system has a hierarchical structure.

Linux

UNIX-compatible operating system (and kernel) designed with free software tools and ported to several hardware architectures. Linux was initially developed by Linus Torvalds in 1991.

Linux is *open source software (OSS)* and aims to be a viable alternative to competing proprietary operating systems.

Linux Loader (LILO)

A *legacy boot loader* for the Linux operating system. LILO resides on the *master boot record (MBR)* of the bootable storage device and loads multiple operating systems.

local area network (LAN)

A computer network that covers a relatively small area. Most LANs cover a single building or group of buildings. A system of LANs can be connected over any distance through telephone lines and radio waves, creating a wide-area network.

localhost

The name typically given to a standalone computer system (or a system on a network that does not have its host name assigned to it by a server).

lock

A temporary file that keeps data and applications from being used by multiple processes or users, which may cause data collisions and/or corruption.

log

A file that contains status information collected from services and daemons. Logs can usually alert system administrators to issues that need resolution.

logical block addressing (LBA)

Used by large hard disk drives to translate hard drive elements (blocks, cylinders, and sectors) into block numbers for processing.

logical volume management (LVM)

A kernel-level subsystem for managing multiple storage devices. Physical drive partitions are collected into logical volumes and provides dynamic resizing of logical volumes with the addition (or removal) of physical drives.

loopback

A virtual device that allows a computer system to mount image files (a *loopback* device) or run services for the local machine (a *loopback* network address).

LPRng

The next-generation line printer daemon that adds features and printer filters over the legacy `lpr`.

M**MAC address**

A unique hardware-level address embedded in a *network interface card (NIC)*.

mail client

An application for sending, receiving, and organizing email.

mail transport agent (MTA)

A server application for receiving and routing email to recipients.

mail user agent (MTA)

See *mail client*.

man page

A brief and concise document that explains a command or file. Open a man page by typing (at the shell prompt) `man` followed by a space and then the term you want to read about.

master

Term for a *hard drive* that controls other drives on the same connection. A master drive is usually the primary drive and is often used to load the computer's operating system.

master boot record (MBR)

The first sector of a hard drive; generally contains the *boot loader*, which starts an operating system.

master drive

The primary drive on an *Integrated Device Electronics (IDE)* chain. The master drive is usually bootable and/or contains an operating system's most critical files.

MB

see *megabyte (MB)*.

Mb

see *megabit (Mb)*.

MD5

An algorithm used to create digital signatures and unique sums for verifying the integrity of a file or message.

megabit (Mb)

1,048,576 bits, or 1,024 kilobits of data.

megabyte (MB)

1,048,576 bytes or 1,024 kilobytes of data.

memory

The space addressed by a computer to store programs and data that are currently open; also used to run programs and process data.

module

A collection of routines that perform a system-level function; may be loaded and unloaded from the running kernel as required.

motherboard

The central circuit board inside a computer, which houses the *central processing unit (CPU)*, the system bus, memory slots, expansion slots, and more.

mount

To access a storage device or medium on a directory within a computer file system.

mount point

The directory under which a file system is accessible after being mounted.

mouse

A pointing device for use with a *graphical user interface (GUI)*.

N**name server**

A system that uses *domain name system (DNS)* to translate an assigned name into its associated *IP address*, and vice versa.

netmask

A 32-bit value, similar to a IP address, that determines how a an IP address is separated into subnet address and host address.

network

A group of interconnected computers and their connecting cables and hardware.

network address translation (NAT)

Networking method in which internal network hosts, which use private IP addresses access public (Internet) hosts through a gateway that tags packets for routing.

network card

See *network interface card (NIC)*.

network file system (NFS)

A protocol used to access files over a network regardless of machine, operating system, or architecture.

network information service (NIS)

Client-server protocol that tracks, manages, and authenticates users and host names on a network.

network interface card (NIC)

A hardware component that initiates and manages network connections.

NFS

see *network file system (NFS)*.

NIC

see *network interface card (NIC)*.

NIS

see *network information service (NIS)*.

O**Open Systems Interconnection (OSI)**

Standard developed by ISO to allow computer systems running network operating systems to communicate using a seven-layer model.

OpenLDAP

An open-source version of *lightweight Directory Access Protocol (LDAP)*.

open source software (OSS)

Non-proprietary software in which the software source code is available and can be adapted by users to suit their needs.

OpenSSH

The open source implementation of the *Secure Shell (SSH)* protocol.

operating system (OS)

The main control software of a computer system; handles task scheduling, storage, and communication with peripherals. All applications installed on a computer system must communicate with the operating system. *Linux* is one example of an operating system.

OS

see *operating system (OS)*.

OSS

See *open source software (OSS)*.

P**package**

A file containing software written in a particular format to enables easy installation, upgrade, and removal.

PAM

see *pluggable authentication modules (PAM)*.

parallel line Internet protocol (PLIP)

A protocol that allows TCP/IP communication over a computer's parallel port using a specially-designed cables.

parse

To analyze a passage or strings so it can be processed by a computer program. Computer language compilers also parse source code so that it can be translated into binary code that computers can understand.

partition

A division of memory or storage disks into physical or logical segments such that each segment acts as an independent component.

path

The location of a file on a *file system*; describes where the file resides in a directory structure. An *absolute* path is the direct location of a file in the directory structure, starting at the root directory. A *relative* path is the location of a file relative to the current working directory.

PC card

Small form-factor peripheral that conforms to the *Personal Computer Memory Card International Association (PCMCIA)* standard and connects to computer systems with compatible card slots.

PCMCIA

see *Personal Computer Memory Card International Association (PCMCIA)*.

PDF

see *portable document format (PDF)*.

peripheral component interconnect (PCI)

A computer system's local bus that provides a high-speed connection between a computer system and its peripherals; allows connection of up to seven peripheral devices in a single system.

permission

Identifiers that control access to files; consists of three fields: user, group, and other; generally controls read, write, and execute operations.

Personal Computer Memory Card International Association (PCMCIA)

A standard for *PC cards*. Adding a modem, network card, and removable disk drives (especially on portable computers) sometime requires the use of PCMCIA cards and compatible slots on computer systems.

PGP

see *pretty good privacy (PGP)*.

physical volume (PV)

A *partition* or segment of a storage disk that can be integrated into a one logical volume and controlled by *logical volume management (LVM)*.

plain text

Unencrypted, text-based data stored in a universal format that can be read by most computer systems and applications.

platter

A round magnetic plate that makes up part of a *hard drive*. Hard drives generally have several platters and require a read/write head for each side of the platter.

PLIP

see *parallel line Internet protocol (PLIP)*.

pluggable authentication modules (PAM)

Method that allows a system administrator to set access and authentication policies without having to separately recompile individual programs for such features.

plug and play (PnP)

Legacy hardware communication standard that allows computer systems to automatically configure installed system components without user intervention or manual configuration.

point-to-point protocol (PPP)

Successor to the *serial line internet protocol (SLIP)* protocol for computer system connectivity to TCP/IP networks. Commonly used in connecting to the Internet via dial-up modem.

POP

see *post office protocol (POP)*.

port

1. A socket used to connect external peripherals such as keyboards, pointing devices, scanners, and printers to computer systems.
2. In a communications network, a logical channel which identifies a communications protocol, such as *port 23* for *Secure Shell (SSH)* connections.

portable document format (PDF)

A file format for rendering document objects (including text) as images, making it possible to send formatted documents and have them appear on a recipient's monitor or printer as they are intended.

port forwarding

To route all inbound traffic on a particular source *port* to one host on a network. Port forwarding is commonly implemented by a *firewall*.

post-mortem

In information security terms, a method of data analysis and investigation performed *after* an intrusion has already occurred.

post office protocol (POP)

Network protocol used to retrieve email from a mail server. Clients that connect to a POP mail server must download and store all of their incoming email messages on the local system.

PostScript (PS)

A standardized document rendering computer language that treats document text, images, and borders as objects. Most printers can output PS documents, and most desktop publishing applications can render PS files.

PPP

see *point-to-point protocol (PPP)*.

pretty good privacy (PGP)

Software that allows users to exchange files and messages encrypted over networks. The receiver cannot read the messages without a decryption key.

printer

Peripheral that uses ink or toner to output documents, images, and *plain text* files onto paper.

Printer Control Language (PCL)

A document rendering computer language developed by Hewlett-Packard Company® for its line of *inkjet* and *laser printers*.

private key

A unique file containing a password or other authentication information. It is used for decryption or encryption of transmitted data. Private keys are not shared, should not be readable by other users, and should be guarded from theft.

process

A program or service running on a UNIX or UNIX-compatible computer system. Use the `ps` command to view running processes on a Red Hat Linux system.

processor

See *central processing unit (CPU)*.

promiscuous mode

Operation status where a network device such as a *network interface card (NIC)* is able to read and intercept all traffic on a network to which it is connected. Malicious users can set this mode on a network device to capture private information that was not intended for them.

prompt

Object that is displayed on a computer screen as an indication to the user to perform a task, such as type a command, a password, or file name.

protocol

A standard framework or procedure for communication and data transmission.

PS/2 port

A six-pin socket for connecting keyboards and mice to computer systems.

public key

A shared data file that is distributed to any interested recipient for the secure transmission of data. Used in conjunction with a *private key* to decrypt data.

Q**query**

To request or search for information contained in a *database*.

quota

Value limits set to manage access to system and network resources or the amount of storage used by a particular user or group.

QWERTY

Standard English-language keyboard arrangement; name represents the first six alphabetical keys on the top left corner of the keyboard.

R**RAID**

see *redundant arrays of independent disks (RAID)*.

RAM

see *random access memory (RAM)*.

random access memory (RAM)

The main memory of a computer. RAM is used for temporarily storing currently running applications and accessed data.

README

A text file that comes with some software and gives information on the program, often additional information not found in the manual.

read-only

Data or storage device that can be accessed and read but cannot be modified.

reboot

To restart a computer without turning off the power.

redundant arrays of independent disks (RAID)

The use of two or more disk drives in a single computer system, which can provide better disk performance, error recovery, and fault tolerance.

relative

In file system navigation, a path to a file or directory as it relates to a user's or program's current directory location.

remote procedure call (RPC)

A protocol where a program or routine on a server can be run remotely on a client.

request for comment (RFC)

A technical note submitted to the *Internet Engineering Task Force (IETF)* that describes novel techniques or technologies that can be eventually voted into a standard.

rescue mode

To boot a small Linux environment entirely from a diskette or CD-ROM, used mostly if a user is unable to boot the operating system or is having hardware or software issues.

RFC

See *request for comment (RFC)*.

root

1. The name of the login account given full access to all system resources.
2. The directory named / as in, "the root directory."

root partition

The *partition* where `/` (the root directory) will be located on a UNIX or UNIX-compatible system.

router

A type of *hub* that connects to a *gateway* and forwards packets between a host on a private network and the Internet.

RPM Package Manager (RPM)

Management system of tools, databases, and libraries that handle the installation and removal of RPM *packages*. Run the command `rpm` to use the program.

runlevel

Working modes of a UNIX or UNIX-compatible operating system. Red Hat Linux has seven runlevels (0-6). 0 = a halted system; 1 = a single-user, stand-alone system; 2-5 = various multi-user modes; and 6 = system reboot. Each runlevel designates a different system configuration and allows access to different processes.

S**Samba**

A free software implementation of the *server message block (SMB)* network file sharing protocol. Samba is usually implemented on networks that have a mixture of UNIX, Linux, and Windows computers and is designed for interoperable file sharing.

SCSI

see *small computer systems interface (SCSI)*.

scanner

A peripheral that uses light receptors for reading printed material and digitally transferring the information as image objects into a computer system for processing.

script

An executable *plain text* file; string of commands written to a file and run as one logical program.

sector

The primary measuring unit of a storage disk upon which data is stored.

Secure Shell (SSH)

A protocol for secure terminal access to remote computer systems. SSH uses key-based cryptography to securely authenticate and transmit session data from client to host.

serial installation

An installation of Red Hat Linux done via serial communication port.

serial line internet protocol (SLIP)

A network connection standard that uses the Internet Protocol (TCP/IP) over a serial line. SLIP makes it possible for a computer to communicate with other computers via a dial-up connection.

serial mouse

A pointing device that connects to a *serial port*.

serial port

9- or 25-pin socket used to connect several devices, including mice and modems.

server

A computer system that manages files, services, and access to resources on a network.

server message block (SMB)

A protocol developed to facilitate the sharing of files, printers, and other resources on a local network. *Samba* is a Linux-compatible implementation of the SMB protocol.

shell

A command interpreter that allows a user to run executable code. Shells also store and configure additional information about a user's executable paths, environment variables, and usability options.

shell prompt

An application that offers interactive console or terminal access to a computer system.

shortcut

An object that simplifies the process of accessing a file or running a program. A desktop icon is an example of an application *shortcut*.

simple mail transfer protocol (SMTP)

A protocol for delivering email; the standard email protocol used on the Internet, SMTP is also used in other TCP/IP networks.

single-click

To tap a mouse button one time.

slave

In *hard drive* technology, a non-bootable drive that is used mostly for system and file storage; is controlled by the *master* drive.

SLIP

see *serial line internet protocol (SLIP)*.

small computer systems interface (SCSI)

A high-speed interface that can connect to computer devices such as hard drives, CD-ROM drives, and tape drives. SCSI is pronounced as "Scuzzy."

SMP

see *symmetric multi-processing (SMP)*.

SMTP

see *simple mail transfer protocol (SMTP)*.

source code

Specially written instructions by a software programmer to create executable programs when run through a compiler or language interpreter.

SPAM

see *superfluous pieces of additional mail (SPAM)*.

special characters

Non-alphanumeric characters such as !, @, ^, *.

SSH

See *Secure Shell (SSH)*.

standard input

The default location where a user enters commands and values, such as a *keyboard*.

standard output

The default location where a computer displays or sends processed data, such as a terminal or console window.

static

Relating to objects (such as system data or network addresses) that do not change; opposite of *dynamic*.

static files

Files (such as system configuration files and binaries), that do not change without an action from the system administrator or an agent that the system administrator has allowed to accomplish the task.

subdirectory

A directory within a directory in a hierarchical file system.

subnet

Network nodes that are related by the same IP address range. For example, computers with an address beginning with 192.168.1.x are in the same subnet.

subnet mask

A 32-bit address used in conjunction with an IP address to segment network traffic; used to restrict transmissions to certain *subnets*.

superfluous pieces of additional mail (SPAM)

Unwanted and unsolicited email received by a user that usually does not know the sender and never requested the communication.

superuser

The *root* user that has administrative rights to all resources on a computer system.

swap

A storage disk partition used to support virtual memory. Data is written to a swap partition when there is not enough main memory to store the data that a system is processing.

switch

A device that facilitates transmissions between nodes on a private network and regulates internal network traffic.

symmetric multi-processing (SMP)

Method of computing which uses two or more processors managed by one operating system, often sharing the same memory and having equal access to input/output devices. Application programs may run on any or all processors in a system.

T**tab**

An object that divides separate but related functions in a graphical application.

TCP

see *transmission control protocol (TCP)*.

TCP/IP

see *transmission control protocol on top internet protocol (TCP/IP)*.

Telnet

Protocol for interactive terminal access to remote machines. Telnet communications are unencrypted and provide no security from network interception.

terminal window

Application screen for typing system commands. See *shell prompt*.

text editor

An application for reading and editing *plain text* files.

text field

Area in a program or application for typing a word or group of words.

text mode installation

Keyboard-oriented installation of a program or operating system, normally non-graphical.

text user interface (TUI)

A non-graphical interface for the interactive use of a computer system, usually utilizing only a keyboard for input.

thumbnail

An image that has been scaled down to a size suitable for previewing only.

time to live (TTL)

A quantity of time or instances that a program will attempt to send or receive information before the data is discarded due to inactivity.

tip

A related or contextual item that is displayed to remind a user of a particular function or action. *Tooltips* usually display an explanation of a certain object's functionality in a graphical application.

TLS

See *transport layer security (TLS)*.

topology

The physical or logical architecture of a private computer network.

traceback error

In a computer program failure, a display showing the calling sequence of a function leading up to the error, which can make it easier for the programmer to determine the location of the error.

transmission control protocol (TCP)

The most common Internet transport layer protocol, defined *Internet Engineering Task Force (IETF) request for comment (RFC) 793*; protocol used in networks that follow U.S. Department of Defense data communication standards.

transmission control protocol on top internet protocol (TCP/IP)

Communications protocol used to connect to a variety of different types of hosts on both private networks and carrier networks such as the Internet.

transport layer security (TLS)

A secure transmission protocol using data encryption and authentication.

TTL

See *time to live (TTL)*.

U**UDP**

see *User Datagram Protocol (UDP)*.

UID

see *user identification (UID)*.

uniform resource locator (URL)

A publicly routable address for resources transmitted via the *World Wide Web (WWW)*. URLs can be name-based (such as `www.example.com`) or address-based (such as `192.168.1.2`).

universal time coordinated (UTC)

The mean solar time of the meridian of Greenwich, England, used as the basis for calculating standard time throughout the world.

UNIX

Pronounced "you-niks," a multi-user, multitasking network operating system developed at Bell Labs in the early 1970s. Linux is based on, and is highly compatible with, UNIX.

UPG

see *user private group (UPG)*.

upgrade

To replace older hardware or software with a new or revised version.

User Datagram Protocol (UDP)

A communications protocol for the Internet network layer, transport layer, and session layer, which makes it possible to send a datagram transmissions from one computer to a recipient computer.

user identification (UID)

Unique number assigned to a user from which the user is identified to various resources such as files in an operating system.

user private group (UPG)

Group assigned to a user account in which that user exclusively belongs; useful for managing file permissions for individual users.

UTC

see *universal time coordinated (UTC)*.

UTF-8/Unicode

Standard for unique and internationalized character encoding; allows for *plain text* files and other data to be represented in several languages and dialects.

V**variable**

1. The condition of an object (such as a file, value, or state) that can change at any time, increasing the functionality and flexibility of data.

2. Setting or parameter defined in shell environments when a user logs into a system or a developer compiles a program for a certain computing environments.

verbose

An optional mode when running a program that will display varying levels of status messages as it is processing.

version

A revision of software or hardware as specified by a name or value assigned by the vendor, such as Red Hat Linux 8.0.

VFAT

See *virtual file allocation table (VFAT)*.

video card

A system component that enables a computer to output information to a display such as a monitor.

virtual console

Virtual device that provides interactive access with which a user may log in and run system commands and programs. One screen is displayed on the computer's monitor at any given time; a keystroke sequence is used to switch between virtual consoles.

virtual file allocation table (VFAT)

The file system used in older Windows operating systems, such as Windows 95. Linux supports VFAT file access.

virtual private network (VPN)

A network that securely connects disparate computer systems to each other over insecure carrier networks such as the Internet.

VPN

See *virtual private network (VPN)*.

W

WAN

see *wide-area network (WAN)*.

Web

see *World Wide Web (WWW)*.

Web browser

An application that accesses and displays *hypertext markup language (HTML)* webpages and other resources available on the *World Wide Web (WWW)*.

webpage

A page that contains text, images, and multimedia presentations and is viewable in a *Web browser*.

website

A collection of *webpages*, files, and other resources published or aggregated by one source.

what you see is what you get (wysiwyg)

Concept that is commonly utilized by complex document formatting applications for ease of use and accurate rendering. As a user creates a document, it is rendered on a display as it appears when it is saved, printed, or sent to another party.

wide-area network (WAN)

A network of computers connected to each other over a long distance, for example on the Internet.

widget

A standardized on-screen representation of a control that may be manipulated by the user. Scroll bars, buttons, and text boxes are all examples of widgets.

window

A graphical representation of a program displayed on the screen. Each running program has a separate window displaying the contents of the program. Some programs have more than one window displayed, usually to separate functions logically and facilitate use of the program.

window manager

A program that controls the display and positioning of graphical windows on a screen; accounts for such variables as screen resolution and user manipulation (for example, a user repositioning or resizing a window).

wireless

The condition of functioning without a wire or cable attached. For example, a wireless network uses radio frequencies traveling in the air instead of a physical wire to transmit data.

Wireless Fidelity (Wi-Fi)

see *802.11*.

word processor

An application that can be used to create documents with easily configured appearance and format settings. Graphical word processors have adopted the *what you see is what you get (wysiwyg)* method of document creation.

World Wide Web (WWW)

An intercontinental network of connected computers that serve documents, files, and other resources over the Internet.

workgroup

A collection of individual computer users that are logically connected, usually by a single project or by a department within an organization. Members of a workgroup share common data and collaborate with each other as they work with it.

X**X**

See *XFree86*.

XFree86

A free software implementation of the *X Window System (X)*; an interface that communicates between video cards, displays, and the graphical *desktop*; provides windowing infrastructure and an interface for programming graphical applications.

XTerm

Graphical application that provides a *shell prompt* for typing system commands.

X Window System (X)

An engine and interface for creating graphical desktops and applications. See *XFree86*.