



# A Brief Linux Glossary for Windows Users

*A Linux White Paper*

## What Does it All Mean?

For a Microsoft® Windows® user first delving into the world of Linux®, there are many new terms to learn. This glossary explains briefly the meaning and significance of many of the terms, acronyms, and abbreviations common to Linux products. (Some of these terms are not specific to Linux, but still may be new to many Windows users.) This document should help lessen some of the confusion surrounding Linux; however, most common hardware, software, and communications terms are not included here, because they are easily found elsewhere.

**Note:** In the interest of keeping the definitions short, some may be oversimplified. They are not meant to be in-depth tutorials, but simply to provide a general explanation for a new user.

If you cannot find a word you are looking for here, there are many other sources of acronyms, abbreviations, and general computing terms (not all of them specific to Linux) from which to choose. Because some terms are likely to appear in one dictionary, but not another, and because some definitions may be clearer or more comprehensive in one source than in another, here is a selection to choose from, in alphabetical order:

- Dictionary of PC Hardware and Data Communications Terms ([www.oreilly.com/reference/dictionary](http://www.oreilly.com/reference/dictionary))
- Free Online Dictionary of Computing ([wombat.doc.ic.ac.uk/foldoc/foldoc.cgi?Free+On-line+Dictionary](http://wombat.doc.ic.ac.uk/foldoc/foldoc.cgi?Free+On-line+Dictionary))
- Glossary of PC and Internet Terminology ([homepages.enterprise.net/jenko/Glossary/G.htm](http://homepages.enterprise.net/jenko/Glossary/G.htm))
- IBM Dictionary of Computing ([www.networking.ibm.com/nsg/nsgmain.htm](http://www.networking.ibm.com/nsg/nsgmain.htm))
- Kadow's Internet and UNIX® Dictionary ([www.msg.net/kadow/answers](http://www.msg.net/kadow/answers))
- Linux Guide ([www.firstlinux.com/guide](http://www.firstlinux.com/guide))
- Lucent Technologies Glossary ([www.lucent.com/search/glossary](http://www.lucent.com/search/glossary))
- TechWeb TechEncyclopedia ([www.techweb.com/encyclopedia](http://www.techweb.com/encyclopedia))
- Ugeek Technical Glossary ([www.geek.com/glossary/glossary.htm](http://www.geek.com/glossary/glossary.htm))
- Webopedia ([www.pcwebopedia.com](http://www.pcwebopedia.com))
- Whatis.com ([www.whatis.com](http://www.whatis.com))

**Note:** If you are reading this document online with Adobe Acrobat Reader, simply click on the Web addresses highlighted in blue to go to those Web sites via your Web browser.

## **Contents**

<b>What Does it All Mean? .....</b>	<b>1</b>
<b>Common Linux Terms .....</b>	<b>3</b>
(A) .....	3
(B) .....	3
(C) .....	4
(D) .....	5
(E) .....	5
(F) .....	5
(G) .....	6
(H) .....	7
(I) .....	7
(J) .....	7
(K) .....	8
(L) .....	8
(M) .....	9
(N) .....	9
(O) .....	10
(P) .....	10
(Q) .....	12
(R) .....	12
(S) .....	12
(T) .....	13
(U) .....	14
(V) .....	14
(W) .....	15
(X) .....	15
(Y) .....	15
(Z) .....	16

## Common Linux Terms

### (A)

- **Account Name** – Same as Login ID, User ID, or User Name. The name assigned to a user on a UNIX/Linux system. Multiple users can be set up on a system with unique account names, each with varying access (permission) levels. After Linux installation, account names are assigned by the Superuser, or root operator.
- **AfterStep** – One of several user interfaces (window managers), AfterStep makes Linux look and feel much like NeXTSTEP, with enhancements. For more on AfterStep, go to [www.afterstep.org](http://www.afterstep.org). (Also, see Enlightenment, GNOME, KDE, and X Window System.)
- **Awk** (Aho, Weinberger, and Kernighan) – A programming language useful for its pattern-matching syntax, and often used for data retrieval and data transformation. A GNU version is called Gawk.
- **APM** (Advanced Power Management) – An industry standard for allowing the system processor and various components to enter power-saving modes, including suspend, sleep and off. APM software is especially important for mobile devices, because it saves battery power.
- **Append Symbol** – The > keyboard character, repeated (i.e., >>). It is often used to send the output from a command to a text file, appending the data to the end of the file, rather than replacing the existing content. For example, `ls -a >> output.txt` sends the current directory list to a file called **output.txt**, and adds it to the end of the file. Repeating the command will continue to add new data to the end of the file. (Also, see Piping Symbol and Redirection Symbol.)
- **Archive** – A single large file containing multiple files, usually compressed to save storage space. Often created to facilitate transferring between computers. Popular archival formats include ARJ, TAR, ZIP and ZOO. Also, to create such an archive file.
- **ARJ** – A popular file compression/archival tool, available for UNIX/Linux, DOS/Windows, and other operating systems. Files compressed in this manner typically have **.arj** or **.ar** extensions.

### (B)

- **Background Process** – A program that is running without user input. A number of background processes can be running on a multitasking operating system, such as UNIX/Linux, while the user is interacting with the foreground process (for example, data entry). Some background processes—daemons, for example—never require user input. Others are merely in the background temporarily while the user is busy with the program presently running in the foreground.
- **Bash** (Bourne Again SHell) – An enhanced version of the Bourne Shell. (Also, see Korn Shell.)
- **BDF Fonts** – A variety of bitmapped fonts for the X Window System. (Also, see PostScript Fonts and TrueType Fonts.)
- **Beans** – Components for the JavaBeans architecture.
- **Beowulf** – A network of relatively inexpensive computers (including PCs), potentially using different processors and hardware architectures, united by Linux and special system-level software into a massively parallel computing system. The end result is a

system capable of supercomputer computation at a much lower price. This sort of system is ideal for compute-intensive tasks such as weather modeling, because the calculations can be divided among dozens, hundreds, or even thousands of separate processors all running simultaneously. Sometimes referred to a "Beowulf-class supercomputer", or a super-cluster or hyper-cluster. For more on Beowulf technology, read the following articles: [www.linuxworld.com/linuxworld/lw-2000-04/lw-04-parallel.html](http://www.linuxworld.com/linuxworld/lw-2000-04/lw-04-parallel.html), and [www.ibm.com/press/prnews.nsf/Searchvw/3f4e88b102477aa5852568460067a52a](http://www.ibm.com/press/prnews.nsf/Searchvw/3f4e88b102477aa5852568460067a52a).

- **Bin** – A directory containing executable programs, primarily binary files.
- **Binaries** – Source code that has been compiled into executable programs. In the UNIX/Linux world, some software is distributed as source code only; other packages include both source and binaries; still others are distributed only in binary format.
- **Boot Disk** – A diskette (floppy) containing enough of an operating system (such as Linux) to boot up (start) the computer and run some essential programs from the command line. This may be necessary if the system was rendered non-bootable for some reason. A boot disk can be used to partition and format the hard drive, restore the Master Boot Record, or copy specific files, among other things.
- **Bot** – Short for Robot. A program designed to search for information on the Internet with little human intervention.
- **Bourne Shell** – A popular command line shell offering many advantages over the DOS command prompt. (Also, see Bash and Korn Shell.)
- **BSD** (Berkeley Software Distribution) **UNIX** – UNIX distribution from University of California at Berkeley. (Also, see FreeBSD.)
- **Bzip2** – A newer file compression program for UNIX/Linux, providing smaller file sizes than Gzip.

## (C)

- **CGI** (Common Gateway Interface) – Used on Web servers to transmit data between scripts and/or applications and then return the data to the Web page or browser. CGI scripts are often created using the Perl language, and can generate dynamic Web content (including e-commerce shopping baskets, discussion groups, survey forms, current news, etc.).
- **CHS** (Cylinder/Head/Sector) – Disk information required by FDISK during partitioning.
- **Client** – A machine that requests services (e-mail, for example) from a server.
- **CLU** (Command Line Utility) – A program that is run from a command line session, or shell, such as Tar or Mkdir.
- **Cluster** – A network of workstations (PCs or other) running Linux. (Also, see Beowulf.)
- **COLA** – A shorthand way of referring to the Internet newsgroup *comp.os.linux.announce*, where Linux-related materials are announced.
- **Command Line Interface** (CLI) – A full-screen or windowed text-mode session where the user executes programs by typing in commands with or without parameters. The CLI displays output text from the operating system or program and provides a command prompt for user input.
- **Command Prompt** – The DOS/Windows and OS/2 term for the part of the command line interface where the user types commands. (Also, see Shell Prompt.)
- **Compile** – To turn programming source code into an executable program.

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- **Compiled Language** – A language that requires a compiler program to turn programming source code into an executable machine-language binary program. After compiling once, the program can continue to be run from its binary form without compiling again. Compiled languages/programs tend to be faster than interpreted or p-code languages, but require compilers (which can be expensive), and are often more difficult to program in than interpreted and p-code languages. Examples of compiled languages are C and C++, COBOL, and FORTRAN.
- **Compiler** – A program used to turn programming source code into an executable program.
- **Console Application** – A command line program that does not require (or perhaps even offer) a graphical user interface to run.
- **Cron** – A Linux daemon that executes specified tasks at a designated time or interval.

### **(D)**

- **Daemon** – A background process of the operating system that usually has root security-level permission. A daemon usually lurks in the background until something triggers it into activity, such as a specific time or date, time interval, receipt of e-mail, etc.
- **Desktop** – The operating system user interface, which is designed to represent an office desk with objects on it. Rather than physical telephones, lamps, in/out baskets, etc., the operating system desktop uses program and data icons, windows, taskbars, and the like. There are many different desktop environments available for Linux, including KDE, GNOME, and X11, that can be installed by a user. (Also, see GUI, Window manager and X Window System.)
- **Device Driver** – A program that serves as an intermediary between the operating system and a device (ports, drives, monitors, printers, etc.) defining to the operating system what capabilities the device has and translating the operating system commands into instructions the device understands.
- **Distribution** – A packaging of the Linux kernel (core) with various user interfaces, utilities, drivers, and other software into a user deliverable. Often available as a free download or in a low-cost CD-ROM package. Popular distributions include Caldera OpenLinux, CoreLinux, Debian, Red Hat, Slackware, SuSE, TurboLinux and others.
- **Dpkg** (Debian Package Manager) – A packaging and installation tool for Internet downloads, included with Debian Linux but compatible with other distributions. It produces files with a .DEB extension. Similar to RPM.

### **(E)**

- **Emacs** (Editing with MACroS) – A popular text editor.
- **Enlightenment** – One of several user interfaces (window managers). For more on AfterStep, go to [www.afterstep.org](http://www.afterstep.org). (Also, see AfterStep, GNOME, KDE and X Window System.)

### **(F)**

- **File System** – A set of programs that tells an operating system how to access and interpret the contents of a disk or tape drive, or other storage medium. Common file

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systems include: FAT and FAT-32 (DOS/Windows), HPFS (OS/2), NFS, NTFS (Windows NT/2000), and others.

- **Filter** – A program that reads data (from a file, program output or command line entry) as input, processes it according to a set of predefined conditions (for example, sorted alphabetically) and outputs the processed data. Some filters include Awk, Grep, Sed and Sort.
- **Finger** – A UNIX/Linux command that provides information about users that are logged on.
- **Foreground Process** – In a multitasking operating system, such as UNIX/Linux, the foreground process is the program that the user is interacting with at the present time (for example, data entry). Different programs can be in the foreground at different times, as the user jumps between them. In a tiered windowing environment, it is the topmost window.
- **FreeBSD** (Free Berkeley Software Distribution) – Similar to Linux in that it includes many GNU programs and runs many of the same packages as Linux. However, some kernel functions are implemented differently. (Also, see BSD UNIX.)
- **FTP (File Transfer Protocol)** – A method of transferring files to and from other computers—often software repositories.

## **(G)**

- **GCC** (GNU C Compiler) – A high-quality C compiler governed by the GPL.
- **GIMP** (GNU Image Manipulation Program) – A popular image editor/paint program for Linux.
- **GNOME** (GNU Network Object Model Environment) – One of several user interfaces (window managers) for Linux, built with Gtk. For more on GNOME, go to [www.gnome.org](http://www.gnome.org). (Also, see AfterStep, Enlightenment, KDE and X Window System.)
- **GNU** (GNU is Not Unix) **Project** – An effort of the Massachusetts Institute of Technology (MIT) Free Software Foundation (FSF) to develop and promote alternatives to proprietary UNIX implementations. GNU software is licensed under the GPL.
- **GNU/Linux** – Same as Linux. So-called because many of the components included in a Linux distribution are GNU tools.
- **GPL** (GNU General Public License) – [A common usage and redistribution license](#). Visit [www.linuxdoc.org/LDP/gs/app-gpl/node1.html](http://www.linuxdoc.org/LDP/gs/app-gpl/node1.html) to see a copy of the GPL agreement.
- **Grep** (Global Regular Expression and Print) – A tool that searches files for a string of text and outputs any line that contains the pattern.
- **Gtk/Gtk+** (GIMP ToolKit) – A powerful, fast open source graphics library for the X window System on UNIX/Linux, used by programmers to create buttons, menus and other graphical objects. (Also, see GNOME, Motif and Qt.)
- **GUI** (Graphical User Interface) – The collection of icons, windows, and other onscreen graphical images that provide the user's interaction with the operating system. (Also, see Desktop and Window manager.)
- **Gzip** (GNU zip) – The original file compression program for UNIX/Linux. Recent versions produce files with a **.gz** extension. (A **.z** or **.Z** extension indicates an older version of Gzip.) Compression is used to compact files to save storage space and reduce transfer time. (When combined with Tar, the resulting file extensions may be **.tgz**, **.tar.gz** or **.tar.Z**.)

## **(H)**

- **Home Directory** – The directory the user is placed in after logging on.
- **HTML (Hyper Text Markup Language)** – The standard markup language for designing Web pages. Markup “tags,” or formatting commands, allow the Web page designer to specify highlighting, position graphics, create hyperlinks, etc.
- **HTTP (Hyper Text Transport Protocol)** – The set of guidelines created for requesting and sending HTML-based Web pages.

## **(I)**

- **Init** – The first process to run immediately after the operating system loads. It starts the system in single-user mode or spawns a shell to read the startup files, and opens ports designated as login ports.
- **Interpreted Language** – Unlike a compiled program, which is converted from source code to an executable one time, by a compiler, and then run from its binary form, an interpreted program is converted to binary on the fly each time it is run, by an interpreter program. Interpreted languages (and thus their programs) tend to be slower than compiled and p-code languages/programs, and generally have limited authorization to low-level operating system functions or direct hardware access. On the other hand, they do not require compilers (which can be expensive), are often included along with operating systems, and are usually easier to program than compiled languages. Examples of interpreted languages are BASIC, Perl, Python and REXX/Object REXX.

## **(J)**

- **Java<sup>®</sup>** – An object-oriented programming language developed by Sun Microsystems<sup>®</sup> to be operating system independent. Java is often used on Web servers. Java applications and applets are sometimes offered as downloads to run on users’ systems. Java programming can produce applications, or smaller Java “applets.” Java is a somewhat simplified version of the C++ language, and is normally interpreted rather than compiled. (Also, see JIT Compiler.)
- **Java Applets** – Small Java programs that are embedded in a Web page and run within a browser, not as a stand-alone application. Applets cannot access some resources on the local computer, such as files and serial devices (modems, printers, etc.), and generally cannot communicate with other computers across a network.
- **JavaBeans** – A component architecture for the Java language. JavaBeans components are called Beans.
- **JavaScript** – A cross-platform World Wide Web scripting language, vaguely related to Java. It can be used as a server-side scripting language, as an embedded language in server-parsed HTML, and as an embedded language for browsers.
- **JDK (Java Development Kit)** – A Java programming toolkit from Sun, IBM or others, available for UNIX/Linux and other operating systems.
- **JFS (Journaled/Journaling File System)** – A file system that includes built-in backup/recovery capabilities. Changes to the index are written to a log file before the changes take effect so that if the index is corrupted (by a power failure during the index write, for example), the index can be rebuilt from the log, including the changes.

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- **Jini**<sup>®</sup> – Pronounced “Genie”. Software from Sun that works somewhat like “plug-and-play”, in that it allows a hardware device to announce itself to the operating system (and provide details about the device) when the hardware is attached, without requiring a system reboot. It also announces itself to the network the system is connected to, providing easy network sharing of the device.
- **JIT (Just-In-Time) Compiler** – A compiler for the Java language that allows interpreted Java programs to be automatically compiled into native machine language on the fly, for faster performance of the program. Some JVMs include a JIT compiler.
- **Journaling** – Same as “logging.” Writing information to a journal (log) file as a method of tracking changes.
- **JVM (Java Virtual Machine)** – A Java runtime environment, required for the running of Java programs, which includes a Java interpreter. A different JVM is required for each unique operating system (Linux, OS/2, Windows 98, etc.), but any JVM can run the same version of a Java program.

### **(K)**

- **KDE (K Desktop Environment)** – One of several user interfaces (window managers) for Linux, built with Qt. For more on KDE, go to [www.kde.org](http://www.kde.org). (Also, see AfterStep, Enlightenment, GNOME and X Window System.)
- **Kernel** – The core of the operating system, upon which all other components rely. The kernel manages such tasks as low-level hardware interaction and the sharing of resources, including memory allocation, input/output, security, and user access.
- **Korn Shell** – An enhanced version of the Bourne Shell, including extensive scripting support and command line editing. It supports many scripts written for the Bourne Shell. (Also, see Bash.)

### **(L)**

- **LGPL (Library GPL)** – A variation of the GPL that covers program libraries.
- **LHarc** – An older file compression and archiving method rarely used anymore. Files packaged with this technology typically have a **.lha** or **.lzh** extension.
- **LILO (Linux LOader)** – A popular partition boot manager utility, capable of booting to operating systems other than Linux. It is not file system-specific.
- **Linux** – An open source UNIX-like operating system, originally begun by Linus Torvalds. “Linux” really refers to only the operating system kernel, or core. More than 200 people have contributed to the development of the Linux kernel. The rest of a Linux distribution consists of various utilities, device drivers, applications, a user interface and other tools that generally can be compiled and run on other UNIX operating systems as well.
- **Linux for RS/6000**<sup>®</sup> – A version of Linux available from SuSE that is designed to run on an IBM RS/6000 supercomputer. For information on Enterprise Linux for RS/6000, read [www.suse.com/suse/news/PressReleases/ibmS6000.html](http://www.suse.com/suse/news/PressReleases/ibmS6000.html) or go to the SuSE home page at [www.suse.com](http://www.suse.com).
- **Linux for S/390**<sup>®</sup> – A version of Linux designed to run on an IBM S/390 mainframe computer as a client operating system within a Virtual Machine session. For more information, go to [oss.software.ibm.com/developerworks/opensource/linux390](http://oss.software.ibm.com/developerworks/opensource/linux390); for an interesting article about the advantages of combining Linux with the industrial strength architecture of a S/390, see [www.linuxplanet.com/linuxplanet/reports/1532/1](http://www.linuxplanet.com/linuxplanet/reports/1532/1); go to

[www.suse.com/suse/news/PressReleases/ibmsuse.html](http://www.suse.com/suse/news/PressReleases/ibmsuse.html) for information on SuSE Linux for S/390.

- **Log** – To store application or system messages or errors. Also, a file that holds this information.
- **Lynx** – A popular non-graphical (text-based) Web browser.

## **(M)**

- **Macro** – A set of instructions stored in an executable form. Macros may be application-specific (such as a spreadsheet or word processing macro that performs specific steps within that program) or general-purpose (for example, a keyboard macro that types in a user ID when Ctrl-U is pressed on the keyboard).
- **Man** – The UNIX/Linux command for reading online manual pages.
- **MBR** (Master Boot Record) – The first physical sector on a bootable disk drive. The place where the system BIOS looks when the computer is first booted, to determine which partition is currently active (bootable), before reading that partition's first (boot) sector and booting from the partition.
- **Mesa** – An implementation of the OpenGL (Open Graphics Library) API (Application Programming Interface). It provides standard guidelines and a toolset for writing 2D and 3D hardware-assisted graphics software.
- **MIME** (Multipurpose Internet Mail Exchange) – A communications protocol that allows text e-mail messages to include non-textual (graphics, video or audio, for example) data.
- **Motif** – A powerful proprietary graphics library for UNIX/Linux, developed by the Open Software Foundation (OSF) and used by programmers to create buttons, menus and other graphical objects for the X Window System. (Also, see Gtk/Gtk+.)
- **Mount** – Identify a disk drive to the file system before use.
- **Multitasking** – The ability of an operating system to run more than one program, or task, at a time. A *cooperative* multitasking OS, like Windows 95/98, requires one application to voluntarily free up resources upon request so another application can use it. A *preemptive* multitasking OS, such as UNIX/Linux, Windows NT/2000 or OS/2, frees up resources when ordered to by the operating system, on a time-slice basis, or a priority basis, so that one application is unable to hog resources when they are needed by another program. (Also, see Multithreading and Time-sharing.)
- **Multithreading** – The ability of an operating system to concurrently run programs that have been divided into subcomponents, or threads. Multithreading, when done correctly, offers better utilization of processors and other system resources. Multithreaded programming requires a multitasking/multithreading operating system, such as UNIX/Linux, Windows NT/2000 or OS/2, capable of running many programs concurrently. A word processor can make good use of multithreading, because it can spell check in the foreground while saving to disk and sending output to the system print spooler in the background. (Also, see Thread.)

## **(N)**

- **NFS (Network File System)** – A file system that allows the sharing of files across a network or the Internet.
- **Newbie** – Someone new to the Internet, computers in general, or Linux specifically (e.g., a "Linux newbie").

## (O)

- **Object-Oriented** – A software development methodology that offers the programmer standard reusable software modules (components), rather than requiring the developer to write custom programming code each time. Using standard components reduces development time (because the writing and testing of those components has already been done by other programmers), and ensures a standard look and feel for programs using the same components.
- **OO** – See Object-Oriented.
- **Open Source** – A somewhat ambiguous term that refers to software that is released with its source code. The fact that the source code is provided does not necessarily mean that users can modify and redistribute the source code. The term is sometimes used interchangeably with “free software,” although they are not always the same. (Also, see Public Domain and Shareware.)
- **OSS** (Open Sound System) – A device driver for accessing sound cards and other audio devices under UNIX/Linux. It evolved from the Linux Sound Driver, and supports most popular audio chips and adapters.
- **OSS** (Open Source Software) – See Open Source.
- **Owner** – The user who has privileged access to a file; typically the user who created the file.

## (P)

- **P-code** (Pseudo-code) **Language** – A type of Interpreted language. P-code languages are something of a hybrid, falling between compiled languages and interpreted languages in the way they execute. Like an interpreted language, P-code programming is converted to a binary form automatically when it is run, rather than having to be compiled. However, unlike a compiled language the executable binary file is stored in pseudo-code, not machine language. In addition, unlike an Interpreted language, the program does not have to be converted to binary each time it is run. After it is converted to P-code the first time, the pseudo-code version is used for each additional execution. P-code languages (and thus their programs) tend to be slower than compiled languages and programs but faster than interpreted languages, and they generally have authorization to some low-level operating system functions but not direct hardware access. They do not require sometimes-expensive compilers, are often included along with operating systems, and some p-code languages are easier to program than compiled languages. Examples of P-code languages are Java, Python and REXX/Object REXX.
- **PAM** (Pluggable Authentication Modules) – A replaceable user authentication module for system security, which allows programs to be written without knowing which authentication scheme will be used. This allows a module to be replaced later with a different module without requiring rewriting the software.
- **Panel** – The name for the Linux equivalent of the Windows Taskbar.
- **Partition** – A contiguous section of a disk drive that is treated by the operating system as a physical drive. Thus, one disk drive can have several drive letters assigned to it.
- **PCF fonts** – A variety of bitmapped fonts to be used with the X Window System.
- **PD** – See Public Domain.

- **PDF** (Portable Document Format) **files** – Binary files created with Adobe Acrobat or other programs capable of producing output in this format. Used for producing operating system-independent documents, which can be viewed using Acrobat Reader or other programs, including Web browsers equipped with an Acrobat Reader plug-in.
- **Perl** (Practical Extraction and Report Language) – A common scripting/programming language. It is often used on UNIX/Linux Web servers for generating CGI scripts.
- **Permission** – The authority to read and write files and directories, and execute programs. Varying permission levels can be assigned by the Superuser, or root operator, on a file-by-file, directory-by-directory basis or by account name (User ID).
- **PGP** (Pretty Good Privacy) – A high-security, public-key data encryption program for UNIX/Linux and other operating systems.
- **Piping Symbol** – The | keyboard character (the **Shift-Backslash** character above the Enter key on a typical 101-key keyboard). It is often used to feed the output from one command or program to another. For example, `history | grep mcopy` sends the contents of the **.bash\_history** file (via the history command) to the grep program, searching for the string “mcopy”. (Also, see Append Symbol and Redirection Symbol.)
- **Port/Ported/Porting** – The process of taking a program written for one operating system platform and modifying it to run on another OS with similar functionality. There is generally little or no attempt to customize the program to take advantage of the unique capabilities of the new operating system, as opposed to *optimizing* an application for a specific operating system.
- **Portable** – A term referring to software that is designed to be use on more than one operating system with only minor modifications and recompilation.
- **POSIX** (Portable Operating System Interface for uniX) – A set of programming interface standards governing how to write application source code so that the applications are portable between operating systems. POSIX is based on UNIX and is the basis for the X/Open specification of The Open Group.
- **PostScript** – A page description language developed by Adobe Systems that tells a printer how to display text or graphics on a printed page.
- **PostScript Fonts** – A wide variety of fonts that can be used with OS/2, MS Windows and the X Window System. Font files include those with **.afm**, **.pfa** and **.pfb** extensions. Sometimes called Adobe Type 1 fonts, or ATM (Adobe Type Manager) fonts. PostScript fonts typically require a PostScript-compatible printer. (Also, see BDF Fonts and TrueType Fonts.)
- **Process** – An executing program. (Also, see Multitasking and Multithreading.)
- **Public Domain** – Software that is available to be used and modified by anyone, for any purpose, and may even be incorporated for distribution in commercial software. Public domain software is not copyrighted, and no rights are retained by the author. (Also, see Open Source and Shareware.)
- **Public Key Encryption** – A method of data encryption that involves two separate keys: a public key and a private key. Data encrypted with the public key can be decrypted only with the private key and vice versa. Typically, the public key is published and can be used to encrypt data sent to the holder of the private key, and the private key is used to sign data.
- **Python** – An object-oriented p-code programming language.

## **(Q)**

- **Qt** – A powerful, fast open source graphics library for the X Window System on UNIX/Linux, which is used by programmers to create buttons, menus, and other graphical objects. (Also, see Gtk/Gtk+ and KDE.)
- **Queue** – (Sometimes incorrectly spelled Que.) A list of tasks awaiting execution, as in “the print queue.”

## **(R)**

- **RAID (Redundant Array of Independent/Inexpensive Disks/Devices)** – A method of providing data redundancy, improved performance and/or quick data recoverability from disk crashes, by spreading or duplicating data across multiple disk drives. Commonly used RAID types include RAID 0 (Data Striping), RAID 1 (Disk Mirroring) and RAID 5 (Striping with Distributed Parity). RAID configurations typically require SCSI disk drives (not IDE/EIDE) and may require identical drives (same capacity, brand, etc.). RAID arrays appear to the operating system as a single device.
- **RC File** – A script file containing the startup instructions for a program (an application or even the operating system). The file, to be executed automatically when the operating system is started, contains a list of instructions (commands or other scripts) to run.
- **RCS (Revision Control System)** – A suite of programs that controls shared access to files in a group environment and tracks text file changes. Generally used for maintaining programming source code modules.
- **Rdev** – A utility for obtaining information about a Linux system. It is used to query and set the image root device, the video mode, the swap device and a RAM disk.
- **Redirection Symbol** – The > keyboard character. It is often used to send the output from a command to a text file. For example, `ls -a > output.txt` sends the current directory list to a file called **output.txt**. Repeating the command will replace the content of the file with new data. (Also, see Append Symbol and Piping Symbol.)
- **RFS (Remote File Sharing)** – A program that lets the user access files on another computer as if they were on the user’s system.
- **Root Operator** – The user ID with authority to perform all system-level tasks. (Also called Superuser.)
- **Root Window** – The underlying session in which the Linux desktop runs.
- **RPM (RPM Package Manager)** – A packaging and installation tool for Internet downloads, included with some Linux distributions. It produces files with a .RPM extension. Similar to Dpkg.

## **(S)**

- **Script** – A set of commands stored in a file. Used for automated, repetitive, execution. (Also, see RC File.)
- **Session** – A complete interaction period between the user and the operating system, from login to logoff.
- **Shareware** – A form of commercial software, where it is offered as “try before you buy”. If the customer continues to use the product after a short trial period, they are required to pay a specified, usually nominal, fee. (Also, see Open Source and Public Domain.)

- **Shell** – A text-mode window containing a command line interface to the operating system.
- **Shell Prompt** – The user input area of a shell. Whereas in a DOS shell the command prompt is designated by a Greater Than (>) symbol, in Linux it is usually a Percent (%) symbol, Dollar sign (\$) or other special character, depending on the shell used. (Also, see Command Prompt.)
- **Shell Script** – A script designed to be run automatically when a shell is started.
- **SHTTP (Secure Hyper Text Transport Protocol)** – A secure, encrypted version of HTTP used for financial transactions and other private information sent via the Internet.
- **Slash (/)** – The symbol used in file pathnames, instead of the backslash (\) used in the DOS/Windows and OS/2 operating systems.
- **Source Code** – Programming commands in their raw state as input by a programmer. Some programming languages allow the commands to be executed on the fly by a program interpreter. Other languages require the commands to be compiled into executable programs (binaries) before they can be used. In the UNIX/Linux world, some software is distributed as source code only; other packages include both source and binaries; still others are distributed in binary format only.
- **Spool (Simultaneous Peripheral Operation On-Line)** – To send data to a program that queues up the information for later use (for example, the print spooler).
- **SQL (Structured Query Language)** – The language used for manipulating records and fields (rows and columns) in a relational database. Sometimes erroneously pronounced “sequel”.
- **Steganography** – The practice of hiding one piece of information within another. One example is putting an invisible digital watermark in a digitized photograph.
- **String** – A sequence of characters, as in a “search string.”
- **Superuser** – Usually synonymous with root operator.
- **Swap** – To temporarily move data (programs and/or data files) from random access memory to disk storage (swap out), or back (swap in), to allow more programs and data to be processed than there is physical memory to hold it. Also called Virtual Memory.
- **Swap Space** – Where swapped data is temporarily stored on disk. Linux uses a dedicated disk partition for swap space, rather than a specific swap file.
- **Symbolic link** – An alias or shortcut to a program or file.
- **Sync** – To force all pending input/output to the disk drive.
- **Syslog** – The UNIX/Linux System Logger, where all system messages or errors are stored.

## **(T)**

- **Tag** – A command in a markup language, such as HTML, to display information in a certain way, such as bold, centered or using a certain font.
- **Tar** (Tape ARchive) – A file packaging tool included with UNIX/Linux for the purpose of assembling a collection of files into one combined file for easier archiving. It was originally designed for tape backup, but today can be used with other storage media. When run by itself, it produces files with a **.tar** extension. When combined with Gzip, for data compression, the resulting file extensions may be **.tgz**, **.tar.gz** or **.tar.Z**.

## *Preparing Today for Linux Tomorrow*

- **Tarball** – A file created by the Tar utility, containing one or more other archived and, optionally, compressed files.
- **TeX** – A popular macro-based text formatter. The basis for other such formatters, including LaTeX and TeX.
- **Text Editor** – A program for editing text files. Similar to a word processor, but without most/all of the formatting functions (such as margins, italics, fonts, etc.). Often used for writing or editing scripts, programs and ASCII text files (such as README.1ST).
- **Text Formatter** – A program that prepares a text document for printing, allowing the user to perform many layout functions, such as margins, headers, footers, indentation, pagination and justification.
- **TFTP (Trivial File Transfer Protocol)** – A simplified version of FTP without authentication or many other basic features of FTP.
- **Thread** – A small piece of programming that acts as an independent subset of a larger program, also called a “process”. A multithreaded program can run much faster than a monolithic, or single-threaded, program because several, or even many, different tasks can be performed concurrently, rather than serially (sequentially). Also, threads within a single application can share resources and pass data back and forth between themselves.
- **Time-sharing** – A method of allowing multiple users to share a processor by allocating each user a portion of the processor resources on a timed basis and rotating each user’s processes within those time segments. (Also, see Multitasking.)
- **Torvalds, Linus** – The original creator of the Linux kernel in 1991, holder of the Linux copyright, and currently still the coordinator of the Linux development project.
- **Touch** – A command that changes the date/time stamp of a file without affecting the contents.
- **TrueType Fonts** – A wide variety of fonts designed to be printer-independent, unlike PostScript fonts. Available for the Apple Macintosh and Windows. Not commonly used with UNIX/Linux. (Also, see BDF Fonts and PostScript Fonts.)
- **Tux** – The name of the fictional Linux penguin mascot.

### **(U)**

- **UNIX** – UNIX began as a proprietary operating system developed by Bell Laboratories in the 1960s. It eventually spawned a number of mutually incompatible commercial versions from such companies as Apple (Mac OS X), Digital (Digital UNIX), Hewlett-Packard (HP-UX), IBM (AIX®), NeXT (NeXTSTEP) and others.
- **UUCP** – A set of programs and protocols that have become the basis for a worldwide network of UNIX computers. Named after the UNIX to UNIX Copy Program.

### **(V)**

- **Virtual Desktop** – A method for expanding the user’s workspace beyond the boundaries of the computer screen. The desktop may be scrollable left and right, up and down, as if a larger desktop were positioned behind the glass screen and moved around to reveal icons, windows and other objects that were “off-stage,” or out of view. Alternatively, as with the KDE desktop, multiple buttons may be available, each of which displays an area of desktop equal to the size of the glass screen and which can each contain different objects.

## *Preparing Today for Linux Tomorrow*

- **Virtual Machine** – Virtual Machines (VMs) are features of central processor chips that isolate an area of memory from the rest of the system. Because operating systems and applications run in a “protected mode” environment, if a program freezes in one Virtual Machine it will not affect the operation of the programs and operating systems running outside of that Virtual Machine.
- **Virtual Memory** – The process of using a portion of disk space as a temporary storage area for memory. Synonymous with Swap.
- **VRML (Virtual Reality Modeling Language)** – A primarily Web-based language used for 3D effects (such as building walk-throughs).

### **(W)**

- **Widget** – A graphical user interface programming object (button, scrollbar, radio button, etc.) for the X Window System. (Also, see X Window System.)
- **Window Manager** – The graphical user interface (GUI) that runs on top of X Window to provide the user with windows, icons, taskbars and other desktop objects. (Also, see Desktop.)
- **Working Directory** – Another name for the current directory, or the directory in which the user is currently working.
- **Workspace** – Another name for the Root Window, or Desktop.
- **Wrapper** – A program used to start another program.

### **(X)**

- **X Window System** – A graphical windowing environment for UNIX. The underlying programming required by many user interfaces. (Also, see Desktop, Window Manager and XFree86.)
- **X11** – Version 11 of the X Window System.
- **XDM (X Display Manager)** – User-friendly login front end for the X Window System. Often used in a cyber café or campus environment where users who are not familiar with UNIX need occasional access.
- **XFree86** – A version of the X Window System for Linux. Used by GNOME, KDE and other Linux user interfaces/window managers.
- **XHTML (extensible Hyper Text Markup Language)** – An enhanced version of HTML that supports programmer-defined extensions like XML.
- **XML (eXtensible Markup Language)** – A powerful new markup language for designing Web pages; an alternative to the older HTML, allowing programmers to define their own markup tags, or formatting commands.

### **(Y)**

- **Y (why)** – Y not? I needed something to go here....

**(Z)**

- **Zip** – A popular form of file compression/archiving available on many operating system platforms, including DOS/Windows, OS/2 and UNIX/Linux. Popular tools include PKZip/PKUnzip and Zip/Unzip. Not to be confused with the lomega Zip disk, which is a removable storage device. (Confusingly, a zipped file can be stored on a Zip disk—or not. They are unrelated.) Zipped files will have a **.zip** extension.
- **Zone** – An area of a network under administrative or other control. In a name server configuration, a domain can be a zone. Zones can be further subdivided into subzones, each having its own administrators and servers.
- **Zoo** – A format for compression and archiving popular on Amiga systems, but also available for UNIX/Linux. Files packaged this way sport a **.zoo** file extension.

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