

September 2000



redhat.

## ***GOT Red Hat?***

*Glossary of Terms for New Associates  
of Red Hat, Inc.*

---

Copyright © 2000 by Red Hat®, Inc. All rights reserved.

The Red Hat Shadow Man® logo, Cygnus Solutions™, Cygmon™, GNUPro®, Source-Navigator™, and Cygwin™ are trademarks of Red Hat, Inc.

Linux® is a registered trademark of Linux Torvalds.

Applix® and Applixware™ are trademarks of Applix, Inc.

Sun Microsystems®, Solaris®, SunOS®, StarOffice™, and Java™ are trademarks of Sun Microsystems, Inc.

AT&T® is a registered trademark of AT&T, Inc.

UNIX® is a registered trademark of The Open Group.

Pentium® is a registered trademark of Intel Corporation.

Apple® and Macintosh® are registered trademarks of Apple Computer, Inc.

Microsoft® and Windows® are registered trademarks of Microsoft Corporation.

All other brand and product names, trademarks, and copyrights are the property of their respective owners.

Permission is granted to make and distribute verbatim copies of this documentation, provided the copyright notice and this permission notice are preserved on all copies.

Permission is granted to copy and distribute modified versions of this documentation under the conditions for verbatim copying, provided also that the entire resulting derived work is distributed under the terms of a permission notice identical to this one.

Permission is granted to copy and distribute translations of this documentation into another language, under the above conditions identical to this one.

While every precaution has been taken in the preparation of this documentation, the publisher assumes no responsibility for errors or omissions, or the damages resulting from the use of the information within the documentation.

# Glossary of Terms

---

You will hear terms in meetings throughout Red Hat® that you might not have learned anywhere else, and the folks using them won't necessarily remember to explain them to you. Write them down, and hopefully you'll find them defined here.

If you come across a term that doesn't appear here and that you can't figure out, please send mail to [glossary@redhat.com](mailto:glossary@redhat.com) and the new term will be included in future editions of this guide.

For more definitions and history of the technical jargon in the open source and embedded communities, see the following sites. If your favorite site isn't listed here, please send that to the above address as well.

- **Webopedia: Online Computer Dictionary:**  
<http://pcwebopedia.com>  
The most popular online dictionary.
- **Internet Multi-Lingual Dictionary:**  
<http://wwli.com/translation/netglos/glossary/glossary.html>  
Definitions of computer terms in many languages.
- **CNET glossary:**  
<http://coverage.cnet.com/Resources/Info/Glossary/>  
The main online dictionary for Windows systems.
- **The Free Online Dictionary of Computing**  
<http://www.InstantWeb.com/foldoc/foldoc.cgi?Free+On-line+Dictionary> OR  
<http://foldoc.doc.ic.ac.uk>  
A dictionary of almost anything to do with computing, edited by Denis Howe.

## Numbers

### 8-bit

A computer or operating system that works with data eight bits, or one byte, at a time. The first IBM® PC was an 8-bit machine. See *bit*, *byte*, *word*.

### 16-bit

A computer or operating system that works with data sixteen bits, or two bytes, at a time. The IBM 286-based PC and the Apple® Mac Plus were 16-bit machines; MS-DOS and Microsoft® Windows® 3.x were 16-bit operating systems. See *bit, byte, word*.

### 32-bit

A computer or operating system that works with data thirty two bits, or four bytes, at a time. Machines based on the Intel® 386, 486, and Pentium® chips, as well as the Apple II, were 32-bit machines. Linux®, OS/2®, and Windows NT® are 32-bit operating systems. See *bit, byte, word*.

### 64-bit

A computer or operating system that works with data sixty four bits, or eight bytes, at a time. The DEC™ Alpha AXP, Sun's Ultra™ workstation, and machines based on Intel's IA-64/Itanium® chip are 64-bit machines. Sun's Solaris® 8 is a 64-bit operating system. See *bit, byte, word*.

## A

### address

1. A number specifying a location in memory where a particular piece of data is stored.
2. A name or label identifying a particular computer on a network, or a site on the Internet (the "address" of a web page is the *URL* you type to get to that page).
3. The combination of a unique name, the @ sign, and a domain that identifies a person or mailing list in an email system.

Examples of email addresses are `mszulik@redhat.com` and `memo-list@redhat.com`.

### AFAIK

Email acronym: as far as I know.

### alias

1. On Linux or UNIX® systems, an alternative name (something that is easier to remember or quicker to type) for a lengthy command or a complex pathname to a file or device on the network.

For example, `net` could be an alias for `/usr/vendor/bin/netscene`. Later, when you type `net` at a command line, Netscape® will start.

2. A name or label signifying a person or group of people on a network.

Aliases can be used when sending a group of people messages on a regular basis (so you don't have to type everyone's email address every time) or when protecting the privacy of the recipients by sending a message without exposing everyone's address to everyone else (`privatelist@anycompany.com`).

## alpha

1. The first release of software to a customer, usually just source code. Alpha releases still contain bugs, and may not have all features implemented yet, but they give the customer an idea of what to expect from later releases.
2. Also a *64-bit* machine from DEC (now Compaq).

## Applixware Office for Linux

Suite of office tools that runs on Linux and provides word processing, spreadsheet, graphics, and other functionality.

## architecture

1. The physical hardware design (the circuit boards and wiring) of a computer system and its components that distinguishes it from another type of computer system. For example, the architecture of a PC is different from that of a Macintosh, so code written for one won't work on the other.
2. Also refers to the way a microprocessor handles data, such as whether it's *16-bit* or *32-bit*.

## ASCII

American Standard Code for Information Interchange. It is a code used to share information between dissimilar equipment and computers, even those made by different manufacturers.

ASCII consists of 128 characters, and includes characters such as the alphabet, numbers, and punctuation as well as non-printing characters such as backspace, tab, and new line.

## assembler

A tool that produces an *object file* from *assembly code*. The GNU assembler is known as *GAS*.

## assembly code

A programming language that is converted to machine-readable code by an *assembler*, and that is specific to a given processor.

Programming in assembly code is difficult for the developer, but it is executed very fast by the computer, so it is only used for very small, time critical parts of programs.

## Atomic Vision

Red Hat's first acquisition in May 1999, based in the Soma (San Francisco) office.

## authority bit off

What someone might say when they're about to launch into a complicated explanation, but they're not completely sure of their facts or the source of their information. "Authority bit on" is much less common, but not unheard of.

## B

### back end

The part of a compiler that transforms source code (a human-readable program) into object code (machine-readable instructions).

When a compiler generates machine language code it performs optimizations specific to a machine's architecture; this is known as back-end processing.

### bar

Usually used in conjunction with foo as a sample name for absolutely anything, especially programs and files. See *foolfoobar/foo.bar*.

### bash

A *basic* command shell (*Bourne Again Shell*), typically for Linux and other UNIX operating systems, based on the Bourne shell. See *shell*.

### beta

Second release of software to a customer; it should contain all features, but is still being tested for bugs.

### binary

A numbering system that uses only the digits 0 and 1, also called base 2 notation. In computers, a 0 means the signal is off (and can also mean “no”) and a 1 means the signal is on (and can also mean “yes”).

To convert a binary number to decimal (base 10) notation, read the binary number from right to left, and assign each digit an increasing multiple of 2 (1, 2, 4, 8, and so on) then add the values together.

For example, the binary number 10111 is equal to the decimal number 23 (remember to read right to left):  $1 \times 1 + 1 \times 2 + 1 \times 4 + 0 \times 8 + 1 \times 16 = 1 + 2 + 4 + 0 + 16 = 23$

### bit

A computational quantity that can take on one of two values, such as true and false or 0 and 1. A bit is said to be set if its value is true or 1, and reset or clear if its value is false or 0. One speaks of setting and clearing bits. To toggle or invert a bit is to change it, either from 0 to 1 or from 1 to 0. See also *byte*, *word*.

### bit rot

Engineers will talk about a program “having bit rot” because sometimes a program will just stop working, even though the developer hasn't changed anything.

Sometimes what has happened is that some other program that the first program depends on has changed, but the first program wasn't updated to match; other times, programs get garbled when disks crash; and sometimes, there's no obvious reason why the program doesn't work. It just doesn't.

### Bluecurve

Red Hat's seventh acquisition, in May 2000, now based in the Soma (San Francisco)

---

office. Dynameasure, Red Hat's performance management software, was developed by Bluecurve.

## boot

The process of starting or resetting a computer. Starting a computer by turning the power on (or off and then back on) is known as a "cold boot" whereas hitting the reset button (or Control-Alt-Delete) is known as a "warm boot."

Booting the computer loads and starts the bootstrap loader, which then loads and starts the operating system. Notice that there are two pieces of software involved: a) the bootstrap loader, a very short program that is just smart enough to get itself running, and b) the actual operating system.

The analogy is drawn to a man who walked into quicksand. There was no one to help him get out, so he reached down and pulled himself out by his own bootstraps. In essence, the computer is doing the same thing: it runs a short little program that helps it start itself up enough to load the operating system. Sounds a bit silly, but that's supposedly where the word "boot" comes from.

## bounce

1. Email that is returned to the sender because the recipient is unknown or unreachable, either because the *address* is no longer valid or because the *server* on the other end is down.
2. A power outage where the power quits suddenly and then comes back on.

## brain dump

The action of telling someone everything you know about a particular topic; usually happens when handing over responsibility for a project to someone else.

## brochureware

Derogatory term describing a product that has a glossy, professionally-produced brochure, but that doesn't (and might never) really exist. See also *slideware*, *vaporware*.

## BSD

Berkeley Software Distribution. BSD contains a UNIX kernel and a family of software tools from U.C. Berkeley. BSD was originally licensed from AT&T®, and was later upgraded to all-free code. Formed the basis for *SunOS*™.

## BTDT

Email acronym: been there, done that.

## buffer

A holding area in a program's memory, like an Emacs buffer holding text waiting to be edited. Similar to the Clipboard in Windows.

## buffer overflow

1. Programming term for what happens when you try to stuff more data into a buffer than the buffer has been constructed to hold. Buffer overflows are common programming mistakes.

2. Also a way to describe the feeling of trying to absorb more new information than you can understand at one time.

## **build**

The build process has four steps: editing code, compiling the code into object files, linking the object files to make an executable, and debugging the executable; the build process repeats until the executable is a working program. As a noun, denotes the results of the process.

## **bus**

1. Collection of wires through which data transmits.
2. In networking, a bus is a central cable that connects all devices on a local-area network (see *LAN*).

## **byte**

A sequence of eight bits, or two digits in *hexadecimal* notation. See also *bit*, *hexadecimal*, *word*.

## **bytecode**

Machine-independent code generated by a compiler and executed by an interpreter. Java® is an example of bytecode, because the same class files can run on just about any machine.

# **C**

## **C2Net**

Red Hat's ninth acquisition, in September 2000, based in Newbury, UK and Oakland, CA. Stronghold, Red Hat's secure web server software, was developed by C2Net.

## **cache**

Recently accessed data in storage on disk on a computer or network.

For example, Netscape keeps a cache of your most recently accessed web pages, so it knows where to go back to when you hit the Back button. Pronounced *cash*.

## **Canadian cross**

A three-way cross compilation; a build process that uses a cross compiler to build another cross compiler.

For example, using a Sun SPARCstation to build a Motorola 68000 cross compiler that runs on a 486 PC. See also *cross-compiler*.

## **canonical**

The standard state or manner or usage in technical terminology, implying “written in the usual way” depending on what is “usual” in a particular situation.

## **CHILL**

A high-level language popular in Europe for telecommunications programming.



---

**client**

An application that relies on a *server* to perform some operations. For example, an email client connects to a mail server, enabling you to send and receive email.

**CLM**

*Career Limiting Move*. An action that is not advised if you want to retain your current state of employment. Advocating the exclusive use of Microsoft products at Red Hat, for example, would be a CLM.

**command line**

The line in a terminal window showing the *prompt* where you type commands; also known as the command prompt.

The most common command line prompt in MS-DOS® is `c : \`; the command line prompt in Linux or UNIX can be `$`, `%`, or just about anything you want it to be.

**communications protocol**

A set of rules or standards that computers follow in order to connect to each other and share information with as few errors as possible. Each machine knows that as long as it follows the *protocol*, and communicates in a particular way, other machines on the network will understand it.

**compiler**

A tool that translates high-level, human readable source code (in a language such as C or Pascal) into machine-executable programs. See *GCC*.

**console**

1. A display screen attached to a computer (usually a mainframe) and used to provide input to, and monitor the status of, a system. Messages such as “log off now, the system will shut down in 5 minutes” appear on the console, rather than on the screen you are working at.
2. A special window that takes the place of a separate screen; the console window allows you to receive messages from the system on the same screen on which you’re doing other work.

**context**

A point of reference; context-sensitive help systems provide different information depending on your position (context) in the application.

**controller**

A device that controls the transfer of data between a computer and a peripheral device. For example, disk drives, display screens, keyboards, and printers all require controllers.

**copyleft**

The copyright notice (the GNU General Public License) for GNU Emacs and other GNU software, which grants reuse and reproduction rights to all users.

## core dump

1. What happens when a process is aborted badly; a very large file named “core” is produced that can tell those able to understand it what the computer was doing when the error occurred.
2. See also *brain dump*, though with a more negative connotation.

## crippleware

Proprietary software that is distributed with some aspect of its functionality disabled, to give potential users an idea of what to expect without giving them a fully functional program free of charge.

## cross-compiler

A compiler built on a particular host that is used to generate executables for a different host or architecture.

For instance, a `sparc-sun-sunos 4.1` “cross” `m68k-aout` compiler (also written `sparc-sun-sunos 4.1 x m68k-aout`) runs on a SunOS 4.1 host, but generates executables for an embedded m68k-aout board.

## cs

*C shell*, a command shell for users to type commands, interacting with the operating system. Uses a C-like command syntax, typically for Linux or UNIX developers.

## crufty

Of poor quality, or done in an ugly way.

## crunch time

The last few weeks or months of a project, when the engineers (and often others) put in lots of overtime to meet their deadlines.

## cursor

A special symbol, usually a solid rectangle or a blinking underline character, that shows where the next character will be displayed on the screen. To type in different areas of the screen, you need to move the cursor, using either the arrow keys or the mouse if your program supports it.

## CVS

Concurrent Version System, an open source version control system. CVS is the database where all source code is stored, so that it’s accessible to all Red Hat developers.

## cycles

Most modern processors get work done in discreet steps. A single step is a cycle, and is the smallest time interval visible to the developer.

## Cygmon™

A ROM monitor with a command line interface; it supports assembly level language debugging without a host-based debugger.

---

**Cygnus Solutions™**

Red Hat's third acquisition, in January 2000. The Engineering Services offices in Sunnyvale, Toronto, and Cambridge, as well as many of Red Hat's *remoties*, were formerly part of Cygnus.

**Cygwin™**

A UNIX *emulator* for Windows operating systems. Cygwin is a shell environment that allows you to run UNIX commands on Windows.

**D****daemon**

A continuously running server process, usually started at boot time, that wait in the background for some condition(s) to occur. Web servers, FTP servers, and print servers are all examples of daemons.

**debugger**

A tool that allows programmers to examine and control a program, typically for the purpose of stopping the program while it runs and finding errors in the program.

**delix**

Red Hat's second acquisition, in July 1999, based in Stuttgart, Germany.

**delta**

A change, especially a small or incremental one, for a program; represented as  $\Delta$  or  $\delta$ .

**demon**

See *daemon*.

**deprecate**

To mark something as obsolete. Outdated functions or features are marked as deprecated so that developers know that these won't be supported in future releases, and warns them that they should migrate their code to newer functions and features.

**desktop environment**

A desktop environment "runs on top of" a *window manager*, and provides convenient add-ons to the window manager such as icons, task-bars, and file managers. *Gnome* and KDE are examples of desktop environments.

**diff**

GNU file-comparison utility that generates a listing of changes, giving differences between (and additions to) lines of source code or other text.

**distro/distribution**

Refers to the producer of a Linux version. Red Hat, Mandrake, Caldera, and SuSE are all distributions of Linux.

## **dynamic link**

A program's link against a shared library that, when run, arranges for that library to be included in the program that is running.

## **E**

### **EGCS**

Historical name for the GNU compiler; now called GCC.

### **Emacs**

GNU customizable text editor (derived from *Editing MACroS*). In addition to editing text files, developers can also start compiles and send and receive email from Emacs. It is so feature-rich (or complicated, depending on your point of view) that many developers don't need or want any other tool.

### **EMEA**

Red Hat's Europe/Middle East/Asia business unit.

### **embedded development, embedded system**

Code that runs on a machine (or target board) that a developer can't code on directly, such as a printer, a toaster, or a video camera. Development is usually done using a cross-compiler; for example, a developer would use a UNIX system to write code that would run in a cellular phone.

### **emulator**

A program or device designed to imitate another program or device. For example, there are programs that enable a Macintosh to emulate a PC, allowing the Mac to run PC software.

### **encryption**

Use of algorithms to alter data, making it unreadable to unauthorized viewers.

### **Engineering Services**

Red Hat's contract engineering business unit. Contracts are negotiated with individual companies where we agree to update our compiler, debugger, and other development tools so that they run on a customer's new chip, platform, target, etc. See *NRE*.

### **enterprise network**

A large and diverse network connecting all the systems in an organization.

### **environment**

Usually, a host operating system. In the case of a *target environment*, a host operating system and a target (usually, a processor board) working together with an executable application.

---

**EOQ**

End of quarter. See *crunch time*.

**EPS**

*Earnings Per Share*. This says how much of a company's profits (or losses) to assign to each share.

For example, a company with 1,000,000 shares of stock outstanding and profits of \$1,000,000 has \$1.00 in earnings per share.

**ESPP**

*Employee Stock Purchase Plan*. A plan administered by Human Resources that allows you to specify a certain amount to be deducted from your paycheck over a six month period; at the end of that period, Red Hat stock is purchased for you at a discount.

**Ethernet**

A LAN *protocol* for connecting to a network and the internet.

**exception**

An event during program execution that prevents the program from continuing normally; generally, an error.

**executable file**

A file that is a ready-to-run application.

**F****face time**

The time spent communicating with someone face to face, rather than on the phone or using email.

**FAQ**

*Frequently Asked Questions*. A list of questions and answers that will probably solve most problems for most people. Company FAQs include answers to questions like "how often do we get paid?" and "what are the official company holidays?"

**FAT**

*File Allocation Table*. The file allocation table allows the operating system to locate files on a disk. MS-DOS ships with a FAT *filesystem*, and Linux supports it.

**feature creep**

The tendency to add more features to a late project, thereby making it later.

**FIFO**

A *first-in-first-out* interprocess communications method. A good example of a FIFO system is the checkout line in a grocery store.

## filesystem

An hierarchical directory structure where files may exist at any level of the directory hierarchy. Different operating systems support different filesystems. Linux supports many different filesystems.

## final candidate

The last build of software released to beta sites before shipment.

## flame/flame bait/flame war

See *holy war*.

## FLOPS

*F*loating-point *O*perations *P*er *S*econd, a measure of computer's speed of performing floating-point operations. Compare *MIPS*.

## foo/foobar/foo.bar

Used as a sample name when you want to be very generic (“Let’s start a new project, and call it foo for now. We’ll think of a real name later.”)

Etymology from Army slang acronym, FUBAR (from a less polite version of *Fouled Up Beyond All Repair*). See *bar*.

## FTP

*F*ile *T*ransfer *P*rotocol, based on TCP/IP, which enables getting and storing files between hosts on the web. Use the `ftp` command to direct files to new location.

## FWIW

Email acronym: for what it’s worth.

## G

### G++

Acronym for the GNU C++ compiler. Written `g++` when showing a command line, G++ when referring to the tool in text.

### GAS

Acronym for the GNU assembler. Written `gas` when showing a command line, GAS when referring to the tool in text.

### GCC

Acronym for the GNU C Compiler (also known as the GNU Compiler Collection, after the integration of the `g++` and `gcj` compilers). Written `gcc` when showing a command line, GCC when referring to the tool in text.

### GCJ

A version of GCC that is able to read Java `.class` files, generating assembly code. Written `gcj` when showing a command line, GCJ when referring to the tool in text.

---

**GDB**

Acronym for the GNU debugger. Written `gdb` when showing a command line, GDB when referring to the tool in text. See also *Insight*<sup>™</sup>

**gdbserver**

A small special-purpose debugging application running on a target board. `gdb` connects to the `gdbserver` rather than running on the target board itself.

**gdbtk**

Obsolete name for the GUI debugger. See *Insight*<sup>™</sup>.

**GIMP**

Gnu Image Processor. A free software tool similar to Adobe Photoshop<sup>®</sup>.

**Gnome**

GNU Network Object Model Environment, a configurable Linux GUI.

**GNU**

Recursive acronym for GNU's Not UNIX. A project to build a free operating system, started by Richard Stallman in 1985, with many useful spinoffs, such as the Emacs text editor, a C compiler (`gcc` or `egcs`), a debugger (`gdb`), and many other programming tools.

**GPL**

GNU Public License. Red Hat, as well as many other companies and individuals in the *open source* community, distributes its software under the GPL.

The GPL gives our customers the right to use, modify, and redistribute our software, as long as they then allow others to use, modify, and redistribute their software.

For the full text, see <http://www.gnu.org/copyleft/gpl.html>. See also *LGPL*.

**grep**

A UNIX command for rapidly scanning a file or directory of files, searching for a specific pattern or specific data.

**grok**

From the novel *Stranger in a Strange Land* by Robert A. Heinlein; means to completely and utterly understand something.

**GTK**

An open source GUI toolkit, primarily developed for use with the X Windows System.

**GUI**

Graphical User Interface. A GUI takes advantage of the computer's graphical capabilities to provide menus, scrollbars, and icons by which you can manipulate your files. Some people prefer to use the *command line*, however, feeling that it is faster and more efficient. Examples of GUIs include *Gnome*, Microsoft<sup>®</sup> Windows<sup>®</sup>, and the Apple<sup>®</sup> Macintosh<sup>®</sup> desktop.

## **gypsies**

See *remoties*.

## **H**

### **hang**

State of waiting where the program expects an action that will never occur; this state prevents it from doing anything else. Compare with *sleep*.

### **hashing**

A sorting and storage mechanism where data items are stored at locations that are determined by a mathematical function of the data.

### **Hell's Kitchen Software**

Red Hat's fourth acquisition, in January 2000, based in New York City. CCVS, Red Hat's e-commerce transaction processing software, was produced by HKS.

### **hexadecimal**

1. The base 16 numbering system that counts from 0-9, and then continues a-f (or equivalently A-F) represents the digits, 0 through 15.  
When representing bytes in hexadecimal notation, you count the bytes two digits at a time, just as you do when representing dates as 02/09/00—you consider “02” to be a unit, and “09” to be another unit, and so on.
2. In HTML, colors are represented in hexadecimal notation, one *byte* for each of Red, Green, and Blue.  
For instance, “font color=FFFFFF” means as much Red, Green, and Blue as you can get, which gives you white. The converse is also true: “font color=000000” means that there is no Red, Green, or Blue, so you get black. All other colors are made from combinations of two digits for Red, two digits for Green, and two digits for Blue.  
Hexadecimal numbers are also sometimes referred to as “hex” numbers.

### **HKS**

See *Hell's Kitchen Software*.

### **holy war**

An argument in which most of the participants try to pass off personal value choices and cultural attachments as objective technical evaluations.

For example, many arguments have broken out over the years between people who favor *Emacs* and those who favor *vi*. One isn't intrinsically better than the other, but in a holy war people judge your worth and make assumptions about you as a person based on the editor you use. Holy wars are taken very seriously by the people waging them, and are considered somewhat silly and arbitrary by those who aren't.

### **host**

A computer on which tools actually run.



---

**I****ICB**

An Internet chat program popular in the Sunnyvale office. Similar to *IRC*.

**ICE**

*In-Circuit Emulator*, a hardware device that gives an engineer control over the execution of a processor while it's connected to the rest of a system's circuitry.

**IDE**

1. *Integrated Development Environment*, a programming environment integrated into an application. An IDE allows a developer to access various development tools and use them together without having to run them all independently. *Source-Navigator™* is an example of an IDE.
2. *Integrated Drive Electronics*, an interface for mass storage devices such as disk drives or CD-ROM drives, in which the *controller* is integrated into the drive rather than being separate from it.

**IIRC**

Email acronym: if I remember correctly.

**IMHO**

Email acronym: in my humble opinion.

**IMNSHO**

Email acronym: in my not so humble opinion.

**include files**

Often shown as `#include` (and pronounced “pound include”), they tell your program where to find other files so you can access their contents without having to duplicate those same lines in your program.

**incr Tcl**

An object-oriented extension to Tcl.

**inheritance**

In object-oriented programming, the ability of one class of objects to derive properties and behavior from another class.

**init**

A command responsible for starting *initial* processes on a Linux system.

**Insight™**

*GUI* interface to *GDB*.

**interpreter**

An interpreter translates high-level instructions into an intermediate form, which it then

executes.

Unlike a compiler, which translates human-readable instructions into machine-readable code, the interpreter immediately executes the instructions. Interpreters are sometimes used during the development of a program, when a programmer wants to add small sections at a time and test them quickly without taking the time to compile the program each time.

## I/O

*Input/Output*. Refers to any software or hardware device whose purpose is to enter data into a computer or to extract data from a computer.

## IP

*Internet Protocol*. The basic *protocol* of the Internet, enabling the delivery of individual *packets* from one computer to another across the web. See also *TCP/IP*.

## IRC

*Internet Relay Chat*. An Internet chat program popular in the Meridian office. Similar to *ICB*.

## IRQ

*Interrupt Request*, pronounced I-R-Q. IRQs are hardware lines over which devices can send interrupt signals to the microprocessor. When you add a new piece of hardware to a machine, you sometimes need to set its IRQ number to specify which interrupt line the device may use.

## IWBNI

Email acronym: it would be nice if.

## J

### JVM

*Java Virtual Machine*, part of the Java Runtime Environment responsible for interpreting Java bytecodes.

## K

### kermit

A program used to perform file transfers.

### kernel

The heart of any operating system; it is what controls all processes on a computer. Activities such as multi-tasking and memory management are controlled by the kernel.

### ksh

A Korn shell. *ksh* is another Linux and UNIX shell, like *bash* and *csh*.

---

## L

### LAN

*Local Area Networking* that connects systems in order to share information and expensive computing resources.

### ld/LD

The GNU linker. Interchangeably used with capitalization, as *LD*. See *linker*.

### LGPL

*Lesser GNU Public License*. The LGPL is different from the *GPL* in that it allows developers to link in small pieces of GPL'd code without their code becoming GPL'd itself.

### library

A collection of precompiled routines, sometimes called a *module*, that is stored in object format. Every program that uses the library has access to the same routines, so developers don't have to write the same code over and over. This reduces the risk of errors, and means that there is a standard way to do something rather than each developer solving the same problem in a different way.

Libraries can be linked to programs when they're compiled (called "static linking") or when the program runs (called "dynamic linking").

### LILO

*Linux Loader*, a program that boots Linux on a system's hard disk. LILO can be configured to allow you to choose between multiple operating systems.

### linker

A tool that merges object files and library archives (such as compiled classes), building an executable, a complete program or a single executable file. For GNU, *ld* is the linker tool.

### linker script

A set of programmer-supplied instructions that tell the linker how to handle object file sections, how to lay out memory, and so forth. For native linking, the contents of the linker script are normally determined by the needs of the operating system; for embedded targets, the programmer explicitly supplies the linker script.

### Linux

An open source UNIX operating system for many kinds of computers, created by Linus Torvalds and others starting about 1990.

### LISP

*LIS*t Processing language, especially popular for artificial intelligence applications.

### Logiciel du Soleil

Red Hat's sixth acquisition, in February 2000, based in Cagnes, France.

## LOL

Email acronym: laughing out loud.

## M

### macro

A set of instructions or keystrokes recorded and given a short name. Whenever the macro's name appears in the source code, the compiler substitutes the instructions or keystrokes of the macro. Invoking a macro reduces errors and saves time because you type just the macro name, not the entire piece of code, each time you need to use it.

### make

Make is a program that developers use to automatically compile, link, etc. so they don't have to run each process themselves. In order to use make, developers must write a *makefile*.

Make figures out whether each instruction in the makefile needs to be executed, or if it may have been done as part of a previous instruction. For instance, sometimes different *modules* in a program all require the same *library*, and make is smart enough to include that library only once for the entire program.

### makefile

A Makefile is a *script*, or list of instructions, that tells the *compiler* the order in which different processes should run to turn *source code* into a *binary*. See also *make*.

### man page

“Manual Pages” are the Linux and other UNIX systems' equivalent of the Windows' Help System, and vice versa. Nearly every command has a built-in man page describing the command's purpose and use.

From a *command line*, type `man command-name` where *command-name* is the actual command you'd like information about, such as `man ls` or `man cd`.

### Minix

A tutorial version of UNIX, written by Andy Tanenbaum. Minix is said to have been the inspiration for *Linux*.

### MIPS

Millions of Instructions Per Second, a measurement of processing speed.

### module

An independent piece of software which forms part of one or more larger programs. See also *library*.

### mount

The Linux and UNIX command that tells the computer that another *filesystem* is available for use. For example, you must mount a CD-ROM drive or a Zip® drive before your

---

computer can access it; most of the time this is done while the computer is booting. You must also mount remote or network filesystems before they are available to you.

## N

### native

A compiler built on a particular host that is used to generate executables for that same host. For instance, a `sparc-sun-sunos4.1` native compiler runs on SunOS 4.1 and generates executables for SunOS 4.1.

### newbie

Someone who is new to something; originally referred to someone new to posting on USENET newsgroups, but now used to describe someone new at almost anything.

### NFS

*Network File System*, a way to link machines over a network so that they can access files as if they're sharing a local hard drive.

### NRE

*Non-Recurring Engineering*, typically used to refer to one-time-only development, such as re-targeting to a new architecture or adding a feature. See also *Engineering Services*.

## O

### object file

A binary-format file containing machine instructions and possibly symbolic relocation information. Typically produced by an assembler for a linker, for compiling with a program into an executable file.

### offline

Usually heard in the phrase "Let's take this offline." Refers to discussing at a later time something that is not relevant to the topic being discussed or that is not of interest to the rest of the group.

### open source

Non-proprietary. You can use and (if you want to) modify open source software without paying royalties to the company or person who wrote it.

## P

### packet

A piece of a message transmitted over a network; the pieces get reassembled into the message when they arrive at their destination. Once in awhile, a packet gets lost, from which comes the phrase "dropped a packet" when someone means they didn't catch what you just said.

## **parsing error**

When you hear someone say something, but what you heard makes no sense.

## **patch**

A change in source code to correct or enhance processes. Also a file that contains changes to source code; specifically, the results of a `diff` (comparison) between the new file(s) and the old file(s).

## **peripheral device**

A piece of hardware that connects to a computer but is not part of the computer, such as a printer.

## **Perl**

*Practical Extraction Report Language*, a scripting language designed by Larry Wall. See <http://www.perl.com>, the Perl Home Page.

## **PGP**

*Pretty Good Privacy*. A freely available piece of encryption software that is considered very secure.

## **ping**

1. A Linux and UNIX command that sends a small message over the network to see if another computer on the network is up and running (like a submarine's sonar pulse).
2. A brief message (usually email) to get someone's attention, to say "Are you there?", to ask a question expecting a short answer (e.g. "I'll ping Joe to see if we can meet Tuesday."), etc.

## **POSIX**

POSIX defines a UNIX-like system by a set of system calls, libraries, tools, and a few other components. Non-UNIX computers often support POSIX.

## **POV**

Email acronym: point of view.

## **PPC**

*PowerPC* family of RISC processors, designed jointly by IBM and Motorola.

## **PROM**

*Programmable Read-Only Memory*, ROM that can be programmed using special equipment. PROMs can be programmed only once.

## **prompt**

A symbol on a display screen, usually accompanied by a *cursor*, indicating that the computer is waiting for input. Common prompts include `$`, `>`, and `%`; some applications also display a prompt, for example `(gdb)`. The prompt is also known as the command prompt or *command line*.

**protocol**

A set of formal rules describing how to transmit data, especially across a network. See also *communications protocol*.

**Publications**

The group that produces online and printed documentation delivered with software and available from Red Hat's website. In different companies may also be known as Documentation or Technical Communications.

**Q****QA**

Quality Assurance, the group that tests software and tools before they're shipped to customers. In different companies may also be known as Quality Control, Quality Group, or Quality Engineering.

**QE**

Quality Engineering; see *QA*.

**R****RAM**

Random-Access Memory, the volatile memory of a computer, from which a microprocessor can read or write data. Anything stored in RAM when the computer is turned off (or rebooted) is lost forever.

**RAM Disk**

A disk drive that resides in memory, taking up very little space, for storing temporary work files or to help decrease the I/O load on a system's disks. Can use RAM from the buffer cache to dynamically grow in size. See also *I/O*, *RAM*.

**RCS**

Revision Control System, the tools for controlling software revisions. See also *CVS*.

**Redhatify**

A process performed by the Information Services (IS) team to make your individual Red Hat Linux workstation compliant with Red Hat's network.

**Releng**

Release engineering, pronounced "rel-enj." The group responsible for building, packaging, and delivering Engineering Services tools to customers.

**remoties**

People who work for Red Hat from their homes, rather than coming in to a Red Hat office every day. Also known as *gypsies*.

## RFC

*Request For Comment(s)*, one of a long-established series of numbered Internet informational documents and standards widely followed by commercial software and freeware in the Internet and UNIX communities.

## ROM

*Read-Only Memory*, non-volatile memory that can be read, but not written to, by the microprocessor. The information stored in ROM doesn't disappear when the computer is turned off.

The programs loaded into ROM are often critical to the operation of the computer; an example is the bootstrap loader needed to *boot* the computer. Compare with *RAM*.

## root

1. In a hierarchy of files in a directory, the one item or directory from which all other items or directory paths descend.
2. The name of the primary administrative account on Linux and other UNIX machines. For example, a system administrator will log onto your machine as *root* in order to install a new piece of software or hardware; grants that person all-powerful control over everything on the machine.

## ROTFL

Email acronym: rolling on the floor, laughing.

## router

Network device that determines the optimal path along which network traffic should be forwarded, moving packets from one network to another based on the information contained at the beginning of the packet (also known as the header).

## routine

Any self-contained piece of source code within a larger program. Routines have an identifying name by which other programs can invoke them.

## RPM

*Red Hat Package Manager*. A system for packaging, installing, uninstalling, and updating software on any Linux distro that supports the RPM standard. These include Red Hat and Mandrake Linux systems. RPM files carry the `.rpm` file extension.

To get help about RPM at the command line, type `rpm --help | more`.

## RSN

Email acronym: real soon now. Usually used sarcastically to imply that several deadlines have passed with no progress, and that whatever it is won't be ready in the near future.

## RTOS

*Real-Time Operating System*.



---

## RTP

Research Triangle Park, North Carolina.

## runtime memory

Memory accessed while a program runs.

## runtime system

The software system or environment in which compiled programs can run. The runtime system includes all the code necessary to load programs, dynamically link native methods, manage memory, handle exceptions, and an implementation of what may be an interpreter.

## S

### script

A file that contains a list of commands that can be run without user intervention. Scripts are a convenient way to automate complex or repetitive tasks.

### SEC

Securities and Exchange Commission.

### server

A computer or device on a network that manages network resources. For example, a file server is a computer dedicated to storing files, a print server is a computer that manages one or more printers, and a network server is a computer that manages network traffic. See also *client*.

### shell

The user interface to the *kernel*, and the location of the *command line*. The main shells in use are `ash`, `bash`, `csh`, `ksh`, `sh`, and `tcsh`. Contact the helpdesk ([helpdesk@redhat.com](mailto:helpdesk@redhat.com)) if you aren't sure which shell you are running.

### **.sig (or .signature) file**

A file in someone's home directory that can be automatically appended to the bottom of their email messages, providing information they have chosen to include: contact information, a favorite quote, a PGP key, etc. See also *PGP, standard disclaimer*.

### simulator

A tool that mimics the behavior of an embedded system (for instance, it shows exactly what happens when the buttons on a cellular phone are pushed or the joystick on a game machine is moved in a particular way) so developers can run their code to see how it will behave once the actual hardware is available for testing.

A simulator makes simultaneous development of the code and the hardware possible, so that they are ready for market together.

## **Sistemi Research Laboratories**

Red Hat's fifth acquisition, in February 2000, based in Milan, Italy.

### **sleep**

State of waiting where the program doesn't do anything until an expected action occurs. Compare with *hang*.

### **slideware**

Derogatory term describing a product described in a slick slide show or presentation, but that doesn't (and might never) really exist. See also *brochureware*, *vaporware*.

### **slip**

To miss (or be in danger of missing) a deadline.

### **SOHO**

Small Office/Home Office, one of the divisions within Red Hat's Support organization.

### **Solaris®**

Sun Microsystem's current version of UNIX.

### **source code**

Source code is a program's instructions written as a human-readable, ASCII text file. It must be compiled by a *compiler* in order to be computer-readable.

### **Source-Navigator™**

A component of *GNUPro Toolkit*, an open source *IDE* with symbol browser, code editor, class browser, hierarchy browser, cross-reference browser, and editor functionality, as well as access to debugging utilities.

### **standard disclaimer**

Usually seen at the bottom of someone's email as "Standard disclaimer applies" meaning "The views contained in this email are mine, and are not the views of my employer."

### **StarOffice™**

Sun's multi-platform office suite of tools.

### **subroutine**

Part of a program which is called by another part of a program so that developers can simplify code in their programs and save memory.

### **SunOS™**

Sun Microsystem's previous version of UNIX, supplanted by *Solaris®*.

### **swapping**

Movement of blocks of information between memory and disk while an application is running.

---

## T

### tar

*Tape Archive*. An archive utility that groups files and their directory structure together on UNIX systems. Originally used to back-up file systems onto magnetic tape, tar is now used extensively for distributing source code and files that do not necessarily reside on a back-up tape. Tar files carry the `.tar` extension.

### target

1. An actual physical device, such as a target microprocessor motherboard that gets files from a host operating system.
2. An application or program run on a target board.
3. A class of devices whose types include executables and libraries, either of which may include other libraries and object files.

### target environment

A host operating system and a target (usually a processor board) when working together with an executable application.

### Tcl

*Tool Command Language*, a scripting language developed by John Ousterhout. Tcl is one of many scripting languages that allow rapid development of tools and utilities without needing to write in a compiled language such as C or C++.

### TCP/IP

*Transmission Control Protocol* (based on IP), an internet protocol that provides for the reliable delivery of streams of data across the web.

### telnet

A program that allows you to log into a different machine on the network and use it as if you were sitting in front of it.

### terminal window

On a Linux or other UNIX system, a typical terminal window program would be `xterm`; on a Windows system, the terminal window program is MS-DOS Prompt. A terminal window allows you to access the computer directly from the *command line*, rather than through a GUI. See also *console*.

### text mode

A method of installing software in which a graphical, mouse-based interface is not available. A text mode interface is very plain in colors and graphics, and uses the keyboard for navigation.

### thread

The basic unit of instructions for a program to execute. A process can have several threads running concurrently, each performing a different job, such as waiting for events or

performing a time-consuming job that the program doesn't need to complete before resuming. For a debugging process, when a thread finishes its job, the debugger suspends or destroys the thread running.

### **three-way cross**

See *Canadian cross*.

### **Tier One**

See *Engineering Services*.

### **Tix**

A set of extensions which adds more *widgets* to *Tk*.

### **Tk**

Toolkit, a graphical extension to *Tcl* that makes it easier to develop graphical user interfaces.

### **TLA**

Three Letter Acronym.

### **toolchain**

A complete set of GNUPro tools that work together in a particular native or host architecture and a target environment. A toolchain's name is made up of the host, the target, and the tool name (e.g. `m68k-elf-gcc`). A toolchain contains four tools, used in this order:

```
compiler->assembler->linker->debugger
```

### **triple cross**

See *Canadian cross*.

## **U**

### **Unicode**

A 16-bit character set defined by ISO 10646.

### **UNIX**

The UNIX operating system, developed at Bell Labs in the early 1970s. There are two main versions of UNIX: one produced by AT&T known as System V and one developed at Berkeley University and known as BSD.

Linux, Solaris, SunOS, HP/UX, and AIX are some UNIX-based operating systems.

### **URL**

Uniform Resource Locator. The *address*, or location, of a resource on the Internet. The URL is used by a web browser to find a web page, an HTML document, an ftp site, or anything else you might be looking for out on the Internet.

---

## V

### vanilla system

A computer system that hasn't been customized in any way; right out of the box.

### vaporware

Derogatory term used to describe a product announced far in advance of a release date that might or might not occur; implies that a piece of hardware or software is more vapor than real substance. See also *brochureware*, *slideware*.

### variables

A variable is a symbol or name that a program uses to represent a value. *Global variables* have one value at a time, and this value is in effect for the whole system. *Constant variables* have values that never change.

### vi

Visual Interface, an editor for reading and writing text files available on UNIX systems (it's called `vim` on Linux systems). `vi` is so simple (or brain-dead, depending on your point of view) that many people use `vi` because they can do their task and be done before a larger more complex tool has started up.

### virus

A program that searches out other programs and embeds itself inside them, so that when the original program is executed, the virus code is executed too. They are spread by people sharing files or programs with other people, and their actions can range from merely annoying to very destructive.

## W

### widget

The components of a graphical user interface, such as menus, scrollbars or buttons. Toolkits such as Tk provide prewritten widgets so that developers don't have to code them from scratch.

### window manager

A window manager (or "WM" for short) manages all the windows, window borders, and window sizes of a *GUI*. When you move windows around on your desktop, the window manager hides and redraws the windows so you can work with the one you want. The window manager "runs on top of" the operating system.

Enlightenment, WindowMaker, IceWM, CDE, and FVWM are all examples of Linux and UNIX window managers; MS Windows is itself a window manager.

### WireSpeed

Red Hat's eighth acquisition, in July 2000, based in Huntsville, AL.

## **word**

The native unit of storage on a particular machine. A word is the largest amount of data that can be handled by the microprocessor in one operation, and is usually the width of the main data bus. See also *8-bit*, *16-bit*, *32-bit*, *64-bit*.

## **WRT**

Email acronym: with regard to.

## **WYSIWYG**

Pronounced “wizzy wig”; describes a graphical user interface where “what you see is what you get” as opposed to a command line interface where you don’t get immediate visual feedback when you change something.

# **X**

## **X Windows**

A windowing system for GUIs on UNIX. See *GUI*.

## **x86**

The name for Intel’s family of 80x86 processor chips. Models after the 8086 are often referred to by the last three digits, for example the 286, 386, and 486. Because Intel couldn’t trademark the numbering scheme, it started giving its processors names rather than numbers, for example Pentium instead of 586. Intel-compatible processors are also produced by Cyrix and AMD.

x86 does not refer to Macintosh, SPARC, Amiga, Alpha, or any other variations of computer processors.

## **XFree86**

A free version of the X Windows system that runs on Linux, XFree86 is an open source-based method of controlling graphical information on your screen.

## **xterm**

The X Window System terminal program.

# **Y**

## **YMMV**

Email acronym: your mileage may vary.

---

# Notes

---

# Notes