Some Important terms which you have know in linux

* Kernel

When referring to an operating system, the kernel is the first section of the operating system to load into memory. As the center of the operating system, the kernel need to be small, efficient and loaded into a protected area in the memory; so as not to be overwritten. It can be responsible for such things as disk drive management, interrupt handler, file management, memory management, process management, etc.

* MicroKernel

Microkernels were first developed in the 1980's to allow services to be more easily worked on, as well as separate them from the kernel code. Essentially, a microkernel is the minimal amount of software used for implementing an operating system. They consist of less than 10,000 lines of code and include inter-process communication, low-level address space management, and thread management.

Note: Typical operating systems remove device drivers and file systems from the microkernel; running them in the user space instead.

* Device Drivers

More commonly known as a driver, a device driver or hardware driver is a group of files that enable one or more hardware devices to communicate with the computer's operating system. Without drivers, the computer would not be able to send and receive data correctly to hardware devices such as a printer.

If the appropriate driver is not installed, the device may not function properly if at all. For Microsoft Windows users, a driver conflict or an error can be seen in the Device Manager. If problems or conflicts are encountered with a driver, the computer manufacturer or hardware manufacturer will release a driver updates to fix the problems.

* File System

Alternatively referred to as file management and sometimes abbreviated as FS, a file system is a method of organizing and retrieving files from a storage medium, such as a hard drive. File systems usually consist of files separated into groups called directories. Directories can contain files or additional directories. Today, the most commonly used file system with Windows is NTFS.

Without a file management, all files would have no organization and it would be impossible for a file with the same name to exist. Typically, files are managed in a hierarchy, which allows you to view files in the current directory and then navigate into any subdirectories.

* Boot

Alternatively referred to as boot up, booting is the process of powering on a computer and getting into the operating system. During the boot process, the computer will perform a self-diagnostic, also known as a POST and load necessary drivers and programs that help the computer and devices communicate. As your computer is booting, you may see a screen similar to the example picture below.

Computer Boot screen

In the above example, this screen is displaying the BIOS information, the type of computer, CPU, and memory for the computer and a prompt to enter BIOS setup.

If the computer cannot boot, you may receive a boot failure error, which indicates that the computer is not passing POST or a device in the computer such as the hard drive has failed.

* BIOS

Short for Basic Input/Output System, the BIOS (pronounced bye-oss) is a ROM chip located on all motherboards that allows you to access and set up your computer system at the most basic level. In the picture below, is an example of what a BIOS chip may look like on your computer motherboard. In this example, this is a picture of an early AMIBIOS, a type of BIOS manufactured by the AMI. Another good example of a BIOS manufacturer is Phoenix.

The BIOS includes instructions on how to load basic computer hardware and includes a test referred to as a POST (Power On Self Test) that helps verify the computer meets requirements to boot up properly. If the computer does not pass the POST, you will receive a combination of beeps indicating what is malfunctioning within the computer.

The four main functions of a PC BIOS

POST - Test the computer hardware and make sure no errors exist before loading the operating system. Additional information on the POST can be found on our POST and Beep Codes page.

Bootstrap Loader - Locate the operating system. If a capable operating system is located, the BIOS will pass control to it.

BIOS drivers - Low level drivers that give the computer basic operational control over your computer's hardware.

BIOS or CMOS Setup - Configuration program that allows you to configure hardware settings including system settings such as computer passwords, time, and date.

When referring to a person BIO, BIO's is short for biography and is a term used to describe a brief description of a person. A short biography or description of people who have affected the computer industry can be found on our computer people section.

Important links-

* <http://www.computerhope.com/jargon/c/cpu.htm>
* <http://www.computerhope.com/unix/telinit.htm>
* Kill (Command)

kill is used to send a signal to a process.

Syntax

kill [-s] [-l] %pid

Description

The default signal for kill is TERM (which will terminate or "kill" the process). Use -l or -L to list available signals. Particularly useful signals include HUP, INT, KILL, STOP, CONT, and 0. Alternate signals may be specified in three ways: -9, -SIGKILL or -KILL. Negative PID (process ID) values may be used to choose whole process groups; see the PGID column in the output of the ps command. A PID of -1 is special; it indicates all processes except two: the kill process itself, and init.

pid [...] - Send a signal to every pid listed.

-signal

-s signal

--signal signal - Specify the signal to be sent. The signal can be specified by using name or number. The behavior of signals, and their identifying names, are listed on our signals page.

-l, --list [signal] - List signal names. This option has optional argument, which will convert signal number to signal name, or other way around.

-L, --table - List signal names in a nice table.

Examples

kill -9 -1

Kills all processes possible to be killed.

kill -l 11

Translates signal number 11 into its signal name.

kill -L

Lists the available signal choices in a tabular format.

kill 123 543 2341 3453

Sends the default signal (TERM) to the processes with IDs 123, 543, 2341, and 3453, terminating those processes.

* Is Linux Unix?

No. However, Linux is often called "Unix-like" because it functions in much the same way as UNIX. For instance, it uses a command-line interface. Also, many of its basic commands have the same name and serve the same purpose, like those found in UNIX. However, the Linux operating system is not directly descended from any of UNIX's code. Additionally, it does not comply with the official single UNIX specification technical standard as defined by the Open Group.

Note: The Open Group, which controls the UNIX trademark, does not approve of the term "Unix-like" or any other hyphenation of the word "Unix."