

Linux Lessons: Using Ubuntu

“The Ubuntu Command Line”

by Pete Choppin

Pete started this Ubuntu series with the first three parts covering installation of Ubuntu:

- ["Step One: Getting Ready for Ubuntu"](#)
- ["Step Two: Partitioning."](#)
- ["Step Three: Finishing the Installation."](#)

Last week, we looked at some of the features seen when you [first load Ubuntu](#).

This week, we will discuss more about the command line and the Linux file system.

The Ubuntu Command Line

For many longtime users of Linux, the command-line interface is their main tool for modifying configurations, installing and launching applications, creating and editing scripts, and many other uses. In fact, many will say they prefer the command line to the GUI interface because of the complete control they have over whatever they are using.

The command line can also be intimidating, especially to those new to Linux or those who have been working primarily in a GUI interface such as Microsoft Windows, where the command line is neither desirable nor very effective. Still, in Linux it is difficult to get away completely from the command line. Anything from the simplest installation to complicated script writing can involve the use of the command-line interface.

There are a few things on the command line that can be useful for most users. Simple file navigation, for example, is probably one of the more common uses. So here are a few of the basic commands that you may find useful.

First, let's open something called a *terminal*. To open a terminal, go to the Applications, Accessories menu and select the Terminal from the menu. You should see something like Figure 1 appear on the screen.

Figure 1. The Ubuntu terminal window showing the command-line prompt.

Without going into all the details, essentially what you see is a command-line prompt. Mine is displaying my username and the name that I gave the computer during the installation. This prompt can be modified, of course, like most things in Linux, but for this discussion we will leave this like it is.

Let's enter a very simple command that will list the contents of the current directory—where we are located in the Ubuntu file system. That command is simply `ls`. Just type `ls` at the command prompt and press Enter. You should then see a list of files and directories that are in the current directory. Ubuntu has created several directories for you in this area. One of these should be called Pictures. To change to this directory, enter the command: `"cd Pictures"`

(without the quotes) and press Enter.

If you get a message like "No such file or directory" it is possible that you typed the word "Pictures" with a lower-case p. Remember that Linux, unlike DOS, is always case sensitive. Just retype the command using a capital P and this should change your current directory to Pictures. To go back up to the previous directory, type "cd .." and Enter. The two dots mean go up one level in the directory structure. You should now be back where you started.

Incidentally, when you open the terminal, you are automatically shown to be at your home directory. The home directory is where you normally store personal files. It is similar to My Documents in Microsoft Windows.

There are literally hundreds of powerful and very useful commands that can be used from the command line. If you are interested in learning more, just go online and Google "Linux commands." You will get dozens of results that list many commands and their uses.

The Linux File System

Let's discuss a little about the Linux file system. It is probably easier to visualize this by opening a file manager. The file manager for Ubuntu is found by going to the Places menu and then selecting Computer. You should see a similar screen to Figure 2.

Figure 2. The Ubuntu file manager.

Open the filesystem icon. This will then display all of the directories of the hard drive. This is the Linux file system (Figure 3).

Figure 3. The Ubuntu file manager showing the file system.

Most Linux files and directories are set up similar to what you see in Ubuntu. Here is a brief description of some of the more crucial directories in the system:

root—The home directory for the root user.

home—Contains the user's home directories.

bin—Commands needed during bootup that might be needed by normal users.

usr—Contains all commands, libraries, man pages, games and static files for normal operation.

usr/bin—Almost all user commands. (some commands are in /bin or /usr/local/bin).

dev—Device files for devices such as disk drives, serial ports, etc.

etc—Configuration files specific to the machine.

var—Contains files that change for mail, news, printers log files, man pages, and temp files.

mnt—Mount points for temporary mounts by the system administrator.

tmp—Temporary files.

I found this list and the descriptions at [The Computer Technology Documentation Project](#). A

Google search for "Linux file structure" can also provide a ton of information on Linux file systems.

That concludes our presentation of Ubuntu. Please feel free to submit questions. We will be pleased to post them and hopefully provide some answers as well.