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## 1 – What Is The Shell?

When we speak of the command line, we are really referring to the *shell*. The shell is a program that takes keyboard commands and passes them to the operating system to carry out. Almost all Linux distributions supply a shell program from the GNU Project called bash. The name “bash” is an acronym for “Bourne Again SHell”, a reference to the fact bash is an enhanced replacement for sh, the original Unix shell program written by Steve Bourne.

### Terminal Emulators

When using a graphical user interface, we need another program called a *terminal emula- tor* to interact with the shell. If we look through our desktop menus, we will probably find one. KDE uses konsole and GNOME uses gnome-terminal, though it's likely called simply “terminal” on our menu. There are a number of other terminal emulators available for Linux, but they all basically do the same thing; give us access to the shell. You will probably develop a preference for one or another based on the number of bells and whistles it has.

### Your First Keystrokes

So let's get started. Launch the terminal emulator! Once it comes up, we should see some- thing like this:



This is called a *shell prompt* and it will appear whenever the shell is ready to accept in- put. While it may vary in appearance somewhat depending on the distribution, it will usu- ally include your *username@machinename*, followed by the current working directory (more about that in a little bit) and a dollar sign.

If the last character of the prompt is a pound sign (“#”) rather than a dollar sign, the ter- minal session has *superuser* privileges. This means either we are logged in as the root user or we selected a terminal emulator that provides superuser (administrative) privi-

Your First Keystrokes



leges.

Assuming that things are good so far, let's try some typing. Enter some gibberish at the prompt like so:



Since this command makes no sense, the shell will tell us so and give us another chance:



#### Command History

If we press the up-arrow key, we will see that the previous command “kaekfjaeifj” reap- pears after the prompt. This is called *command history*. Most Linux distributions remem- ber the last 500 commands by default. Press the down-arrow key and the previous com- mand disappears.

#### Cursor Movement

Recall the previous command with the up-arrow key again. Now try the left and right-ar- row keys. See how we can position the cursor anywhere on the command line? This makes editing commands easy.





### Try Some Simple Commands

Now that we have learned to type, let's try a few simple commands. The first one is

date. This command displays the current time and date.



A related command is cal which, by default, displays a calendar of the current month.

|  | October | 2007 |  |
| --- | --- | --- | --- |
| Su | Mo Tu We | Th Fr | Sa |
|  | 1 2 3 | 4 5 | 6 |
| 7 | 8 9 10 | 11 12 | 13 |
| 14 | 15 16 17 | 18 19 | 20 |
| 21 | 22 23 24 | 25 26 | 27 |
| 28 | 29 30 31 |  |  |

To see the current amount of free space on your disk drives, enter df:

| /dev/sda2 | 15115452 | 5012392 9949716 34% / |
| --- | --- | --- |
| /dev/sda5 | 59631908 | 26545424 30008432 47% /home |
| /dev/sda1 | 147764 | 17370 122765 13% /boot |

Try Some Simple Commands



Likewise, to display the amount of free memory, enter the free command.

| [me@linuxbox ~]$ **free** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
|  | total | used | free | shared | buffers | cached |
| Mem: | 513712 | 503976 | 9736 | 0 | 5312 | 122916 |
| -/+ buffers/cache: 375748 137964  Swap: 1052248 104712 947536 | | | | | | |

### Ending A Terminal Session

We can end a terminal session by either closing the terminal emulator window, or by en- tering the exit command at the shell prompt:





### Summing Up

As we begin our journey, we are introduced to the shell and see the command line for the first time and learn how to start and end a terminal session. We also see how to issue some simple commands and perform a little light command line editing. That wasn't so scary was it?

### Further Reading

* To learn more about Steve Bourne, father of the Bourne Shell, see this Wikipedia article:

<http://en.wikipedia.org/wiki/Steve_Bourne>

* Here is an article about the concept of shells in computing: <http://en.wikipedia.org/wiki/Shell_(computing)>

**Screenshots:**

