

Introduction to Linux

9-3-2003

Opening Discussion

- What did we talk about last class?
- How many of you have ever worked with a command line before? What are some advantages of doing things with a command line instead of clicking on a GUI?

Command Line

- The Unix family of operating systems is based on the concept of a command line interface. While graphical interfaces have been put on top of this, most people who work with them use the command line.
- With the command line you type in the names of programs you want to execute along with a list of arguments to them.
- The program executes in your "current directory".

Directory Commands

- ls - Lists the contents of the current directory. Can be followed by a path or many different display options.
- cd - Change the current directory to the path specified.
- pwd - Stands for present working directory.
- mkdir - makes a directory
- rmdir - removes an empty directory

Some File Commands

- rm - Remove the specified file. Can include "wild cards".
- mv - Move the file in the first arg to the location of the second.
- cp - Copy the file in the first arg to the location of the second.
- more, less - print the contents of a file.
- vi - An editor for text files, including programs.

Other Helpful Commands

- top - Shows the most active processes sorted in order of CPU usage and other info.
- ps - Lists processes. The -ef option shows info on everything.
- kill - Kills a process. You provide the PID. Use the -9 option for a "bigger hammer".
- grep - Searches in files for a string of text.

I/O Redirection and Piping

- One of the powerful tools that you can use in Linux is the ability to redirect input and output.
- The "<" and ">" symbols can be used to cause input to come from a file or output to go to a file.
- The "|" pipes the output of one program to be the input of another program.

Manual Pages

- One of the most useful commands in Linux is man. You can type man followed by any Linux command to see a description of what it does and the options it can take.
- It also have a -k option that allows you to search for keywords in the short descriptions of all commands.
- C library routines are in man as well.

Rebooting Machines

- Because Linux boxes are truly multi-user platforms, people can be using them without physically sitting in front of them. You should check for this before you reboot.
- who, w, users - These all provide listing of who is logged onto the machine.
- top, uptime - Show usage. If there are things running taking a lot of CPU time odds are good someone wants them running.
- rwho, rusers, ruptime - remote computers.

Minute Essay

- Write the commands you would use to make a directory called "Backup", copy the file prog.c into it, then go into that directory and display the contents of the file.
- Keep in mind that you can give me any feedback you want in these essays.
