











# The Shell & Navigating Linux




# Agenda

-  What is the shell
-  Directory Structure
-  Moving around in the shell
-  Some tweaks and shortcuts

# What is the Shell

-  The shell accepts human readable commands and translates them into something the kernel can read and process.
-  Is a user program or it is an environment provided for user interaction.
-  It is a command language interpreter that executes commands read from the standard input device such as keyboard or from a file.
-  The shell gets started when you log in or open a console (terminal).
-  Quick and dirty way to execute utilities.
-  The shell is not part of system kernel, but uses the system kernel to execute programs, create files etc.

# Shells Cont'd

-  Several shells are available for Linux including:
  - BASH ( Bourne-Again SHell ) - Most common shell in Linux. It's Open Source.
  - CSH (C SHell) - The C shell's syntax and usage are very similar to the C programming language.
  - KSH (Korn SHell) - Created by David Korn at AT & T Bell Labs. The Korn Shell also was the base for the POSIX Shell standard specifications.
  - TCSH - It is an enhanced but completely compatible version of the Berkeley UNIX C shell (CSH).

# Shells Cont'd

- Please note that each shell does the same job, but each:
  - understands different command syntax
  - provides different built-in functions.
- Under MS-DOS, the shell name is COMMAND.COM which is also used for the same purpose
  - it is by far not as powerful as our Linux Shells are!

- How to find out what shell you are using

`ps -p $$`

```
[dbecker@localhost ~]$ ps -p $$  
  PID TTY          TIME CMD  
 4054 pts/0    00:00:00 bash  
[dbecker@localhost ~]$
```



# Linux Directory Structure

The Main ones

/	Primary hierarchy <b>root</b> and root directory of the entire file system hierarchy.
/bin	Essential command binaries that need to be available in single user mode; for all users, e.g., cat, ls, cp.
/boot	Boot loader files, e.g., kernels, initrd.
/home	Users' home directories, containing saved files, personal settings, etc.
/root	Home directory for the root user
/etc	Host-specific system-wide configuration files



# Moving around in the file system via the shell.

cd	<ul style="list-style-type: none"><li>• Change directory – needs an argument</li><li>• Also gets you back to your home dir</li></ul>
cd ..	<ul style="list-style-type: none"><li>• Change directory up one level</li></ul>
cd /etc	<ul style="list-style-type: none"><li>• Change to the etc directory<ul style="list-style-type: none"><li>• go up to root dir and then down to etc</li></ul></li></ul>
cd Documents	<ul style="list-style-type: none"><li>• Change to the Documents directory<ul style="list-style-type: none"><li>• Just down to the Documents dir</li></ul></li></ul>



# Linux Command structure

- Command **-options** argument(s)

`ls -la /etc`

# A couple Shortcuts

- In Vmware - Ctrl-Alt-Enter – makes VM full screen
- Create a shortcut to Terminal
  - Applications->System Tools->Settings>Keyboard
  - Scroll to the bottom of the shortcuts & hit the +
  - Type *Open Terminal* for Name
  - Type *gnome-terminal* for Command
  - Click Edit to add the shortcut (buttons and text will gray out, but nothing else will happen)
  - Press Ctrl-Alt-T
  - Click the Add button
  - If it does not work immediately you may need to restart

Cancel

Add Custom Shortcut

Add

Name

Open Terminal

Command

gnome-terminal

Shortcut

Ctrl

+

Alt

+

T

Edit

# Copy just an area of the screen

- Ctrl-Shift-PrtScrn
  - Select the area that you want to copy
  - It copies to the clipboard,
  - You can then paste it directly into the cell in the Lab.

# Change Focus

- The book mentions changing the focus to make the window that the mouse is in the on “in focus”
  - Applications->utilities->tweak tool
  - Windows Tab
  - Choose Mouse for Focus Mode
- Look around to see if there is anything else you would like to change for the better

