Starting to Use Unix

Lecture 3

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Questions??

- Last week’s lab?
- Last week’s lecture?
  - status of server
Tonight’s Overview

- To root or not to root...
- Documentation
- Logging-in
- Command Line
- Basic commands
- We may have time to do some more commands...
A word about root

- All powerful user
- Usually can’t login as root directly
- Don’t login to root until you need to
Documentation: man

- Manual pages: man
- Eight main sections ex: ls(1), ifconfig(8)
- We’ll use sections 1 and 8 the most
- Keyword search for man pages
  - man -k keyword
  - apropos keyword
  - whatis keyword
Parts of a Man Page

- Name
- Synopsis
- Description
- Examples
- Files
- See Also
If a man page is in multiple sections:

- man crontab

- man 5 crontab

CRONTAB(1)                BSD General Commands Manual               CRONTAB(1)

NAME
  crontab - maintain crontab files for individual users (V3)

SYNOPSIS
  crontab [-u user] file
  crontab [-u user] { -l | -r | -e }

DESCRIPTION
  Crontab is the program used to install, deinstall or list the tables used
to drive the cron(8) daemon in Vixie Cron. Each user can have their own
crontab, and though these are files in /var, they are not intended to be
edited directly.
Part of GNU, so may not be on all systems.

Info may either bring up a man page, or it’s own documentation.

This text is a brief description of the features that are present in the Bash shell.

This is Edition 2.5b, last updated 15 July 2002, of `The GNU Bash Reference Manual', for `Bash', Version 2.05b.
Setting up

- `stty erase or stty ek`
- `chsh or chshell or ?`
- `passwd`
- `uname -a`
Commands

- All commands need a command (!)
- The rest is optional (depending on the command)
- command [ -options ] [ parameters ]
Command editing

- Up, down arrows retrieve previous commands
- Left & right arrows allow command editing
- ^u erases entire line
- ^c stops a process
- ^d logs out
Special Characters

- Lots of special characters:
  - `& ; * ' “ ` [ ] ( ) $ <> { } ^ # / \ % ! ~ +`
- Quote them!
  - “soft quote”
  - ‘hard quote’
  - `\c (charter quote)`
File Commands

- *List files in a directory*
  - `ls -l`

- *Display the contents of a file*
  - `cat file`
  - `more file`
  - `less file`
More File Commands

- Delete a file
  - `rm file`
- Copy a file
  - `cp source destination`
- Rename a file
  - `mv source destination`
Printing

- *Print a file*
  - `lpr file`
  - `lpr -Pprintername file`
- *Viewing print queue*
  - `lpq`
Basic Searching

- Search for text in a file:
  - `grep "string" file`
  - `grep -i "string" file`
  - `grep -r "string" directory`
  - `grep -ir "string" directory`
Seeing part of a File

- Top of a file
  - head file
- End of a file
  - tail file
  - tail -10 file
  - tail -f file
File Manipulation

- Sort a file (doesn’t change orig file)
  - `sort file`
- Show only unique lines
  - `uniq file`
- Show differences between files
  - `diff file1 file2`
Continue Next Week?

- I had originally decided to just go this far in Chapter 5 this week.
- If we feel comfortable, we may continue...
What kind of file is it??

- In a world without icons, sometimes this command is your best helper:
  - `file file`
- Note that Unix files don’t have to have any certain extension
- Some applications require certain extensions.
Interprocess Communication

- Pipes
  - *Put the vertical bar between commands*
  - *Only the first command has a file*
  - *Output of first command goes to second*
  - *cat file | head -2*
Date

- The date command can either
  - display the date and/or time
    - `date`
    - `date +"%H:%M:%S"`
  - set the date and/or time (root)
    - `date 200409162000`
Misc. commands

- **Logs your terminal session**
  - `script`
- **Shows who is logged-in**
  - `who`
  - `who am i`
File Compression

- Compress a file (appends .gz extension)
  - `gzip file`
- Uncompress
  - `gunzip file`
- View compressed files
  - `zcat file`
Tar (Tape ARchive)

- *Puts multiple files into one file*
- *Does not compress (can use gzip flag).*
- *Main tar functions:*
  - *c - create*
  - *x - extract*
  - *t - list contents*
tar usage

○ Create Tarfile (tarball)
  ○ `tar -cvf tarfile.tar file [ directory ]`

○ List contents of tarfile
  ○ `tar -tvf tarfile.tar`

○ Extract files from a tarfile
  ○ `tar -xvf tarfile.tar`
Looking for stuff

- Look where a command is
  - which command
  - where command
- Look where a file is
  - locate file
User info

- Who is currently logged on
  - who
  - users
  - w
  - finger
User Communication

- write user
- talk user
- mesg \( n \)
- mesg \( y \)