A few UNIX basics

Our chosen platform

- Ubuntu
  - Currently popular UNIX variant
  - No GUI, administer using SSH
  - 14.04

- Other platforms you could use
  - FreeBSD, RedHat, Centos, Debian

- This is Not a UNIX admin course
  - Worksheets are mostly step-by-step
  - Please help each other or ask us for help

Some things we will need to do …

Be *root* when necessary: sudo <cmd>

Edit files:

     sudo vi /etc/motd

Installed editors include vi, emacs

vi editor

- The default editor for all UNIX systems
  - Can be difficult to use
  - If you know it and prefer to use vi please do
- Emacs is also there
  - But it is heavy weight

Other tools

- Terminate foreground program: CTRL+C

  $ ping yahoo.com

  PING yahoo.com(67.195.160.76): 56 data bytes

  64 bytes from67.195.160.76: icmp_seq=0 ttl=45 time=221.053 ms

  64 bytes from67.195.160.76: icmp_seq=1 ttl=45 time=224.145 ms

  ^C ← Press CTRL + C

- Browse the file system:

  cd /etc

  ls

  ls -l

- Rename and delete files

  mv file file.bak

  rm file.bak

Starting and stopping services

- Standard method
  sudo service named [stop|start|restart]

Check for a process by name

- ps auxwww| grep http

```
gollum# ps auxwww | grep http
root          2694    0.0   0.2 147672   6592   ??   Ss     5:32AM   0:00.03 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2695    0.0   0.2 147672   6900   ??   I      5:32AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2696    0.0   0.2 147672   6900   ??   I      5:32AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2697    0.0   0.2 147672   6588   ??   I      5:32AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2698    0.0   0.2 147672   6588   ??   I      5:32AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2699    0.0   0.2 147672   6588   ??   I      5:32AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2700    0.0   0.2 147672   6908   ??   I      5:32AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2701    0.0   0.2 147672   6780   ??   I      5:32AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2702    0.0   0.2 147672   6704   ??   I      5:32AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
www           2749    0.0   0.2 147672   6896   ??   I      5:34AM   0:00.00 /usr/local/sbin/httpd -DNOHTTPACCEPT
root          4072    0.0   0.0  10056   1088   v0   I+     5:40AM   0:00.00 tail -f /var/log/httpd-access.log
root          4091    0.0   0.0  16424   1472    2   S+     5:44AM   0:00.00 grep http
```

Viewing files

- Some times files are viewed through a pager program("more", "less", "cat").

- Examples:
  cat /etc/motd
  less /usr/local/etc/nagios/nagios.cfg-sample
  > Spacebar for next page
  > "b" to go backwards
  > "q" to quit
  > "/" and a pattern(/text) to search

Troubleshooting: Log files

- Log files are critical to solve problems.
    They reside (largely) in /var/log/

- Some popular log files include:
    /var/log/syslog
    /var/log/auth.log
    /etc/bind/log/*

- To view the last entry in a log file:
    tail /var/log/syslog

- To view new entries as they happen:
    tail -f /var/log/syslog

Connecting via SSH to machines

- Login to your virtual machine using ssh
- On Windows use putty.exe
    Connect as user tldadmin to:
        auth1.grpX => 10.192.X.1
- where "X" is your group number.
- The password is given in class.

Logging in

- Linux/MacOS
  - First, open a terminal, then:
    ssh tldadmin@10.192.X.1

- Windows
  - Putty (or other SSH program) connect to:
    10.192.X.1
    1. As user "tldadmin"
    2. Accept the key

- "X" is the number of your group

After you are logged in...

- Experiment with the vi editor
- Edit the "message of the day" to identify your virtual machine:

  sudo vi /etc/motd

- Log out and log in again to see your changes.

Questions?