Network Monitoring & Management

A few Linux basics

Our chosen platform

Ubuntu Linux 12.04 LTS 32-bit

- LTS = Long Term Support
- no GUI, we administer using ssh
- Ubuntu is Debian underneath

- In the real world choose 64-bit edition

- There are other platforms you could use:
  - CentOS / RedHat, FreeBSD, …

- This isn't a UNIX admin course
  - Worksheets are mostly step-by-step
  - Please help each other or ask us for help

You need to be able to….

Login to your virtual machine using ssh

- On Windows use putty.exe or SecureShell
- Connect to pcX as user *sysadm*
- *We'll do that now...*

- Accept Public Key when prompted
- Windows users download *putty* or *SecureShell* from http://noc.ws.nsrc.org and connect
- Instructors will assist everyone to connect

You need to be able to….

- Be *root* when necessary: `sudo <cmd>`
- Install packages
  - `sudo apt-get install <pkg>`
- Edit files
  - `sudo joe /etc/mailname`
  - `sudo vi /etc/mailname`
- Start/Stop services
  - `service <NAME> start | stop | restart`

joe editor

- Ctrl-C quit without saving
- Ctrl-K X to quit and save
- Cursors work as you expect
- We provide a PDF reference in the materials

vi editor

- The default editor for all UNIX and Linux distributions
- Can be difficult to use
- If you know it and prefer to use vi please do
- We provide a PDF reference in the materials

Other tools

- Terminate foreground program:
  - `ctrl-c`
- Browse the filesystem:
  - `cd /etc`
  - `ls`
  - `ls -l`
- Rename and delete files
  - `mv file file.bak`
  - `rm file.bak`

Starting and stopping services

"Old School" method

- `/etc/init.d/apache2 restart`

New method (default in Ubuntu 12.04 LTS)

- `service apache2 restart`

Check for the process

- `ps auxwww | grep apache`

Viewing files

Sometimes files are viewed through a pager program ("more", "less", "cat"). Example:

- `man sudo`
- Space bar for next page
- "b" to go backwards
- "q" to quit
- "/" and a pattern (/text) to search

To get started

1. Login to your virtual server using ssh
2. Install the "joe" editor package
    - `sudo apt-get update`
    - `sudo apt-get install joe`
3. Install the postfix mailserver and some utilities:
    - `sudo apt-get install postfix mutt mailutils`
      1. Select "**Internet Site**" when prompted
      2. Accept the hostname presented.
      3. For both screens tab to <Ok> and press ENTER to continue
4. Restart the mailserver:
    - `sudo service postfix restart`

Troubleshooting: Your logs

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

- Some popular log files include:
  - /var/log/syslog
  - /var/log/apache2/error.log
  - /var/log/mail.log
  - And, many, many more

- 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`

  Press "ctrl-c" to exit from the `tail` command.