



# Network Monitoring & Management

**A few Linux basics**

# Our chosen platform

## Ubuntu Linux 10.04 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
- Connect to pcX as user *sysadm*

***– We'll do that now...***

- Accept Public Key when prompted
- Windows users download putty 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

## Standard 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 mail server package
  - `sudo apt-get install postfix`
  - When you are prompted for type of mail server select:  
**Internet Site**
  - Then tab to “OK” and press Enter.
4. Restart the mailserver:
  - `sudo service postfix restart`

# Adjust /etc/hosts

1. The file /etc/hosts needs to be cleaned up. Use the editor of your choice:

```
$ sudo editor /etc/hosts
```

2. Change the second line in the file that says:

```
127.0.1.1 gold.ws.nsrc.org gold
```

to be:

```
127.0.1.1 pcN.ws.nsrc.org pcN
```

Where “pcN” is your pc number.

3. Exit and save the file.

# Troubleshooting: Your logs

- Log files are critical to solve problems. They reside (largely) in `/var/log/`
- Some popular log files include:
  - `/var/log/messages`
  - `/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/messages`
- To view new entries as they happen:
  - `tail -f /var/log/messages`