

# DNS/DNSSEC Workshop

## A few UNIX basics

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# Our chosen platform

- FreeBSD 9.x 64 bit
  - UNIX OS, BSD variant
  - 30 year history
  - no GUI, we administer using SSH
- There are other platforms you could use:
  - Ubuntu, Debian, CentOS/RedHat, ...
- This isn't a UNIX admin course
  - Worksheets are mostly step-by-step
  - Please help each other or ask us for help



# Some things we'll need to do...

Be *root* when necessary: `sudo <cmd>`

Install packages:

```
pkg install <package_name>
```

Edit files:

```
sudo ee /etc/motd
```

```
sudo vi /etc/motd
```

Installed editors include ee, jed, joe and vi\*



# 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
- We provide a PDF reference in the materials on the workshop wiki



# Other editors

- ee
  - ESC brings up the editor menu
  - Cursors work as you expect
- jed
  - F10 brings up the editor menu
  - Cursors work as you expect
- joe
  - Ctrl-k-h brings up the editor menu
  - Ctrl-c aborts
  - Cursors work as you expect



# Other tools

## Terminate foreground program: CTRL+C

```
$ ping yahoo.com
PING yahoo.com (67.195.160.76): 56 data bytes
64 bytes from 67.195.160.76: icmp_seq=0 ttl=45 time=221.053 ms
64 bytes from 67.195.160.76: icmp_seq=1 ttl=45 time=224.145 ms
^C    ← here press 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

```
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

- Sometimes files are viewed through a pager program (“more”, “less”, “cat”).
- Examples:
  - `cat /etc/motd`
  - `less /usr/local/etc/nagios/nagios.cfg-sample`
    - Space bar 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/messages`
  - `/var/log/httpd-error.log`
  - `/var/log/maillog`
  - `/etc/namedb/log/*` (this class only)
- 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`



# Connecting via SSH to machines

- Login to your virtual machine using ssh
- On Windows use putty.exe - download from:  
<http://the.earth.li/~sgtatham/putty/latest/x86/putty.exe>  
or  
<http://noc.ws.nsrc.org/>
- Connect as user “sysadm” to:  
auth1.grpX => 10.10.X.1  
auth2.grpX => 10.10.X.2  
resolv.grpX => 10.10.X.3
- where “X” is your group number.
- The password is given in class.



# Logging in

- Linux/MacOS
  - First, open a terminal, then:
    - `ssh sysadm@auth1.grpX.dns.nsrc.org`
- Windows
  - Putty (or other SSH program) connect to:
    - `auth1.grpX.dns.nsrc.org`
      1. As user "sysadm"
      2. Accept the key
      3. Repeat for `resolv.grpX` and `auth2.grpX` (if configured)
- "X" is the number of your group



# After you are logged in...

- Experiment with the ee editor
  - ... or vi or joe or jed if you prefer
- Edit the “message of the day” to identify your virtual machine as yours:
  - `sudo ee /etc/motd`
- Log out and log in again to see your changes. Repeat this for each virtual machine...



# Questions?

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