

TNE30019/TNE80014 – Unix for Telecommunications

Apache – Virtual Hosts

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Virtual Hosting

Need one Server per Web Site?

Even old Intel x386 can service thousands of hits a day

Web Hosting Services are often provided by Third Parties

- Powerful servers hosting multiple concurrent web sites
- DNS servers configured to return same IP for multiple names
- HTTP v1.1 has Host: directive – Browser can request certain host from actual server
- Lower per web site cost means web hosting services at reasonable prices

Outline

- What is Virtual Hosting
- Configuring Apache Virtual Hosts
 - Named Virtual Hosts
 - Using Multiple IP Addresses

Virtual Hosting – Basic Configuration

DNS Configuration

All names must resolve to the Web Server IP Address

*Example: **www.caia.swin.edu.au** and **genius.caia.swin.edu.au** resolve to 136.186.229.16*

Apache Server for Multiple Host Names

Each Virtual Host

- Needs DNS based name
- Needs root directory where site content is stored
- Changes to default server settings, e.g. admin email, log file locations

Virtual Hosting – Apache Configuration

Basic/Minimum Configuration

```
NameVirtualHost *:80
<VirtualHost *:80>
ServerName www.server1.com
DocumentRoot /home/www/server1
</VirtualHost>
<VirtualHost *:80>
ServerName www.server2.com
DocumentRoot /home/www/server2
</VirtualHost>
```

- Name in <VirtualHost> directive must match name in NameVirtualHost directive
- Multiple names allow a server to run on some ports only

Virtual Hosting – Multiple IP Addresses

IP-based Virtual Hosts

- Multiple sites on single web server
- Each web site hosted on different IP address
- Machine must be configured with all these IP Addresses
- DNS entries must be configured for all these IP Addresses

Can Mix-and-Match

Multiple IP Addresses/servers, each hosting multiple named Virtual Hosts

Virtual Hosting – Apache Configuration

First <VirtualHost> Directive in httpd.conf

- **“Default”** Web Site
- Defines which web site serves HTTP 1.0 requests
- Main host goes away (global settings ignored)

Other Fields for <VirtualHost> directive

- ServerAlias: other names that resolve to same web site
- ServerAdmin: email address of server admin to receive error and other messages
- ErrorLog, CustomLog: locations of log files for virtual host
- <Directory>: per directory configuration for this virtual host

Virtual Hosting – Example Configuration

```
<VirtualHost 192.168.0.1:80>
ServerAdmin mickey@disney.com
DocumentRoot /home/www/mickey
ServerName www.mickey.com
ErrorLog /logs/mickey/error_log
</VirtualHost>
NameVirtualHost 192.168.0.2:80
<VirtualHost 192.168.0.2:80>
ServerAdmin donald@disney.com
DocumentRoot /home/www/donald
ServerName www.donald.com
ErrorLog /logs/donald/error_log
</VirtualHost>
<VirtualHost 192.168.0.2:80>
ServerAdmin pluto@disney.com
DocumentRoot /home/www/pluto
ServerName www.pluto.com
ErrorLog /logs/pluto/error_log
</VirtualHost>
```