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***Hosting A Web Server***

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# Hosting A Web Server

## ⌘ apache

⌘ "A PA+CHy web sErver"

⌘ most popular internet web server by far

⌘ *run on over 1.2 million Internet servers*

⌘ features

⌘ *portable across many platforms*

- mostly Unix variants, Windows is in β

⌘ *supports a wide range of plug-in modules*

- spell check served pages
- MD5 authentication
- user directories
- Dynamic Shared Object support
- directly execute perl, python, etc. CGI scripts

⌘ *other features*

- virtual hosting
- extensive logging
- open source

# Apache Configuration

## ⌘ files

### ⌘ httpd.conf

- ⌘ *for the server; general parameters such as port number and number of server instances*

### ⌘ srm.conf

- ⌘ *Server Resource Map configuration*
- ⌘ *configuration for server resources—documents and other served information*

### ⌘ access.conf

- ⌘ *access control policies for the web tree or individual sections*

# /etc/httpd/httpd.conf

⌘ the basic daemon configuration file

☒ specifies which plug-in modules are to be used

☒ establishes virtual host configurations

☒ "refers to the practice of maintaining more than one server on one machine, as differentiated by their apparent hostname"

- also requires DNS alias support

☒ specifies options for performance tuning

```
# heavily excerpted file...
LoadModule userdir_module      modules/mod_userdir.so
ServerType standalone
Port 80
HostnameLookups off
User nobody
Group nobody
ServerRoot /etc/httpd
LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-Agent}i\"" combined
Timeout 300
MinSpareServers 1
MaxSpareServers 2
StartServers 2
MaxClients 150
MaxRequestsPerChild 100
<VirtualHost www.myserver.skewst.net.au>
ServerAdmin webmaster@www.myserver.skewst.net.au
DocumentRoot /www/docs/www.myserver.skewst.net.au
ServerName www.myserver.skewst.net.au
ErrorLog logs/www.myserver.skewst.net.au-error_log
TransferLog logs/www.myserver.skewst.net.au-access_log
</VirtualHost>
```

# /etc/httpd/srm.conf

## ⌘ Server Resource Map configuration

- ☒ specifies the location(s) of the web pages
- ☒ specifies data type handling
  - ☒ *what to do with images, sounds, videos, etc.*
  - ☒ *also CGI handling*

```
# heavily excerpted srm.conf...
DocumentRoot /home/httpd/html
UserDir public_html
DirectoryIndex index.html index.shtml index.cgi
FancyIndexing on
AddIconByType (VID,/icons/movie.gif) video/*
AddIcon /icons/binary.gif .bin .exe
AccessFileName .htaccess
TypesConfig /etc/mime.types
ScriptAlias /cgi-bin/ /home/httpd/cgi-bin/
Alias /perl/ /home/httpd/perl/
<Location /perl>
    SetHandler perl-script
    PerlHandler Apache::Registry
    Options +ExecCGI
</Location>
BrowserMatch "RealPlayer 4\.0" force-response-1.0
```

# /etc/httpd/access.conf

## ⌘ global access controls

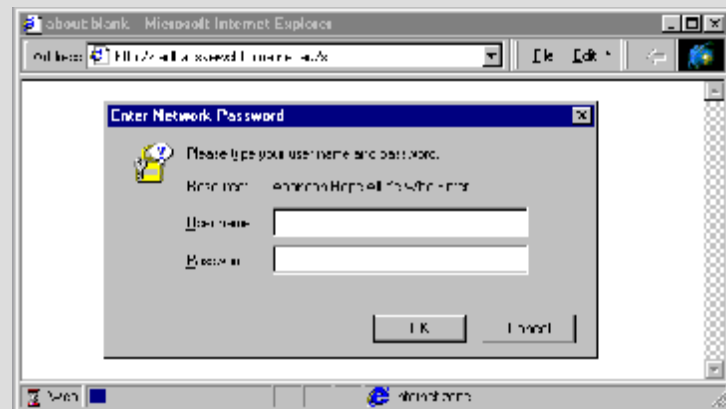
```
# excerpted access.conf file...
<Directory />
Options None
AllowOverride None
</Directory>
<Directory /home/httpd/html>
Options Indexes Includes FollowSymLinks
AllowOverride None
order allow,deny
allow from all
</Directory>
<Directory /home/httpd/cgi-bin>
AllowOverride None
Options ExecCGI
</Directory>
```

## ⌘ can be overridden by .htaccess files

- ☑ establishes controls on a subtree
- ☑ nearly the same syntax

```
AuthUserFile /etc/httpd/.htpasswd
AuthGroupFile /dev/null
AuthName "Abandon Hope All Ye Who Enter Here..."
AuthType Basic

<Limit GET POST>
require user bob joe fred steve
</Limit>
```



# Access Passwords

⌘ uses a separate configuration file

📁 /etc/httpd/.htpasswd

```
fred:v3l0KWx6v8mQM  
bob:x4DtaLTqsE1C2  
steve:i0KWx6mQ381vM  
joe:hfdudjsmoeqL
```

📁 *high-volume sites can use a DBM-style database instead of this simple flat file*

📁 new users are added via the htpasswd command

```
# htpasswd -c /etc/httpd/.htpasswd harry  
Adding password for harry.  
New password: password  
Re-type new password: password
```

# Squid

## ⌘ a popular web proxy service

- ☒ supports SSL, extensive access controls, and full request logging
- ☒ acts as a local cache
  - ☒ *increases speed of access to commonly used locations*
  - ☒ *increases security*
    - can restrict web access when used in conjunction with a filtering firewall
- ☒ defined via `/etc/squid.conf`
  - ☒ *configuration includes (but not limited to) HTTP port number, the Internet Cacheing Protocol request port number, incoming and outgoing requests, information about firewall access, and various timeout information.*