### 1.113.3

# Operate and perform basic configuration of Apache Weight 4

Linux Professional Institute Certification — 102

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1.113.1 Configure and manage inetd, xinetd, and related services [4]

1.113.2 Operate and perform basic configuration of sendmail [4]

1.113.3 Operate and perform basic configuration of Apache [4]

1.113.4 Properly manage the NFS, smb, and nmb daemons [4]

1.113.5 Setup and configure basic DNS services [4]

1.113.7 Set up secure shell (OpenSSH) [4]

### **Description of Objective**

1.113.3 Operate and perform basic configuration of Apache

Candidates should be able to modify simple parameters in Apache configuration files, start, stop, and restart httpd, arrange for automatic restarting of httpd upon boot. Does not include advanced custom configuration of Apache.

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### Key files, terms, and utilities include:

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httpd.conf — main configuration file for Apache

apachect1 — a program to send
commands to a running Apache
server, especially the graceful
command

httpd — the Apache server program

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Apache home page: http://httpd.apache.org

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# **Apache**

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httpd <mark>options</mark>

Configuring Apache

- Apache is a web server (http daemon)
- Default on all Linux distros
- Most popular web server on the internet
- Named after the number of patches to orginal source code
- Provides both HTTP and HTTPS (SSL) as standard
- Other features added with modules (eg cgi)

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- Apache can be started:
  - On demand through inetd or xinetd
  - As a daemon
- Normally started as daemon to reduce connect delay
- Uses standard SysV start/stop semantics
  - Debian, Red Hat:
    - \$ sudo /etc/init.d/apache start ←
  - ▶ Red Hat/Fedora: \$ sudo service httpd start ←
- ▶ An alternative is apachect1
  - ⇒ \$ sudo service httpd graceful 

    ← actually calls apachect1

### apachectl

apachectl is a management utility. To use it: \$ sudo apachect1  $\langle command \rangle \leftarrow$ 

command	function
start	Start the daemon
stop	Stop the daemon
restart	Restart or start the daemon
fullstatus	Report status of server (requires lynx)
graceful	Gracefully restart the server
configtest	Test config file syntax
help	Display commands

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### httpd Options

The httpd deamon can be run directly if needed. On Debian the daemon is called apache.

Option	Function
-A	Shows version
-V	Shows compile configuration
-h	List all cmd line parameters
-1	List compiled in modules
-L	List config directives
-S	Shows parsed settings (virtual hosts only)
-t	Test config file & doc root
$-\mathtt{T}$	Test config file only

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### httpd options with parameters

The following options take parameters:

Parameter	Function
-D ⟨ <i>name</i> ⟩	Defines a name for use in IfDefine name
-d ⟨ <i>directory</i> ⟩	Defines an alternate server root
-f $\langle \emph{file}  angle$	Set a new configuration file
-c ⟨"directive"⟩	Process directive before reading config file
-c $\langle$ "directive" $\rangle$	Process directive after reading config file

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# **Configuring Apache**

- Apache originally (a decade ago) used 3 configuration files:
  - ▶ httpd.conf Server settings
  - srm.conf File types & doc specs
  - access.conf Security settings
- ▶ All configuration is now done in httpd.conf
- ▶ Normally located in /etc/httpd/conf

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### Site-wide Directives

Directive	Function		
ServerAdmin	Sets email address for admin		
ServerName	Sets the name of the server		
DocumentRoot	Sets the root for content served		
ServerRoot	Sets root for server files		
ServerType	standalone <b>or</b> inetd		
MinSpareServers	No of free httpd's before starting more		
MaxSpareServers	No of free httpd's before killing some		
StartServers	No of httpd's to start		
MaxClients	Maximum no of httpd's to run at once.		

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You can set directives so that thay only apply to a particular part of the content directory tree. For example:

This says that the .htaccess file can not override settings for this directory

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This directive controls who can access what directories on your site. This is about the only directive that needs to be changed from an 'off-the-shelf' configuration if you don't want external users to access your site.

```
<Location />
      order deny, allow
      deny from all
      allow from 127.0.0.0/255.0.0.0
      allow from .c222
</Location>
```

This says to deny first then allow. The result is that only users in the .c222 domain and the localhost will be able to access the server.

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There are a large number of configuration directives. These are grouped as follows:

- Aliases and Redirects
- Default pages
- User Web Directories (site content in a users home)
- MIME types
- CGI files
- Directory Browsing
- Authentication
- Virtual hosts (multiple sites on one host)
- Logging directives

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