1.113.3
Operate and perform basic configuration of Apache
Weight 4

Linux Professional Institute Certification — 102

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Outline

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2 Objective

Description of Objective
    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.

Key files, terms, and utilities include:

httpd.conf — main configuration file for Apache

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

httpd — the Apache server program

3 Resources

Operate and Perform Basic Configuration of Apache

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

4   Intro to Apache

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)

5   Starting and Stopping Apache

Starting and Stopping Apache

- 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 `apachectl`

  - $ **sudo service httpd graceful** ↩ actually calls `apachectl`

6   `apachectl`

apachectl

apachectl is a management utility. To use it:

$ **sudo apachectl** ⟨*command*⟩ ↩

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

7   `httpd` options

httpd Options

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

Option	*Function*
-v	Shows version
-V	Shows compile configuration
-h	List all cmd line parameters
-l	List compiled in modules
-L	List config directives
-S	Shows parsed settings (virtual hosts only)
-t	Test config file & doc root
-T	Test config file only

7.1   `httpd` Options with Parameters

httpd options with parameters

The following options take parameters:

Parameter	Function
-D ⟨*name*⟩	Defines a name for use in `IfDefine` name
-d ⟨*directory*⟩	Defines an alternate server root
-f ⟨*file*⟩	Set a new configuration file
-C ⟨*"directive"*⟩	Process directive before reading config file
-c ⟨*"directive"*⟩	Process directive after reading config file

8 Configuring Apache

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`

8.1 Site-wide Directives

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` or `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.

8.2 Directory block Directives

Directory block Directives

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

```
<Directory /Games>
          AllowOverride None
</Directory>
```

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

8.3 Access Control

Access Control

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.

8.4 Other Directives

Other Directives

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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