1.113.3
Operate and perform
basic configuration of
Apache
Weight 4

Andrew Eager

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Linux Professional Institute Certification — 102

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Outline

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Topic 113 Networking Services [24]
Where we are up to

- 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]

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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.

Key files, terms, and utilities include:
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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

Operate and Perform Basic Configuration of Apache
Resources of Interest

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

Apache

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- ▶ 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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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`

apachectl

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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

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

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`httpd` options with parameters

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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

Configuring Apache

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- ▶ 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

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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.

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Directory block Directives

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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

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Access Control

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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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Other Directives

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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

Topics Covered

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