# Apache HTTP Server Web server

## CONCEPTS

> Always run configtest before graceful: a syntax error then leaves the running server untouched.

**Request** host and port
↓ match
**VirtualHost** ServerName / Alias
↓ map
**Directory / Location** Require, Options
↓ merge
**.htaccess** per-directory overrides

> Debian and Ubuntu call the binary and service apache2 (apache2ctl); RHEL, Fedora and source builds use httpd.

## CONTROL

**apachectl start**
Start the server

**apachectl stop**
Stop, aborting open connections

**apachectl graceful**
Reload config without dropping requests

**apachectl configtest**
Check config syntax

**systemctl reload apache2**
Reload via systemd (Debian)

**systemctl reload httpd**
Reload via systemd (RHEL)

## INSPECT

**httpd -S**
Show parsed vhosts and ports

**httpd -M**
List loaded modules

**httpd -V**
Version, MPM, config path

## DEBIAN HELPERS

**a2enmod** *<module>*
Enable a module

## DEBIAN HELPERS (cont.)

**a2ensite** *<site>*
Enable a vhost file

## FILES AND PATHS

**/etc/apache2/apache2.conf**
Main config (Debian)

**/etc/httpd/conf/httpd.conf**
Main config (RHEL)

**/var/log/apache2/error.log**
Error log (Debian)

**/var/log/httpd/error_log**
Error log (RHEL)

**/var/www/html**
Default document root

## VIRTUAL HOSTS

*<VirtualHost *:80>*
Open a vhost for a port

**ServerName** *<host>*
Main hostname of the vhost

**DocumentRoot** *<dir>*
Directory served for the vhost

**Listen** *<port>*
Bind a port

## ACCESS AND .HTACCESS

*<Directory <dir>>*
Settings for a filesystem path

**Require all granted**
Allow everyone

**Require all denied**
Deny everyone

**Require ip** *<cidr>*
Allow an address range

**Options -Indexes**
No directory listings

**AllowOverride All**
Honor .htaccess in this directory