Installing Apache

sudo apt update

sudo apt install apache2

Adjusting the Firewall

sudo ufw app list

This list indicates that there are three profiles available for Apache:

Apache: This profile opens only port 80 (normal, unencrypted web traffic)

Apache Full: This profile opens both port 80 (normal, unencrypted web traffic) and port 443 (TLS/SSL encrypted traffic)

Apache Secure: This profile opens only port 443 (TLS/SSL encrypted traffic)

sudo ufw allow 'Apache'

sudo ufw status

sudo systemctl status apache2

hostname -I

curl -4 icanhazip.com

http://10.10.10152

Managing the Apache Process

sudo systemctl stop apache2

sudo systemctl start apache2

sudo systemctl restart apache2

sudo systemctl reload apache2

sudo systemctl disable apache2

sudo systemctl enable apache2

sudo systemctl enable apache2

sudo mkdir /var/www/ctel.com

sudo chown -R $USER:$USER /var/www/ctel.com

sudo chmod -R 755 /var/www/ctel.com

nano /var/www/ctel.com/index.html

/var/www/ctel.com/index.html

<html>

<head>

<title>Welcome to ctel.com!</title>

</head>

<body>

<h1>Success! The ctel.com virtual host is working!</h1>

</body>

</html>

sudo nano /etc/apache2/sites-available/ctel.com.conf

/etc/apache2/sites-available/ctel.com.conf

<VirtualHost \*:80>

ServerAdmin webmaster@localhost

ServerName ctel.com

ServerAlias www.ctel.com

DocumentRoot /var/www/ctel.com

ErrorLog ${APACHE\_LOG\_DIR}/error.log

CustomLog ${APACHE\_LOG\_DIR}/access.log combined

</VirtualHost>

sudo a2ensite ctel.com.conf

sudo a2dissite 000-default.conf

sudo apache2ctl configtest

sudo systemctl restart apache2

Getting Familiar with Important Apache Files and Directories

/var/www/html: The actual web content, which by default only consists of the default Apache page you saw earlier, is served out of the /var/www/html directory.

Server Configuration

/etc/apache2: The Apache configuration directory. All of the Apache configuration files reside here.

/etc/apache2/apache2.conf: The main Apache configuration file. This can be modified to make changes to the Apache global configuration. This file is responsible for loading many of the other files in the configuration directory.

/etc/apache2/ports.conf: This file specifies the ports that Apache will listen on. By default, Apache listens on port 80 and additionally listens on port 443 when a module providing SSL capabilities is enabled.

/etc/apache2/sites-available/: The directory where per-site virtual hosts can be stored. Apache will not use the configuration files found in this directory unless they are linked to the sites-enabled directory. Typically, all server block configuration is done in this directory and then enabled by linking to the other directory with the a2ensite command.

/etc/apache2/sites-enabled/: The directory where enabled per-site virtual hosts are stored. Typically, these are created by linking to configuration files found in the sites-available directory with the a2ensite. Apache reads the configuration files and links found in this directory when it starts or reloads to compile a complete configuration.

/etc/apache2/conf-available/, /etc/apache2/conf-enabled/: These directories have the same relationship as the sites-available and sites-enabled directories, but are used to store configuration fragments that do not belong in a virtual host. Files in the conf-available directory can be enabled with the a2enconf command and disabled with the a2disconf command.

/etc/apache2/mods-available/, /etc/apache2/mods-enabled/: These directories contain the available and enabled modules, respectively. Files ending in .load contain fragments to load specific modules, while files ending in .conf contain the configuration for those modules. Modules can be enabled and disabled using the a2enmod and a2dismod commands.

Server Logs

/var/log/apache2/access.log: By default, every request to your web server is recorded in this log file unless Apache is configured to do otherwise.

/var/log/apache2/error.log: By default, all errors are recorded in this file. The LogLevel directive in the Apache configuration specifies how much detail the error logs will contain.

How to Redirect in Apache

Using the Redirect Directive

In Apache, you can accomplish simple, single-page redirects using the "Redirect" directive, which is included in the "mod\_alias" module. This directive takes at least two arguments: the old URL and the new URL.

In its simplest form, you can accomplish a redirect with the following lines in your server configuration:

<VirtualHost \*:80>

ServerName ctel.com

Redirect / http://www.tora.com

</VirtualHost>

<VirtualHost \*:80>

ServerName www.domain2.com

. . .

. . .

</VirtualHost>

If you would like to create a permanent redirect, you can do so in either of the following two ways:

Redirect 301 /oldlocation http://www.tora.com/newlocation

Redirect permanent /oldlocation http://www.tora.com/newlocation