

NAME : ATUL SHARMA

UID : 2021700060

Batch : d4

Date : 24/02/23

AIM : To install and use apache2 server

Apache is the most commonly used Web server on Linux systems. Web servers are used to serve Web pages requested by client computers. Clients typically request and view Web pages using Web browser applications such as Firefox, Opera, Chromium, or Internet Explorer.

Users enter a Uniform Resource Locator (URL) to point to a Web server by means of its Fully Qualified Domain Name (FQDN) and a path to the required resource.

Apache Web Servers are often used in combination with the MySQL database engine, the HyperText Preprocessor (PHP) scripting language, and other popular scripting languages such as Python and Perl. This configuration is termed LAMP (Linux, Apache, MySQL and Perl/Python/PHP) and forms a powerful and robust platform for the development and deployment of Web-based applications.

remove if already apache2 is install

```
File Edit View Search Terminal Help
cnlab404@cnlab404-Veriton-M200-H110: ~
cnlab404@cnlab404-Veriton-M200-H110:~$ sudo apt remove apache2*
Reading package lists... Done
Building dependency tree
Reading state information... Done
Note, selecting 'apache2-ssl-dev' for glob 'apache2*'
Note, selecting 'apache2.2-common' for glob 'apache2*'
Note, selecting 'apache2-suexec-pristine' for glob 'apache2*'
Note, selecting 'apache2-api-20120211' for glob 'apache2*'
Note, selecting 'apache2-data' for glob 'apache2*'
Note, selecting 'apache2-api-20120211-openssl1.1' for glob 'apache2*'
Note, selecting 'apache2-suexec' for glob 'apache2*'
Note, selecting 'apache2-bin' for glob 'apache2*'
Note, selecting 'apache2.2-bin' for glob 'apache2*'
Note, selecting 'apache2-dbg' for glob 'apache2*'
Note, selecting 'apache2-dev' for glob 'apache2*'
Note, selecting 'apache2-doc' for glob 'apache2*'
Note, selecting 'apache2-suexec-custom' for glob 'apache2*'
Note, selecting 'apache2' for glob 'apache2*'
Note, selecting 'apache2-utils' for glob 'apache2*'
Note, selecting 'apache2-mpm-itk' for glob 'apache2*'
Package 'apache2.2-bin' is not installed, so not removed
Package 'apache2.2-common' is not installed, so not removed
Note, selecting 'apache2-bin' instead of 'apache2-api-20120211'
Note, selecting 'apache2-bin' instead of 'apache2-api-20120211-openssl1.1'
Package 'apache2-mpm-itk' is not installed, so not removed
Package 'apache2-dbg' is not installed, so not removed
Package 'apache2-dev' is not installed, so not removed
Package 'apache2-doc' is not installed, so not removed
Package 'apache2-ssl-dev' is not installed, so not removed
Package 'apache2-suexec-custom' is not installed, so not removed
Package 'apache2-suexec-pristine' is not installed, so not removed
The following packages were automatically installed and are no longer required:
 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap
Use 'sudo apt autoremove' to remove them.
The following packages will be REMOVED:
 apache2 apache2-bin apache2-data apache2-utils
0 upgraded, 0 newly installed, 4 to remove and 1 not upgraded.
After this operation, 5,893 kB disk space will be freed.
```

```
File Edit View Search Terminal Help
cnlab404@cnlab404-Veriton-M200-H110: ~
Do you want to continue? [Y/n] y
(Reading database ... 180955 files and directories currently installed.)
Removing apache2 (2.4.29-1ubuntu4.26) ...
Removing apache2-bin (2.4.29-1ubuntu4.26) ...
dpkg: warning: while removing apache2-bin, directory '/var/lib/apache2' not empty so not removed
Removing apache2-data (2.4.29-1ubuntu4.26) ...
Removing apache2-utils (2.4.29-1ubuntu4.26) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ufw (0.36-0ubuntu0.18.04.2) ...
cnlab404@cnlab404-Veriton-M200-H110:~$ sudo apt remove --purge apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap
Use 'sudo apt autoremove' to remove them.
The following packages will be REMOVED:
 apache2*
0 upgraded, 0 newly installed, 1 to remove and 1 not upgraded.
After this operation, 0 B of additional disk space will be used.
Do you want to continue? [Y/n] y
(Reading database ... 180452 files and directories currently installed.)
Purging configuration files for apache2 (2.4.29-1ubuntu4.26) ...
dpkg: warning: while removing apache2, directory '/var/www/html' not empty so not removed
Processing triggers for ureadahead (0.100.0-21) ...
ureadahead will be reprofiled on next reboot
Processing triggers for systemd (237-3ubuntu10.56) ...
Processing triggers for ufw (0.36-0ubuntu0.18.04.2) ...
```

Installation

The Apache2 web server is available in Ubuntu Linux. To install Apache2:

At a terminal prompt enter the following command:

```
sudo apt install apache2
```

```
File Edit View Search Terminal Help
cnlab404@cnlab404-Veriton-M200-H110: ~
cnlab404@cnlab404-Veriton-M200-H110:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils
0 upgraded, 4 newly installed, 0 to remove and 1 not upgraded.
Need to get 1,410 kB of archives.
After this operation, 5,893 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-bin amd64 2.4.29-1ubuntu4.26 [1,072 kB]
Get:2 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-utils amd64 2.4.29-1ubuntu4.26 [83.7 kB]
Get:3 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-data all 2.4.29-1ubuntu4.26 [160 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2 amd64 2.4.29-1ubuntu4.26 [95.1 kB]
Fetched 1,410 kB in 2s (743 kB/s)
Selecting previously unselected package apache2-bin.
(Reading database ... 180290 files and directories currently installed.)
Preparing to unpack .../apache2-bin_2.4.29-1ubuntu4.26_amd64.deb ...
Unpacking apache2-bin (2.4.29-1ubuntu4.26) ...
Selecting previously unselected package apache2-utils.
Preparing to unpack .../apache2-utils_2.4.29-1ubuntu4.26_amd64.deb ...
Unpacking apache2-utils (2.4.29-1ubuntu4.26) ...
Selecting previously unselected package apache2-data.
Preparing to unpack .../apache2-data_2.4.29-1ubuntu4.26_all.deb ...
Unpacking apache2-data (2.4.29-1ubuntu4.26) ...
Selecting previously unselected package apache2.
Preparing to unpack .../apache2_2.4.29-1ubuntu4.26_amd64.deb ...
Unpacking apache2 (2.4.29-1ubuntu4.26) ...
Setting up apache2-utils (2.4.29-1ubuntu4.26) ...
Setting up apache2-bin (2.4.29-1ubuntu4.26) ...
Setting up apache2-data (2.4.29-1ubuntu4.26) ...
Setting up apache2 (2.4.29-1ubuntu4.26) ...
Enabling module mpm_event.
Enabling module authz_core.
```

```
File Edit View Search Terminal Help
cnlab404@cnlab404-Veriton-M200-H110: ~
Unpacking apache2-data (2.4.29-1ubuntu4.26) ...
Selecting previously unselected package apache2.
Preparing to unpack .../apache2_2.4.29-1ubuntu4.26_amd64.deb ...
Unpacking apache2 (2.4.29-1ubuntu4.26) ...
Setting up apache2-utils (2.4.29-1ubuntu4.26) ...
Setting up apache2-bin (2.4.29-1ubuntu4.26) ...
Setting up apache2-data (2.4.29-1ubuntu4.26) ...
Setting up apache2 (2.4.29-1ubuntu4.26) ...
Enabling module mpm_event.
Enabling module authz_core.
Enabling module authz_host.
Enabling module authn_core.
Enabling module auth_basic.
Enabling module access_compat.
Enabling module authn_file.
Enabling module authz_user.
Enabling module alias.
Enabling module dir.
Enabling module autoindex.
Enabling module env.
Enabling module mime.
Enabling module negotiation.
Enabling module setenvif.
Enabling module filter.
Enabling module deflate.
Enabling module status.
Enabling module reqtimeout.
Enabling conf charset.
Enabling conf localized-error-pages.
Enabling conf other-vhosts-access-log.
Enabling conf security.
Enabling conf serve-cgi-bin.
Enabling site 000-default.
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.
Processing triggers for systemd (237-3ubuntu10.56) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ufw (0.36-0ubuntu0.18.04.2) ...
```

sudo service apache2 start
sudo service apache2 status

```
File Edit View Search Terminal Help
Processing triggers for ufw (0.36-0ubuntu0.18.04.2) ...
Processing triggers for ureadahead (0.100.0-21) ...
cnlab404@cnlab404-Veriton-M200-H110:~$ sudo service apache2 start
cnlab404@cnlab404-Veriton-M200-H110:~$ sudo service apache2 status
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset:
   Drop-In: /lib/systemd/system/apache2.service.d
            └─apache2-systemd.conf
   Active: active (running) since Fri 2023-02-24 09:58:14 IST; 42s ago
   Main PID: 3437 (apache2)
     Tasks: 55 (limit: 4915)
    CGroup: /system.slice/apache2.service
            └─3437 /usr/sbin/apache2 -k start
               3438 /usr/sbin/apache2 -k start
               3439 /usr/sbin/apache2 -k start

Feb 24 09:58:14 cnlab404-Veriton-M200-H110 systemd[1]: Starting The Apache HTTP
Feb 24 09:58:14 cnlab404-Veriton-M200-H110 apachectl[3426]: AH00558: apache2: Co
Feb 24 09:58:14 cnlab404-Veriton-M200-H110 systemd[1]: Started The Apache HTTP S
lines 1-15/15 (END)..  
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Drop-In: /lib/systemd/system/apache2.service.d
            └─apache2-systemd.conf
   Active: active (running) since Fri 2023-02-24 09:58:14 IST; 42s ago
   Main PID: 3437 (apache2)
     Tasks: 55 (limit: 4915)
    CGroup: /system.slice/apache2.service
            └─3437 /usr/sbin/apache2 -k start
               3438 /usr/sbin/apache2 -k start
               3439 /usr/sbin/apache2 -k start

Feb 24 09:58:14 cnlab404-Veriton-M200-H110 systemd[1]: Starting The Apache HTTP Server...
Feb 24 09:58:14 cnlab404-Veriton-M200-H110 apachectl[3426]: AH00558: apache2: Could not reliably determine the server's fully qualified domain
Feb 24 09:58:14 cnlab404-Veriton-M200-H110 systemd[1]: Started The Apache HTTP Server.
~
~
```

now make the file index.html in desktop

```
File Edit View Search Terminal Help
cnlab404@cnlab404-Veriton-M200-H110: /var/www/html
cnlab404@cnlab404-Veriton-M200-H110:~$ sudo rm index.html
[sudo] password for cnlab404:
rm: cannot remove 'index.html': No such file or directory
cnlab404@cnlab404-Veriton-M200-H110:~$ sudo /var/www/html
sudo: /var/www/html: command not found
cnlab404@cnlab404-Veriton-M200-H110:~$ cd /var/www/html
cnlab404@cnlab404-Veriton-M200-H110:/var/www/html$ sudo rm index.html
cnlab404@cnlab404-Veriton-M200-H110:/var/www/html$
cnlab404@cnlab404-Veriton-M200-H110:/var/www/html$ ifconfig
enp1s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.16.41.36 netmask 255.255.255.0 broadcast 172.16.41.255
    inet6 fe80::fe24:adf5:1c5c:da61 prefixlen 64 scopeid 0x20<link>
    ether f4:4d:30:4e:d6:62 txqueuelen 1000 (Ethernet)
    RX packets 20654 bytes 9043042 (9.0 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 6111 bytes 971001 (971.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

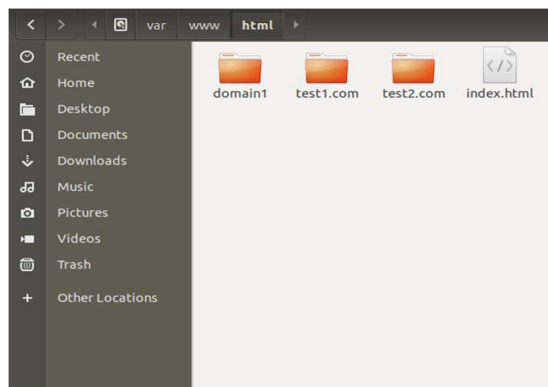
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    loop txqueuelen 1000 (Local Loopback)
    RX packets 359 bytes 34614 (34.6 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 359 bytes 34614 (34.6 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

nano index.html

```
Open ▾ icon index.html /var/www/html Sa
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>atul</title>
5   </head>
6   <body>
7     <hr color = "red" size = "7">
8     <br>
9     <h1>hlw ATUL<h1>
10  <br>
11    <hr color = "red" size = "7">
12
13  </body>
14 </html>
```

Now move the file from desktop to other locations/var/www/html

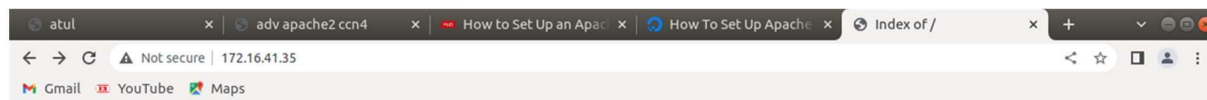
+



on opening file



hlw ATUL



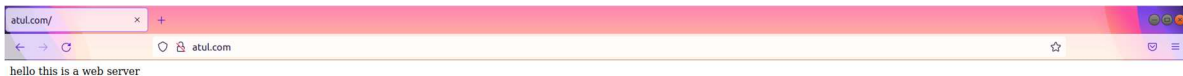
Index of /

	Name	Last modified	Size	Description
	advait.conf	2023-02-24 10:59	217	
	html/	2023-02-24 10:39	-	

Apache/2.4.29 (Ubuntu) Server at 172.16.41.35 Port 80

Now making Atul.com file

```
rtk@rtk-VirtualBox:~/Desktop$ sudo cp /etc/apache2/sites-available/000-default.conf /etc/apache2/sites-available/vedanti.com.conf
[sudo] password for rtk:
rtk@rtk-VirtualBox:~/Desktop$ sudo nano /etc/apache2/sites-available/ritik.com.conf
rtk@rtk-VirtualBox:~/Desktop$ sudo nano /etc/apache2/sites-available/vedanti.com.conf
rtk@rtk-VirtualBox:~/Desktop$ sudo nano /etc/apache2/sites-available/test.com.conf
rtk@rtk-VirtualBox:~/Desktop$ sudo cp /etc/apache2/sites-available/000-default.conf /etc/apache2/sites-available/vedanti.com.conf
rtk@rtk-VirtualBox:~/Desktop$ sudo nano /etc/apache2/sites-available/test.com.conf
rtk@rtk-VirtualBox:~/Desktop$ sudo a2ensite vedanti.com.conf
Enabling site vedanti.com.
To activate the new configuration, you need to run:
  systemctl reload apache2
rtk@rtk-VirtualBox:~/Desktop$ sudo systemctl reload apache2
rtk@rtk-VirtualBox:~/Desktop$ sudo a2ensite vedanti.com.conf
Site vedanti.com already enabled
rtk@rtk-VirtualBox:~/Desktop$ sudo a2dissite 000-default.conf
Site 000-default already disabled
rtk@rtk-VirtualBox:~/Desktop$ sudo systemctl restart apache2
rtk@rtk-VirtualBox:~/Desktop$ sudo nano /etc/hosts 127.0.0.1 localhost
rtk@rtk-VirtualBox:~/Desktop$ sudo systemctl restart apache2
```



Conclusion :-

I understand the concept of apache2 and able to know how to use commands and by using the IP address of other device I came to know about its html file text.