

- Using apt install apache2 server

```
vboxuser@ubuntu:~$ 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 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.2-0
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.2-0
0 upgraded, 9 newly installed, 0 to remove and 237 not upgraded.
Need to get 1,821 kB of archives.
After this operation, 7,952 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libapr1 amd64 1.6.5-1ubuntu1 [91.4 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libaprutil1 amd64 1.6.1-1ubuntu1 [104.6 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.1-1ubuntu1 [10.4 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu focal/main amd64 libaprutil1-ldap amd64 1.6.1-1ubuntu1 [10.4 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu focal/main amd64 liblua5.2-0 amd64 5.2.4-1ubuntu2 [104.6 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu focal/main amd64 apache2-bin amd64 2.4.18-0ubuntu1 [1,454 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu focal/main amd64 apache2-data all 2.4.18-0ubuntu1 [1,014 B]
Get:8 http://us.archive.ubuntu.com/ubuntu focal/main amd64 apache2-utils amd64 2.4.18-0ubuntu1 [104.6 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu focal/main amd64 apache2 amd64 2.4.18-0ubuntu1 [104.6 kB]
debconf: delaying package configuration, since apt-utils is not installed
vboxuser@ubuntu:~$ sudo systemctl start apache2
vboxuser@ubuntu:~$
```

- Replace the default index.html content with your own content

```
vboxuser@ubuntu:~$ cd /var/www/html
vboxuser@ubuntu:/var/www/html$ sudo nano index.html
[sudo] password for vboxuser:
vboxuser@ubuntu:/var/www/html$ sudo nano new.html
vboxuser@ubuntu:/var/www/html$ sudo mv new.html index.html
mv: cannot stat 'new.html': No such file or directory
vboxuser@ubuntu:/var/www/html$ sudo nano new.html
vboxuser@ubuntu:/var/www/html$ sudo mv new.html index.html
vboxuser@ubuntu:/var/www/html$ sudo systemctl restart apache2
vboxuser@ubuntu:/var/www/html$
```

- install php module for apache2

```
vboxuser@ubuntu:/var/www/html$ sudo apt install libapache2-mod-php
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libapache2-mod-php7.4 php-common php7.4-cli php7.4-common php7.4-json php7.4-opcache php7.4-readline
Suggested packages:
  php-pear
The following NEW packages will be installed:
  libapache2-mod-php libapache2-mod-php7.4 php-common php7.4-cli php7.4-common php7.4-js
0 upgraded, 8 newly installed, 0 to remove and 237 not upgraded.
Need to get 4,023 kB of archives.
After this operation, 17.9 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu focal/main amd64 php-common all 2:75 [11.9 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 php7.4-common amd64 7.4.3-1ubuntu1 [4,012 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 php7.4-json amd64 7.4.3-1ubuntu1 [10.4 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libapache2-mod-php7.4 amd64 7.4.3-1ubuntu1 [104.6 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 libapache2-mod-php amd64 7.4.3-1ubuntu1 [104.6 kB]
debconf: delaying package configuration, since apt-utils is not installed
```

- create new Named VirtualHost to serve new php project with special access log

```
vboxuser@ubuntu:/var/www/html$ sudo mkdir /var/www/html/sys-admin
vboxuser@ubuntu:/var/www/html$ sudo nano /var/www/html/sys-admin/index.php
vboxuser@ubuntu:/var/www/html$ sudo nano /etc/apache2/sites-available/sys-admin.conf
vboxuser@ubuntu:/var/www/html$ sudo mkdir LAB4
vboxuser@ubuntu:/var/www/html$ sudo nano LAB4/index.php
vboxuser@ubuntu:/var/www/html$ sudo nano /etc/apache2/sites-available/LAB4
vboxuser@ubuntu:/var/www/html$
vboxuser@ubuntu:/var/www/html$ sudo nano /etc/apache2/sites-available/LAB4.conf
vboxuser@ubuntu:/var/www/html$ sudo nano /etc/apache2/sites-available/LAB4.conf
vboxuser@ubuntu:/var/www/html$ sudo systemctl reload apache2
vboxuser@ubuntu:/var/www/html$ sudo a2ensite LAB4.conf
Enabling site LAB4.
To activate the new configuration, you need to run:
  systemctl reload apache2
vboxuser@ubuntu:/var/www/html$ sudo systemctl reload apache2
vboxuser@ubuntu:/var/www/html$ systemctl reload apache2
```

- **disable directory listing for the new virtualhost or the php site**

```
vboxuser@ubuntu:/var/www/html$ sudo nano /etc/apache2/sites-available/sys-LAB4.conf
```