Apache web server

- Apache is a free open-source web server developed and maintained by Apache Software Foundation. It is primarily designed for Linux but runs on other major platforms, such as Windows and OpenVMS.
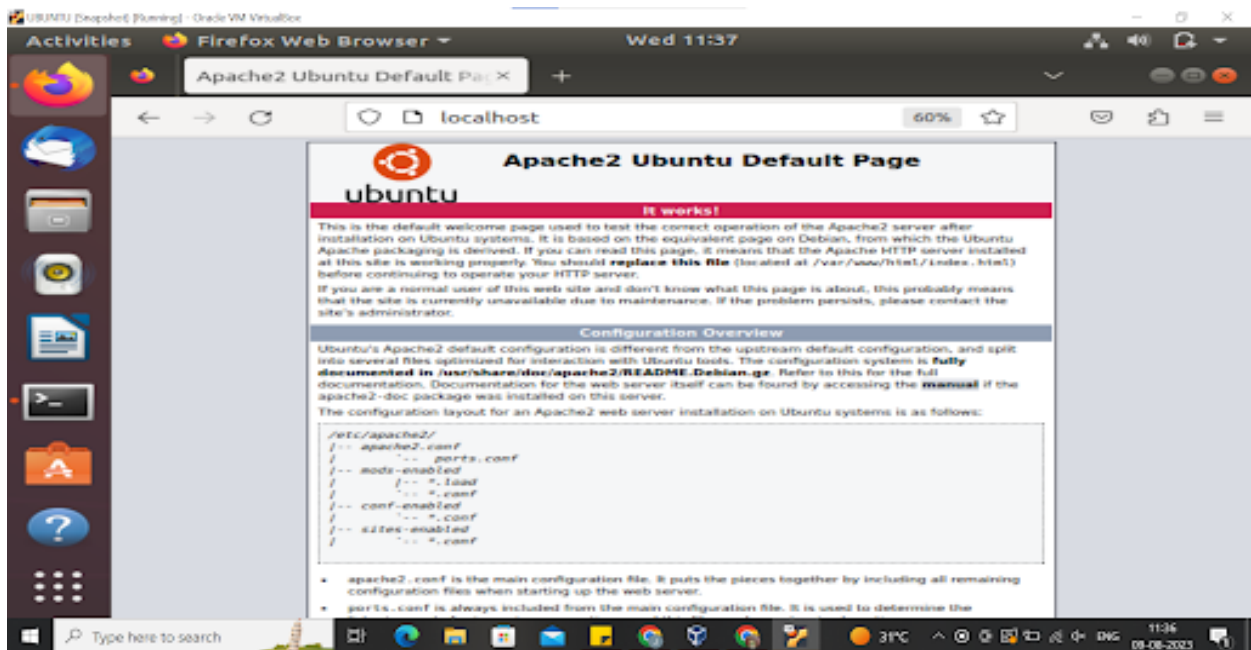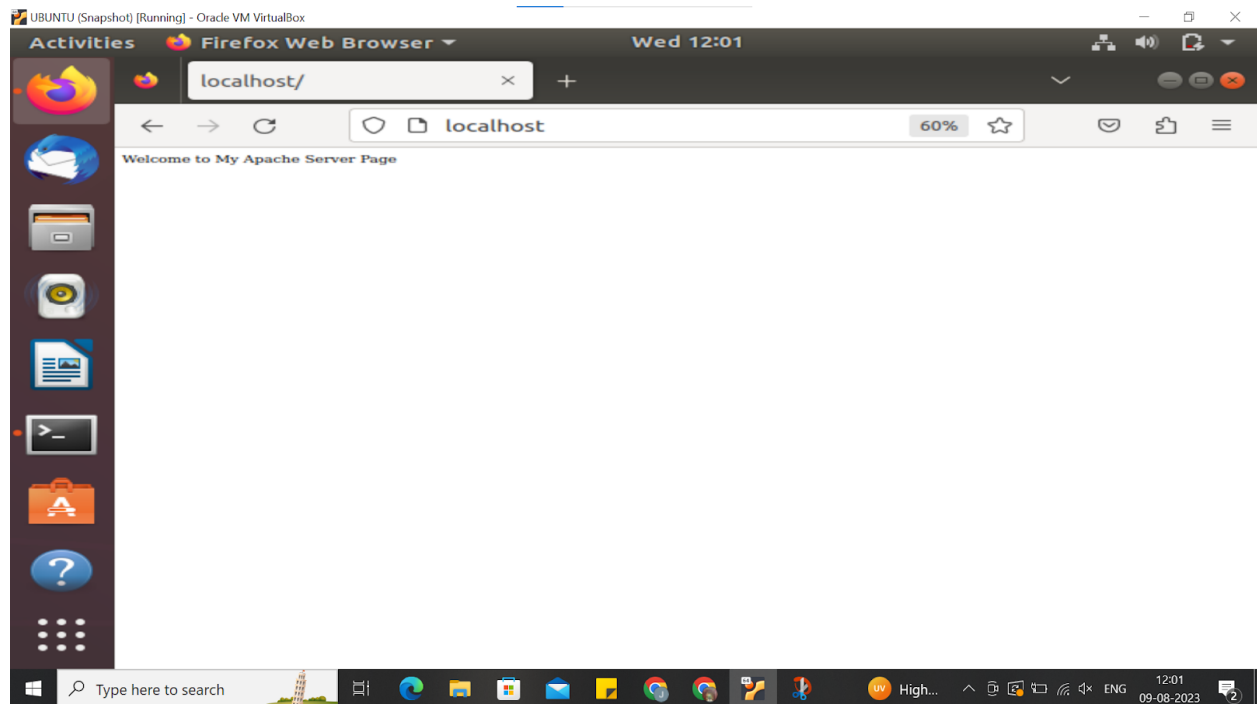-

Install and Configure Apache on Ubuntu

Step 1: Install Apache


```
root@UBUNTU:~# sudo apt-get install apace2
Reading package lists... Done
Building dependency tree
Reading state information... Done
```

Step 2: Verify Apache Installation
http://local.server.ip

Step 3: Configure Your Firewall


```
root@UBUNTU:~# sudo ufw app list
Available applications:
   Apache
   Apache Full
   Apache Secure
   CUPS
   OpenSSH
   Samba
root@UBUNTU:~# sudo ufw allow 'Apache'
Skipping adding existing rule
Skipping adding existing rule (v6)
```

Check ufw status


```
root@UBUNTU:~# sudo ufw status |grep Apache
Apache                     ALLOW       Anywhere
Apache (v6)                ALLOW       Anywhere (v6)
root@UBUNTU:~# Systemctl stop apache2.service
```

Apache Service Controls

```
root@UBUNTU:~# systemctl stop apache2.service
root@UBUNTU:~# systemctl start apache2.service
root@UBUNTU:~# systemctl restart apache2.service
root@UBUNTU:~# systemctl reload apache2.service
root@UBUNTU:~#
```

Directories
 ● After installing, Apache by default creates a document root directory at /var/www/html.
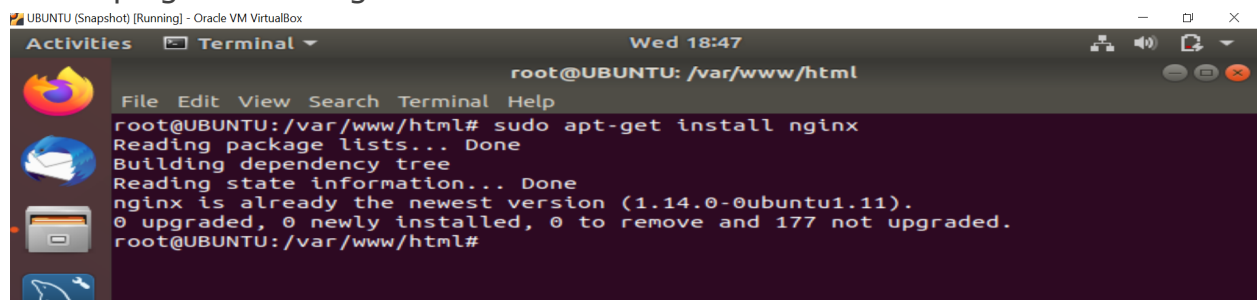

Nginx Web server

 ● NGINX is one of the most popular web servers in the world that can also be used as a reverse proxy, load balancer, mail proxy and HTTP cache. The main goal of the NGINX project is to ensure a stable, lightweight, and highly efficient web server for websites that experience a huge amount of traffic.

Install and Configure Nginx on Ubuntu

Install Nginx
sudo apt-get update
sudo apt-get install nginx
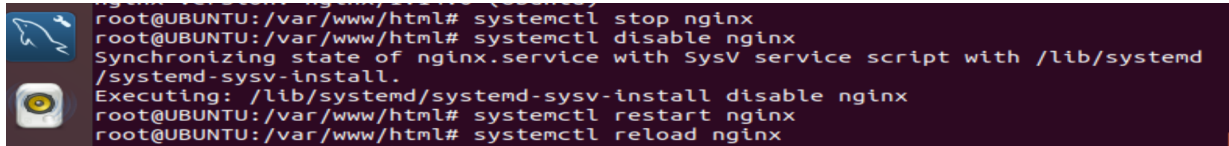
```
UBUNTU (Snapshot) [Running] - Oracle VM VirtualBox
Activities    Terminal                        Wed 18:47
                          root@UBUNTU: /var/www/html
File  Edit  View  Search  Terminal  Help
root@UBUNTU:/var/www/html# sudo apt-get install nginx
Reading package lists... Done
Building dependency tree
Reading state information... Done
nginx is already the newest version (1.14.0-0ubuntu1.11).
0 upgraded, 0 newly installed, 0 to remove and 177 not upgraded.
root@UBUNTU:/var/www/html#
```
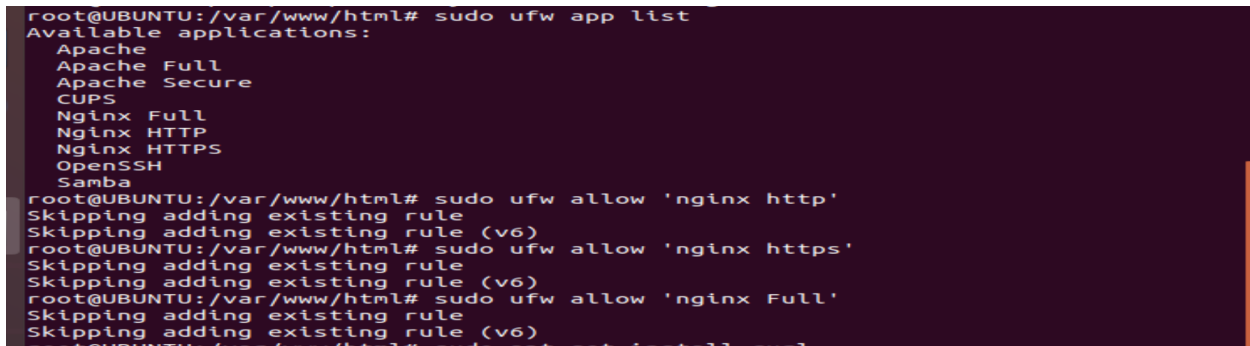
nginx -v

```
root@UBUNTU:/var/www/html# nginx -v
nginx version: nginx/1.14.0 (Ubuntu)
root@UBUNTU:/var/www/html# systemctl stop nginx
```

Nginx Service Controls


```
root@UBUNTU:/var/www/html# systemctl stop nginx
root@UBUNTU:/var/www/html# systemctl disable nginx
Synchronizing state of nginx.service with SysV service script with /lib/systemd
/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install disable nginx
root@UBUNTU:/var/www/html# systemctl restart nginx
root@UBUNTU:/var/www/html# systemctl reload nginx
```

Configure Your Firewall


```
root@UBUNTU:/var/www/html# sudo ufw app list
Available applications:
  Apache
  Apache Full
  Apache Secure
  CUPS
  Nginx Full
  Nginx HTTP
  Nginx HTTPS
  OpenSSH
  Samba
root@UBUNTU:/var/www/html# sudo ufw allow 'nginx http'
Skipping adding existing rule
Skipping adding existing rule (v6)
root@UBUNTU:/var/www/html# sudo ufw allow 'nginx https'
Skipping adding existing rule
Skipping adding existing rule (v6)
root@UBUNTU:/var/www/html# sudo ufw allow 'nginx Full'
Skipping adding existing rule
Skipping adding existing rule (v6)
root@UBUNTU:/var/www/html# sudo apt-get install curl
```

http://127.0.0.1
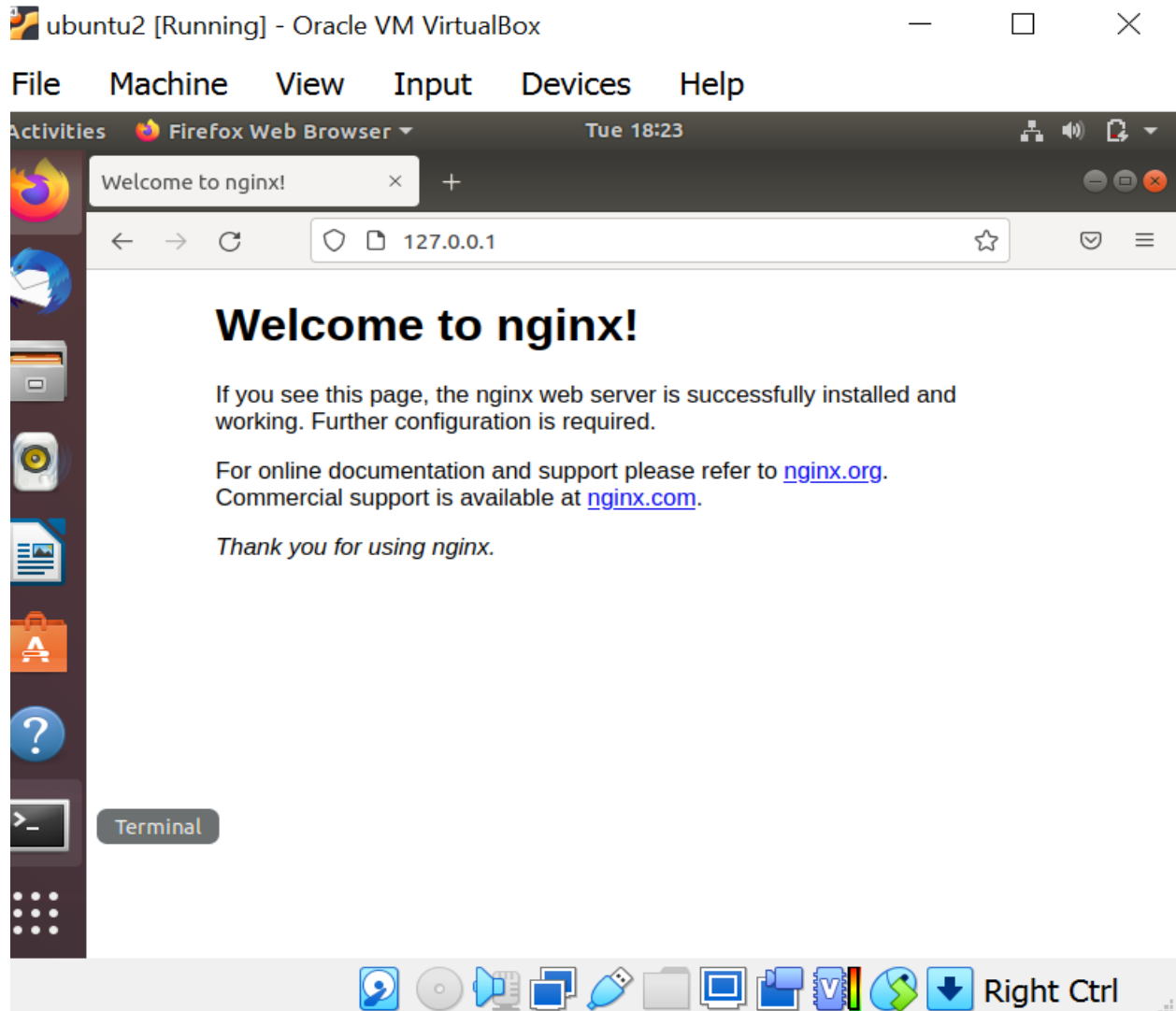
If the system does not have a graphical interface, the Nginx Welcome page can be loaded in the terminal using curl:
sudo apt-get install curl
curl –i 127.0.0.1

Create a Directory for the Test Domain

sudo mkdir -p /var/www/test_domain.com/html

Configure Ownership and Permissions

Create an index.html File for the Server Block

sudo nano /var/www/test_domain.com/html/index.html

```
Unset
<html>
  <head>
    <title>Welcome to test_domain.com!</title>
  </head>
  <body>
```

```
      <h1>This message confirms that your Nginx server block is
working. Great work!</h1>
   </body>
</html>
```

Create Nginx Server Block Configuration

sudo nano /etc/nginx/sites-available/test_domain.com

Create soft link
sudo ln –s /etc/nginx/sites-available/test_domain.com
/etc/nginx/sites-enabled

Restart the nginx service:
sudo systemctl restart nginx

Test the Configuration

sudo nginx –t

```
root@UBUNTU:~# sudo systemctl restart nginx
root@UBUNTU:~# sudo nginx -t
nginx: the configuration file /etc/nginx/nginx.conf syntax is ok
nginx: configuration file /etc/nginx/nginx.conf test is successful
root@UBUNTU:~#
```

Check test_domain.com in a Web Browser