

**Technological Institute of the Philippines**  
**Manila**  
**CIT401 - Systems Administration and Maintenance**

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Section	IT41S3

Instructions:

1. Meet as a group and perform the given task.
2. Put your answer on the number (marked as RED) asking for an output.
3. Do not modify the format of this document for easier checking.

Tasks:

A. Installing the LAMP

1. Issue the command for the Apache

- `sudo apt install apache2`
- `sudo ufw app list`

2. Issue the command for MySQL

- `sudo apt install mysql-server`

3. Issue the command for PHP

- `sudo apt install php libapache2-mod-php php-mysql`

B. Configuring the IP address

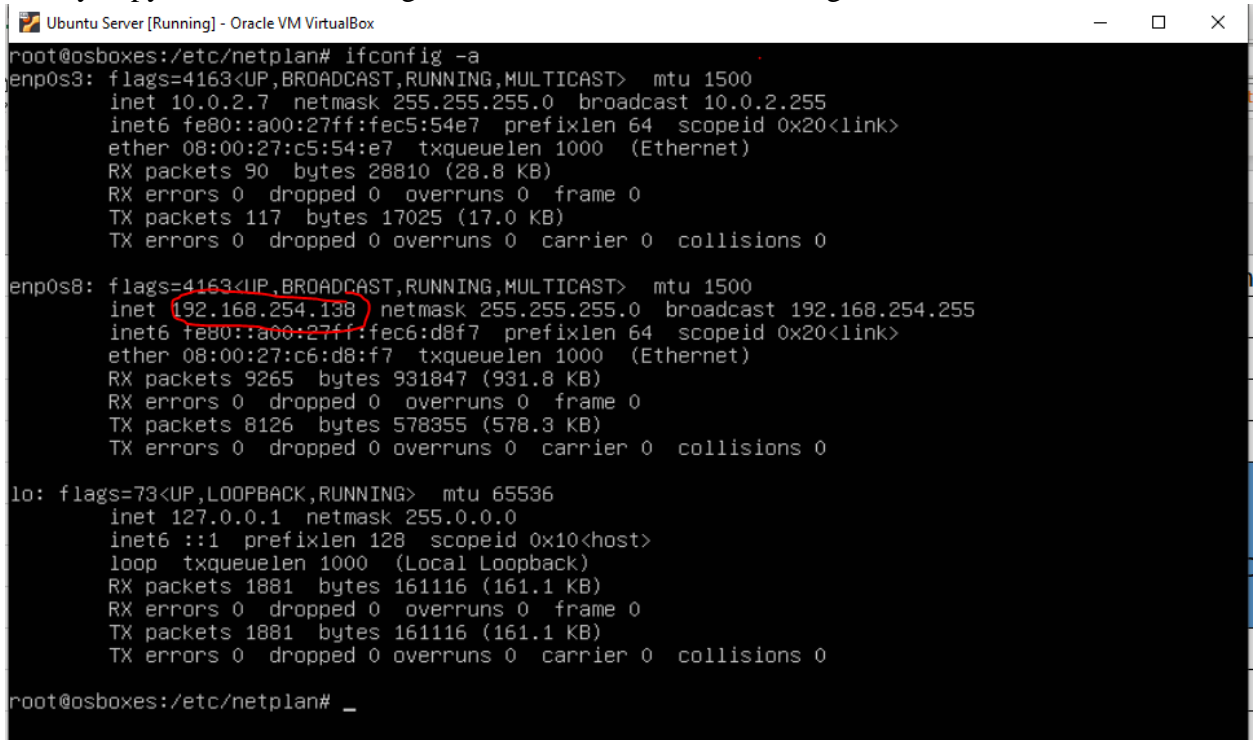
1. Follow the link below on how to set static IP address in your Ubuntu server.

<https://technologyrss.com/how-to-configure-static-ip-address-on-ubuntu-21-04-server/>

```
vacunawa@vacunawa:~$ lsb_release -a && ip r
No LSB modules are available.
Distributor ID: Ubuntu
Description:    Ubuntu 22.04.1 LTS
Release:       22.04
Codename:      jammy
default via 192.168.1.1 dev enp0s3 proto dhcp src 192.168.1.9 metric 100
192.168.1.0/24 dev enp0s3 proto kernel scope link src 192.168.1.9 metric 100
192.168.1.1 dev enp0s3 proto dhcp scope link src 192.168.1.9 metric 100
216.239.32.15 via 192.168.1.1 dev enp0s3 proto dhcp src 192.168.1.9 metric 100
216.239.35.4 via 192.168.1.1 dev enp0s3 proto dhcp src 192.168.1.9 metric 100
vacunawa@vacunawa:~$ _
```

Note: You can use other references.

2. On my copy of VM after setting the static IP I have the following:



```
root@osboxes:/etc/netplan# ifconfig -a
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.2.7 netmask 255.255.255.0 broadcast 10.0.2.255
    inet6 fe80::a00:27ff:fec5:54e7 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:c5:54:e7 txqueuelen 1000 (Ethernet)
    RX packets 90 bytes 28810 (28.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 117 bytes 17025 (17.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

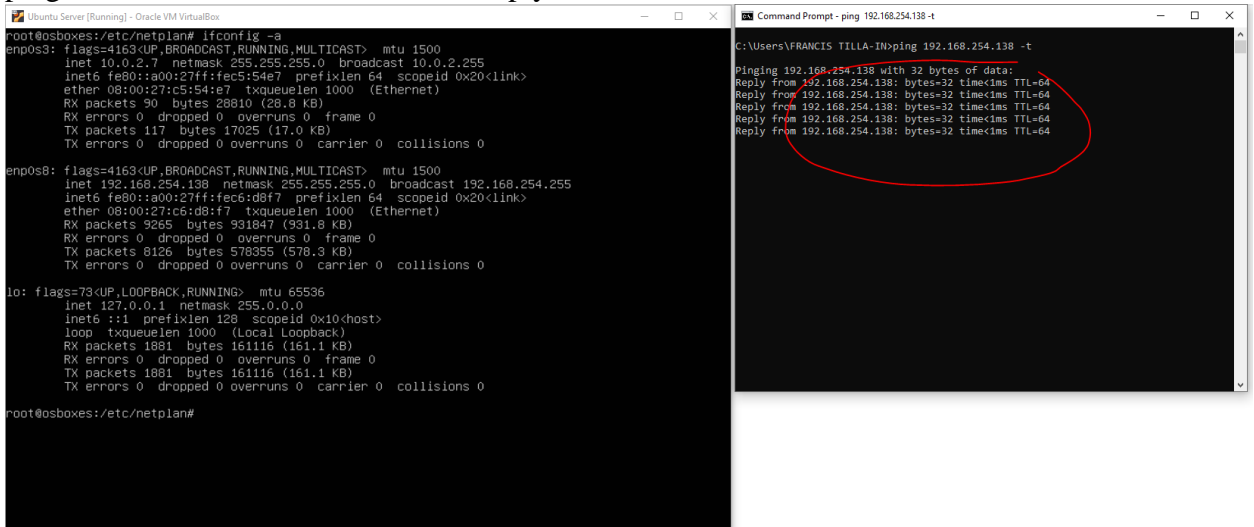
enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.254.138 netmask 255.255.255.0 broadcast 192.168.254.255
    inet6 fe80::a00:27ff:fec6:d8f7 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:c6:d8:f7 txqueuelen 1000 (Ethernet)
    RX packets 9265 bytes 931847 (931.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8126 bytes 578355 (578.3 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
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 1881 bytes 161116 (161.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1881 bytes 161116 (161.1 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

root@osboxes:/etc/netplan# _
```

Figure 1.Static IP is set to the Ubuntu VM.

The IP that I set in my Ubuntu is 192.168.254.138 and my desktop is 192.168.254.137. To validate that my desktop pc can communicate with the Ubuntu server, I will issue a ping command and there should be a reply.



```
root@osboxes:/etc/netplan# ifconfig -a
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.2.7 netmask 255.255.255.0 broadcast 10.0.2.255
    inet6 fe80::a00:27ff:fec5:54e7 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:c5:54:e7 txqueuelen 1000 (Ethernet)
    RX packets 90 bytes 28810 (28.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 117 bytes 17025 (17.0 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

enp0s8: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.254.138 netmask 255.255.255.0 broadcast 192.168.254.255
    inet6 fe80::a00:27ff:fec6:d8f7 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:c6:d8:f7 txqueuelen 1000 (Ethernet)
    RX packets 9265 bytes 931847 (931.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 8126 bytes 578355 (578.3 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
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 1881 bytes 161116 (161.1 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1881 bytes 161116 (161.1 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

root@osboxes:/etc/netplan#

C:\Users\FRANCIS TILLA-IM>ping 192.168.254.138 -t
Pinging 192.168.254.138 with 32 bytes of data:
Reply from 192.168.254.138: bytes=32 time<1ms TTL=64
Reply from 192.168.254.138: bytes=32 time<1ms TTL=64
Reply from 192.168.254.138: bytes=32 time<1ms TTL=64
Reply from 192.168.254.138: bytes=32 time<1ms TTL=64
Reply from 192.168.254.138: bytes=32 time<1ms TTL=64
```

Figure 2. Issuing ping command from PC to Ubuntu server.

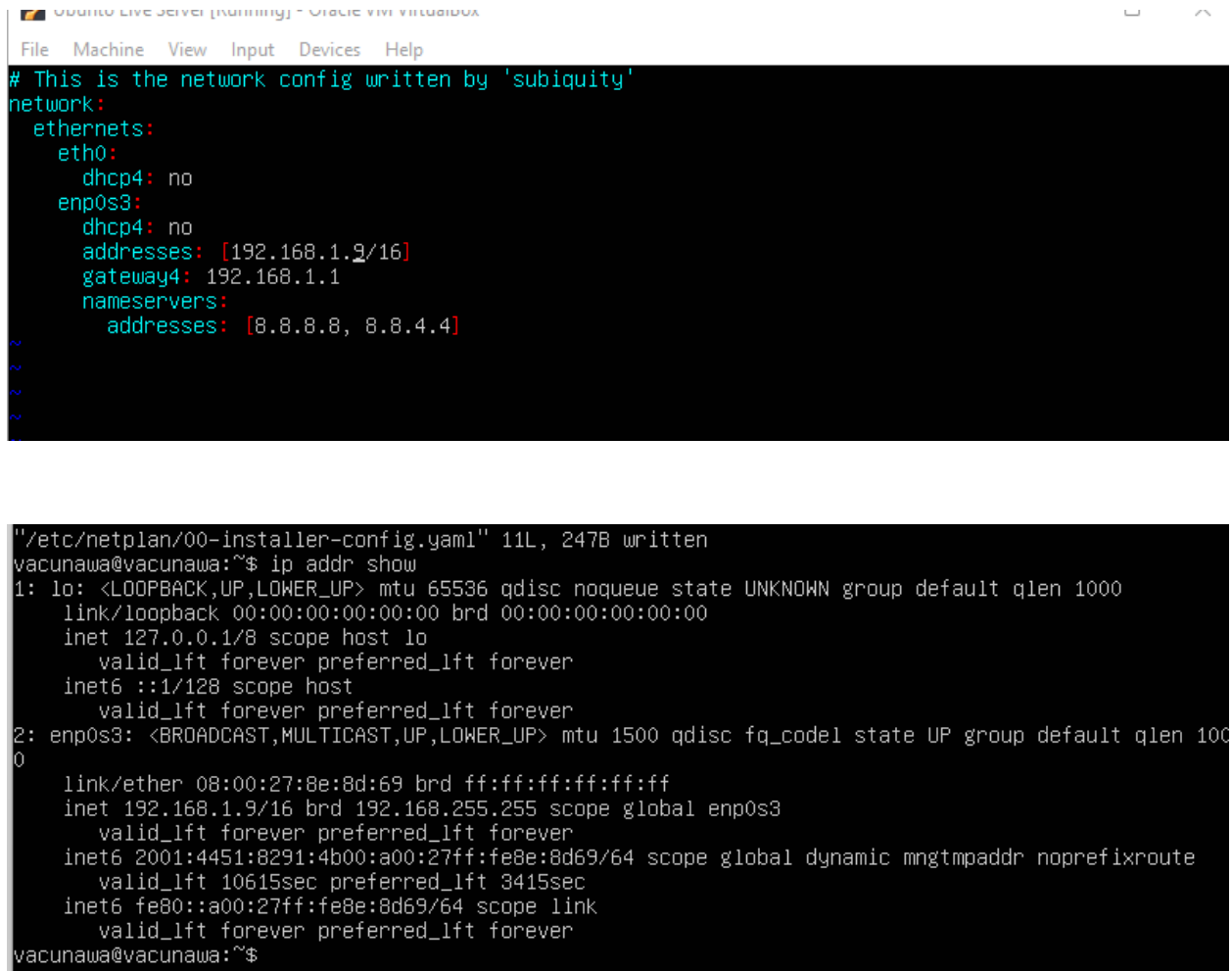
This way we can access the website that we will be deploying outside the Ubuntu server.

3. Provide a screenshot of your output like Figure 2.

4. Open a browser on your PC and access the test website by typing on the URL <http://192.167.245.138> or replace it with your own IP address. The output will be like this:

*Figure 3. Default Ubuntu Apache web page.*

5. Put your screenshot below including the URL to see that you can access your server on your PC browser.



```
Ubuntu LIVE Server (running) - Oracle VM VirtualBox
File Machine View Input Devices Help
# This is the network config written by 'subiquity'
network:
  ethernets:
    eth0:
      dhcp4: no
    enp0s3:
      dhcp4: no
      addresses: [192.168.1.9/16]
      gateway4: 192.168.1.1
      nameservers:
        addresses: [8.8.8.8, 8.8.4.4]
~
~
~

"/etc/netplan/00-installer-config.yaml" 11L, 247B written
vacunawa@vacunawa:~$ ip addr show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:8e:8d:69 brd ff:ff:ff:ff:ff:ff
    inet 192.168.1.9/16 brd 192.168.255.255 scope global enp0s3
        valid_lft forever preferred_lft forever
    inet6 2001:4451:8291:4b00:a00:27ff:fe8e:8d69/64 scope global dynamic mngtmpaddr noprefixroute
        valid_lft 10615sec preferred_lft 3415sec
    inet6 fe80::a00:27ff:fe8e:8d69/64 scope link
        valid_lft forever preferred_lft forever
vacunawa@vacunawa:~$
```

My ubuntu static IP is 192.168.1.9

My desktop IP is 192.168.1.7

```
Command Prompt
Microsoft Windows [Version 10.0.22000.918]
(c) Microsoft Corporation. All rights reserved.

C:\Users\User>ping 192.168.1.9

Pinging 192.168.1.9 with 32 bytes of data:
Reply from 192.168.1.9: bytes=32 time<1ms TTL=64
Reply from 192.168.1.9: bytes=32 time<1ms TTL=64
Reply from 192.168.1.9: bytes=32 time<1ms TTL=64
Reply from 192.168.1.9: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.9:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\User>
```



## Apache2 Default Page

# Ubuntu

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

### Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

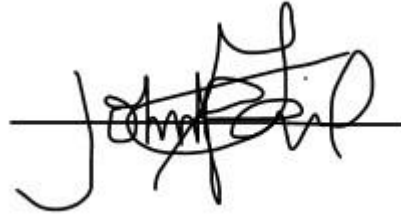
The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|-- mods-enabled
|   |-- *.load
|   |-- *.conf
|-- conf-enabled
|-- sites-enabled
|   |-- *.conf
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations, respectively.
- They are activated by symlinking available configuration files from their respective `*-available/` counterparts. These should be managed by using our helpers `a2enmod`, `a2dismod`, `a2ensite`,

### Honor Pledge

"I affirm that I have not given or received any unauthorized help on this assignment, and that this work is my own."

A handwritten signature in black ink, appearing to be "James", written over a horizontal line.