✏️ Module 10 - Assignment

Problem Statement:

You work for xyz organization. Your job work is to manage Linux-based servers.

You have been asked to:

1. Add a website with its IP address in the /etc/hosts file
2. Ping it to check whether it is working fine
3. Connect to that server using ftp and transfer a file from your pc to that server
4. Install a web server and allow access to the port number of that server

♨️ FTP Portion

For this lab I created an FTP Server at https://sftpcloud.io/tools/free-ftp-server

Resolved the hostname `eu-central-1.sftpcloud.io` to IP at https://www.nsookup.io/

IP addresses for **eu-central-1.sftpcloud.io**

Our DNS servers responded with these IP addresses when we queried it for the domain eu-central-1.sftpcloud.io. Some DNS servers may return different IP addresses based on your location.

IP address	Type	Hosted by	Location
> **94.130.108.110**	IPv4	H Hetzner Online GmbH Germany	
> **5.75.179.162**	IPv4	H Hetzner Online GmbH Germany	

1. **Mapping** `5.75.179.162` **to** `ftp_server`

```
vagrant@ubuntu-bionic:~$ vi /etc/hosts
vagrant@ubuntu-bionic:~$ sudo vi /etc/hosts
vagrant@ubuntu-bionic:~$ cat /etc/hosts
127.0.0.1       localhost
5.75.179.162    ftp_server
# The following lines are desirable for IPv6 capable hosts
::1     ip6-localhost   ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
ff02::3 ip6-allhosts
127.0.1.1       ubuntu-bionic   ubuntu-bionic
```

2. **Pinging** `ftp_server`

```
vagrant@ubuntu-bionic:~$ ping ftp_server
PING ftp_server (5.75.179.162) 56(84) bytes of data.
64 bytes from ftp_server (5.75.179.162): icmp_seq=1 ttl=45 time=148 ms
64 bytes from ftp_server (5.75.179.162): icmp_seq=2 ttl=45 time=147 ms
64 bytes from ftp_server (5.75.179.162): icmp_seq=3 ttl=45 time=147 ms
64 bytes from ftp_server (5.75.179.162): icmp_seq=4 ttl=45 time=148 ms
64 bytes from ftp_server (5.75.179.162): icmp_seq=5 ttl=45 time=147 ms
64 bytes from ftp_server (5.75.179.162): icmp_seq=6 ttl=45 time=147 ms
```

3. **Using** `5.75.179.162` **I'll connect to the FTP server where I'll upload** `test` **file**

Could have used `ftp_server` *instead of IP to connect as well*

```
vagrant@ubuntu-bionic:~$ ftp ftp_server
Connected to ftp_server.
220 SSH-2.0-SFTPCloud.io
Name (ftp_server:vagrant): █
```

```
vagrant@ubuntu-bionic:~$ ftp 5.75.179.162
Connected to 5.75.179.162.
220 SSH-2.0-SFTPCloud.io
Name (5.75.179.162:vagrant): 092d0b76ff9d44eca9bc6495c36d1c4d
331 OK
Password:
230 Password ok, continue
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls
501 Your request does not meet the configured security requirements
ftp: bind: Address already in use
ftp> passive
Passive mode on.
ftp> ls
227 Entering Passive Mode (5,75,179,162,195,135)
150 Using transfer connection
226 Closing transfer connection
ftp> put test
local: test remote: test
227 Entering Passive Mode (5,75,179,162,195,152)
150 Using transfer connection
226 Closing transfer connection
ftp> ls
227 Entering Passive Mode (5,75,179,162,195,90)
150 Using transfer connection
-rw-r--r-- 1 ftp ftp              0 Aug 22 01:53 test
226 Closing transfer connection
```

4. **Install a web server and allow access to the port number of that server**

In terminal I run:

```
sudo apt update -y #update packages
sudo apt install apache2 -y #install web server apache
```

Checking web server is up:

```
sudo systemctl status apache2
```

```
hector@hectorsVirtualBox:~$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
     Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor prese
     Active: active (running) since Tue 2023-08-22 21:56:02 EDT; 20s ago
       Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 4197 (apache2)
      Tasks: 55 (limit: 6932)
     Memory: 5.8M
     CGroup: /system.slice/apache2.service
             ├─4197 /usr/sbin/apache2 -k start
             ├─4198 /usr/sbin/apache2 -k start
             └─4199 /usr/sbin/apache2 -k start
```

Getting server IP:

```
hector@hectorsVirtualBox:~$ ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65
    link/loopback 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_l
    inet6 ::1/128 scope host
       valid_lft forever preferred_l
2: enp0s3: <BROADCAST,MULTICAST,UP,L
    link/ether 08:00:27:92:52:c9 brd
    inet 192.168.1.111/24 brd 192.16
       valid_lft 86170sec preferred_
```

Enabling firewall

```
sudo ufw enable
```

```
hector@hectorsVirtualBox:~$ sudo ufw enable
Firewall is active and enabled on system startup
```

If I check in browser page does not appear

Hmmm... can't reach this page

192.168.1.111 took too long to respond

Try:

- Running network diagnostics with Get Help
- Search the web for 192 168 1 111
- Checking the connection
- Checking the proxy and the firewall

ERR_CONNECTION_TIMED_OUT

Opening the necessary ports:

```
sudo ufw allow 80,443/tcp
```

```
hector@hectorsVirtualBox:~$ sudo ufw allow 80,443/tcp
Rule added
Rule added (v6)
```

When I check again page appears: