Module Networking

How to Start Module:

- Before starting the module, Run the <module_script_name> to configure the environment and then <module_script_name> to verify you have done the work correctly
    1. Open a Terminal Window
    2. Clone the GitHub repo (If you have already downloaded Github Repo, skip Step2) (https://github.com/milodigwe/Linux_Essentials_m2itech)
        - From the command line type:
          git clone https://github.com/milodigwe/Linux_Essentials_m2itech
    3. Once repository is cloned, navigate to the Hands_On Folder and find the script named: **networking.sh**
    4. Run the networking.sh script: This will configure the environment for the hands-on module
        - **sh ./networking.sh**
        - The script will ask you for your public IP of your instance (which you can find in your aws console) and your key_pair (which you downloaded and assigned to instance during the ec2 creation process) to log into your instance.
    5. Once the script is finished it will provide you with an output on how to log into the system.
        - Should look like: ssh -i <path to key pair> ec2-user@<ip address>
    6. Once logged in to the instance, Perform the required tasks below.

7. To verify that you have performed the task correctly. You will need to run the **networking_check.sh** script located in /home/ec2-user directory.
    - **sh ./networking_check.sh**
8. You must score a 100% to pass this module.
    - Please Note * Terminate or Stop your instance when not using it.

HAPPY LEARNING!!!

Questions:

Lab 1: There is a file inside of the networking module folder. Secure Copy the main.txt file to the /home/ec2-user/defaults directory.

```
milodigw@milodigw-mac Module_Networking % scp -i /Users/milodigw/linux_key2.pem main.txt ec2-user@54.147.236.12:~/defaults
main.txt                                                                      100%   37     3.0KB/s   00:00
milodigw@milodigw-mac Module_Networking %
```

```
[ec2-user@ip-172-31-94-32 ~]$ ls -lart defaults/
total 20
drwx------. 4 ec2-user ec2-user 16384 Jun 23 17:32 ..
drwxrwxr-x. 2 ec2-user ec2-user    22 Jun 23 17:35 .
-rw-r--r--. 1 ec2-user ec2-user    37 Jun 23 17:35 main.txt
[ec2-user@ip-172-31-94-32 ~]$
```

Lab2: SSH into your EC2 Instance

```
milodigw@milodigw-mac Module_Networking % ssh -i /Users/milodigw/linux_key2.pem ec2-user@54.147.236.12
   ,     #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
Last login: Sun Jun 23 16:49:14 2024 from 108.48.244.223
[ec2-user@ip-172-31-94-32 ~]$
```

Lab 3: Display your ip address and it into /home/ec2-user/ip_txt file.

```
[ec2-user@ip-172-31-94-32 ~]$ ifconfig | awk 'NR==2 {print $2}' > ~/ip_txt
[ec2-user@ip-172-31-94-32 ~]$ cat /home/ec2-user/ip_txt
172.31.94.32
```

Lab 4: Display the network interface name that your IP address is using and enter the name in /home/ec2-user/interface_name.txt

```
[ec2-user@ip-172-31-94-32 ~]$ ifconfig | awk 'NR==1 {print $0}' | cut -d ":" -f1
enX0
[ec2-user@ip-172-31-94-32 ~]$ ifconfig | awk 'NR==1 {print $0}' | cut -d ":" -f1 > /home/ec2-user/interface_name.txt
[ec2-user@ip-172-31-94-32 ~]$
```

Lab 5: Try pinging google.com only limit the ping counts to four. Do you get response?
Yes, we do get a response.

```
[ec2-user@ip-172-31-94-32 ~]$ ping -c4 google.com
PING google.com (142.251.111.113) 56(84) bytes of data.
64 bytes from bk-in-f113.1e100.net (142.251.111.113): icmp_seq=1 ttl=108 time=1.49 ms
64 bytes from bk-in-f113.1e100.net (142.251.111.113): icmp_seq=2 ttl=108 time=1.65 ms
64 bytes from bk-in-f113.1e100.net (142.251.111.113): icmp_seq=3 ttl=108 time=1.58 ms
64 bytes from bk-in-f113.1e100.net (142.251.111.113): icmp_seq=4 ttl=108 time=1.54 ms

--- google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 1.487/1.566/1.652/0.059 ms
[ec2-user@ip-172-31-94-32 ~]$
```

Check Script:

```
[ec2-user@ip-172-31-94-32 ~]$ sh ./networking_check.sh
1. Checking for main.txt file present in defaults directory. PASS
PASS

2. Checking if ip_txt file exists and has the correct IP address. PASS

3. Checking if the correct network interface name matches in interface_name.txt. PASS

Score: 3 / 3
Your score is 100%, You have passed this module!!

Number of Correct : 3 / Number of Fail : 0 PASS
[ec2-user@ip-172-31-94-32 ~]$
```