OLD DOMINION UNIVERSITY
CYSE 270 LINUX SYSTEM FOR CYBERSECURITY
Lab #11
Networking Basics
Cameron Stegura
01160817

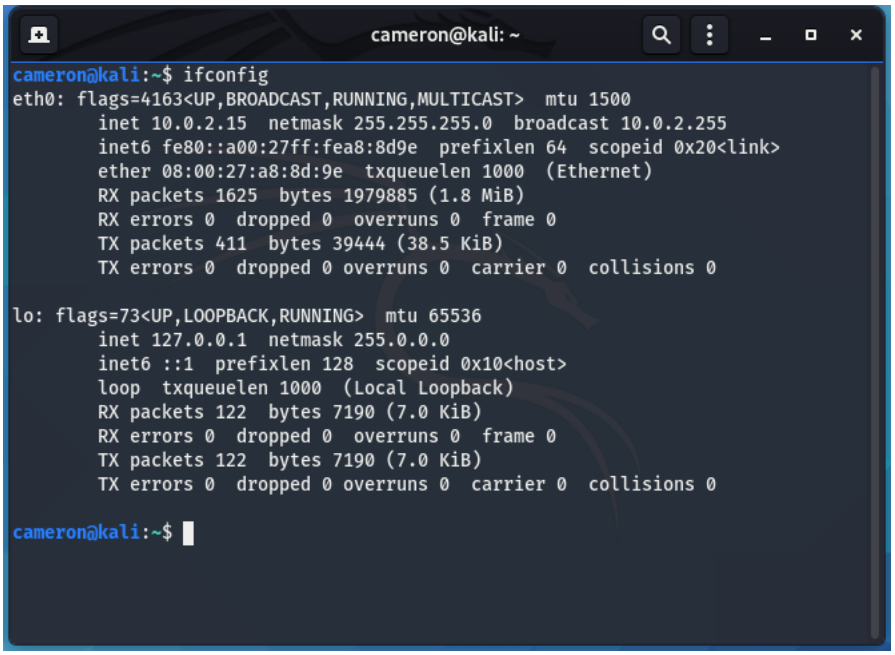
Task A – Subnetting

Category	IP Address	Binary Format
Address	75.99.120.100	01001011.01100011.01111000.01100100
Netmask	28	11111111.11111111.11111111.11110000
Network	75.99.120.96	01001011.01100011.01111000.01100000
Broadcast	75.99.120.111	01001011.01100011.01111000.01101111
First IP	75.99.120.97	01001011.01100011.01111000.01100001
Last IP	75.99.120.110	01001011.01100011.01111000.01101110
Maximum Hosts in Network	14	1110

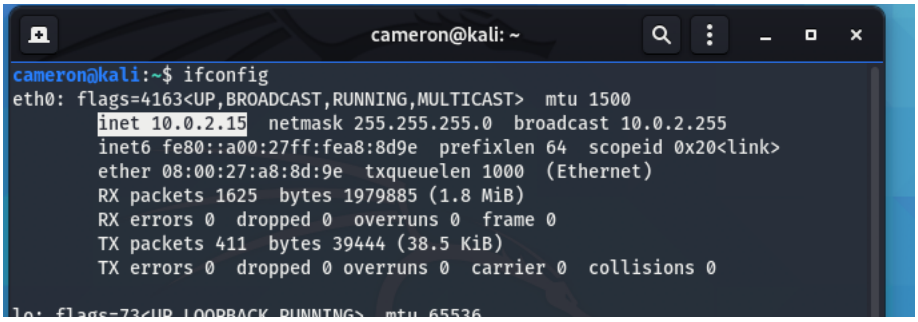
Category	IP Address	Binary Format
Address	144.77.66.40	10010000.01001101.01000010.00101000
Netmask	18	11111111.11111111.11000000.00000000
Network	144.77.64.0	10010000.01001101.01000000.00000000
Broadcast	144.77.127.255	10010000.01001101.01111111.11111111
First IP	144.77.64.1	10010000.01001101.01000000.00000001
Last IP	144.77.127.254	10010000.01001101.01111111.11111110
Maximum Hosts in Network	16382	11111111111110

Task B – Explore Network Configurations in Kali VM

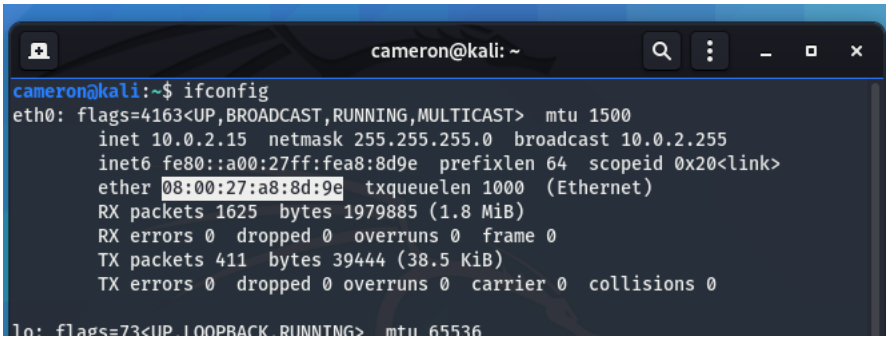
STEP 1 – I displayed the current network configurations and the highlighted the IP Address, MAC Address, and the network mask.



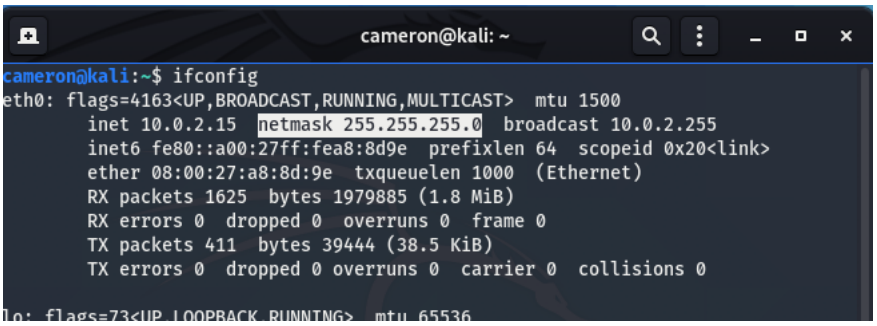
Displaying current network configurations.



Highlighted IP Address.

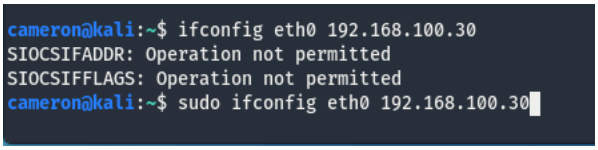


Highlighted MAC Address.

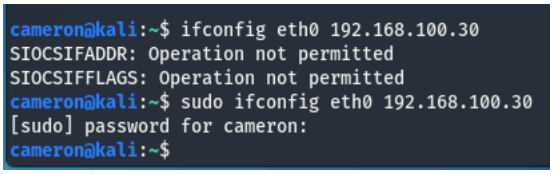


Highlighted the network mask.

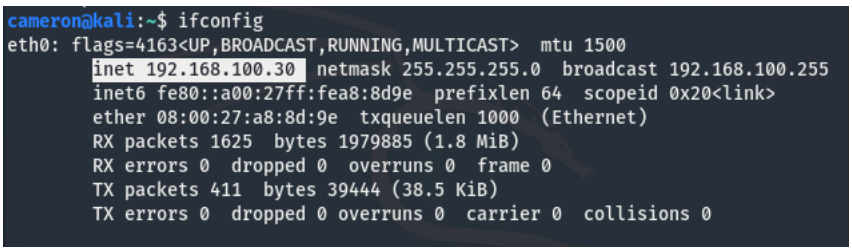
STEP 2 – Using the ifconfig command to change the IP address and then I proved that it changed.



Failed ifconfig command so I used sudo.



It worked.



Proof that it changed from before.

STEP 3 – Using the route command to display the current routing table.

```
cameron@kali:~$ route -n
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
cameron@kali:~$
```

Used route -n to display the table.

STEP 4 – Using the netstat command to display the current routing table.

```
cameron@kali:~$ netstat -rn
Kernel IP routing table
Destination     Gateway         Genmask         Flags   MSS Window  irtt Iface
cameron@kali:~$
```

Used netstat -rn to display the current routing table.

STEP 5 – Used the ping command to determine if the ubuntu.com system is accessible via the network.

```
cameron@kali:~$ ping -c 10 ubuntu.com
ping: ubuntu.com: Name or service not known
cameron@kali:~$
```

It was not accessible.