

# Task Day 4 @ ITI

## Network Commands

View network interface details (Linux ,Windows) :

```
Select Command Prompt

DNS Servers . . . . . : fec0:0:0:ffff::1%1
                      fec0:0:0:ffff::2%1
                      fec0:0:0:ffff::3%1
NetBIOS over Tcpip. . . . . : Enabled

Ethernet adapter VMware Network Adapter VMnet8:

   Connection-specific DNS Suffix  . : 
   Description . . . . . : VMware Virtual Ethernet Adapter for VMnet8
   Physical Address. . . . . : 00-50-56-C0-00-00
   DHCP Enabled. . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::378:e36:4dbf83(Prefe
   IPv4 Address. . . . . : 192.168.84.1(Prefe
   Subnet Mask . . . . . : 255.255.255.0
   Lease Obtained. . . . . : Thursday, July 3, 2025 12:32:30 PM
   Lease Expires . . . . . : Thursday, July 3, 2025 3:03:46 PM
   Default Gateway . . . . . : 192.168.84.254
   DHCP Server . . . . . : 192.168.221.38
   DHCPv6 IAID . . . . . : 889213014
   DHCPv6 Client DUID. . . . . : 00-01-00-01-2f-30-0A-DC-71-96-11-2C-8D
   DNS Servers . . . . . : fec0:0:0:ffff::1%1
                      fec0:0:0:ffff::2%1
                      fec0:0:0:ffff::3%1
   Primary WINS Server . . . . . : 192.168.84.2
   NetBIOS over Tcpip. . . . . : Enabled

Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . : 
   Description . . . . . : Intel(R) Wi-Fi 6 AX200 160MHz
   Physical Address. . . . . : DC-71-90-11-2C-8D
   DHCP Enabled. . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::cfd3:35ef:e83c:7458K11(Prefe
   IPv4 Address. . . . . : 192.168.221.221(Prefe
   Subnet Mask . . . . . : 255.255.255.0
   Lease Obtained. . . . . : Thursday, July 3, 2025 1:50:38 PM
   Lease Expires . . . . . : Thursday, July 3, 2025 3:20:47 PM
   Default Gateway . . . . . : 192.168.221.38
   DHCP Server . . . . . : 192.168.221.38
   DHCPv6 IAID . . . . . : 190896374
   DHCPv6 Client DUID. . . . . : 00-01-00-01-2f-30-0A-DC-71-96-11-2C-8D
   DNS Servers . . . . . : 192.168.221.38
   NetBIOS over Tcpip. . . . . : Enabled

C:\Users\VPB>
```

```
aaS@DESKTOP-FSHF8OM:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.18.137.119 netmask 255.255.240.0 broadcast 172.18.143.255
    inet6 fe80::215:54ff:face:2ca3 prefixlen 64 scopeid 64<v4lnc>
    ether 00:15:5d:ca:2c:a3 txqueuelen 1000 (Ethernet)
    RX packets 26 bytes 12879 (12.8 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 42 bytes 4180 (4.1 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 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

aaS@DESKTOP-FSHF8OM:~$
```

Test access to a specific host over the network :

```
Command Prompt

C:\Users\VPB>ping 8.8.8.8

Pinging 8.8.8.8 with 32 bytes of data:
Reply from 8.8.8.8: bytes=32 time=101ms TTL=110
Reply from 8.8.8.8: bytes=32 time=62ms TTL=110
Reply from 8.8.8.8: bytes=32 time=66ms TTL=110
Reply from 8.8.8.8: bytes=32 time=65ms TTL=110

Ping statistics for 8.8.8.8:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 62ms, Maximum = 101ms, Average = 73ms

C:\Users\VPB>
```

```
aaS@DESKTOP-FSHF8OM:~$ ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data:
 64 bytes from 8.8.8.8: icmp_seq=1 ttl=109 time=68.1 ms
 64 bytes from 8.8.8.8: icmp_seq=2 ttl=109 time=103 ms
 64 bytes from 8.8.8.8: icmp_seq=3 ttl=109 time=74.8 ms
 64 bytes from 8.8.8.8: icmp_seq=4 ttl=109 time=75.8 ms
 64 bytes from 8.8.8.8: icmp_seq=5 ttl=109 time=76.9 ms
 64 bytes from 8.8.8.8: icmp_seq=6 ttl=109 time=69.8 ms
^C
--- 8.8.8.8 ping statistics ---
 6 packets transmitted, 6 received, 0% packet loss, time 5000ms
 rtt min/avg/max/mdev = 68.067/78.093/103.163/11.654 ms
aaS@DESKTOP-FSHF8OM:~$
```

Track the path of packages to the final destination :

```
Command Prompt

C:\Users\VPB>tracert google.com

Tracing route to google.com [216.58.209.46]
over a maximum of 30 hops:
 0  12 ms  4 ms  10 ms  192.168.221.38
 1  62 ms  247 ms  39 ms  10.101.141.90
 2  61 ms  35 ms  28 ms  10.101.141.89
 3  44 ms  62 ms  33 ms  10.101.98.114
 4  73 ms  31 ms  39 ms  10.101.139.10
 5  76 ms  48 ms  31 ms  10.101.130.113
 6  65 ms  42 ms  45 ms  10.101.130.97
 7  85 ms  58 ms  31 ms  10.101.139.10
 8  57 ms  34 ms  35 ms  10.101.139.17
 9  64 ms  48 ms  47 ms  10.101.6.10
10  50 ms  46 ms  44 ms  10.101.6.1
11  85 ms  47 ms  53 ms  10.29.8.10
12  77 ms  31 ms  35 ms  10.45.28.77
13  65 ms  42 ms  65 ms  193.251.247.98
14  88 ms  63 ms  64 ms  81.52.188.109
15  144 ms  85 ms  69 ms  193.251.131.44
16  92 ms  67 ms  76 ms  72.14.197.204
17  102 ms  62 ms  69 ms  192.178.105.211
18  * * * Request timed out.
19  * * * Request timed out.
20  * * * Request timed out.
21  * * * Request timed out.
22  160 ms  304 ms  111 ms  172.253.65.236
23  201 ms  189 ms  66 ms  192.178.99.217
24  200 ms  184 ms  78 ms  100.170.232.181
25  178 ms  81 ms  69 ms  wan02a05-in-f46.1e100.net [216.58.209.46]
Trace complete.

C:\Users\VPB>
```

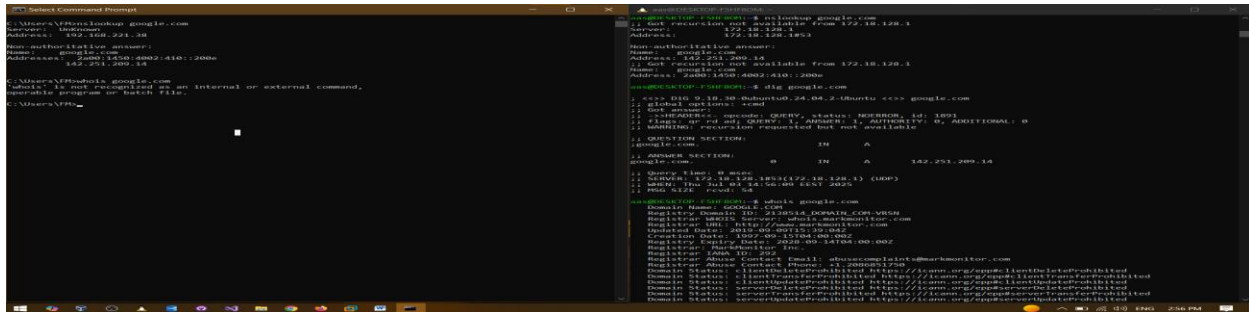
```
aaS@DESKTOP-FSHF8OM:~$ traceroute google.com
traceroute to google.com (142.251.209.14): 64 hops max
 0  172.18.128.1 0.571ms 0.263ms 0.212ms
 1  192.168.221.38 10.244ms 3.330ms 6.910ms
 2  10.101.141.90 98.879ms 167.953ms 325.497ms
 3  10.101.141.89 42.880ms 34.574ms 29.152ms
 4  10.101.98.114 24.872ms 35.694ms 36.630ms
 5  10.101.139.10 34.509ms 30.353ms 28.922ms
 6  10.101.130.113 74.493ms 29.240ms 52.422ms
 7  10.101.130.97 44.436ms 37.406ms 27.202ms
 8  10.101.139.22 30.125ms 31.562ms 34.321ms
 9  10.101.139.17 36.662ms 31.704ms 45.091ms
10  10.101.6.14 35.409ms 62.740ms 45.717ms
11  10.101.6.1 51.852ms 37.493ms 30.887ms
12  10.29.8.14 30.402ms 48.430ms 34.270ms
13  * * *
14  * * *
15  193.251.247.98 58.363ms 58.098ms 31.567ms
16  193.251.247.99 111.444ms 109.108ms 66.882ms
17  193.251.131.44 102.241ms 86.395ms 66.307ms
18  72.14.203.56 76.520ms * *
19  192.178.105.173 208.542ms 70.658ms 62.056ms
20  192.178.105.10 73.371ms 72.467ms 73.982ms
21  * * *
22  142.251.231.86 106.514ms 69.155ms 69.912ms
23  192.178.110.234 76.200ms 71.399ms 76.708ms
24  192.178.104.215 75.806ms 70.408ms 68.690ms
25  142.251.235.173 81.276ms 68.866ms 78.957ms
26  142.251.209.14 78.818ms 83.440ms 89.027ms
aaS@DESKTOP-FSHF8OM:~$
```

THANKS E. Mohamed AboSehly  
BY : Abdelwahab Ahmed Shandy

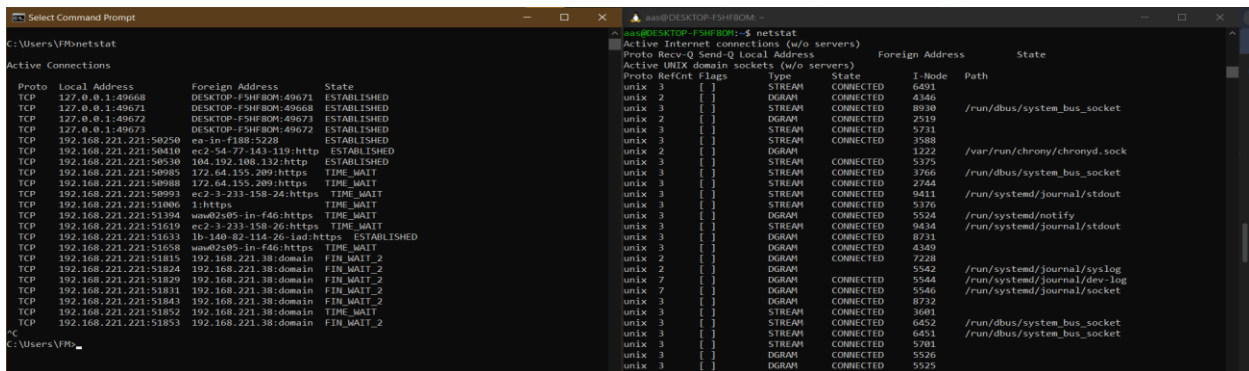
# Task Day 4 @ ITI

## Network Commands

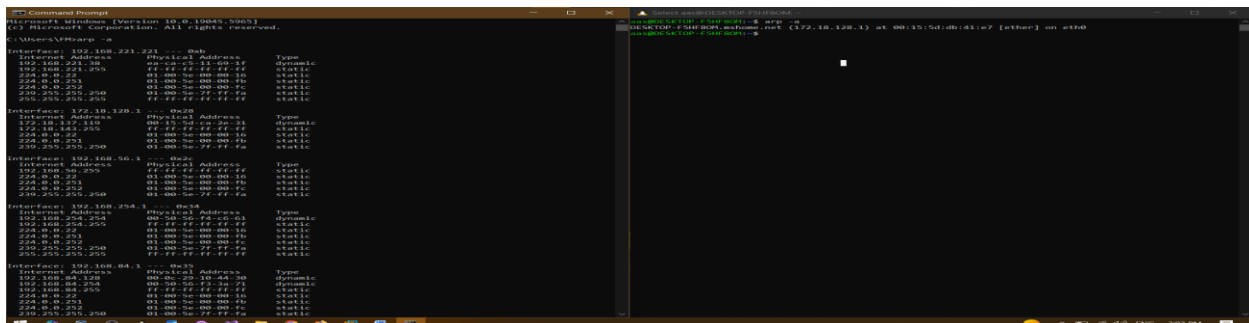
Query DNS information :



View network connections, open ports, and routing tables :



All recently contacted IP addresses and their corresponding MAC address :



Shows the physical address (MAC) of each currently connected network interface :

```
C:\Users\FM>getmac
```

Physical Address	Transport Name
=====	

THANKS E. Mohamed AboSehly  
BY : Abdelwahab Ahmed Shandy