➢ 1- Ipconfig Command

```
Administrator: Command Prompt                                          —    □    ×

Microsoft Windows [Version 10.0.19041.572]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\mh-sh>ipconfig /all

Windows IP Configuration

   Host Name . . . . . . . . . . . . : DESKTOP-K1UEKP3
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Hybrid
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Ethernet 4:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : TAP-Windows Adapter V9
   Physical Address. . . . . . . . . : ██-██-██-██-██-██
   DHCP Enabled. . . . . . . . . . . : No
   Autoconfiguration Enabled . . . . : Yes

Unknown adapter VPN - VPN Client:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : VPN Client Adapter - VPN
   Physical Address. . . . . . . . . : ██-██-██-██-██-██
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
```

➢ 2- Configure IP address manually.

Internet Protocol Version 4 (TCP/IPv4) Properties   ✕

General

You can get IP settings assigned automatically if your network supports
this capability. Otherwise, you need to ask your network administrator
for the appropriate IP settings.

◯ Obtain an IP address automatically

⦿ Use the following IP address:

IP address: 192 . 168 . 1 . 207

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 1 . 1

◯ Obtain DNS server address automatically

⦿ Use the following DNS server addresses:

Preferred DNS server: 1 . 1 . 1 . 1

Alternate DNS server: 1 . 0 . 0 . 1
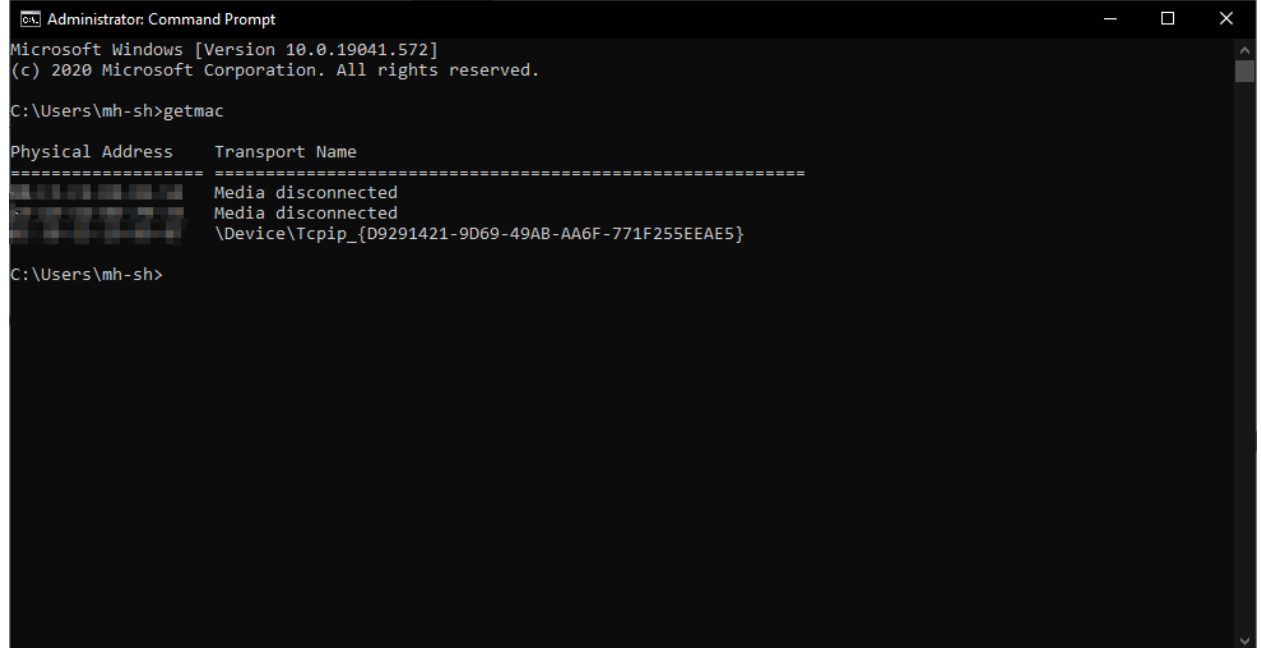
☐ Validate settings upon exit   Advanced...

                                    OK   Cancel

➢ 3- Ping Command

```
C:\Windows\System32\cmd.exe - C:\Windows\System32\ping.exe  104.160.142.3 -t                    —    □    ×
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=146ms TTL=55
Reply from 104.160.142.3: bytes=32 time=143ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
Reply from 104.160.142.3: bytes=32 time=144ms TTL=55
Reply from 104.160.142.3: bytes=32 time=142ms TTL=55
```

➤ 4- MAC address

```
Administrator: Command Prompt                                    —   □   ×

Microsoft Windows [Version 10.0.19041.572]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\mh-sh>getmac

Physical Address       Transport Name
==================     ============================================================
                       Media disconnected
                       Media disconnected
                       \Device\Tcpip_{D9291421-9D69-49AB-AA6F-771F255EEAE5}

C:\Users\mh-sh>
```

5- ARP Command

```
Administrator: Command Prompt                                           —    □    ×

Microsoft Windows [Version 10.0.19041.572]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\mh-sh>arp -a

Interface: 192.168.1.207 --- 0x17
  Internet Address      Physical Address      Type
  192.168.1.1           74-da-88-22-0f-66     dynamic
  192.168.1.23          20-47-da-1a-c3-a1     dynamic
  192.168.1.255         ff-ff-ff-ff-ff-ff     static
  224.0.0.22            01-00-5e-00-00-16     static
  224.0.0.251           01-00-5e-00-00-fb     static
  224.0.0.252           01-00-5e-00-00-fc     static
  230.0.0.1             01-00-5e-00-00-01     static
  239.255.255.250       01-00-5e-7f-ff-fa     static

C:\Users\mh-sh>arp -d

C:\Users\mh-sh>arp -a

Interface: 192.168.1.207 --- 0x17
  Internet Address      Physical Address      Type
  192.168.1.1           74-da-88-22-0f-66     dynamic
  224.0.0.22            01-00-5e-00-00-16     static
  230.0.0.1             01-00-5e-00-00-01     static

C:\Users\mh-sh>_
```

➤ 6- Routing Table Commands

```
Administrator: Command Prompt                                          —    □    ×

C:\Users\mh-sh>route print
===========================================================================
Interface List
1. ...........? ......TAP-Windows Adapter V9
1. ................ ......VPN Client Adapter - VPN
................ ......Intel(R) 82579LM Gigabit Network Connection
1...........................Software Loopback Interface 1
===========================================================================

IPv4 Route Table
===========================================================================
Active Routes:
Network Destination        Netmask          Gateway       Interface  Metric
          0.0.0.0          0.0.0.0      192.168.1.1    192.168.1.207      36
        127.0.0.0        255.0.0.0         On-link        127.0.0.1     331
        127.0.0.1  255.255.255.255         On-link        127.0.0.1     331
  127.255.255.255  255.255.255.255         On-link        127.0.0.1     331
      192.168.1.0    255.255.255.0         On-link    192.168.1.207     291
    192.168.1.207  255.255.255.255         On-link    192.168.1.207     291
    192.168.1.255  255.255.255.255         On-link    192.168.1.207     291
        224.0.0.0        240.0.0.0         On-link        127.0.0.1     331
        224.0.0.0        240.0.0.0         On-link    192.168.1.207     291
  255.255.255.255  255.255.255.255         On-link        127.0.0.1     331
  255.255.255.255  255.255.255.255         On-link    192.168.1.207     291
===========================================================================
Persistent Routes:
  Network Address          Netmask  Gateway Address  Metric
          0.0.0.0          0.0.0.0      192.168.1.1       1
===========================================================================
```

➢ 7- Opened ports and sessions

```
Administrator: Command Prompt                                                    ─    □    ×

C:\Users\mh-sh>netstat -n

Active Connections

  Proto  Local Address          Foreign Address        State
  TCP    127.0.0.1:1039         127.0.0.1:9544         ESTABLISHED
  TCP    127.0.0.1:1055         127.0.0.1:65001        ESTABLISHED
  TCP    127.0.0.1:1059         127.0.0.1:1075         ESTABLISHED
  TCP    127.0.0.1:1075         127.0.0.1:1059         ESTABLISHED
  TCP    127.0.0.1:1147         127.0.0.1:49671        ESTABLISHED
  TCP    127.0.0.1:7215         127.0.0.1:7216         ESTABLISHED
  TCP    127.0.0.1:7216         127.0.0.1:7215         ESTABLISHED
  TCP    127.0.0.1:7233         127.0.0.1:7234         ESTABLISHED
  TCP    127.0.0.1:7234         127.0.0.1:7233         ESTABLISHED
  TCP    127.0.0.1:7235         127.0.0.1:7236         ESTABLISHED
  TCP    127.0.0.1:7236         127.0.0.1:7235         ESTABLISHED
  TCP    127.0.0.1:7237         127.0.0.1:7279         ESTABLISHED
  TCP    127.0.0.1:7237         127.0.0.1:7287         ESTABLISHED
  TCP    127.0.0.1:7237         127.0.0.1:12572        ESTABLISHED
  TCP    127.0.0.1:7279         127.0.0.1:7237         ESTABLISHED
  TCP    127.0.0.1:7285         127.0.0.1:7363         ESTABLISHED
  TCP    127.0.0.1:7285         127.0.0.1:7365         ESTABLISHED
  TCP    127.0.0.1:7285         127.0.0.1:7371         ESTABLISHED
  TCP    127.0.0.1:7285         127.0.0.1:12663        ESTABLISHED
  TCP    127.0.0.1:7285         127.0.0.1:12665        ESTABLISHED
  TCP    127.0.0.1:7285         127.0.0.1:12666        ESTABLISHED
  TCP    127.0.0.1:7285         127.0.0.1:12667        ESTABLISHED
  TCP    127.0.0.1:7285         127.0.0.1:12668        ESTABLISHED
  TCP    127.0.0.1:7287         127.0.0.1:7237         ESTABLISHED
  TCP    127.0.0.1:7363         127.0.0.1:7285         ESTABLISHED
```

➢ 8- Port Scanning

LANguard Port Scanner

File   Options   Logs   Help

Scan Type
- TCP

Scan options
- Ping only   ○ Ping and scan
- Scan Only
- ☑ Resolve hostnames
- ☑ Show Host responses
- ☑ Only Scan responsive pings
- ☑ Only show responsive pings

IP Range
- ○ Define Range
- Start   192 . 168 . 1 . 1
- Stop   192 . 168 . 1 . 255
- ○ Import Range
- ○ Multiple Range

Port Range
- 65535
- ○ Import Range

Scan   Pause   Stop

192.168.1.1 [Unresolved]
192.168.1.23 [Unresolved]
192.168.1.103 [ELMOSRSY-PC]
192.168.1.105 [Unresolved]
192.168.1.207 [DESKTOP-K1UEKP3]

Host : 192.168.1.1 [Unresolved] : 0 Open ports found.
Host : 192.168.1.23 [Unresolved] : 0 Open ports found.
Host : 192.168.1.103 [ELMOSRSY-PC] : 0 Open ports found.
Host : 192.168.1.105 [Unresolved] : 0 Open ports found.

LANguard port scanner   NUM

Advanced IP Scanner

File   View   Settings   Help

Scan

192.168.1.1-254   Example: 192.168.0.1-100, 192.168.0.200   Search

Results   Favorites

Status	Name	IP	Manufacturer	MAC address	C
	192.168.1.1	192.168.1.1		74:DA:88:22:0F:66	
	192.168.1.23	192.168.1.23	Xiaomi Communicati...	20:47:DA:1A:C3:A1	
	ELMOSRSY-PC	192.168.1.103	Intel Corporate	00:21:5D:74:07:98	
	192.168.1.105	192.168.1.105	GUANGDONG OPPO ...	BC:3A:EA:99:12:49	
	DESKTOP-K1UEKP3	192.168.1.207	Hewlett Packard	6C:3B:E5:19:B9:87	

5 alive, 0 dead, 249 unknown