1) PING Command (ping www.google.com)

Pinging www.google.com [142.250.183.4] with 32 bytes of data:
Reply from 142.250.183.4: bytes=32 time=1834ms TTL=119
Reply from 142.250.183.4: bytes=32 time=495ms TTL=119
Reply from 142.250.183.4: bytes=32 time=128ms TTL=119
Reply from 142.250.183.4: bytes=32 time=850ms TTL=119

Ping statistics for 142.250.183.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 128 ms, Maximum = 1834 ms, Average = 826 ms

2) Continuous PING (ping -t www.google.com)

3) Tracert Command (tracert www.google.com)

Tracing route to www.google.com [142.250.182.228]
over a maximum of 30 hops:

1	8 ms	47 ms	26 ms	192.168.16.10
2	*	*	*	Request timed out.
3	*	*	*	Request timed out.
4	*	62 ms	78 ms	72.14.196.76
5	10 ms	23 ms	16 ms	142.251.76.27
6	1805 ms	399 ms	3517 ms	142.250.214.105
7	23 ms	10 ms	13 ms	bom07s29-in-f4.1e100.net [142.250.182.228]

Trace complete.

4) tracert /?

Usage: tracert [-d] [-h maximum_hops] [-j host-list] [-w timeout]
            [-R] [-S srcaddr] [-4] [-6] target_name

Options:
    -d   Do not resolve addresses to hostnames.
    -h maximum_hops   Maximum number of hops to search for target.
    -j host-list   Loose source route along host-list (IPv4-only).
    -w timeout   Wait timeout milliseconds for each reply.
    -R   Trace round-trip path (IPv6-only).
    -S srcaddr   Source address to use (IPv6-only).
    -4   Force using IPv4.
    -6   Force using IPv6.

5) netstat

Active Connections

Proto	Local Address	Foreign Address	State
TCP	127.0.0.1:49671	DESKTOP-50J51A7:49672	ESTABLISHED
TCP	127.0.0.1:49672	DESKTOP-50J51A7:49671	ESTABLISHED
TCP	127.0.0.1:49673	DESKTOP-50J51A7:49674	ESTABLISHED
TCP	127.0.0.1:49674	DESKTOP-50J51A7:49673	ESTABLISHED
TCP	192.168.20.125:50822	20.198.119.84:https	ESTABLISHED
TCP	192.168.20.125:53686	20.198.119.143:https	ESTABLISHED
TCP	192.168.20.125:53699	51.11.192.48:https	ESTABLISHED
TCP	192.168.20.125:53717	bom12s09-in-f14:https	ESTABLISHED
TCP	192.168.20.125:53753	pnq-static-24:https	ESTABLISHED
TCP	192.168.20.125:53775	13.89.179.8:https	FIN_WAIT_1
TCP	192.168.20.125:53781	192.168.20.175:8009	ESTABLISHED
TCP	192.168.20.125:53782	52.185.211.133:https	TIME_WAIT
TCP	192.168.20.125:53783	52.137.106.217:https	TIME_WAIT
TCP	192.168.20.125:53784	a-0001:https	ESTABLISHED
TCP	192.168.20.125:53787	a-0003:https	ESTABLISHED
TCP	192.168.20.125:53789	a-0001:https	ESTABLISHED
TCP	192.168.20.125:53791	a23-212-252-34:https	ESTABLISHED
TCP	192.168.20.125:53792	a23-212-252-34:https	ESTABLISHED
TCP	192.168.20.125:53793	204.79.197.219:https	ESTABLISHED
TCP	192.168.20.125:53794	204.79.197.219:https	ESTABLISHED
TCP	192.168.20.125:53798	server-18-66-30-66:https	ESTABLISHED
TCP	192.168.20.125:53800	server-18-66-30-66:https	ESTABLISHED
TCP	192.168.20.125:53801	52.168.117.169:https	ESTABLISHED
TCP	192.168.20.125:53802	52.168.117.169:https	ESTABLISHED
TCP	192.168.20.125:53803	52.168.117.169:https	ESTABLISHED

6) Ethernet Status (netstat -es)

Interface Statistics

	Received	Sent
Bytes	584040738	391711746
Unicast packets	664728	470634
Non-unicast packets	702	2742
Discards	0	0
Errors	0	0
Unknown protocols	0	

IPv4 Statistics

Packets Received	= 4410419
Received Header Errors	= 0
Received Address Errors	= 5673
Datagrams Forwarded	= 0
Unknown Protocols Received	= 94
Received Packets Discarded	= 181546
Received Packets Delivered	= 4251102
Output Requests	= 2356394
Routing Discards	= 0
Discarded Output Packets	= 1698
Output Packet No Route	= 551
Reassembly Required	= 120
Reassembly Successful	= 60
Reassembly Failures	= 0
Datagrams Successfully Fragmented	= 0
Datagrams Failing Fragmentation	= 0
Fragments Created	= 0

IPv6 Statistics

Packets Received	= 4051668
Received Header Errors	= 0
Received Address Errors	= 4848
Datagrams Forwarded	= 0
Unknown Protocols Received	= 0
Received Packets Discarded	= 668
Received Packets Delivered	= 4053170
Output Requests	= 2643168
Routing Discards	= 0
Discarded Output Packets	= 385
Output Packet No Route	= 381
Reassembly Required	= 1848
Reassembly Successful	= 923
Reassembly Failures	= 0
Datagrams Successfully Fragmented	= 24
Datagrams Failing Fragmentation	= 0
Fragments Created	= 48

ICMPv4 Statistics

	Received	Sent
Messages	681	2475

Errors	0	0
Destination Unreachable	190	2438
Time Exceeded	11	0
Parameter Problems	0	0
Source Quenches	0	0
Redirects	0	0
Echo Replies	16	3
Echos	3	34
Timestamps	0	0
Timestamp Replies	0	0
Address Masks	0	0
Address Mask Replies	0	0
Router Solicitations	0	0
Router Advertisements	461	0

ICMPv6 Statistics

	Received	Sent
Messages	10026	3470
Errors	0	0
Destination Unreachable	84	241
Packet Too Big	0	0
Time Exceeded	10	0
Parameter Problems	0	0
Echos	0	28
Echo Replies	2	0
MLD Queries	0	0
MLD Reports	89	0
MLD Dones	0	0
Router Solicitations	0	165
Router Advertisements	307	0
Neighbor Solicitations	1439	1356
Neighbor Advertisements	8095	1680
Redirects	0	0
Router Renumberings	0	0

TCP Statistics for IPv4

Active Opens	= 24967
Passive Opens	= 227
Failed Connection Attempts	= 5096
Reset Connections	= 2786
Current Connections	= 16
Segments Received	= 1171690

```
  Segments Sent                      = 1149196
  Segments Retransmitted             = 28833

TCP Statistics for IPv6

  Active Opens                       = 10594
  Passive Opens                      = 225
  Failed Connection Attempts         = 1418
  Reset Connections                  = 1362
  Current Connections                = 0
  Segments Received                  = 1828633
  Segments Sent                      = 1389402
  Segments Retransmitted             = 23023

UDP Statistics for IPv4

  Datagrams Received    = 4186014
  No Ports              = 181677
  Receive Errors        = 52
  Datagrams Sent        = 1162557

UDP Statistics for IPv6

  Datagrams Received    = 3923771
  No Ports              = 647
  Receive Errors        = 15
  Datagrams Sent        = 1216753
```

7) nslookup

```
Default Server:  dns.google
Address:  8.8.8.8

> www.hotmail.com
Server:  dns.google
Address:  8.8.8.8

Non-authoritative answer:
Name:    a-0010.a-msedge.net
Addresses:  2620:1ec:c11::212
          204.79.197.212
Aliases:  www.hotmail.com
          outlook-fd-0010.live.com
```

> www.google.com
Server: dns.google
Address: 8.8.8.8

Non-authoritative answer:
Name: www.google.com
Addresses: 2404:6800:4009:820::2004
          142.250.182.228

8) ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

   Media State . . . . : Media disconnected
   Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 1:

   Media State . . . . : Media disconnected
   Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 2:

   Media State . . . . : Media disconnected
   Connection-specific DNS Suffix . :

Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix . :
   Link-local IPv6 Address . . . . . : fe80::c883:55b6:7c82:c03e%15
   IPv4 Address. . . . . : 192.168.20.125
   Subnet Mask . . . . : 255.255.192.0
   Default Gateway . . . . : 192.168.16.10

9) ipconfig/all

Windows IP Configuration

   Host Name . . . . : DESKTOP-50J51A7
   Primary Dns Suffix . . . . :
   Node Type . . . . : Hybrid

```
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Ethernet:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Realtek PCIe FE Family Controller
   Physical Address. . . . . . . . . : DC-4A-3E-AB-22-C5
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 1:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Microsoft Wi-Fi Direct Virtual Adapter
   Physical Address. . . . . . . . . : 46-1C-A8-45-0C-29
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Local Area Connection* 2:

   Media State . . . . . . . . . . . : Media disconnected
   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Microsoft Wi-Fi Direct Virtual Adapter #2
   Physical Address. . . . . . . . . : 44-1C-A8-45-0C-29
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wi-Fi:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Realtek RTL8723BE 802.11 bgn Wi-Fi Adapter
   Physical Address. . . . . . . . . : 44-1C-A8-45-0C-29
   DHCP Enabled. . . . . . . . . . . : Yes
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::c883:55b6:7c82:c03e%15(Preferred)
   IPv4 Address. . . . . . . . . . . : 192.168.20.125(Preferred)
   Subnet Mask . . . . . . . . . . . : 255.255.192.0
   Lease Obtained. . . . . . . . . . : Wednesday, February 8, 2023 10:25:18 AM
   Lease Expires . . . . . . . . . . : Thursday, February 9, 2023 10:25:18 AM
   Default Gateway . . . . . . . . . : 192.168.16.10
   DHCP Server . . . . . . . . . . . : 192.168.16.10
```

```
   DHCPv6 IAID . . . . . . . . . . . : 138681512
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-2A-8D-FE-1A-DC-4A-3E-AB-22-C5
   DNS Servers . . . . . . . . . . . : 8.8.8.8
                                       8.8.4.4
   NetBIOS over Tcpip. . . . . . . . : Enabled
```

10) route Print

```
===========================================================================
===
Interface List
  2...dc 4a 3e ab 22 c5 ......Realtek PCIe FE Family Controller
 14...46 1c a8 45 0c 29 ......Microsoft Wi-Fi Direct Virtual Adapter
 11...44 1c a8 45 0c 29 ......Microsoft Wi-Fi Direct Virtual Adapter #2
 15...44 1c a8 45 0c 29 ......Realtek RTL8723BE 802.11 bgn Wi-Fi Adapter
  1...........................Software Loopback Interface 1
===========================================================================
===

IPv4 Route Table
===========================================================================
===
Active Routes:
Network Destination        Netmask          Gateway       Interface  Metric
          0.0.0.0          0.0.0.0    192.168.16.10   192.168.20.125     55
        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
     192.168.0.0    255.255.192.0         On-link    192.168.20.125    311
   192.168.20.125  255.255.255.255         On-link    192.168.20.125    311
   192.168.63.255  255.255.255.255         On-link    192.168.20.125    311
        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    192.168.20.125    311
  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    192.168.20.125    311
===========================================================================
===
Persistent Routes:
  None

IPv6 Route Table
===========================================================================
===
```

Active Routes:
 If Metric Network Destination   Gateway
  1   331 ::1/128   On-link
 15   311 fe80::/64   On-link
 15   311 fe80::c883:55b6:7c82:c03e/128
                                    On-link
  1   331 ff00::/8   On-link
 15   311 ff00::/8   On-link
===
===
Persistent Routes:
  None

11) arp -a

Interface: 192.168.20.125 --- 0xf
  Internet Address   Physical Address   Type
  10.128.128.128   00-a2-89-00-54-c8   dynamic
  192.168.16.10   7c-5a-1c-c8-ec-56   dynamic
  192.168.20.175   38-8b-59-b1-cb-50   dynamic
  192.168.63.255   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
  239.255.255.250   01-00-5e-7f-ff-fa   static
  255.255.255.255   ff-ff-ff-ff-ff-ff   static