## **GETMAC COMMAND**

C:\Users\karan>getmac

Physical Address Transport Name

50-5A-65-03-EF-99 \Device\Tcpip\_{2D4A5C38-0D7E-42F7-8C80-AE2393457BCF}

A0-36-BC-6B-26-30 Media disconnected

C:\Users\karan>

C:\Users\karan>getmac /FO csv "Physical Address","Transport Name" "50-5A-65-03-EF-99","\Device\Tcpip\_{2D4A5C38-0D7E-42F7-8C80-AE2393457BCF}" "A0-36-BC-6B-26-30","Media disconnected"

C:\Users\karan>getmac /NH

50-5A-65-03-EF-99 \Device\Tcpip\_{2D4A5C38-0D7E-42F7-8C80-AE2393457BCF}

AO-36-BC-6B-26-30 Media disconnected

C:\Users\karan>getmac /v

Connection Name Network Adapter Physical Address Transport Name

Wi-Fi MediaTek Wi-Fi 50-5A-65-03-EF-99 \Device\Tcpip\_{2D4A5C38-0D7E-42F7-8C80-AE2393457BCF} Ethernet Realtek PCIe Gb A0-36-BC-6B-26-30 Media disconnected

7 30 BC 0B 20 30 Media disconnected

# **HOSTNAME COMMAND**

C:\Users\karan>hostname

Karan

C:\Users\karan>

## **IPCONFIG COMMAND**

```
C:\Users\karan>ipconfig
Windows IP Configuration
Ethernet adapter Ethernet:
                            . . . : Media disconnected
  Media State . . . .
  Wireless LAN adapter Local Area Connection* 1:
                             . . . : Media disconnected
   Media State . . .
  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::46f:59d5:9d4b:5a53%5 IPv4 Address . . . . . . . . . : 10.20.65.16
  Default Gateway . . . . . . . : 10.20.1.1
```

```
C: Users' Naran-ipconfig / All
Mindows IP Configuration
Wast Base ... | Naran
Primary Ons Suffix ... | Hybrid
IP Routing Enabled ... | No
WINS Proys (Rabled ... | No
Ethernet adapter Ethernet:
Redia State ... | Media disconnected
Connection-specific DUS Suffix | Description ... | Realtek PCIe GBE Family Controller
SUC Planaled ... | No
Succeeded ... | No
```

```
C:\Users\karan>ipconfig /flushdns
Windows IP Configuration
Successfully flushed the DNS Resolver Cache.
```

```
Windows IP Configuration
No operation can be performed on Ethernet while it has its media disconnected.
No operation can be performed on Local Area Connection* 1 while it has its media disconnected.
No operation can be performed on Local Area Connection* 2 while it has its media disconnected.
 Ethernet adapter Ethernet:
   Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
  rireless 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 . :
   ireless LAN adapter Wi-Fi:
   Connection-specific DNS Suffix :
Link-local IPv6 Address : fe88::46f:89d5:9d4b:Sa53%5
IPv8 Address : 10,20.65.16
Subnet Mask : 255.255.8.0
Default Gateway : 10.20.1.1
  :\Users\karan>ipconfig /renew
  indows IP Configuration
No operation can be performed on Ethernet while it has its media disconnected.
No operation can be performed on Local Area Connection* I while it has its media disconnected.
No operation can be performed on Local Area Connection* 2 while it has its media disconnected.
  thernet adapter Ethernet:
    Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
   ireless LAN adapter Local Area Connection* 1:
    Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
    reless LAN adapter Local Area Connection* 2:
   Media State . . . . . . . . . : Media disconnected Connection-specific DNS Suffix . :
```

#### **PING COMMAND**

```
C:\Users\karan>ping
Usage: ping [-t] [-a] [-n count] [-l size] [-f] [-i TTL] [-v TOS]
[-r count] [-s count] [[-j host-list] | [-k host-list]]
[-w timeout] [-R] [-S srcaddr] [-c compartment] [-p]
[-4] [-6] target_name
                                                Ping the specified host until stopped.
                                                To see statistics and continue - type Control-Break;
To stop - type Control-C.
Resolve addresses to hostnames.
         -n count
-l size
                                                Number of echo requests to send.
                                                Send buffer size.
Set Don't Fragment flag in packet (IPv4-only).
          -i TTL
                                                 Time To Live
                                                 Type Of Service (IPv4-only. This setting has been deprecated and has no effect on the type of service field in the IP
          -v TOS
                                               Header).

Record route for count hops (IPv4-only).

Timestamp for count hops (IPv4-only).

Loose source route along host-list (IPv4-only).

Strict source route along host-list (IPv4-only).

Timeout in milliseconds to wait for each reply.

Use routing header to test reverse route also (IPv6-only).

Per RFC 5095 the use of this routing header has been deprecated. Some systems may drop echo requests if this header is used.

Source address to use.
                                                Header)
         -r count
-s count
-j host-list
-k host-list
                 timeout
                                               Course address to use.

Routing compartment identifier.

Ping a Hyper-V Network Virtualization provider address.

Force using IPv4.

Force using IPv6.
           -S srcaddr
```

```
C:\Users\karan>pathping darshanums.in
Tracing route to darshanums.in [103.13.112.180]
over a maximum of 30 hops:

0 Karan [10.20.65.16]

1 10.20.1.1
     103.70.32.145
    10.1.252.37
                          103.156.182.82
    103.77.108.5
               darshan.interactivedns.com [103.13.112.180]
Computing statistics for 150 seconds.
             Source to Here This Node/Link
Lost/Sent = Pct Lost/Sent = Pct Address
Hop RTT
                                                    Karan [10.20.65.16]
                                   10/ 100 = 10%
                                    0/ 100 = 0% 10.20.1.1
0/ 100 = 0% |
 1
       3ms
               10/ 100 = 10%
               10/ 100 = 10%
                                     0/ 100 = 0% 103.70.32.145
       8ms
                                     1/ 100 = 1%
              100/ 100 =100%
                                    89/ 100 = 89% 10.1.252.37
                                    0/ 100 = 0% |
0/ 100 = 0% 103.156.182.82
               11/ 100 = 11%
                                   0/ 100 = 0% |
89/ 100 = 89% 103.77.108.5
 5 ---
             100/ 100 =100%
                                    0/ 100 = 0% |
0/ 100 = 0% darshan.interactivedns.com [103.13.112.180]
               11/ 100 = 11%
     25ms
 6
Trace complete.
```

```
C:\Users\karan>ping -a darshanums.in

Pinging darshanums.in [103.13.112.180] with 32 bytes of data:
Reply from 103.13.112.180: bytes=32 time=23ms TTL=123
Reply from 103.13.112.180: bytes=32 time=24ms TTL=123
Reply from 103.13.112.180: bytes=32 time=21ms TTL=123
Reply from 103.13.112.180: bytes=32 time=21ms TTL=123

Ping statistics for 103.13.112.180:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 21ms, Maximum = 24ms, Average = 22ms
```

```
C:\Users\karan>ping -l 24 darshan.ac.in

Pinging darshan.ac.in [103.13.112.180] with 24 bytes of data:
Reply from 103.13.112.180: bytes=24 time=23ms TTL=123
Reply from 103.13.112.180: bytes=24 time=21ms TTL=123
Reply from 103.13.112.180: bytes=24 time=23ms TTL=123
Reply from 103.13.112.180: bytes=24 time=21ms TTL=123

Ping statistics for 103.13.112.180:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 21ms, Maximum = 23ms, Average = 22ms
```

```
C:\Users\karan>ping -n 7 darshanums.in

Pinging darshanums.in [103.13.112.180] with 32 bytes of data:
Reply from 103.13.112.180: bytes=32 time=52ms TTL=123
Reply from 103.13.112.180: bytes=32 time=22ms TTL=123
Reply from 103.13.112.180: bytes=32 time=24ms TTL=123
Reply from 103.13.112.180: bytes=32 time=21ms TTL=123
Reply from 103.13.112.180: bytes=32 time=26ms TTL=123
Reply from 103.13.112.180: bytes=32 time=30ms TTL=123
Reply from 103.13.112.180: bytes=32 time=36ms TTL=123
Ping statistics for 103.13.112.180:
    Packets: Sent = 7, Received = 7, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 21ms, Maximum = 52ms, Average = 30ms
```

#### **ARP COMMAND**

```
C:\Users\karan>arp
Displays and modifies the IP-to-Physical address translation tables used by
address resolution protocol (ARP).
ARP -s inet_addr eth_addr [if_addr]
ARP -d inet_addr [if_addr]
ARP -a [inet_addr] [-N if_addr] [-v]
                                                                    Displays current ARP entries by interrogating the current protocol data. If inet_addr is specified, the IP and Physical addresses for only the specified computer are displayed. If more than one network interface uses ARP, entries for each ARP
                                                                      table are displayed.
                                                                      Same as -a.
                                                                     Displays current ARP entries in verbose mode. All invalid entries and entries on the loop-back interface will be shown.
        inet_addr
                                                                       Specifies an internet address
                                                                     Displays the ARP entries for the network interface specified
        -N if addr
                                                                    by if_addr.

Deletes the host specified by inet_addr. inet_addr may be wildcarded with * to delete all hosts.

Adds the host and associates the Internet address inet_addr with the Physical address is the property of the pr
        -d
        -s
                                                                                                                                                                                                                                       The Physical address is
                                                                     given as 6 hexadecimal bytes separated by hyphens. The entry is permanent.
                                                                    Specifies a physical address.

If present, this specifies the Internet address of the interface whose address translation table should be modified. If not present, the first applicable interface will be used.
        eth addr
        if_addr
Example:
       campter.
> arp -s 157.55.85.212 00-aa-00-62-c6-09 .... Adds a static entry.
> arp -a .... Displays the arp table.
```

```
C:\Users\karan>arp -a
Interface: 10.20.65.16 --- 0x5
 Internet Address Physical Address
                                              Type
                       7c-5a-1c-ce-2f-57
  10.20.1.1
                                              dynamic
                       60-ff-9e-1e-3c-54
 10.20.11.13
                                              dvnamic
 10.20.32.22
                       cc-47-40-d7-e6-17
                                              dynamic
  10.20.38.26
                       60-ff-9e-1e-3d-1a
                                              dynamic
                       f4-6d-3f-29-e6-9f
  10.20.64.81
                                              dynamic
 10.20.64.178
                       68-7a-64-d3-b9-6d
                                              dynamic
  10.20.64.238
                       e4-0d-36-9f-d0-26
                                              dynamic
  10.20.255.255
                       ff-ff-ff-ff-ff
                                              static
  224.0.0.2
                       01-00-5e-00-00-02
                                              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
                        ff-ff-ff-ff-ff
  255.255.255.255
                                              static
```

```
C:\Users\karan>arp -s
Displays and modifies the IP-to-Physical address translation tables used by
address resolution protocol (ARP).
ARP -s inet_addr eth_addr [if_addr]
ARP -d inet_addr [if_addr]
ARP -a [inet_addr] [-N if_addr] [-v]
                Displays current ARP entries by interrogating the current
  -a
                protocol data. If inet_addr is specified, the IP and Physical
                addresses for only the specified computer are displayed. If
                more than one network interface uses ARP, entries for each ARP
                table are displayed.
                Same as -a.
  -g
                Displays current ARP entries in verbose mode. All invalid
                entries and entries on the loop-back interface will be shown.
  inet_addr
                Specifies an internet address.
  -N if_addr
                Displays the ARP entries for the network interface specified
                by if_addr.
                Deletes the host specified by inet_addr. inet_addr may be
                wildcarded with * to delete all hosts.
                Adds the host and associates the Internet address inet_addr
  -5
                with the Physical address eth_addr. The Physical address is
                given as 6 hexadecimal bytes separated by hyphens. The entry
                is permanent.
  eth_addr
                Specifies a physical address.
                If present, this specifies the Internet address of the
  if_addr
                interface whose address translation table should be modified.
```

#### C:\Users\karan>arp -g

```
Interface: 192.168.1.2 --- 0x5
 Internet Address
                        Physical Address
                                              Type
 192.168.1.1
                        c0-94-ad-d2-9a-38
                                              dynamic
                        bc-45-5b-d1-ff-46
 192.168.1.6
                                              dynamic
                        ff-ff-ff-ff-ff
 192.168.1.255
                                              static
 224.0.0.22
                        01-00-5e-00-00-16
                                              static
                        01-00-5e-00-00-fb
 224.0.0.251
                                              static
 224.0.0.252
                        01-00-5e-00-00-fc
                                              static
 239.255.255.250
                        01-00-5e-7f-ff-fa
                                              static
                        ff-ff-ff-ff-ff
 255.255.255.255
                                              static
```

## SYSTEMINFO COMMAND

C:\Users\karan>systeminfo Host Name: OS Name: OS Version: Microsoft Windows 11 Home Single Language 10.0.26100 N/A Build 26100 OS Manufacturer: Microsoft Corporation Standalone Workstation OS Configuration: OS Build Type: Registered Owner: Registered Organization: Multiprocessor Free karan08338@outlook.com N/A Product ID: Original Install Date: 00342-42630-23808-AAOEM 09-04-2025, 01:23:26 PM 28-05-2025, 01:37:25 PM System Boot Time: System Manufacturer: System Model: ASUSTeK COMPUTER INC. ASUS TUF Gaming A15 FA506IHRB\_FA506IHRZ System Type: Processor(s): x64-based PC 1 Processor(s) Installed. [01]: AMD64 Family 23 Model 96 Stepping 1 AuthenticAMD ~3001 Mhz BIOS Version: Windows Directory: System Directory: American Megatrends Inc. FA506IHRB.307, 28-12-2022 C:\WINDOWS C:\WINDOWS\system32 Boot Device: \Device\HarddiskVolume1 System Locale: Input Locale: en-us; English (United States) 00004009 (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi Time Zone: Total Physical Memory: 15,790 MB 9,244 MB Available Physical Memory: Virtual Memory: Max Size: 20,142 MB Virtual Memory: Available: Virtual Memory: In Use: 11,177 MB 8,965 MB C:\pagefile.sys Page File Location(s): Domain: WORKGROUP Logon Server: Hotfix(s): \\KARAN 4 Hotfix(s) Installed. [01]: KB5054979 [02]: KB5058411

[03]: KB5058538

#### **TACERT COMMAND**

```
C:\Users\karan>tracert darshan.ac.in
Tracing route to darshan.ac.in [103.13.112.180]
over a maximum of 30 hops:
                       1010 ms
                                10.20.1.1
       44 ms
  2
                 5 ms
                                103.70.32.145
                         10 ms
  3
        *
                 6 ms
                          6 ms 10.1.252.37
  4
       23 ms
                26 ms
                         36 ms 103.156.182.82
  5
                         26 ms 103.77.108.5
        *
                 *
  6
       22 ms
                23 ms
                         21 ms darshan.interactivedns.com [103.13.112.180]
Trace complete.
```

```
C:\Users\karan>tracert -d google.com
Tracing route to google.com [2607:f8b0:4002:c09::71]
over a maximum of 30 hops:
                                 Request timed out.
        3 ms
                 2 ms
                          2 ms
                                 2402:a00:182:1::1111
 3
                 3 ms
                           3 ms
                                 2402:a00:80::1001
        3 ms
 4
                                 2402:a00:80::2e
       20 ms
                20 ms
                         20 ms
 5
                20 ms
                         20 ms
                                 2404:6800:81e1:1c0::1
       20 ms
                         20 ms
                                 2404:6800:81e1:1c0::1
 6
7
       21 ms
                20 ms
                                 2001:4860:0:1::5500
                         21 ms
                20 ms
 8
       22 ms
                         21 ms
                                 2001:4860:0:1::77ae
               292 ms
                        292 ms
                                 2001:4860::9:4001:163c
      292 ms
 10
      292 ms
               296 ms
                        293 ms
                                 2001:4860::c:4003:1caf
 11
      298 ms
               290 ms
                        294 ms
                                 2001:4860::c:4002:f3e0
 12
                                 Request timed out.
 13
      292 ms
               293 ms
                        293 ms
                                 2001:4860::c:4003:1cbd
      292 ms
               302 ms
                        292 ms
 14
                                 2001:4860::c:4002:74b3
      293 ms
               292 ms
                        291 ms
 15
                                 2001:4860::c:4003:cf35
 16
                        293 ms
                                 2001:4860::c:4002:8e38
      292 ms
               293 ms
 17
                                 Request timed out.
18
                                 Request timed out.
 19
                                 Request timed out.
               290 ms
                        289 ms 2607:f8b0:4002:c09::71
 20
      289 ms
Trace complete.
```

```
C:\Users\karan>tracert -h 10 darshan.ac.in
Tracing route to darshan.ac.in [103.13.112.180]
over a maximum of 10 hops:
  1
                                 gpon.net [192.168.1.1]
        2 ms
                 3 ms
                          2 ms
                                 182.237.14.17
  2
        3 ms
                          3 ms
                 3 ms
  3
        4 ms
                 4 ms
                          8 ms
                                 10.244.21.1 [10.244.21.1]
  4
                                103.241.47.61
       16 ms
                16 ms
                         15 ms
       31 ms
                         17 ms
  5
                18 ms
                                103.77.108.5
                         15 ms darshan.interactivedns.com [103.13.112.180]
  6
       16 ms
                17 ms
Trace complete.
```

#### C:\Users\karan>tracert -4 google.com Tracing route to google.com [142.251.42.78] over a maximum of 30 hops: 1 ms gpon.net [192.168.1.1] 3 ms 182.237.14.17 4 ms 10.244.21.1 [10.244.21.1] 2 3 ms 3 ms 4 ms 4 ms 4 ms 16 ms 15 ms 15 ms 103.241.47.61 4 5 6 7 16 ms 16 ms 16 ms 142.250.47.236 16 ms 72.14.238.215 15 ms 142.251.69.105 17 ms 16 ms 15 ms 16 ms 15 ms 15 ms 15 ms bom12s21-in-f14.1e100.net [142.251.42.78] Trace complete.

#### **NETSTAT COMMAND**

```
C:\Users\karan>netstat
Active Connections
                                       Foreign Address
4.213.25.242:https
          Local Address
10.20.65.16:49450
                                                                    State
ESTABLISHED
  TCP
  TCP
          10.20.65.16:49740
                                        20.189.173.24:https
                                                                     TIME_WAIT
  TCP
          10.20.65.16:49743
                                        20.190.146.35:https
                                                                     TIME_WAIT
                                                                    ESTABLISHED
  TCP
          10.20.65.16:49744
                                       dns:https
4.213.25.242:https
          10.20.65.16:65472
                                                                     ESTABLISHED
          10.20.65.16:65486
127.0.0.1:1042
                                       sf-in-f188:5228
Karan:64732
                                                                    ESTABLISHED ESTABLISHED
  TCP
  TCP
           127.0.0.1:1042
                                        Karan:64734
                                                                     ESTABLISHED
          127.0.0.1:9012
127.0.0.1:13030
                                                                    ESTABLISHED ESTABLISHED
  TCP
                                        Karan: 64711
  TCP
                                        Karan: 49669
                                                                     ESTABLISHED
           127.0.0.1:49669
                                        Karan:13030
          127.0.0.1:50100 127.0.0.1:64710
  TCP
                                        Karan:64710
                                                                    ESTABLISHED
                                                                    ESTABLISHED
  TCP
                                        Karan:50100
  ТСР
           127.0.0.1:64711
                                        Karan:9012
                                                                     ESTABLISHED
          127.0.0.1:64732
  TCP
                                        Karan: 1042
                                                                    ESTABLISHED
  TCP
          127.0.0.1:64734
                                        Karan: 1042
                                                                    ESTABLISHED
```

```
C:\Users\karan>netstat -a
Active Connections
  Proto Local Address
                                  Foreign Address
                                                          State
                                                          LISTENING
         0.0.0.0:135
                                  Karan:0
  TCP
  TCP
         0.0.0.0:445
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:5040
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:9012
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:9013
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:49664
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:49665
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:49666
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:49667
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:49668
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:49670
                                  Karan:0
                                                          LISTENING
  TCP
         0.0.0.0:57621
                                  Karan:0
                                                          LISTENING
         0.0.0.0:61602
  TCP
                                                          LISTENING
                                  Karan:0
  TCP
         127.0.0.1:1042
                                  Karan:0
                                                          LISTENING
  TCP
         127.0.0.1:1042
                                  Karan:61571
                                                          ESTABLISHED
  TCP
         127.0.0.1:1042
                                  Karan:61573
                                                          ESTABLISHED
  TCP
         127.0.0.1:1043
                                  Karan:0
                                                          LISTENING
  TCP
         127.0.0.1:7768
                                  Karan:0
                                                          LISTENING
         127.0.0.1:7778
  TCP
```

#### C:\Users\karan>netstat -e Interface Statistics Received Sent 187383930 53782662 Bytes Unicast packets 275100 235806 Non-unicast packets 6390 3738 Discards 0 0 0 0 Errors 0 Unknown protocols

LISTENING

Karan:0

## **NSLOOKUP COMMAND**

C:\Users\karan>nslookup darshan.ac.in Server: UnKnown Address: 10.20.1.1 Non-authoritative answer: Name: darshan.ac.in Address: 103.13.112.180

```
C:\Users\karan>nslookup -type=ns google.com
Server: gpon.net
Address: fe80::1

Non-authoritative answer:
google.com nameserver = ns3.google.com
google.com nameserver = ns1.google.com
google.com nameserver = ns2.google.com
google.com nameserver = ns4.google.com
```

```
C:\Users\karan>nslookup -type=any google.com
Server: gpon.net
Address: fe80::1
Non-authoritative answer:
              nameserver = ns4.google.com
google.com
google.com
               text =
       "facebook-domain-verification=22rm551cu4k0ab0bxsw536tlds4h95"
google.com
              nameserver = ns1.google.com
google.com
                text =
        "cisco-ci-domain-verification=47c38bc8c4b74b7233e9053220c1bbe76bcc1cd33c7acf7acd36cd6a5332004b"
google.com
        "docusign=05958488-4752-4ef2-95eb-aa7ba8a3bd0e"
google.com
```