

Computer Network (LAB Session – 10)

+ Study of basic network command and Network configuration commands.

1. Below is the list of some important network configuration command in Linux. Find the usage of the commands and also explore what is the equivalent command in windows for performing the similar task.

Explain the usage of the commands and observe the result of the command (Either windows or Linux)

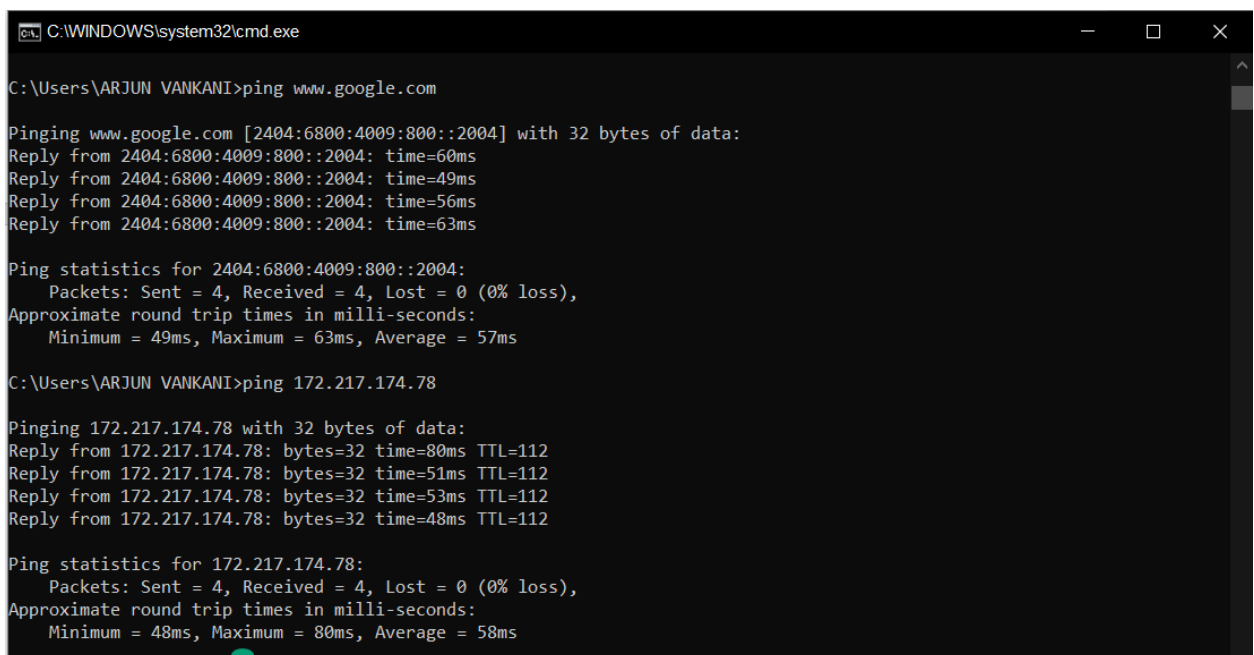
- A) Ping**
- B) Nslookup**
- C) Traceroute**
- D) Host**
- E) Netstat**
- F) Arp**
- G) Ifconfig / Ipconfig**

- Here by, All the command is very useful for and needed to gathering information given below listed:

1) Ping = > (Send Test Packets)

It mostly used for Sending test packet in which our pc sends to 4 packets to server or website or another pc(target).

Ping URL or IPADDRESS to see if you reach an internet destination. If successfully reach then receive 4 packets other wise get lost 4 packets.



```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>ping www.google.com

Pinging www.google.com [2404:6800:4009:800::2004] with 32 bytes of data:
Reply from 2404:6800:4009:800::2004: time=60ms
Reply from 2404:6800:4009:800::2004: time=49ms
Reply from 2404:6800:4009:800::2004: time=56ms
Reply from 2404:6800:4009:800::2004: time=63ms

Ping statistics for 2404:6800:4009:800::2004:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 49ms, Maximum = 63ms, Average = 57ms

C:\Users\ARJUN VANKANI>ping 172.217.174.78

Pinging 172.217.174.78 with 32 bytes of data:
Reply from 172.217.174.78: bytes=32 time=80ms TTL=112
Reply from 172.217.174.78: bytes=32 time=51ms TTL=112
Reply from 172.217.174.78: bytes=32 time=53ms TTL=112
Reply from 172.217.174.78: bytes=32 time=48ms TTL=112

Ping statistics for 172.217.174.78:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 48ms, Maximum = 80ms, Average = 58ms
```

Figure (01)

In Figure (01), we sent the destination URL like google.com and see the result of Received: 4 packets in given time Otherwise its result is request timeout. And below Ping 172.217.174.78 is Ip address to send request.

2)Nslookup: (Network Administration Command-line Tool)

It's used for querying the Domain Name System to obtain name or Ip address mapping information. Main use of Nslookup is for troubleshooting DNS related problem. It can be use in interactive and non-interactive mode.

- To find a record of domain (How many records?)

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>nslookup cloudns.net
Server:  UnKnown
Address:  192.168.43.1

Non-authoritative answer:
Name:     cloudns.net
Addresses: 2a00:1768:2001:46::1:1
           2a00:1768:6001:10::2:231
           46.166.142.62
           185.107.80.231
```

- To check NS record of domain (Name server for DNS Zone)

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>nslookup -type=ns cloudns.net
Server:  UnKnown
Address:  192.168.43.1

Non-authoritative answer:
cloudns.net      nameserver = dns2.cloudns.net
cloudns.net      nameserver = dns7.cloudns.net
cloudns.net      nameserver = pns1.cloudns.net
cloudns.net      nameserver = ns4.cloudns.net
cloudns.net      nameserver = pns4.cloudns.net
```

- To query the SOA record (Start of Authority Record)

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>nslookup -type=soa cloudns.net
Server: UnKnown
Address: 192.168.43.1

Non-authoritative answer:
cloudns.net
    primary name server = pns1.cloudns.net
    responsible mail addr = support.cloudns.net
    serial = 2020090501
    refresh = 7200 (2 hours)
    retry = 3600 (1 hour)
    expire = 1209600 (14 days)
    default TTL = 60 (1 min)
```

- To find the MX record responsible (Mail exchanger)

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>nslookup -type=mx cloudns.net
Server: UnKnown
Address: 192.168.43.1

Non-authoritative answer:
cloudns.net      MX preference = 10, mail exchanger = ALT4.ASPMX.L.GOOGLE.COM
cloudns.net      MX preference = 5, mail exchanger = ALT1.ASPMX.L.GOOGLE.COM
cloudns.net      MX preference = 5, mail exchanger = ALT2.ASPMX.L.GOOGLE.COM
cloudns.net      MX preference = 1, mail exchanger = ASPMX.L.GOOGLE.COM
cloudns.net      MX preference = 10, mail exchanger = ALT3.ASPMX.L.GOOGLE.COM
```

- To find all available DNS record

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>nslookup -type=any cloudns.net
Server:  UnKnown
Address:  192.168.43.1

Non-authoritative answer:
cloudns.net      internet address = 185.107.80.231
cloudns.net      internet address = 46.166.142.62
cloudns.net      AAAA IPv6 address = 2a00:1768:2001:46::1:1
cloudns.net      AAAA IPv6 address = 2a00:1768:6001:10::2:231
cloudns.net      MX preference = 5, mail exchanger = ALT2.ASPMX.L.GOOGLE.COM
cloudns.net      MX preference = 1, mail exchanger = ASPMX.L.GOOGLE.COM
cloudns.net      MX preference = 10, mail exchanger = ALT3.ASPMX.L.GOOGLE.COM
cloudns.net      MX preference = 10, mail exchanger = ALT4.ASPMX.L.GOOGLE.COM
cloudns.net      MX preference = 5, mail exchanger = ALT1.ASPMX.L.GOOGLE.COM
cloudns.net      nameserver = ns4.cloudns.net
cloudns.net      nameserver = pns4.cloudns.net
cloudns.net      nameserver = dns2.cloudns.net
cloudns.net      nameserver = dns7.cloudns.net
cloudns.net      nameserver = pns1.cloudns.net
```

- To check the specific DNS server

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>nslookup cloudns.net ns1.cloudns.net
(root)
    primary name server = undefined.cloudns.net
    responsible mail addr = support.cloudns.net
    serial  = 2020041401
    refresh = 7200 (2 hours)
    retry   = 1800 (30 mins)
    expire  = 1209600 (14 days)
    default TTL = 0 (0 secs)
Server:  UnKnown
Address:  2a00:1768:1001:9::1

Name:     cloudns.net
Addresses: 2a00:1768:2001:46::1:1
           2a00:1768:6001:10::2:231
           185.107.80.231
           46.166.142.62
```

- To check reverse DNS lookup

```
C:\WINDOWS\system32\cmd.exe - nslookup
C:\Users\ARJUN VANKANI>nslookup 34.218.62.116
Server: UnKnown
Address: 192.168.43.1

Name: ec2-34-218-62-116.us-west-2.compute.amazonaws.com
Address: 34.218.62.116

C:\Users\ARJUN VANKANI>nslookup 185.136.96.96
Server: UnKnown
Address: 192.168.43.1

Name: pns21.cloudns.net
Address: 185.136.96.96

C:\Users\ARJUN VANKANI>nslookup
Default Server: UnKnown
Address: 192.168.43.1

> geeksforgeeks.org
Server: UnKnown
Address: 192.168.43.1

Non-authoritative answer:
Name: geeksforgeeks.org
Address: 34.218.62.116
```

- To change the port number for the Connection

```
C:\WINDOWS\system32\cmd.exe
C:\Users\ARJUN VANKANI>nslookup -port=56 cloudns.net
Server: UnKnown
Address: 192.168.43.1

Non-authoritative answer:
Name: cloudns.net
Addresses: 2a00:1768:2001:46::1:1
           2a00:1768:6001:10::2:231
           46.166.142.62
           185.107.80.231
```

- To change the timeout interval for reply

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>nslookup -timeout=10 google.com
Server:  UnKnown
Address:  192.168.43.1

Non-authoritative answer:
Name:     google.com
Addresses: 2404:6800:4009:815::200e
          216.58.199.174
```

- To enable debug mode

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>nslookup -debug cloudns.net
-----
Got answer:
HEADER:
    opcode = QUERY, id = 1, rcode = NXDOMAIN
    header flags:  response, want recursion, recursion avail.
    questions = 1,  answers = 0,  authority records = 0,  additional = 0

    QUESTIONS:
        1.43.168.192.in-addr.arpa, type = PTR, class = IN

-----
Server:  UnKnown
Address:  192.168.43.1

-----
Got answer:
HEADER:
    opcode = QUERY, id = 2, rcode = NOERROR
    header flags:  response, want recursion, recursion avail.
    questions = 1,  answers = 2,  authority records = 0,  additional = 0

    QUESTIONS:
        cloudns.net, type = A, class = IN
    ANSWERS:
        -> cloudns.net
            internet address = 185.107.80.231
            ttl = 1800 (30 mins)
        -> cloudns.net
            internet address = 46.166.142.62
            ttl = 1800 (30 mins)

-----
Non-authoritative answer:
-----
Got answer:
HEADER:
    opcode = QUERY, id = 3, rcode = NOERROR
    header flags:  response, want recursion, recursion avail.
    questions = 1,  answers = 2,  authority records = 0,  additional = 0

    QUESTIONS:
        cloudns.net, type = AAAA, class = IN
    ANSWERS:
        -> cloudns.net
            AAAA IPv6 address = 2a00:1768:6001:10::2:231
            ttl = 1800 (30 mins)
        -> cloudns.net
            AAAA IPv6 address = 2a00:1768:2001:46::1:1
```

3)Traceroute (TRACERT)

- Traceroute and Tracert are computer network diagnostic commands for displaying possible(paths) and measuring transit delays of packets across an (IP) network.
- This command is a fascinating windows command to use, and curious to see the path of our internet traffic takes to get from our browser to remote system.

This provide Three information

- 1) Number of hops before getting to the destination
 - 2) Time it takes to get to each hop
 - 3) The IP and sometimes the name of hop
- ➔ (*) represent Time out -> that's why change path.

```
C:\WINDOWS\system32\cmd.exe

C:\Users\ARJUN VANKANI>tracert google.com

Tracing route to google.com [2404:6800:4009:805::200e]
over a maximum of 30 hops:

  1  532 ms    2 ms      2 ms    2405:204:8002:c9ff::14
  2    *        *          *      Request timed out.
  3   36 ms    35 ms     38 ms    2405:200:320:b::3
  4   40 ms    32 ms     52 ms    2405:200:801:b00::a9a
  5   34 ms    26 ms     27 ms    2405:200:801:b00::ab2
  6   57 ms    46 ms     48 ms    2405:200:801:200::31b
  7   75 ms    37 ms     46 ms    2405:200:802:760::1
  8   76 ms    46 ms     36 ms    2405:200:802:760::8
  9    *        *          *      Request timed out.
 10   74 ms    48 ms     56 ms    2001:4860:1:1::aac
 11    *        *          *      Request timed out.
 12   63 ms    42 ms     38 ms    2001:4860:0:1::1314
 13   97 ms    51 ms     45 ms    2001:4860:0:1::22c7
 14   71 ms    53 ms     75 ms    bom05s09-in-x0e.1e100.net [2404:6800:4009:805::200e]

Trace complete.
```


4) Host

It is used for DNS lookup operation in Linux, It finds particular domain name or IP address etc..

```
admin1@arjun: ~
File Edit View Search Terminal Help
admin1@arjun:~$ host
Usage: host [-adtlrTvVw] [-c class] [-N ndots] [-t type] [-W time]
        [-R number] [-m flag] hostname [server]
-a is equivalent to -v -t ANY
-c specifies query class for non-IN data
-C compares SOA records on authoritative nameservers
-d is equivalent to -v
-i IP6.INT reverse lookups
-l lists all hosts in a domain, using AXFR
-m set memory debugging flag (trace|record|usage)
-N changes the number of dots allowed before root lookup is done
-r disables recursive processing
-R specifies number of retries for UDP packets
-s a SERVFAIL response should stop query
-t specifies the query type
-T enables TCP/IP mode
-v enables verbose output
-V print version number and exit
-w specifies to wait forever for a reply
-W specifies how long to wait for a reply
-4 use IPv4 query transport only
-6 use IPv6 query transport only
admin1@arjun:~$ host google.com
google.com has address 172.217.174.78
google.com has IPv6 address 2404:6800:4009:815::200e
google.com mail is handled by 40 alt3.aspmx.l.google.com.
google.com mail is handled by 20 alt1.aspmx.l.google.com.
google.com mail is handled by 50 alt4.aspmx.l.google.com.
google.com mail is handled by 10 aspmx.l.google.com.
google.com mail is handled by 30 alt2.aspmx.l.google.com.
admin1@arjun:~$
```

- -v used for verbose output

```
admin1@arjun: ~
File Edit View Search Terminal Help
google.com mail is handled by 30 alt2.aspmx.l.google.com.
admin1@arjun:~$ host -v google.com
Trying "google.com"
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 8359
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;google.com.                IN      A

;; ANSWER SECTION:
google.com.                222     IN      A      172.217.174.78

Received 44 bytes from 127.0.0.53#53 in 70 ms
Trying "google.com"
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 4970
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;google.com.                IN      AAAA

;; ANSWER SECTION:
google.com.                120     IN      AAAA    2404:6800:4009:815::200e

Received 56 bytes from 127.0.0.53#53 in 0 ms
Trying "google.com"
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 15948
;; flags: qr rd ra; QUERY: 1, ANSWER: 5, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;google.com.                IN      MX

;; ANSWER SECTION:
google.com.                140     IN      MX      40 alt3.aspmx.l.google.com.
google.com.                140     IN      MX      20 alt1.aspmx.l.google.com.
google.com.                140     IN      MX      50 alt4.aspmx.l.google.com.
google.com.                140     IN      MX      10 aspmx.l.google.com.
google.com.                140     IN      MX      30 alt2.aspmx.l.google.com.

Received 136 bytes from 127.0.0.53#53 in 0 ms
admin1@arjun:~$
```

```

admin1@arjun: ~
File Edit View Search Terminal Help

admin1@arjun:~$ host -t ns google.com
google.com name server ns4.google.com.
google.com name server ns2.google.com.
google.com name server ns3.google.com.
google.com name server ns1.google.com.
admin1@arjun:~$ host -t soa google.com
google.com has SOA record ns1.google.com. dns-admin.google.com. 330353109 900 90
0 1800 60
admin1@arjun:~$ host -t txt google.com
google.com descriptive text "docuSign=05958488-4752-4ef2-95eb-aa7ba8a3bd0e"
google.com descriptive text "facebook-domain-verification=22rm551cu4k0ab0bxsw536
tlds4h95"
google.com descriptive text "v=spf1 include:_spf.google.com ~all"
google.com descriptive text "globalsign-smime-dv=CDYX+XFHUw2wml6/Gb8+59Bsh31KzUr
6c1l2BPvqKX8="
google.com descriptive text "docuSign=1b0a6754-49b1-4db5-8540-d2c12664b289"
admin1@arjun:~$ host -C txt google.com
^Z
[1]+  Stopped                  host -C txt google.com
admin1@arjun:~$ host -C google.com
Nameserver 216.239.32.10:
    google.com has SOA record ns1.google.com. dns-admin.google.com. 33035310
9 900 900 1800 60
Nameserver 216.239.34.10:
    google.com has SOA record ns1.google.com. dns-admin.google.com. 33035310
9 900 900 1800 60
Nameserver 216.239.36.10:
    google.com has SOA record ns1.google.com. dns-admin.google.com. 33035310
9 900 900 1800 60
Nameserver 216.239.38.10:
    google.com has SOA record ns1.google.com. dns-admin.google.com. 33035310
9 900 900 1800 60
admin1@arjun:~$ host -R 3 google.com
google.com has address 172.217.174.78
google.com has IPv6 address 2404:6800:4009:807::200e
google.com mail is handled by 50 alt4.aspmx.l.google.com.
google.com mail is handled by 30 alt2.aspmx.l.google.com.
google.com mail is handled by 20 alt1.aspmx.l.google.com.
google.com mail is handled by 10 aspmx.l.google.com.
google.com mail is handled by 40 alt3.aspmx.l.google.com.
admin1@arjun:~$ host -l google.com
;; communications error to 127.0.0.53#53: end of file
;; communications error to 127.0.0.53#53: end of file
admin1@arjun:~$

```

- -t is used for specific type of query
- -t SOA is for record
- -t txt used for print txt record
- -c used for, in order to compare the SOA records on authoritative nameservers
- -r used for retries entry and try fails
- -l for list all hosts in domain

5) Netstat (Network Statistics)

- Netstat command displays various network related information such as network connections, routing tables, interface statistics, masquerade connections, multicast memberships etc.

```

C:\WINDOWS\system32\cmd.exe
C:\Users\ARJUN VANKANI>netstat

Active Connections

Proto Local Address          Foreign Address         State
TCP    192.168.43.201:14743    52.139.250.253:https    ESTABLISHED
TCP    192.168.43.201:15210    40.119.211.203:https    ESTABLISHED
TCP    192.168.43.201:15379    52.114.14.120:https     ESTABLISHED
TCP    192.168.43.201:15541    52.114.14.150:https     ESTABLISHED
TCP    192.168.43.201:30478    161.69.226.19:https     ESTABLISHED
TCP    192.168.43.201:30498    600:https              TIME_WAIT
TCP    192.168.43.201:30501    600:https              TIME_WAIT
TCP    192.168.43.201:30503    52.114.6.174:https      TIME_WAIT
TCP    192.168.43.201:30504    8:https                TIME_WAIT
TCP    192.168.43.201:30505    ec2-18-139-231-224:https TIME_WAIT
TCP    192.168.43.201:30511    600:https              TIME_WAIT
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30524 [2620:1ec:c11::200]:https TIME_WAIT
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30544 [2620:1ec:42::132]:https TIME_WAIT
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30548 [2620:1ec:c11::200]:https TIME_WAIT
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30549 [2620:1ec:c11::200]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30552 [2405:200:1609:1731::312c:c09a]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30556 [2405:200:1609:1731::312c:7057]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30557 [2405:200:1609:1731::312c:c09a]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30563 [2405:200:1609:1731::312c:c0b1]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30564 [2405:200:1609:1731::312c:c0b1]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30565 [2405:200:1609:1731::312c:c0b1]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30566 [2405:200:1609:1731::312c:c0b1]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30567 [2405:200:1609:1731::312c:c0b1]:https ESTABLISHED
TCP    [2405:204:8002:c9ff:28ac:f94b:2684:b895]:30568 [2405:200:1609:1731::312c:c0b1]:https ESTABLISHED

```

- -a for list out all connection-> to show listening and non-listening socket
- -at for list out TCP port
- -au for list out UDP port
- -l list only listening port
- -lt for TCP listening and -lu for UDP listening

6)Arp (Address Resolution Protocol)

- Using the ARP command allows you to display and modify the Address Resolution Protocol (ARP) cache.
- An ARP cache is a simple mapping of IP addresses to MAC addresses. Each time a computer's TCP-Ip stack uses ARP to determine MAC address for an IP address, it records the mapping in the ARP cache so that future ARP lookups go faster.

```
C:\WINDOWS\system32\cmd.exe
ARP: bad argument: google.com

C:\Users\ARJUN VANKANI>arp -a

Interface: 192.168.56.1 --- 0x2
    Internet Address      Physical Address      Type
    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

Interface: 169.254.183.78 --- 0x4
    Internet Address      Physical Address      Type
    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

Interface: 192.168.43.201 --- 0x28
    Internet Address      Physical Address      Type
    192.168.43.1          ce-36-57-57-30-cd    dynamic
    192.168.43.255        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
    239.255.102.18        01-00-5e-7f-66-12    static
    239.255.255.250       01-00-5e-7f-ff-fa    static
    255.255.255.255       ff-ff-ff-ff-ff-ff    static
```

7) Ifconfig / Ipconfig

- Ipconfig in windows system used for gathering information about all IPv4 / IPv6 address and all connection given below.

```
C:\WINDOWS\system32\cmd.exe
*** UnKnown can't find c: Non-existent domain

C:\Users\ARJUN VANKANI>ipconfig

Windows IP Configuration

Ethernet adapter Npcap Loopback Adapter:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::ac3a:3361:63fc:b74e%4
    Autoconfiguration IPv4 Address. . : 169.254.183.78
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 

Wireless LAN adapter Local Area Connection* 3:

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

Wireless LAN adapter Local Area Connection* 4:

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

Ethernet adapter VirtualBox Host-Only Network #2:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::59b8:df85:9602:fdd6%2
    IPv4 Address. . . . . : 192.168.56.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 

Wireless LAN adapter Wi-Fi:

    Connection-specific DNS Suffix  . : 
    IPv6 Address. . . . . : 2405:204:8002:c9ff:f125:edc1:70ac:a608
    Temporary IPv6 Address. . . . . : 2405:204:8002:c9ff:28ac:f94b:2684:b895
    Link-local IPv6 Address . . . . . : fe80::f125:edc1:70ac:a608%40
    IPv4 Address. . . . . : 192.168.43.201
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : fe80::cc36:57ff:fe57:30cd%40
                                192.168.43.1
```

Another indispensable and frequently used utility that is used for finding network information about your local machine-like IP addresses, DNS addresses etc.

1)Ipconfig/all -> display all network setup

2)Ipconfig/release -> release IP address

3)Ipconfig/renew -> renew ip address

4)Ipconfig/? -> shows help

5)Ipconfig/flushdns -> flush the dns cache

- **Assoc** is used for **Fix file associations**
- **Powercfg** -> **POWER configuration**
- **Systeminfo** -> **gives system information**
- **Tasklist** -> **all list out task running on our pc**
- **Taskkill** -> **kill or stop process.**
- **Cipher** -> **It used without any switches to quickly ascertain which files and folders in a given directory are encrypted.**