

# 4/7/25 Study of Various Network Commands in Linux and windows

Aim: Study of various network commands used in Linux and windows.

## Basic Networking Commands:

### 1)arp-a:

ARP is a short form of address protocol. It will show the IP address of your computer along with the IP address and MAC address of your router.

#### Output:

Interface:	172.16.75.69	--0x5	Type
Internet Address		physical Address	dynamic
172.16.72.1		7C-5A-TC-CF-be-41	dynamic
172.16.75.49		4C-82-A9-78-8C-3d	dynamic
172.16.75.49		4C-82-A9-78-8e-db	dynamic

### 2) hostname:

This is the simplest of all TCP/IP commands. It simply displays the name of your computer.

KS03-69

### 3) ipconfig/all:

This command helps display detailed configuration information about your TCP/IP connection including Route, Gateway, DNS, DFLP, and type of Ethernet.

#### Output:

Windows IP Configuration

Host Name :

KS03

Primary DNS Suffix :

NODE Type :

Hybrid

problems with  
IP address [c]

Machine name

routes : about

5.2

Established

Established

TIME\_WAIT

To perform  
display IP

particular computer  
NS server of  
works : internet

### 7) Path Ping:

It is basically a combination of the ping and  
Traceroute command. Path Ping shows route to the destination.

#### Output:

Pathping [-g host-list] [-h maximum hops]  
[-P keepalive] [-q number-of-waitms] [-w timeout]  
[-4] [-6] Target-name

### 8) Ping:

It is the best way to test connectivity between  
two nodes. Pings use ICMP to communicate. If other  
drives

#### Output:

Ping [-t] [-c] [-n count] [-l size] [-f] [-T TIC]  
[-v count] [-s count] [-j host-list] [-k host-list]  
[-w timeout] [-R] [-S Saddr]

## 9) ~~Network~~ Linux networking commands

### (1) Show IP Address

P.P address show

Wih 250  
Enet 172.16.75.17/L2

int 6 fe80::2726:b045 abaf:afC5164

### (2) Add an IP address

\$ sudo ip address add 172.168.1.2 64/24 dev  
RINetwerk anrufen: file /var/run

(3) Delete on IP  
\$ sudo ip address del 172.168.1.2 64/24  
dev wlp5g

(4) Bring interface up  
\$ sudo ip link set wlp5g up

(5) Bring interface down  
\$ sudo ip link set wlp5g down

(6) Enable promiscuous mode.  
\$ sudo ip link set wlp5g promisc

(7) Add default route  
\$ sudo ip route add 192.168.1.254  
via wlp5g

8) Add a route to 192.168.1.0/24

Gateway 192.168.1.254

\$ sudo ip route add 192.168.1.0/24 via  
192.168.1.1.254

9) Add a route to 192.168.0/24 via interface  
wlp5g

10) Directly route between two ip 10.10.0.2-4  
Route 9st 10.10.1.4

11) Delete route  
192.168.1

\$ sudo  
192.168.1

12) IP config  
\$ ifconfig

13) Which  
of the  
destinat  
ping

2) Which  
by o

5) whi  
mg

4) cu  
u

64/24 dev

68.1.238/24  
n weig

49

1250 down

168.1.254

via

Machine

2-4 9

- 1) Delete route for 192.168.10/24 via gateway  
192.168.1.254  
\$ Sudo ip route del 192.168.1.6/14 via  
192.168.1.214

2) ~~if config~~

~~\$ if config~~

Student observation

- 1) Which command will be given the details of the route taken by a packet to reach its destination  
Ping (host-name or IP)

- 2) Which command will give the details of hosts taken by a packet to reach its destination.  
Tracert (host-name or IP)

- 3) Which command displays the IP configuration of your machine  
ipconfig show

- 4) Which command displays the TCP port status in your machine?  
netstat -t

28  
5) Write the modify the IP configuration in a Linux  
we Sudo if Config <interface> <IP> > network <mod  
or Sudo if add in <IP> / <prefix> dev <interface>

Result:

The Study of various windows and network command  
are executed successfully