

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-1C-CF-be-41 dynamic
172.16.75.49			4C-82-A9-78-8C-3D dynamic
172.16.75.49			4C-82-A9-78-8E-d6 dynamic

2) host name:

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

KSO3-69

3) ipconfig/all:

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

Output:

Windows IP configuration  
Host Name : KSO3  
Primary DNS Suffix :  
Node Type : Hybrid



1) Path Ping:

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

Output:

```
pathping [-g host-list] [-h maximum hops]
[-P packet] [-q num-queries] [-w Timeout]
[-4] [-6] Target-name
```

2) Ping:

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

Output:

```
Ping [-t] [-c] [-n count] [-size] [-f] [-(TTL)]
[-r count] [-s count] [-j host-list] [-k host-list]
[-w timeout] [-R] [-S sigmask]
```

~~1) Show~~ Linux networking commands

(1) Show IP Address

P.P address show

with 250

inet 172.16.75.17/24

inet 6 fe80::2726:b045:aba6:aFC5164

(2) Add on IP address



\$ Sudo ip address add 172.168.1.264/24 der  
RTNetwork anrun: file Tomish

(3) Delete on IP  
\$ Sudo ip address del 172.168.1.258/24  
der wil pig

(4) Bring interface up  
\$ Sudo ip link set eth450 up

(5) Bring interface down  
\$ Sudo ip link set eth450 down

(6) Enable promisc mode.  
\$ Sudo ip link set eth450 promisc on

(7) Add default route  
\$ Sudo ip address add 192.168.1.254  
124 - der wil 250

8) Add a route to 192.168.1.0/24

getaway 192.168.1.254

\$ Sudo ip route add 192.168.1.0/24 via  
192.168.1.1.254

9) Add a route to 192.151.0/24 reachable  
on device wil 250

10) Display route between to ip 10.10.2.4  
route get 10.10.1.4

11) Delete route  
192.168

\$ Sudo  
192.168

120 ~~if config~~  
\$ if co

1) 1) which  
of the  
destin  
ping

2) which  
by o

3) whi  
mo

4) 'w  
u



64/24 den

68.1.234/24  
n ul p.s

up

1250 down

168.1.254

Via

reachable

2-4 9

- 11) Delte route for 192.168.10/24 via gateway  
192.168.1.254  
\$ suke ip route delte 192.168.1.0/24 via  
192.168.1.214

120 ~~3F Config~~

\$ ~~if Config~~

Student Observation

- 1) a) Which Command will be given the details  
of the route taken by a packet to reach it's  
destination  
Ping < host name or IP >
- 2) Which Command will give the details of hops taken  
by a packet to reach it's destination.  
Trace Route < host-name or IP >
- 3) Which Command displays the ip configuration of your  
machine  
ip addr show
- 4) Which Command displays the TCP port status in  
your machine?  
netstat -t



5) Write the modify the IP configuration in a Linux  
we sudo if config <interface> <IP> network <mask>  
or sudo ifconfig <IP> <mask> dev <interface>

Result:

The Study of various windows and network commands  
are executed successfully