

AIM:-

Study of various network commands used in Linux and windows

Basic Networking commands:

i) arp -a

Output:-

Interface : 192.168.1 <-- 8.98 --- 0xb

Internet Address

Physical Address

Type

192.168.1

4c-5a-1c-cf-be-4b

dynamic

192.168.10.57

d8-bb-cf-c5-cd-76

dynamic

Interface : 192.168.58.0 &lt;-- 0xf

Internet Address

Physical Address

Type

192.168.58.255

ff-ff-ff-ff-ff-ff

static

224.0.0.2

01-00-5e-00-00-02

static

ii) hostname

o: DESKTOP-1NOI8LT

iii) ipconfig /all

o: windows IP configuration

~~Host name~~: DESKTOP-1NOI8LT  
~~Primary Dns Suffix~~: Mixed

~~Node Type~~

Enabled: No

~~IP Routing~~

Enabled: No

~~WINS Proxy~~

Enabled: No

iv) nbtstat -a

NBTSTAT [-a RemoteName] [-A IP address] [-c] [-n]  
 [-r] [-R] [-RR] [-s] [-S] [-interval]

-a (adapter status) lists the remote machine's name  
 table given the name

v) netstat

### Active Connections

Proto	Local Address	Foreign Address	State
TCP	172.16.8.98:49831	a-0008:https	CLOSE_WAIT
TCP	172.16.8.98:49833	a-0003:https	ESTABLISHED

vi) nslookup www.google.com

O: Server: Unknown

Address: 172.16.8.1

Non authoritative answer:

Name: www.google.com

Address: 24.104.68.001 4007:81e :2004

172.280.183.228

vii) pathping

Usage: pathping [-g host-list] [-t maximum\_hops] [-a address]  
[-p period] [-q num\_queries] [-w timeout]  
[-4] [-6] target-name

viii) ping www.facebook.com

O: Pinging star-mini.c1or.facebook.com [157.240.192.85]

with 32 bytes of data:

Reply from 157.240.192.85: bytes=32 time=8ms TTL=255

ix) route

O:- Manipulates network routing tables

ROUTE [-f] [-p] [-h -b] command [destination]

[-M mask] [-m netmask] [gateway] [METRIC metric]  
[-I interface]

-f Clears the routing tables of all gateway entries.

If this is used in conjunction with one of the commands, the tables are cleared prior to running the command.

LINUX Network all kind of basic & higher level  
commands used in Linux

i) ip

D: ip [OPTIONS] OBJECT & COMMAND | help given about a p  
ip [-force] -batch filename  
where OBJECT := { link | address | interface | route }  
OPTIONS := { -v[ersion] | +s[tatistics] | -d[etailed] |  
-r[esolve] }

ii) ifconfig

enp2s0: flags=4163 <UP,BROADCAST,RUNNING,MULTICAST>  
mtu 1500

inet 192.168.1.98 netmask 255.255.252.0  
broadcast 192.168.1.255

inet6 fe80::b1bb:81e9:feec:e67b prefixlen 64  
scopeid 0x20<link>

ether 50:9a:ac:34:d4:cc brd 1000 mtu 1500  
queueing discipline pfifo\_fast status: up txqueuelen 1000 (ETHTOOL)

iii) mtr

mtr google.com

HOST

1. 192.168.1

2. static-48.229.249.49-lataide.co.in

Loss%	Packets			Pings		
	SNT	LAST	Avg	Bkt	Lat	Std
0.0%	191	0.2	0.2	0.1	0.9	0.0
0.0%	286	3.1	3.1	2.9	10.9	0.9

iv) ping

Usage: ping [-aAbBdDfhlNnOqrRUVV64] [-c count]  
[-i interval] [-I interface] [-m mark]

[-M pmtu-dis-option] [-t prebad]

[-H host-name] [-a AbBdDfhlNnOqrRUVV] [-c count]

Usage: ping [-b [ -a AbBdDfhlNnOqrRUVV ] destination  
[-i interval] [-I interface] [-t timeout] [-T TOS]

Result:

Thus the study of various Network commands  
used in Linux and windows is successfully  
completed.

✓ 20/7

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def main():
    sniff = (iface="Wi-Fi", prn=packet_callback,
              filter="ip", store=0)
```

Q) which command is used to find the reachability of a host machine from your device?

A: ping <hostname or IP address>

Q: which command will be given the details of hops taken by a packet to reach its destination?

A: trace route <hostname or IP address>

Q: which command displays the ip configuration of your machine.

A: ifconfig

Q: which command displays the TCP port status in your machine?

A: netstat -tuln

Q: Write the modify the ip configuration on a Linux machine.

A: sudo ip addr add <new-ip-address>/<subnet-mask> dev <interface-name>

Result: Thus the program the study of