Computer Networks

Practical - 1

Aim : Study of various Network Command used windows

Basic Networking Commands :

① arp -a

Output :

Interface : 172.16.75.28 - - - 0x13

Internet address	Physical address	Type
172.16.72.1	7c-5a-1c-cf-be-41	dynami
172.16.72.133	4c-ae-a3-65-97-f3	dynami
172.16.72.195	4c-ae-a3-64-fc-50	dynamic
224.0.0.2	01-00-5e-00-00-02	Static
224.0.0.22	01-00-5e-00-00-16	Static
239.0.0.8	01-00-5e-00-00-08	Static

② hostname

O/P : DESKTOP - C01BH7D

③ ipconfig /all :

O/P :

Windows IP Configuration

HOST NAME . . . . : DESKTOP - C01BH7D
primary Dns Suffix . . . ;
IP Routing Enabled. . . . . :No
Node Type . . . . ; Hybrid
WINS Proxy Enabled . . . . . : No

Ethernet adapter Ethernet 3:

Media State . . . . : Media disconnected

Connection-Specific DNS Suffix :

Description . . . . : Intel(R) Etheral Connection (17)

Physical Address . . . . : 20-08-10-86-45-61

DHCP Enabled . . . . : Yes

Auto configuration Enabled . . . . : Yes

④ hbt Stat -a

O/P :

hbt Stat - a DESKTOP - C01BH7D

Ethernet 3:

Node IP Address : [0.0.0.0] Scope Id : []

Host not Found.

Between Network Connection 2

Node IP Address : [0.0.0] Scope Id : []

Host not Found.

⑤ net Stat

O/P :

Active Connections

Proto	Local Address	Forign Address	State
TCP	127.0.0.1:49678	DESKTOP-C0184 7D:4949	Establi:
TCP	127.0.0.1:49679	DESKTOP-C01BH7D: 49678	Establish
TCP	12:16.75.28.62144	20.42.73.26	Clo le
TCP	172.16.75.28.62156	223-11-215-25	Close

⑥ nslookup www. google. com

O/P : Server : unknown

Address : 172.16.72.1

non -

authontative answer :

Name : www. google. Com

Address : 2404 : 6800 : 4067 : ele : 2004

142. 250 -183 . 228

⑦ Pathping -g DESTOP - COIBH7D

O/P :

Tracing route to 172.16.75.28 over maximum of 30 hops

0   172.16.75. 28

1   172.16.75. 28

Computing Statistics for 25 seconds....

		Source to Here	This Node / Link
Hop	RIT	LOST / Sent = Pct	Lost /Sent =Pa
0			Desktop - COIBH7O [172.16. 75. 2 8] 0/100 = 0%
1	oms	0/100 = 0.1	0/100 = 0% Desktop - COIBH7D [172.16.75.28]

Trace Complete

⑧ Ping www. rajalakshmi.edu.in

Ping www. rajalakshmi.edu.in [162.255.19.253]
with 32 bytes of data:

Reply from 162.255.19.253: bytes=32
time=248 ms TTL=55

Reply from 162.255.119.253: bytes=32 time=
312 ms

Reply from 162.255.19.253: bytes=32 time=
254 m

Ping Statistics from 162.255.119.253:
Packets: Sent =4, Received=4,
Lost = 0 (0.1. Loss)
Approximate round trip times in milli-seconds
minimum = 243 ms, Maximum = 317 m

⑨ Route Print 157 *
o/p :
Internet List

18. ... 20 88 1068 (5 61 .... Intel (R)
I 219-LM

18.... 42.82 99 79 id a5 ...... Microsoft wid
Direct
Virtual Adapter.

IPv4 Route table

Active Routes:
No he
IPv6 Route Table

For linux

1. ip

o/p:

usage : ip [options] object {command} {help}
       ip [-force] - batch filename
where object := {link |address| addr|abel|
route |rule| height | btable |tunnel| tuntap|
maddress |mroute| mrule | monitor |
x from |netns |2tp| fol | mac | tcp -metrior|
token| netconf | ila |vrf }

→ ip route get 127-0.0.118

o/p

local 127.0.0.1 dev to src 127.0.0.r
1000 cache < local >

2. mtr www. google - com

O/P

My trace route [v0.87]
local host. local domain (0.0.0.0)

Host	Packets				Pings			
	Loss %	Snt	Last		Avg	Best	Wrst	
1.172.16.8.1	0.0%	5.2	0.3		0.4	0.2	5.5	

3. tcp dump - D

o/p:

1. enp2s0 [up, Running]
2. any (Pseudo-device that capture on all interface)
3. wlp3s0 [up]
4. Sluetooth (Bluetooth adapter number)
5. lo [Loopback].

4. ping google.com

o/p:

PING google.com (142.250.67.46)
56(84) bytes of data

64 bytes from maa05 12-in-f14-le100-net
(142.250.67.46)
icmp-seq=1 tu=120 time=2.39ms

64 bytes from maa05 12-in-f14-le100-net
(142.250.67.46)
icmp-seq=2 tl=120 time=2.0

-google.com ping statistics.

18 packets transmitted, 17 received, 5%.
packet loss, time 17076

rtt min/avg/max/mdev=2.245/5.74

5. >nmcli connection show

o/p:

Name	UUID	TYPE	Device
RECA4	bd76 219c-9ae6- -4cc4-b468- Cof4 7c56fdc7	802-11- wireless	wep350.

6. >nmcli connection add con-name <connection name>
if name <device-name>
↓enp1s0   Gopi

o/p:
Successfully added

7. >nmcli Connection delete Gopi

o/p:

    Successfully deleted.

8. >nmcli connection Show

    output:

Name	UUID	Type	Device
New 802.3- ethurnel Con. RECAH	25ff 109f- 370e-42dp- 904e-94 79ce	DO2-3- Cthenal	emp2s. wlp3?0.

Result:

    Thus, the study of values networks commands used in linux & windows was done successfully.