

Practical 1

Network Commands

Aim

Study of various Network commands used in Linux & windows

Basic Network Command :

1) arp - a

Interface : 172.16.8.87... 0x10

Internet address

Physical

Type

172.16.8.1

7c-5a-1c-cf-be-45

dynamic

172.16.8.38

38-60-77-3f-70-9a

dynamic

172.16.8.54

00-27-0e-03-ee-57

dynamic

239.255.255.250

01-00-5e-7f-fd-6e

static

2) host name

Desktop-LDM.VTDN

3) ipconfig /all

windows ip configuration:

Host name : Laptop-LDMVTDN

Primary Dns Suffix :

Node type : Hybrid

IP routing enabled : NO

WINS Proxy enabled : NO

4) nbtstat -a : displays protocol statistics and
current TCP/IP connection using NBT

NBTSTAT [-a Remote Name] [-A IP Address] [-c] [-n]
[-r] [-R] [-FR] [-g] [-s]

5) netstat :

Active Connections

Proto	Local Address	Foreign Address	State
TCP	172.16.8.87:50333	20.198.119.743:https	established
TCP	172.16.8.87:50705	123:HTTP	established
TCP	172.16.8.87:50794	a23-11-215-97:https	close-wait
TCP	172.16.8.87:50897	192.168.137.221:msob	Syn-Rec
TCP	172.16.8.87:50895		

6)
 default Server : Unknown
 Address : 172.16.8.1

Non-authoritative answer

Name : www.google.com

Addresses : 2404 : 6800 : 4007 : 81e : : 2004

142.250.183.228

7) Pathping :-

Usage : ping [-g host-list] [-h maximum-hops]
[-i address] [-p packet] [-q num-queries]
[-w timeout] [-4] [-6] target-name

8) Ping :-

Usage : ping [-t] [-a] [-ncount] [-isize] [-s]

E: TTL

[-v tos] [-i count] [-s count] [-j host-list]
[-k host-list] [-w timeout] [-R] [-s srcaddr]
[-c compartment] [-R] [-4] [-6] target-name

9) route : manipulates network tables.

ROUTE [-f] [-p] [-4|-6] Command [destination]
[mask netmask] [gateway] [metric metric]

Basic Network Commands: LINUX

1) ip

Usage: ip [options] [OBJECT] {command / help}

ip [-force] - batch filename

Where OBJECT := {link | address | addr label | route | rule | monitor | xfrm | netns | tcp | flow | netconf | flt | verify}

neigh table | tunnel | tuntap | mac | macvlan | vrf

rule | monitor | xfrm | netns | tcp | flow | netconf | flt | verify

tcp - netns | token | netconf | flt | verify

2) ifconfig

lo: flags = 73 <UP, LOOPBACK, RUNNING, SMITH>
65536

inet 127.0.0.1 netmask 255.0.0.0

inet 6:::1 prefixlen 128 scopeid 0 <host>

loop txqueuelen 1000 (local loop back)
rx packet 0 bytes 0 (0.0B)

Rx errors 0 dropped 0 overruns 0 ignored
Tx packets 0 bytes 0 (0.0%)
Tx errors 0 dropped 0 overruns 0 carrier
collisions

3) mib google.com

localhost.localdomain (0.0.0.0)

pingbit pattern : 0

pattern Range : 0 (0x00) - 255 (0xFF) <0x2arandom

Host

1 172.16.81

2 static - 41.229.249.49 - tataide.co.in

3 142.250.171.162

4 142.251.227.215

5 142.250.228.81

ping:

ping google.com (216.58.200.142) 56.484
bytes of data 64 bytes from m2a 05510-in f14

Student Observation

- 1) ping (hostname)
- 2) traceroute (hostname)
- 3) ipconfig
- 4) ifconfig
- 5) netstat

Result: Thus the network basic commands
of windows & linux are studied