

20/7/24

CS19541 - Computer Networks

Date: _____

Practical-1

AIM :- Study of Various Network Commands used in Linux and Windows.

Basic Network Commands :- WINDOWS

1) arp - a

Interface : 172.16.8.87 - 0x10

Internet address	physical address	Type
172.16.8.1	7c-5a-1c-cf-bc-45	dynam
172.16.8.38	38-60-77-3f-70-9a	dynam
172.16.8.64	00-27-0c-13-ee-57	dynamic
239.255.255.250	01-00-5e-7f-ff-fa	Static

(2) hostname : DESKTOP-LDMVTDN

(3) ipconfig /all

windows ip configuration

Host name : DESKTOP-LDMVTDN

Primary Dns suffix

Node Type : Hybrid

IP routing enabled : No

WINS Proxy enabled : No

4) nbtstat - a : display protocol statistics and current TCP/IP connections using NBT

NBTSTAT [[-a RemoteName] [-A IPAddress] [-c] [-n] [-s] [-R] [-RR] [-S] [-s]]

5) netstat :

Active connections

Proto	Local Address	Foreign Address	State
TCP	172.16.8.87:50332	20.198.119.143:https	establish
TCP	172.16.8.87:50705	123:https	establish
TCP	172.16.8.87:50705		

6) nslookup :

default Server : unknown

Address : 172.16.8.1

non-authoritative answer

Name : www.google.com

Address : 2404:6800:4007:81e::2054

142.250.183.228

7) Pathping :

usage : pathping [-g host-list] [-h maximum-hops]

[-i address] [-P period] [-q num-queries]

[-w timeout] [-4] [-6] target-name

8) ping :

Usage: ping [-t] [-a] [-n count] [-s size] [-f] [-i

[-v Tos] [-r count] [-s count] [-j host-list]

[-k host-list] [-w timeout] [-R] [-S srcaddr]

[-c compartment] [-P] [-4] [-6] target-name

9) route: Manipulates network tables

ROUTE [-f] [-P] [-4] [-6] command [destination]

[mask netmask] [gateway] [metric metric]

[if interface]

Basic Network Commands : LINUX

1) ip

Usage: ip [OPTIONS] OBJECT {command | help}

ip [-force] -batch filename

where OBJECT := {link | address | addresslabel |
 route | rule | neigh | rtable | tunnel | tunnel
 maddress | mroute | mrule | monitor | xfrm |
 netns | l2tp | fov | macsec | tcp-metrics |
 token | netconf | ila | vxr }

2) mtr google.com

localhost, local domain (0.0.0.0)

ping Bit pattern: 0

pattern Range: 0 (0x00) - 255 (0xFF); 0 random
Host

1. 172.16.8.1

2. Static - 41.229.249.49 - tataidc.co.in

3. 142.250.191.162

4. 142.251.229.215

5. 142.250.228.81

6. maa05912 - in-f4.1e100.net

3) Ping:

PING google.com (216.58.200.142) 56(84) bytes
of data

64 bytes from maa05912-in-f4.1e100.net

icmp-seq=1 ttl=120 (216.58.200.142):
time: 3.31ms

64 bytes from maa05912-in-f4.1e100.net

(216.58.200.142):
icmp-seq=2 ttl=120 time: 3.51ms

Student Observation:

- 1) Ping <hostname>
- 2) traceroute <hostname>
- 3) ifconfig
- 4) ipconfig
- 5) Netstat

Result: 10/11/2024

Thus 10/11/2024 Network Basic commands of Windows & Linux are studied.