

Computer Network.

Practical - 1

Aim:

Study of various network commands used in Linux and Windows.

Windows.

1) arp - a

Interface : 172.16.8.87 X10

Internet address	physical address	Type
172.16.8.1	7C-5A-1C-df-be-45	dynamic
172.16.8.38	38-60-77-3f-70-9a	dynamic
...		
239.255.255.250	01-00-5e-7f-ff-fa	statics.

2. host name

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. nslookup

default server : unknown

Address : 172.16.8.1

Non-authoritative answer

Name : www.google.com

Address: 2404:6800:4007:818::2604
142' 250.183.228

5. pathping:

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

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

[-w timeout] [-A] [-B] target-name.

6. ping:

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

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

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

[-c compartment] [-P] [-A] [-B] target-name

7. route: manipulates network tables

ROUTE [-f] [-P] [-A] [-b] command [also the ip]

[mask network] [get/set] [metric metric]

[if interface]

Linux:

1. ip:

Usage: ip [option] object & command / help

ip [-force] - batch filename

where object = { link | address | address6 | route | rule |

neigh | table | tunnel | tuntap | maddress | mroute | mrule |

monitor | xfrm | rtm | l2tp | ipv6 | macsec | tcp-metrics |

token | netconf | ila | vrf }

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. Sfatc - 41 - 229. 249 - 49 - ~~abcd~~ c . co . in

3. 142.250.171.162

4. 142.251.227.215

5. 142.250.228.81

6. maa 05512 - 11 - 114. 12100. net

4) Ping

PING google.com (216.58.200.142) 56 bytes of data

64 bytes from 192.168.1.100: 10000.net

(216, 58, 200, 142) $i_{\text{comp}} - \text{seq} = 1$ $t + 1 = 120$ time: 3031ms

64 bytes from mac 05510 - in f14.0e100.net

$(216 \cdot 52 \cdot 200 \cdot 142)$ icmp-seq = 2 + 1 = 120 time: 351ms

Student observation:

- 1) Ping <hostname>
- 2) traceroute <hostname>
- 3) ip config
- 4) if config
- 5) Netstat.

Result:

Thus the basic commands are executed successfully.

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