STUDY OF VARIOUS NETWORK COMMANDS
USED IN LINUX AND WINDOWS

AIM:

To study various Network commands used in Linux & Windows

BASIC NETWORK COMMANDS:

1) arp-a : ARP is short form of address resolution protocol, It will show the IP address of your computer along with the IP address & MAC address of your router.

2) hostname : This is the simplest of all TCP/IP commands. It simply displays the name of your computer.

3) ipconfig/all : This command displays detailed configuration about your TCP/IP connection including Router, Gateway, DNS, and type to Ethernet adapter in your system.

4) nbtstat-a : This command helps solve problems with NetBIOS name resolution

5) netstat : displays variety of statistics about a computers active TCP/IP connections. It is a command line tool for monitoring network connections both incoming & outgoing as well as viewing routing tables interface statistics etc.

6) nslookup: It is a tool used to perform DNS looksup in Linux. It is used to display DNS details, such as the IP address of a particular computer

7) ping: command is the best way to test connectivity between two nodes

   # ping ip address (ping 4.2.2.2)

8) Route: Used to show the IP routing table. It is primarily used to setup static routes to specific host via an interface

SOME IMPORTANT LINUX NETWORKING COMMANDS:

* ip

Command can show address information, manipulate routing, plus display network various devices & tunnels.

   ip < options > < object > < command >

a) IP address show ⇒ ip address show

b) Assign an IP to an iterface ⇒ IP address add 192.168.1.254/24

c) Delete an IP load interface ⇒ IP address del 192.168.1.254/24 dev

d) Alter the status (online) ⟹ ip link set eth0 up.

e) Alter the status (offline) ⟹ ip link set eth0 down

f) Enabling promiscuous mode ⟹ ip link set eth0 promis on.

g) Add default route ⟹ ip route via 192.168.1.254

h) ip route add 192.168.1.0124 via 192.168.1.254

i) ip route delete 192.168.1.0124 via 192.168.1.254

★ ip config:

It is a staple in many sysadmin's tool belt for configuring & trouble shooting networks. It has been replaced by the ip command

★ mtr:

MTR is a program with a command line inter-face that serves as a network diagnostic & trouble shooting.

★ Ping:

Tool that verifies IP level connectivity to another TCP/IP computer echo request messages.

RESULT:

Thus the networking commands were executed successfully.

STUDENT OBSERVATION:

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

   ping <hostname or IP address>

   eg) ping google.com

2. Which command will be given the details of hops taken by a packet to reach its destination?

   LINUX/MAC:

   traceroute <hostname or IPY

   WINDOWS:

   tracert <hostname or IPY

3. Which command displays the ip configuration of your machine?

   LINUX/MAC:

   ifconfig (or) ip a

   WINDOWS:

   ipconfig