

## Experiment - 2

### { Data Communications and Computer Networks :->

1 Ping :-> The ping command is used to check the reachability to a networked device. The ping command sends a request over the network to a specific device.

2 NetStat :-> NetStat stands for network statistics, it is used for troubleshooting and configuration. It also serves as a monitoring tool for connections over the network. Both the incoming and outgoing connections, routing tables, port listening and usage statistics are the common uses of this command.

↓ To list all listening ports, using both TCP and UDP, use netstat -a.



(2) To list only TCP port connections

ARP : → ARP stands for Address Resolution Protocol (ARP) Cache, which contains one or more tables that are used to store IP addresses and their resolved Ethernet or Token Ring physical addresses

NBT Stat : → NbtStat is a utility that displays protocol statistics and current TCP/IP connections using NBT (Net BIOS over TCP/IP) which helps troubleshoot NetBIOS name resolution issues

The Net BIOS is an acronym for Network Basic input/output System

Hostname : → A hostname command is used to view a computer's hostname and domain name (DNS) (Domain Name Service), and to display or set a computer's hostname or domain name.

Tracert : → it is a network diagnostic tool used to track in real-time the pathway taken by a packet on an IP network from source to destination, reporting the IP addresses of all the routers it pinged in between.

Traceroute also records the time taken for each hop the packet makes during its route to the destination.

IP Config : → It stands for Internet Protocol configuration program of some computer operating systems that displays all



Current TCP / IP network configuration values and refreshes Dynamic Host Configuration protocol (DHCP) and Domain name system (DNS) settings.

NSlookup : → Name Server Lookup is a useful command for getting information from the DNS server. It is a network administration tool for querying the Domain Name System (DNS) to obtain the domain name or IP address mapping or any other specific DNS record.

Route : → The route command allows you to make manual entries into the networking routing tables. The route command distinguishes between routes to hosts and routes to networks by interpreting the network address of the desti-

- nation variable, which can be specified either by symbolic name or numeric addresses

Path ping: → Path ping Command is used to locate spots that have network latency and network loss.

Net diag: → It is a command line diagnostic tool that helps to isolate networking and connectivity problems by performing a series of tests to determine the state of your network client.

System info: → It displays a list of details about your OS, computer hardware and software components such as OS version, RAM status etc.