

NETWORKING LAB

BASIC COMMAND OF NETWORKING

1. Dig

Used for querying DNS servers to retrieve information about domain names, with options modifying its behavior and query_type specifying the type of DNS record to retrieve.

Syntax: dig [options] [domain] [query_type]

Example: dig www.jecc.ac.in

2. ping

Explanation: The ping command is a network utility tool used to test the reachability of a host (usually a computer or a server) on an Internet Protocol (IP) network. It also measures the round-trip time for messages sent from the originating host to a destination computer.

Syntax: ping [options] destination

Example: ping www.jecc.ac.in

3. wget Command:

Explanation: Command-line utility for downloading files from the web.

Syntax: wget [options] [URL]

Example: wget www.jecc.ac.in/file.zip

4. hostname Command:

Explanation: Display or set the system's host name.

Syntax:

- Display host name: hostname
- Set host name (temporary): hostname [new_hostname]

Example: hostname

5. nslookup Command:

Explanation: Network utility for querying DNS to obtain domain name or IP address information.

Syntax: nslookup [domain] [server]

Example: nslookup www.jecc.ac.in

6. host Command:

Explanation: DNS lookup utility for querying domain name information.

Syntax: host [options] [domain]

Example: host www.jecc.ac.in

7. traceroute Command:

Explanation: Utility for displaying the route that packets take to reach a network host.

Syntax: traceroute [options] [host]

Example: traceroute www.jecc.ac.in

8. ss Command:

Explanation: Command-line utility for displaying socket statistics, including details about network connections, routing tables, and more.

Syntax: ss [options]

Example: ss

ss -t (Displays TCP socket statistics)

9. nmcli Command:

Explanation: Command-line client for NetworkManager, used for managing network connections on Linux.

Syntax: nmcli [options] [commands]

Example: nmcli

10. ip n Command:

Explanation: Displays and manages ARP (Address Resolution Protocol) cache entries.

Syntax: ip n [options]

Example: ip n show (Shows ARP cache entries)

11. ip route Command:

Explanation: Displays and manipulates the IP routing table.

Syntax: ip route [options]

Example: ip route show (Shows the IP routing table)

12. ssh Command:

Explanation: Secure Shell command for securely connecting to a remote server.

Syntax: ssh [user@]hostname [command]

Example: ssh [username@remote-server.com](#)

13. ip link Command:

Explanation: Displays and manages network interfaces on a Linux system.

Syntax: ip link [subcommand] [options]

Example: ip link show (Shows information about network interfaces)

14. ip -s link Command:

Explanation: Displays detailed statistics for network interfaces, including packet and byte counts.

Syntax: ip -s link [interface]

Example: ip -s link show eth0 (Shows detailed statistics for the eth0 network interface)

15. ip monitor Command:

Explanation: Displays real-time monitoring information for network interfaces.

Syntax: ip monitor [options]

Example: ip monitor

16. ip help Command:

Explanation: Displays help and usage information for the ip command, providing details on available subcommands and options.

Syntax: ip help [object]

Example: ip help

17. ip neighbour Command:

Explanation: Displays and manages the neighbor table, showing the link-layer addresses (MAC addresses) associated with neighboring IP addresses.

Syntax: ip neighbour [options] [object]

Example: ip neighbour show (Displays the neighbor table, showing IP addresses and associated MAC addresses)

List the addresses of Jyothi Network:

- 1.Public IP/Static IP:
- 2.Private IP Range & Class Type of NW Lab:
- 3.Gateway IP:
- 4.DNS(Primary & Secondary):
- 5.Subnet Mask:
- 6.Firewall IP and Port No:
- 7.Topology used: