



NETWORKING COMMANDS

BY: MICHAEL
ILODIGWE

PING (TESTING NETWORK CONNECTIVITY)

- ping is a command-line utility used to test network connectivity between two devices.
- It sends ICMP echo request packets to a target host and waits for ICMP echo reply packets.
- Basic Syntax: ping [options] destination
- **Common Options:**
 - -c <count>: Specify the number of packets to send.
 - -i <interval>: Set the interval between sending packets.
 - -s <size>: Set the size of the ICMP packet.
 - -t <ttl>: Set the time to live (TTL) for the packets.
- **Examples:**
 - Ping a host: ping example.com
 - Specify packet count: ping -c 5 example.com
 - Set packet size: ping -s 1000 example.com

IFCONFIG (NETWORK INTERFACE CONFIGURATION)

- It displays information about active network interfaces and allows for interface configuration.
- Basic Syntax: `ifconfig [interface] [options]`
- **Common Options:**
 - `up`: Activate the specified interface.
 - `down`: Deactivate the specified interface.
 - `address <IP>`: Assign a specific IP address to the interface.
 - `netmask <mask>`: Set the subnet mask for the interface.
 - `promisc`: Enable promiscuous mode for the interface.
- **Examples:**
 - Display information for all interfaces: `ifconfig`
 - Activate interface: `ifconfig eth0 up`
 - Set IP address: `ifconfig eth0 address 192.168.1.100`

SSH (SECURE SHELL)

- It provides a secure, encrypted connection over an insecure network.
- Basic Syntax: `ssh [options] [user@]hostname`
- **Common Options:**
 - `-p <port>`: Specify the port to connect to.
 - `-i <identity_file>`: Use a specific private key file for authentication.
 - `-X`: Enable X11 forwarding.
 - `-N`: Do not execute any commands; useful for port forwarding.
- **Examples:**
 - Connect to a remote host: `ssh username@hostname`
 - Specify port: `ssh -p 2222 username@hostname`
 - Use specific private key: `ssh -i ~/.ssh/id_rsa username@hostname`

SCP (SECURE COPY)

- command-line utility for securely transferring files between hosts over a network.
- Basic Syntax: `scp [options] source destination`
- **Common Options:**
 - `-P <port>`: Specify the port to connect to.
 - `-r`: Recursively copy entire directories.
 - `-p`: Preserve modification times, access times, and modes from the original file.
 - `-v`: Verbose mode; display debugging messages.
- **Examples:**
 - Copy file to remote host: `scp file.txt username@hostname:/remote/directory/`
 - Copy file from remote host: `scp username@hostname:/remote/file.txt /local/directory/`
 - Copy directory recursively: `scp -r directory username@hostname:/remote/`

NETSTAT(STANDS FOR NETWORK STATISTICS)

- command-line tool used to display network connections, routing tables, interface statistics, masquerade connections, and multicast memberships
- Common Options:
 - -t or --tcp: Show TCP connections.
 - -u or --udp: Show UDP connections.
 - -n or --numeric: Show numerical addresses instead of resolving hostnames.
 - -a or --all: Show both listening and non-listening sockets.
 - -r or --route: Display routing table.
- **Examples:**
 - netstat -tuln: Show all listening TCP and UDP connections with numerical addresses.
 - netstat -rn: Display routing table with numerical addresses.