

MANAGE NETWORKING	
DESCRIPTION	COMMANDS / OPTIONS
show command to the link-local ip address	<p>ip [OPTIONS] OBJECT</p> <p>To view information about network interfaces and their associated IP addresses ip addr show</p> <p>To set the IP address of an interface ip addr add 192.168.1.100/24 dev eth0</p> <p>To delete an existing route from the routing table ip route delete 10.0.0.0/24 via 192.168.1.1 dev eth0</p> <p>To change the default gateway for outgoing traffic ip route add default via 192.168.1.254 dev eth0</p> <p>To bring an interface up ip link set eth0 up</p> <p>To change the MTU (maximum transmission unit) of a network interface ip link set eth0 mtu 1500</p> <p>To bring an interface up (activate it) ip link set eth0 up</p> <p>To monitor real-time network traffic on a specific interface watch -n 1 "ip -s link show eth0 grep 'RX bytes'"</p>
Options available in the IP	<p>Displaying Interface Errors ip -s link show eth0 grep -E 'errors dropped'</p> <p>To show all IP addresses associated with all network devices ip address</p> <p>To display link layer information ip link</p> <p>To show the statistics of the various network interfaces ip -s link</p> <p>To get information about a particular network interface ip -s link show (interface)</p> <p>To display the state of devices, addresses and routes continuously ip monitor</p> <p>To show routing information ip route</p> <p>To view the MAC address of the devices connected to your system ip neighbour</p>

DESCRIPTION	COMMANDS / OPTIONS
Test connectivity	<p>ping [options] host_or_IP_address</p> <ul style="list-style-type: none"> -c the number of packets to send to the server/host -s send light and heavy packet -i change wait time -q To only get the summary about the network -w to set a timeout for the PING -f To flood a network with PING packets for testing network performance -T Timestamps record the current time of an event over a network tsonly (timestamp only) tsandaddr (timestamp and address) tsprespec (timestamp pre-specified for multiple hosts)
To trace the network traffic path to reach a remote host through multiple routers	<p>tracert HostName</p>
To display socket statistics	<p>ss [options]</p> <ul style="list-style-type: none"> -n Show numbers instead of name for interface and port -t Show TCP sockets -u Show UDP sockets -l Show only listening sockets -a show all -p Show the process that uses the sockets -A inet Display active connections

DESCRIPTION	COMMANDS / OPTIONS
nmcli utility to create and edit connection files from the command line	status of all network interfaces. nmcli dev status List all connections. nmcli con show List the current settings for the connection nmcli con show name Add and name a new connection profile. nmcli con add con-name name Modify the connection name nmcli con mod con-name ipv4.method manual ipv4.method auto ipv4.addresses ipv4.gateway ipv4.dns ipv4.dns-search ipv4.ignore-auto-dns connection.autoconnect connection.id ens3 connection.interface-name ens3 Reload the configuration files, after manual file editing. nmcli con reload
	Activate the connection name nmcli con up name Disconnect the interface, which also deactivates the current connection. nmcli dev dis dev Delete the specified connection and its configuration file. nmcli con del name
Modify Network Configuration	/etc/NetworkManager/system-connections/ /run/NetworkManager/system-connections /usr/lib/NetworkManager/system-connections/

DESCRIPTION	COMMANDS / OPTIONS
Configure Hostnames	hostnamectl [OPTIONS...] COMMAND set-hostname NAME --options Static: Assigned by system admin and it is used to initialize the kernel hostname during boot time Dynamic or Transient: Assigned by mDNS server or DHCP server during run time. Pretty: It's a high-level hostname assigned by system admin or end-user set-icon-name NAME set-chassis NAME
Configure Name Resolution	configuration Files /etc/hosts To resolve the query /etc/nsswitch.conf /etc/resolv.conf To controls query is performed
Test DNS Name Resolution	Test DNS Name Resolution host classroom.example.com To test DNS server connectivity dig classroom.example.com To test the /etc/hosts file getent hosts classroom.example.com