CONFIGURING BASIC LAN INTERFACE USING IP COMMAND IN LINUX:

1. “ip” is one of the preferred network configuration tools which is part of iproute2 package to configure interfaces, routes, addresses and more.
2. To show the available network interfaces, “ ip link show <interface or leave it empty>“ can be used.
3. To assign static IP to any available interface, “sudo ip addr <ip/netmask> dev <interface>”
4. To see the IP assignment , “ip addr show <interface > “ can be used
5. To bring interface up (active) or down, “sudo ip link set <interface> <up/down> can be used
6. To add default gateway for the interface, “sudo ip route add default via <default gateway ip> dev <interface> “ can be used.
7. To list the routing table in router , “ip route show” can be used.
8. To ping particular interface from particular interface in the system, “ping <IP of dest interface> -I <interface>” can be used.
9. To keep the changes permanent for any interface, following can be done:

* Edit /etc/network/interfaces file using sudo nano in linux to have following:

auto <interface>

iface <interface> inet static address <ip> netmask <subnet mask> gateway <default gateway ip> dns-nameservers <comma separated list of dns servers IP>

* sudo systemcl restart networking to bring it to effect.

1. Use “ip neigh show” to view arp cache in the system
2. Use “ sudo ip -s -s neigh flush all” to delete the arp cache in the system.
3. To make an interface be a part of VLAN, use “sudo ip link add link eth0 name eth0.<tag> type vlan id <tag>
4. To delete an interface, “sudo ip link delete <interface>
5. To view VLAN configuration , “sudo ip -d link show”
6. To create virtual bridge or software switch, use “ sudo ip link add name br0 type bridge”
7. To attach any interface to created bridge, use “ sudo ip link set <interface> master <bridge name>