Networking Commands in Linux

$ ifconfig -- used to assign an address to a network interface and to configure or display the current network interface configuration information.

Example: $ ifconfig -- for display the current network interface configuration information

$ ifconfig eth0 172.16.25.125 netmask 255.255.255.252
for assign an IP address and netmask address

$ Ping -- used to check the network connectivity between host and server

This command takes as input the IP or the URL and sends a data packet to the specified address with the message "PING" and get a response from the server/host this time is recorded which is called latency.

First ping low latency means faster connection.

$ nslookup -- used for getting information from the DNS server. also used to troubleshoot DNS-related problems

$ host -- used for DNS (Domain Name System) lookup operations also used to find the IP address of a particular domain name or find out the domain name of a particular IP address

$ arp -e -- The arp stands for "Address Resolution Protocol", it makes changes in the kernel's table which contains the arp addresses

It communicates with the IPV4 networks and resolves the IP address of any other machine into the physical address whic is known as the MAC (Media Access Control) address.

$ hostname -- Hostname is used to display the System DNS Name and display or set its host name or NIS (Network information System) domain name.

$ netstate -- used for monitoring network connections both incoming and outgoing as well as viewing routing tables, interface statistic, etc.

netstate -a -- To show both listening and non-listening sockets

netstate -at -- To list all Tcp ports.

netstate -au -- To list all udp ports.

netstate -s -- To list the statistics for all ports

netstate -pt -- To display the PID and program names

$ ip -- Stands for internet protocol. used to show or manipulate, routing devices, and tunnels.
It is much more powerful with more functions and facilities than ifconfig command.

ip address -- used to show all ip addresses associated on all network devices.

ip address show eth0 -- used to show of an particular interface

ip link -- It is used to display link layer information.

ip -s link -- This link option when used with -s option to show the statistics of the various network

#ip rout -- This command helps you to see the rout packets your network will take as set in your table

ip a add (ip-add) dev eth0 -- This is used to assign an ip address to an interface.

ip a del (ip-add) dev eth0 -- This is used to delete an assigned ip address to an interface.

ip link set eth0 up -- This option enables a network interface.

ip link set eth0 down -- This option disables a network interface.

ip monitor -- This command can monitor and displays the state of devices, addresses and routes continuously.

$ ss -- used to show network statistics. ss is faster version of netstate command.
ss is essential for gathering network information and troubleshooting network issues.

$ dig -- dig command stands for Domain information Groper. basically used by network administrators. used for verifying and troubleshooting DNS problems and to perform DNS lookups. also used for retrieving information about DNS name servers.

$ ssh -- ssh stands for "secure shell" It is a protocol used to securely connect to a remote server/system. ssh is secure in the sense that it transfers the data in encrypted form between the host and the client.

ssh runs at TCP/IP port 22

Example: step1:# service ssh start.
step2:# ssh username@ipaddress.