Setting up the complete network interface by configuring services

Command   1   :ifconfig -a
Purpose of Command :display all the interfaces available
usage   :ifconfig -a

Sample Input/Output :

```
File  Edit  View  Search  Terminal  Help
abhishek@abhishek:~$ ifconfig -a
enp2s0: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
        ether 8c:16:45:4f:ff:f4  txqueuelen 1000  (Ethernet)
        RX packets 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
        inet 127.0.0.1  netmask 255.0.0.0
        inet6 ::1  prefixlen 128  scopeid 0x10<host>
        loop  txqueuelen 1000  (Local Loopback)
        RX packets 2305  bytes 227045 (227.0 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 2305  bytes 227045 (227.0 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

wlp3s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.0.109  netmask 255.255.255.0  broadcast 192.168.0.255
        inet6 fe80::95c6:f89e:e2e6:e3be  prefixlen 64  scopeid 0x20<link>
        ether 7c:76:35:1f:91:bd  txqueuelen 1000  (Ethernet)
        RX packets 25368  bytes 26103248 (26.1 MB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 14181  bytes 2124122 (2.1 MB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

Command   2   :ifup
Purpose of Command :Enabale a Network Interface
usage   :ifconfig *<interface name>* up #setting up network
                              or ifup *<networkname>*
Sample Input/Output **:**

```
abhishek@abhishek:~$ ifconfig enp2s0 up
```

Command   3   ifconfig
Purpose of Command :Assigning ip to a network interface
usage   :ifconfig *<interface name>* <ip address>
Sample Input/Output :

```
abhishek@abhishek:~$ ifconfig enp2s0 192.168.99.5
```

Set Default Gateway

Command   4   :route add default gw .
Purpose of Command :Set default gate way.
usage   :route add default gw *<ip addres*s>
Sample Input/Output :

```
abhishek@abhishek:~$ route add default gw 192.168.99.5
```

```
abhishek@abhishek:~$ route add -net 192.168.4.0/24 gw 192.168.4.1
```

Set DNS

Command   5   :
Purpose of Command :To set DNS server
usage   :echo "nameserver 1.1.1.1" > /etc/resolv.conf
Sample Input/Output :

```
abhishek@abhishek:~$ echo "nameserver 1.1.1.1" > /etc/resolv.conf
```

Command   6   : route
Purpose of Command :To show the routing table.
usage   :
Sample Input/Output :

```
abhishek@abhishek:~$ route
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
default         _gateway        0.0.0.0         UG    100    0        0 enp2s0
default         _gateway        0.0.0.0         UG    20600  0        0 wlp3s0
link-local      0.0.0.0         255.255.0.0     U     1000   0        0 enp2s0
192.168.0.0     0.0.0.0         255.255.255.0   U     600    0        0 wlp3s0
192.168.1.0     0.0.0.0         255.255.255.0   U     100    0        0 enp2s0
abhishek@abhishek:~$
```

Command 7   :iptables

Purpose of Command : To show ip tables

usage   : sudo iptables -L

                              sudo iptables -L -n -v

```
abhishek@abhishek:/$ sudo iptables -L
[sudo] password for abhishek:
Chain INPUT (policy ACCEPT)
target     prot opt source               destination

Chain FORWARD (policy ACCEPT)
target     prot opt source               destination

Chain OUTPUT (policy ACCEPT)
target     prot opt source               destination
abhishek@abhishek:/$ sudo iptables -L -n -v
Chain INPUT (policy ACCEPT 76 packets, 7243 bytes)
 pkts bytes target     prot opt in     out     source               destination

Chain FORWARD (policy ACCEPT 0 packets, 0 bytes)
 pkts bytes target     prot opt in     out     source               destination

Chain OUTPUT (policy ACCEPT 86 packets, 6510 bytes)
 pkts bytes target     prot opt in     out     source               destination
abhishek@abhishek:/$
```

Submitted by
Abhishek manoharan
roll no 2