

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 :Enable 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 address>`

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:~$
```