EXPERIMENT NO:-2

AIM:-

Set up the complete network interface by configuring services such as gateway,DNS,IP tables etc.using ifconfig

DATE:-21/02/2019

SUBMITTED BY

JILSHA M K

ROLL NO:-36

S4-CSE

1.view all network setting

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

    ether b4:b6:86:48:a3:9a 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 4411 bytes 268267 (268.2 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 4411 bytes 268267 (268.2 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

    inet 192.168.43.129 netmask 255.255.255.0 broadcast 192.168.43.255

    inet6 fe80::9c7b:6102:a0c6:3747 prefixlen 64 scopeid 0x20<link>

    inet6 2405:204:d280:d1a7:81bc:7e2:bcfe:d425 prefixlen 64 scopeid 0x0<global>

    inet6 2405:204:d280:d1a7:d94d:13f3:b605:2d3b prefixlen 64 scopeid 0x0<global>

    ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

    RX packets 191 bytes 212248 (212.2 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 226 bytes 31520 (31.5 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

2.Display Information of All Network Interfaces

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig -a

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

    ether b4:b6:86:48:a3:9a 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 4623 bytes 282008 (282.0 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 4623 bytes 282008 (282.0 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

    ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

    RX packets 473 bytes 455504 (455.5 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 551 bytes 91865 (91.8 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

jilsha@jilsha-HP-Laptop-15-bs0xx:~$

3. View Network Settings of Specific Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig wlo1
wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.43.129 netmask 255.255.255.0 broadcast 192.168.43.255
    inet6 fe80::9c7b:6102:a0c6:3747 prefixlen 64 scopeid 0x20<link>
    inet6 2405:204:d280:d1a7:81bc:7e2:bcfe:d425 prefixlen 64 scopeid 0x0<global>
    inet6 2405:204:d280:d1a7:d94d:13f3:b605:2d3b prefixlen 64 scopeid 0x0<global>
    ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)
    RX packets 399 bytes 447717 (447.7 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 406 bytes 67867 (67.8 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

4. How to Enable an Network Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 up
jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig
eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
    ether b4:b6:86:48:a3:9a 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 4427 bytes 269455 (269.4 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 4427 bytes 269455 (269.4 KB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

    inet 192.168.43.129 netmask 255.255.255.0 broadcast 192.168.43.255

    inet6 fe80::9c7b:6102:a0c6:3747 prefixlen 64 scopeid 0x20<link>

    inet6 2405:204:d280:d1a7:81bc:7e2:bcfe:d425 prefixlen 64 scopeid 0x0<global>

    inet6 2405:204:d280:d1a7:d94d:13f3:b605:2d3b prefixlen 64 scopeid 0x0<global>

    ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

    RX packets 404 bytes 448219 (448.2 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 410 bytes 68331 (68.3 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

5. How to Disable an Network Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 down

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

    ether b4:b6:86:48:a3:9a 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 4431 bytes 269703 (269.7 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 4431 bytes 269703 (269.7 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

6. How to Assign a IP Address to Network Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 192.168.43.116

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

    ether b4:b6:86:48:a3:9a 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 4534 bytes 276005 (276.0 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 4534 bytes 276005 (276.0 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

    inet 192.168.43.116 netmask 255.255.255.0 broadcast 192.168.43.255

    ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

    RX packets 404 bytes 448219 (448.2 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 410 bytes 68331 (68.3 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

7. How to Assign a Netmask to Network Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 netmask 255.255.255.224

```
jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig
eno1: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
        ether b4:b6:86:48:a3:9a  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 4667  bytes 285059 (285.0 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 4667  bytes 285059 (285.0 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0


wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.43.129  netmask 255.255.255.224  broadcast 192.168.43.159
        inet6 2405:204:d088:bac6:d94d:13f3:b605:2d3b  prefixlen 64  scopeid 0x0<global>
        inet6 fe80::d283:aef3:aecd:c36d  prefixlen 64  scopeid 0x20<link>
        inet6 2405:204:d088:bac6:2bfc:6a1c:a42b:33e8  prefixlen 64  scopeid 0x0<global>
        ether fc:01:7c:29:2d:bd  txqueuelen 1000  (Ethernet)
        RX packets 501  bytes 459023 (459.0 KB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 639  bytes 109198 (109.1 KB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

8. How to Assign a Broadcast to Network Interface

```
jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 broadcast 172.16.25.63
jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig
```

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

    ether b4:b6:86:48:a3:9a 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 4675 bytes 285619 (285.6 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 4675 bytes 285619 (285.6 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500

    inet 192.168.43.129 netmask 255.255.255.224 broadcast 172.16.25.63

    inet6 2405:204:d088:bac6:d94d:13f3:b605:2d3b prefixlen 64 scopeid 0x0<global>

    inet6 fe80::d283:aef3:aecd:c36d prefixlen 64 scopeid 0x20<link>

    inet6 2405:204:d088:bac6:2bfc:6a1c:a42b:33e8 prefixlen 64 scopeid 0x0<global>

    ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

    RX packets 501 bytes 459023 (459.0 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 655 bytes 113266 (113.2 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

jilsha@jilsha-HP-Laptop-15-bs0xx:~$

9. How to Assign a IP, Netmask and Broadcast to Network Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 172.16.25.125 netmask 255.255.255.224 broadcast 172.16.25.63

[sudo] password for jilsha:

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

```
        ether b4:b6:86:48:a3:9a  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 5426  bytes 358234 (358.2 KB)

        RX errors 0  dropped 0  overruns 0  frame 0

        TX packets 5426  bytes 358234 (358.2 KB)

        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0


wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500

        inet 172.16.25.125  netmask 255.255.255.224  broadcast 172.16.25.63

        inet6 2405:204:d088:bac6:d94d:13f3:b605:2d3b  prefixlen 64  scopeid 0x0<global>

        inet6 fe80::d283:aef3:aecd:c36d  prefixlen 64  scopeid 0x20<link>

        inet6 2405:204:d088:bac6:2bfc:6a1c:a42b:33e8  prefixlen 64  scopeid 0x0<global>

        ether fc:01:7c:29:2d:bd  txqueuelen 1000  (Ethernet)

        RX packets 4933  bytes 3677733 (3.6 MB)

        RX errors 0  dropped 0  overruns 0  frame 0

        TX packets 4761  bytes 784824 (784.8 KB)

        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0


jilsha@jilsha-HP-Laptop-15-bs0xx:~$
```

10. How to Change MTU for an Network Interface

```
jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 mtu 1000

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500

        ether b4:b6:86:48:a3:9a  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 5458  bytes 361010 (361.0 KB)

        RX errors 0  dropped 0  overruns 0  frame 0

        TX packets 5458  bytes 361010 (361.0 KB)

        TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0


wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1000

        inet 172.16.25.125  netmask 255.255.255.224  broadcast 172.16.25.63

        ether fc:01:7c:29:2d:bd  txqueuelen 1000  (Ethernet)

        RX packets 5020  bytes 3693730 (3.6 MB)

        RX errors 0  dropped 0  overruns 0  frame 0

        TX packets 4873  bytes 807420 (807.4 KB)

        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0


jilsha@jilsha-HP-Laptop-15-bs0xx:~$
```

11. How to Enable Promiscuous Mode

```
jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 promisc

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500

        ether b4:b6:86:48:a3:9a  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 5531 bytes 366212 (366.2 KB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 5531 bytes 366212 (366.2 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4419<UP,BROADCAST,RUNNING,PROMISC,MULTICAST> mtu 1000

inet 172.16.25.125 netmask 255.255.255.224 broadcast 172.16.25.63

ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

RX packets 5041 bytes 3695890 (3.6 MB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 4873 bytes 807420 (807.4 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

jilsha@jilsha-HP-Laptop-15-bs0xx:~$

12. How to Disable Promiscuous Mode

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 -promisc

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

ether b4:b6:86:48:a3:9a 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 5566 bytes 368610 (368.6 KB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 5566 bytes 368610 (368.6 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1000

inet 172.16.25.125 netmask 255.255.255.224 broadcast 172.16.25.63

ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

RX packets 5047 bytes 3696406 (3.6 MB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 4874 bytes 807631 (807.6 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

jilsha@jilsha-HP-Laptop-15-bs0xx:~$

13. How to Add New Alias to Network Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1:0 172.16.25.127

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

ether b4:b6:86:48:a3:9a 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 5609 bytes 371620 (371.6 KB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 5609 bytes 371620 (371.6 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1000

    inet 172.16.25.125 netmask 255.255.255.224 broadcast 172.16.25.63

    ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

    RX packets 5055 bytes 3697094 (3.6 MB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 4881 bytes 808786 (808.7 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1:0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1000

    inet 172.16.25.127 netmask 255.255.0.0 broadcast 172.16.255.255

    ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

14. How to Remove Alias to Network Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1:0 down

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ ifconfig

eno1: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500

    ether b4:b6:86:48:a3:9a 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 5654 bytes 374658 (374.6 KB)

    RX errors 0 dropped 0 overruns 0 frame 0

    TX packets 5654 bytes 374658 (374.6 KB)

    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlo1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1000

inet 172.16.25.125 netmask 255.255.255.224 broadcast 172.16.25.63

ether fc:01:7c:29:2d:bd txqueuelen 1000 (Ethernet)

RX packets 5058 bytes 3697408 (3.6 MB)

RX errors 0 dropped 0 overruns 0 frame 0

TX packets 4883 bytes 809140 (809.1 KB)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

15. How to Change the MAC address of Network Interface

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo ifconfig wlo1 hw wired AA:BB:CC:DD:EE:FF

Usage:

  ifconfig [-a] [-v] [-s] <interface> [[<AF>] <address>]

  [add <address>[/<prefixlen>]]

  [del <address>[/<prefixlen>]]

  [[-]broadcast [<address>]] [[-]pointopoint [<address>]]

  [netmask <address>] [dstaddr <address>] [tunnel <address>]

  [outfill <NN>] [keepalive <NN>]

  [hw <HW> <address>] [mtu <NN>]

  [[-]trailers] [[-]arp] [[-]allmulti]

  [multicast] [[-]promisc]

  [mem_start <NN>] [io_addr <NN>] [irq <NN>] [media <type>]

  [txqueuelen <NN>]

  [[-]dynamic]

  [up|down] ...

  <HW>=Hardware Type.

  List of possible hardware types:

    loop (Local Loopback) slip (Serial Line IP) cslip (VJ Serial Line IP)

    slip6 (6-bit Serial Line IP) cslip6 (VJ 6-bit Serial Line IP) adaptive (Adaptive Serial Line IP)

    ash (Ash) ether (Ethernet) ax25 (AMPR AX.25)

    netrom (AMPR NET/ROM) rose (AMPR ROSE) tunnel (IPIP Tunnel)

ppp (Point-to-Point Protocol) hdlc ((Cisco)-HDLC) lapb (LAPB)

arcnet (ARCnet) dlci (Frame Relay DLCI) frad (Frame Relay Access Device)

sit (IPv6-in-IPv4) fddi (Fiber Distributed Data Interface) hippi (HIPPI)

irda (IrLAP) ec (Econet) x25 (generic X.25)

eui64 (Generic EUI-64)

<AF>=Address family. Default: inet

List of possible address families:

unix (UNIX Domain) inet (DARPA Internet) inet6 (IPv6)

ax25 (AMPR AX.25) netrom (AMPR NET/ROM) rose (AMPR ROSE)

ipx (Novell IPX) ddp (Appletalk DDP) ec (Econet)

IP Tables

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo root add default gw

sudo: root: command not found

jilsha@jilsha-HP-Laptop-15-bs0xx:~$ sudo iptables -L

Chain INPUT (policy ACCEPT)

target   prot opt source   destination

Chain FORWARD (policy ACCEPT)
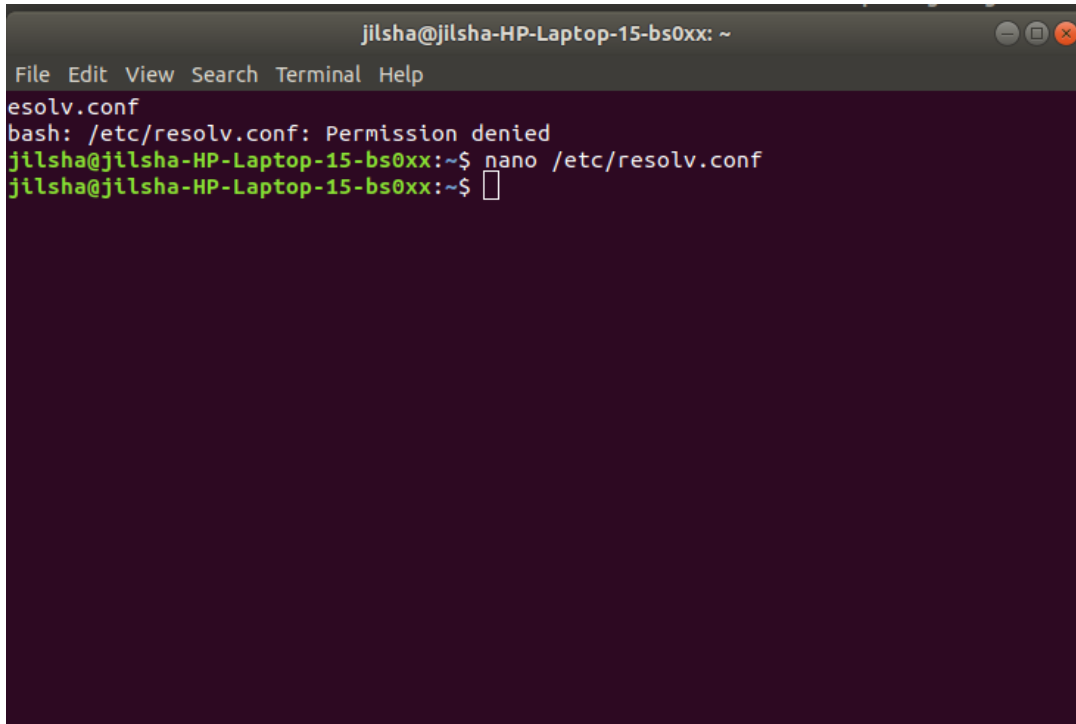
target   prot opt source   destination

Chain OUTPUT (policy ACCEPT)
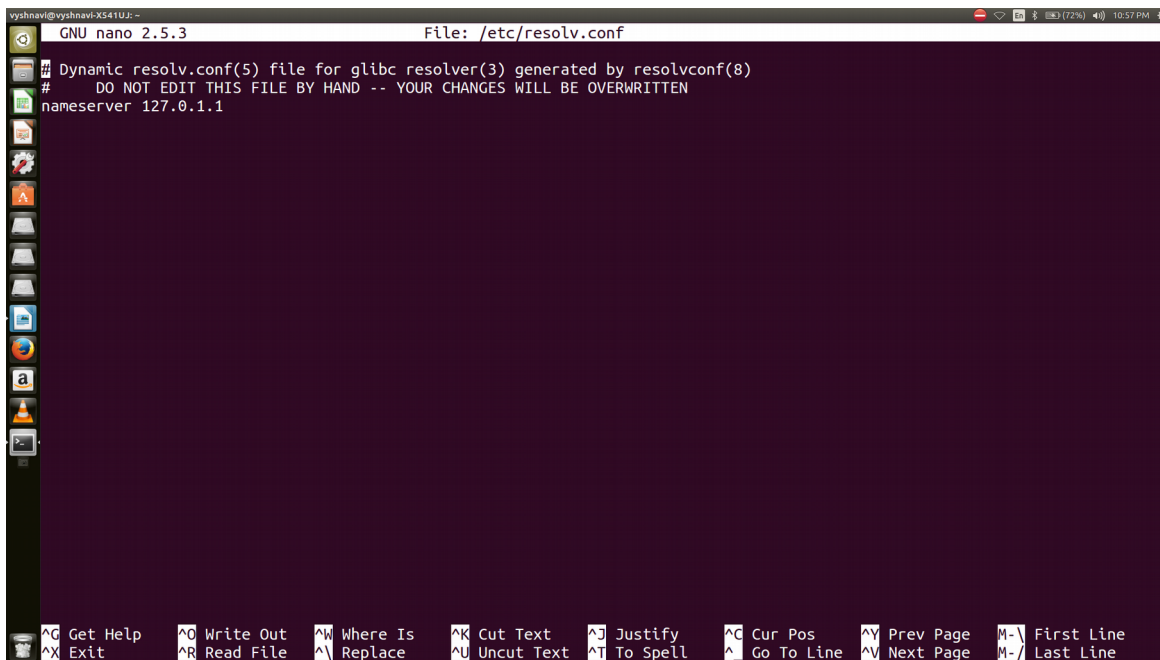
target   prot opt source   destination

jilsha@jilsha-HP-Laptop-15-bs0xx:~$

Configure DNS

Gateway configuration

```
ubnutu@ubnutu-VPCEH26EN:~$ sudo route add default gw 192.168.43.1
ubnutu@ubnutu-VPCEH26EN:~$ ifconfig
enp19s0   Link encap:Ethernet  HWaddr 78:84:3c:f5:25:9e
          UP BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:13763 errors:0 dropped:0 overruns:0 frame:0
          TX packets:13763 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1
          RX bytes:1092408 (1.0 MB)  TX bytes:1092408 (1.0 MB)

wlp7s0    Link encap:Ethernet  HWaddr 94:39:e5:ba:31:eb
          inet addr:192.168.43.116  Bcast:192.168.43.255  Mask:255.255.255.0
          inet6 addr: 2405:204:d407:c9cb:69f4:d0ff:5252:9a4c/64 Scope:Global
          inet6 addr: 2405:204:d407:c9cb:549d:6210:7281:9309/64 Scope:Global
          inet6 addr: fe80::a0b2:92f:e97d:438a/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1280  Metric:1
          RX packets:43403 errors:0 dropped:0 overruns:0 frame:0
          TX packets:37174 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:35771058 (35.7 MB)  TX bytes:5942085 (5.9 MB)
```