

ASSIGNMENT 2

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No: 65

1) View all network settings, assign IP address, and netmask.

```
ubuntu@ubuntu-HP-Laptop-15-bslxx:~$ sudo ifconfig lo 192.168.1.9 netmask
[sudo] password for ubuntu:
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>] [metric <NN>] [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)
ash (Ash) x25 (CCITT X.25)
ubuntu@ubuntu-HP-Laptop-15-bslxx:~$ ifconfig -a
enol1    Link encap:Ethernet  HWaddr ac:e2:d3:7c:b9:05
         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:192.168.1.9  Mask:255.255.255.0
         inet6 addr: ::1/128 Scope:Host
         UP LOOPBACK RUNNING  MTU:65536  Metric:1
         RX packets:48 errors:0 dropped:0 overruns:0 frame:0
         TX packets:48 errors:0 dropped:0 overruns:0 carrier:0
         collisions:0 txqueuelen:1
         RX bytes:3328 (3.3 KB)  TX bytes:3328 (3.3 KB)
```

2) Configure gateway

```
ubuntu@ubuntu-HP-Laptop-15-bs1xx:~$ sudo route add default gw 192.168.1.1
SIOCADDRT: File exists
ubuntu@ubuntu-HP-Laptop-15-bs1xx:~$ ifconfig -a
enol      Link encap:Ethernet  HWaddr ac:e2:d3:7c:b9:05
          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:192.168.1.9  Mask:255.255.255.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:48 errors:0 dropped:0 overruns:0 frame:0
          TX packets:48 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1
          RX bytes:3328 (3.3 KB)  TX bytes:3328 (3.3 KB)

ubuntu@ubuntu-HP-Laptop-15-bs1xx:~$ sudo route add default gw 192.168.1.1
SIOCADDRT: File exists
```

3) Configure DNS

```
ubuntu@ubuntu-HP-Laptop-15-bs1xx:~$ sudo echo "nameserver 192.168.11.1" >> /etc/resolv.conf
bash: /etc/resolv.conf: Permission denied
```

```
GNU nano 2.5.3                                     File: /etc/resolv.conf

# Dynamic resolv.conf(5) file for glibc resolver(3) generated by resolvconf(8)
#     DO NOT EDIT THIS FILE BY HAND -- YOUR CHANGES WILL BE OVERWRITTEN
nameserver 127.0.0.53
options edns0
```

4) Iptables

```
ubuntu@ubuntu-HP-Laptop-15-bs1xx:~$ 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
```

Conclusion: Complete network interface by configuring services such as gateway, DNS, Iptables using ifconfig was done.