Ganpat University
(2CSE204) Basics of Operating System and Shell Scripting

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Sem – 2

Branch: CS

Class: B

Batch: 25

Practical-10

1. List the current network scenario of your system.
   Command – ifconfig

```
[sentinel@thunderbolt ~]$ ifconfig
ens160: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        ether 00:0c:29:56:32:1f  txqueuelen 1000  (Ethernet)
        RX packets 12  bytes 1152 (1.1 KiB)
        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 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

virbr0: flags=4099<UP,BROADCAST,MULTICAST>  mtu 1500
        inet 192.168.122.1  netmask 255.255.255.0  broadcast 192.168.122.255
        ether 52:54:00:dd:99:7a  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

[sentinel@thunderbolt ~]$
```


2. Configure your IP Address, Gateway and DNS as follows:
   IP Address:192.168.100.XXX/24
   Gateway 192.168.100.100
   DNS:192.168.100.100
   (The name of the connection should be yourname_surname)
   Command - sudo nmcli connection add con-name jaimin_gondaliya ifname ens160 type
   ethernet ipv4.method manual ipv4.addresses 192.168.100.49/24 ipv4.gateway
   192.168.100.100 ipv4.dns 192.168.100.100

```
[sentinel@thunderbolt ~]$ sudo nmcli connection add con-name jaimin_gondaliya ifname ens160 type ethernet ipv4.method manual ip
v4.addresses 192.168.100.49/24 ipv4.gateway 192.168.100.100 ipv4.dns 192.168.100.100
[sudo] password for sentinel:
Connection 'jaimin_gondaliya' (83f6d26b-b30f-4f4d-9a34-6ba6e2e60a51) successfully added.
[sentinel@thunderbolt ~]$ _
```

3. Activate the newly added network connection
   Command - nmcli connection up jaimin_gondaliya

```
                                        sentinel@thunderbolt:~
File  Edit  View  Search  Terminal  Help
[sentinel@thunderbolt ~]$ sudo nmcli connection up jaimin_gondaliya
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkManager/ActiveConnection/3)
[sentinel@thunderbolt ~]$
```

4. Display the details of newly added connection
   Command - nmcli connection show jaimin_gondaliya

```
[sentinel@thunderbolt ~]$ nmcli connection show jaimin_gondaliya
connection.id:                          jaimin_gondaliya
connection.uuid:                        83f6d26b-b30f-4f4d-9a34-6ba6e2e60a51
connection.stable-id:                   --
connection.type:                        802-3-ethernet
connection.interface-name:              ens160
connection.autoconnect:                 yes
connection.autoconnect-priority:        0
connection.autoconnect-retries:         -1 (default)
connection.multi-connect:               0 (default)
connection.auth-retries:                -1
connection.timestamp:                   1713339051
connection.read-only:                   no
connection.permissions:                 --
connection.zone:                        --
connection.master:                      --
connection.slave-type:                  --
connection.autoconnect-slaves:          -1 (default)
connection.secondaries:                 --
connection.gateway-ping-timeout:        0
connection.metered:                     unknown
connection.lldp:                        default
connection.mdns:                        -1 (default)
connection.llmnr:                       -1 (default)
connection.dns-over-tls:                -1 (default)
connection.mptcp-flags:                 0x0 (default)
connection.wait-device-timeout:         -1
connection.wait-activation-delay:       -1
802-3-ethernet.port:                    --
802-3-ethernet.speed:                   0
802-3-ethernet.duplex:                  --
802-3-ethernet.auto-negotiate:          no
lines 1-31
```

```
002 3 ethernet.accept att mac addresses. 1 (default)
ipv4.method:                            manual
ipv4.dns:                               192.168.100.100
ipv4.dns-search:                        --
ipv4.dns-options:                       --
ipv4.dns-priority:                      0
ipv4.addresses:                         192.168.100.49/24
ipv4.gateway:                           192.168.100.100
ipv4.routes:                            --
```

5. Delete the newly added connection and restore the previous network connection scenario.
    Command – nmcli connection delete jaimin_gondaliya

```
[sentinel@thunderbolt ~]$ sudo nmcli connection delete jaimin_gondaliya
Connection 'jaimin_gondaliya' (83f6d26b-b30f-4f4d-9a34-6ba6e2e60a51) successfully deleted.
Connection 'jaimin_gondaliya' (232fb46c-dd8e-42d1-bf63-dce34e43c4b8) successfully deleted.
[sentinel@thunderbolt ~]$ _
```