Lab4-network

1- show all connections

```
[root@server ~]# nmcli connection show
NAME     UUID                                  TYPE      DEVICE
ens160   25fca5ef-ce87-3a14-881b-86e6c861103f  ethernet  ens160
lo       86e1207c-77bb-4d94-9d8d-4dc3034a8e6f  loopback  lo
[root@server ~]#
```

```
┤ Edit Connection ├
        Profile name  ens160
              Device  ens160 (00:0C:29:5F:9C:24)
```

2- display all config setting for the active connection

```
[root@server ~]# nmcli connection show --active
NAME     UUID                                  TYPE      DEVICE
ens160   25fca5ef-ce87-3a14-881b-86e6c861103f  ethernet  ens160
lo       86e1207c-77bb-4d94-9d8d-4dc3034a8e6f  loopback  lo
[root@server ~]# nmcli connection show ens160
connection.id:                          ens160
connection.uuid:                        25fca5ef-ce87-3a14-881b->
connection.stable-id:                   --
connection.type:                        802-3-ethernet
connection.interface-name:              ens160
connection.autoconnect:                 yes
connection.autoconnect-priority:        -999
connection.autoconnect-retries:         -1 (default)
connection.multi-connect:               0 (default)
connection.auth-retries:                -1
connection.timestamp:                   1732041342
connection.permissions:                 --
connection.zone:                        --
connection.controller:                  --
connection.master:                      --
lines 1-15...skipping...
connection.id:                          ens160
connection.uuid:                        25fca5ef-ce87-3a14-881b->
connection.stable-id:                   --
connection.type:                        802-3-ethernet
connection.interface-name:              ens160
```

3- show device status

```
[root@server ~]# nmcli device status
DEVICE  TYPE      STATE                 CONNECTION
ens160  ethernet  connected             ens160
lo      loopback  connected (externally)  lo
[root@server ~]#
```

4- display the setting of the eno16777736 interface

```
[root@server ~]# nmcli connection show ens160
connection.id:                          ens160
connection.uuid:                        25fca5ef-ce87-3a14-881b->
connection.stable-id:                   --
connection.type:                        802-3-ethernet
connection.interface-name:              ens160
connection.autoconnect:                 yes
connection.autoconnect-priority:        -999
connection.autoconnect-retries:         -1 (default)
connection.multi-connect:               0 (default)
connection.auth-retries:                -1
connection.timestamp:                   1732041342
connection.permissions:                 --
connection.zone:                        --
connection.controller:                  --
connection.master:                      --
connection.slave-type:                  --
connection.port-type:                   --
connection.autoconnect-slaves:          -1 (default)
connection.autoconnect-ports:           -1 (default)
connection.secondaries:                 --
connection.gateway-ping-timeout:        0
connection.metered:                     unknown
connection.lldp:                        default
connection.mdns:                        -1 (default)
connection.llmnr:                       -1 (default)
```

5- create a static connection with the same IP address, network, prefix and default gateway.
Name the new connection static-eth0 with ip
172.25.0.11,netmask 255.255.255.0 and gateway
172.25.0.254

```
[root@server ~]# nmcli connection add type ethernet con-name stat
ic-eth0 ifname eth0 ip4 172.25.0.11/24 gw4 172.25.0.254
Connection 'static-eth0' (338c67a4-cd3c-4f75-ba57-6a014e3ade14) s
uccessfully added.
[root@server ~]# nmcli connection show
NAME            UUID                                    TYPE      DEV>
ens160          25fca5ef-ce87-3a14-881b-86e6c861103f    ethernet  ens>
lo              86e1207c-77bb-4d94-9d8d-4dc3034a8e6f    loopback  lo >
static-eth0     338c67a4-cd3c-4f75-ba57-6a014e3ade14    ethernet  -- >
lines 1-4/4 (END)
```

```
                        | Edit Connection |
                                                                    ↑
            Profile name static-eth0_____   ▮
                  Device eth0▮

        = ETHERNET                                           <Show>
        = 802.1X SECURITY                                    <Show>

        = IPv4 CONFIGURATION <Manual>                        <Hide>
               Addresses 172.25.0.11/24_____  <Remove>
                         <Add...>
                 Gateway 172.25.0.254_____
             DNS servers 8.8.8.8                  <Remove>
                         <Add...>
          Search domains <Add...>

                 Routing (No custom routes) <Edit...>
        [ ] Never use this network for default route
        [ ] Ignore automatically obtained routes
        [ ] Ignore automatically obtained DNS parameters

        [ ] Require IPv4 addressing for this connection
                                                                    ↓
```
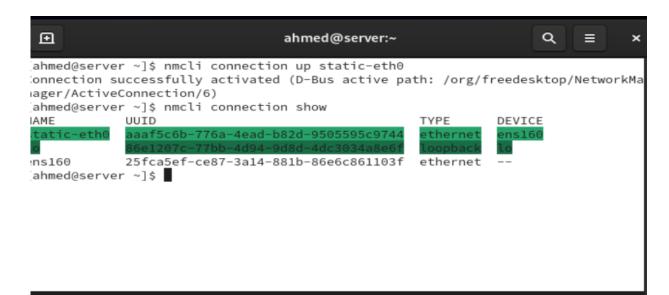
6- modify the new
connection to add DNS

```
[root@server ~]# nmcli connection modify static-eth0 ipv4.dns "8.8.8.8"
[root@server ~]# ▮
```

7- activate the new connection

```
ahmed@server ~]$ nmcli connection up static-eth0
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkMa
ager/ActiveConnection/7)
ahmed@server ~]$
```

8- view the active connection

```
                                    ahmed@server:~                        Q   ≡   ✕

ahmed@server ~]$ nmcli connection up static-eth0
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkMa
ager/ActiveConnection/6)
ahmed@server ~]$ nmcli connection show
NAME              UUID                                    TYPE       DEVICE
static-eth0       aaaf5c6b-776a-4ead-b82d-9505595c9744    ethernet   ens160
o                 86e1207c-77bb-4d94-9d8d-4dc3034a8e6f    loopback   lo
ns160             25fca5ef-ce87-3a14-881b-86e6c861103f    ethernet   --
ahmed@server ~]$
```

9- verify the ip address using ip command

```
[ahmed@server ~]$ ip a s
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group defaul
t qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: ens160: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP group de
fault qlen 1000
    link/ether 00:0c:29:5f:9c:24 brd ff:ff:ff:ff:ff:ff
    altname enp3s0
    inet 172.25.0.11/24 brd 172.25.0.255 scope global noprefixroute ens160
       valid_lft forever preferred_lft forever
    inet6 fe80::8f6f:160:d4cc:fe0d/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
[ahmed@server ~]$
```

10- verify the default gateway

```
       valid_lft forever preferred_lft forever
[ahmed@server ~]$ ip route show
default via 172.25.0.254 dev ens160 proto static metric 100
172.25.0.0/24 dev ens160 proto kernel scope link src 172.25.0.11 metric 100
[ahmed@server ~]$
```

11- ping the DNS

```
[ahmed@server ~]$ ping -c4 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
.From 172.25.0.11 icmp_seq=1 Destination Host Unreachable
From 172.25.0.11 icmp_seq=2 Destination Host Unreachable
From 172.25.0.11 icmp_seq=3 Destination Host Unreachable
From 172.25.0.11 icmp_seq=4 Destination Host Unreachable

--- 8.8.8.8 ping statistics ---
4 packets transmitted, 0 received, +4 errors, 100% packet loss, time 3055ms
pipe 3
[ahmed@server ~]$ .
```
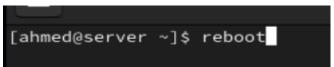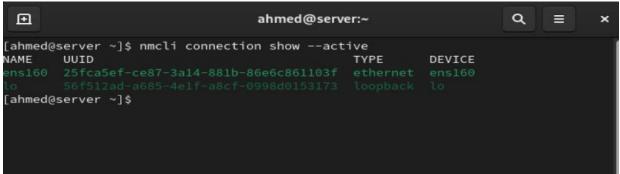
12- disable the original connection autostarting at boot

```
[ahmed@server ~]$ nmcli connection modify static-eth0  connection.autoconnect no
[ahmed@server ~]$
```

13- reboot the system

```
[ahmed@server ~]$ reboot
```

14- view the active connections

```
[ahmed@server ~]$ nmcli connection show --active
NAME     UUID                                  TYPE      DEVICE
ens160   25fca5ef-ce87-3a14-881b-86e6c861103f  ethernet  ens160
lo       56f512ad-a685-4e1f-a8cf-0998d0153173  loopback  lo
[ahmed@server ~]$
```

ahmed@server:~

15- edit the /etc/sysconfig/network-scripts/ifcfg-conname add an additional address of 10.0.0.1/24

```
[ahmed@server network-scripts]$ cat static-eth0
IPADDR2=10.0.0.1
PREFIX2=24
[ahmed@server network-scripts]$
```

16- reload the configuration changes

```
[ahmed@server ~]$ sudo nmcli connection reload
[ahmed@server ~]$
```

`ahmed@server:~`

17- display the current host name

```
[ahmed@server ~]$ hostname
server.iti.com
[ahmed@server ~]$
```

18- display the host name status

```
[ahmed@server ~]$ hostnamectl status
 Static hostname: server.iti.com
       Icon name: computer-vm
         Chassis: vm
      Machine ID: 6afdbee46fca4e10af181f75f0df085f
         Boot ID: 9b5322db741340ef8274bfdb7ae39d18
  Virtualization: vmware
Operating System: Red Hat Enterprise Linux 9.4 (Plow)
     CPE OS Name: cpe:/o:redhat:enterprise_linux:9::baseos
          Kernel: Linux 5.14.0-427.13.1.el9_4.x86_64
    Architecture: x86-64
 Hardware Vendor: VMware, Inc.
  Hardware Model: VMware Virtual Platform
Firmware Version: 6.00
[ahmed@server ~]$
```

19- change the hostname and hostname config file

```
[root@server ahmed]# cd
[root@server ~]# hostnamectl set-hostname server.ITI.com
[root@server ~]# hostname
server.ITI.com
[root@server ~]#
```

20- verify the configuration file providing the hostname at network start

```
[root@server ~]# cat /etc/hostname
server.ITI.com
[root@server ~]#
```