IT3010
Network Design & Management
3rd Year, 1st Semester

<Lab Report 01>

<Configurations>

Submitted to

Sri Lanka Institute of Information Technology

In partial fulfillment of the requirements for the

Bachelor of Science Special Honors Degree in Information Technology

02-Mar-2018

Declaration

I certify that this report does not incorporate without acknowledgement, any material previously submitted for a degree or diploma in any university, and to the best of my knowledge and belief it does not contain any material previously published or written by another person, except where due reference is made in text.

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Contents

1. Network Configurations for Server (CentOS)

1.1 For the Server Network Configurations first we need to use the command '**nmtui**' (Fig 1.1)

- Command - #nmtui

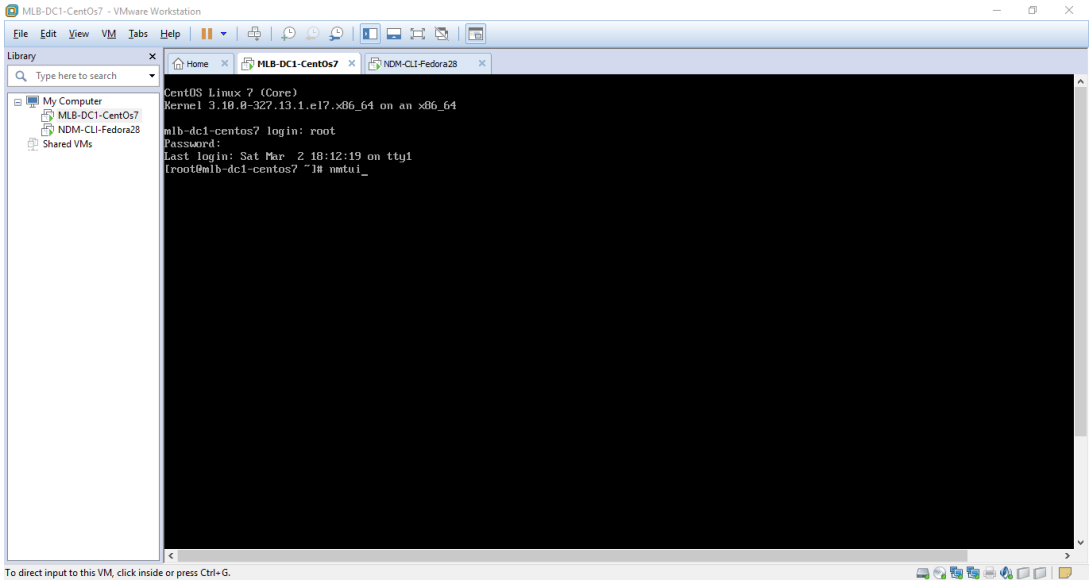

Figure 1.1: command for NetworkManager TUI

1.2 Then, in the NetworkManager TUI window opened select **edit connection**. (Fig 1.2)

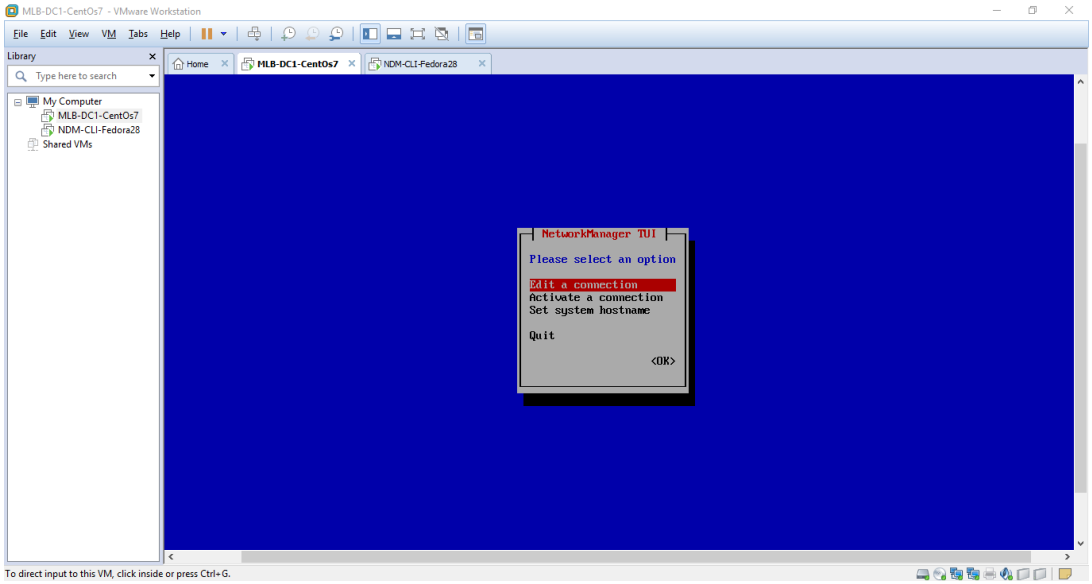

Figure 1.2: NetworkManager TUI window

1.3 Select the adapter used in VMnet2; select edit. (Fig 1.3)

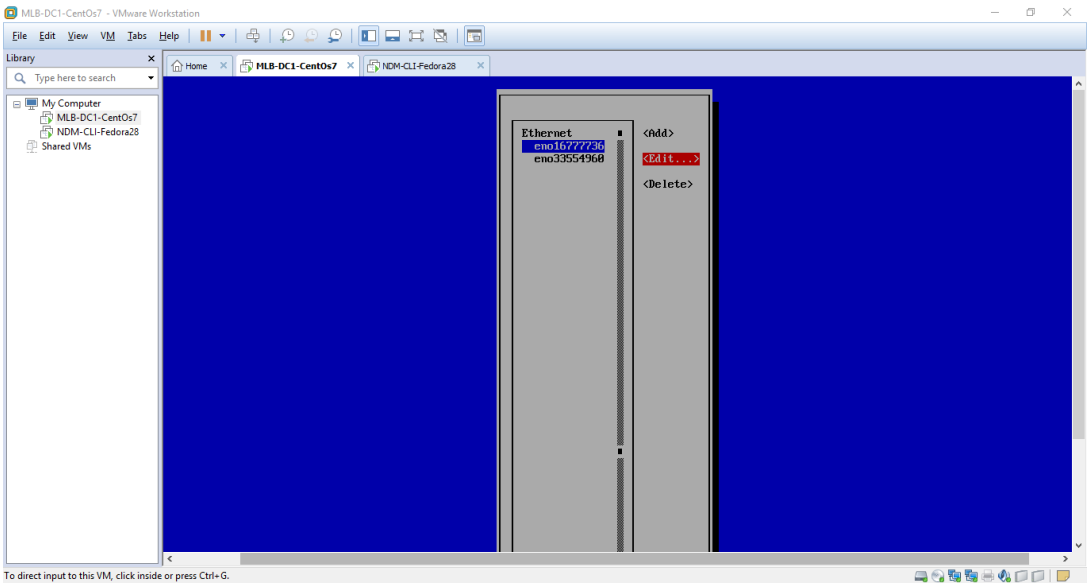

Figure 1.3: Select edit connection window in NetworkManager TUI

1.4 Navigate to IPv4 settings and select the type as **Manual** and enter IP configurations given below,

- IP address – 10.0.1.2/24
- Gateway – 10.0.1.1

Then **save** the configurations to select **OK**. (Fig 1.4)

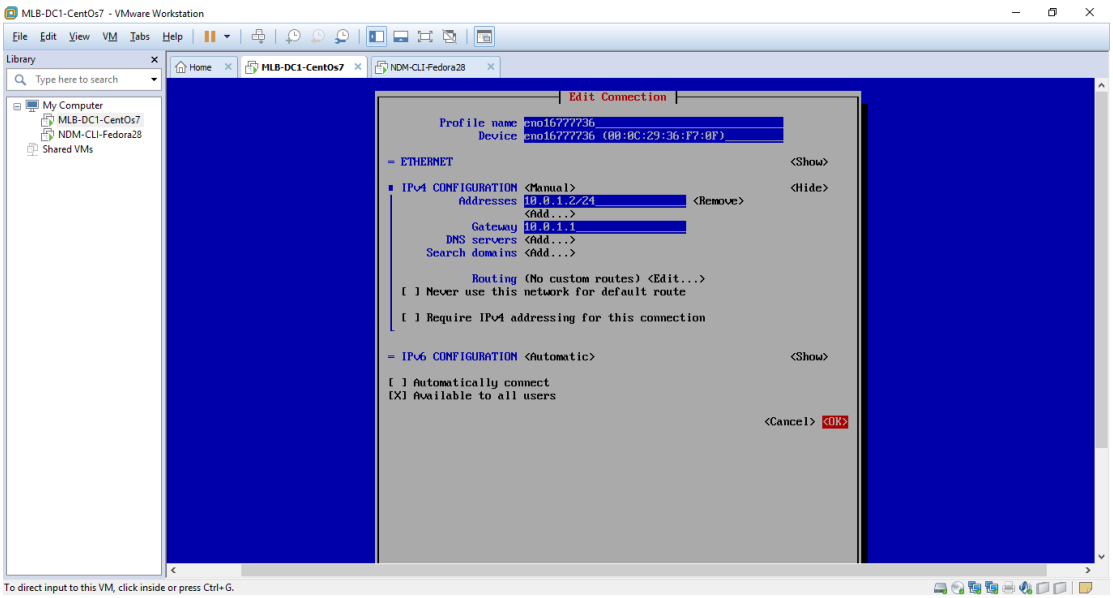

Figure 1.4: Edit connection window in NetworkManager TUI

❖ Connection Activation can be done using same command '**nmtui'.**

1.5 Select **Activate Connection** (Fig 1.5)

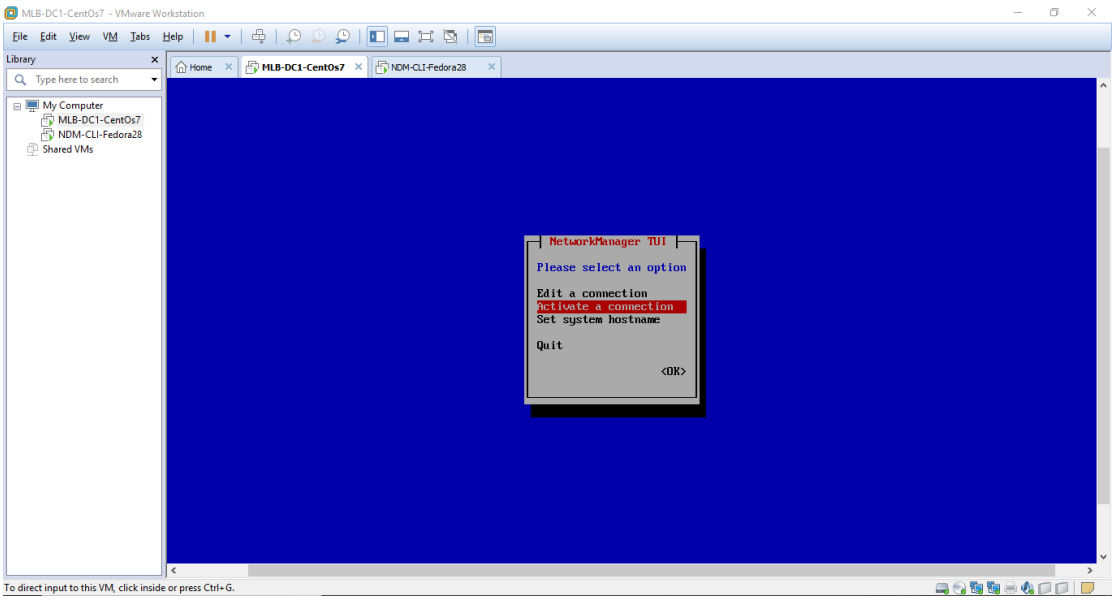

Figure 1.5: NetworkManager TUI window

1.6 Select the Adapter to be **Activate** (Fig 1.6)

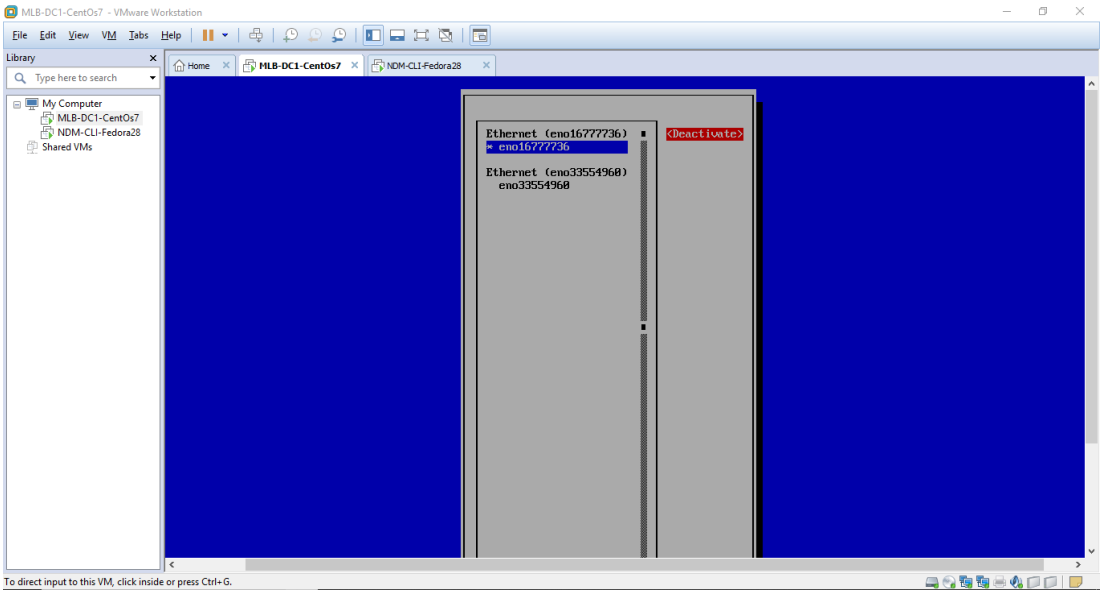

Figure 1.6: Select activate connection window in NetworkManager TUI

2. Network Configurations for Client (Fedora)

2.1 First we need to login to client server by entering the following command

- Command – #su

Then type "**root**" for password and hit enter to login to client. (Fig 2.1)

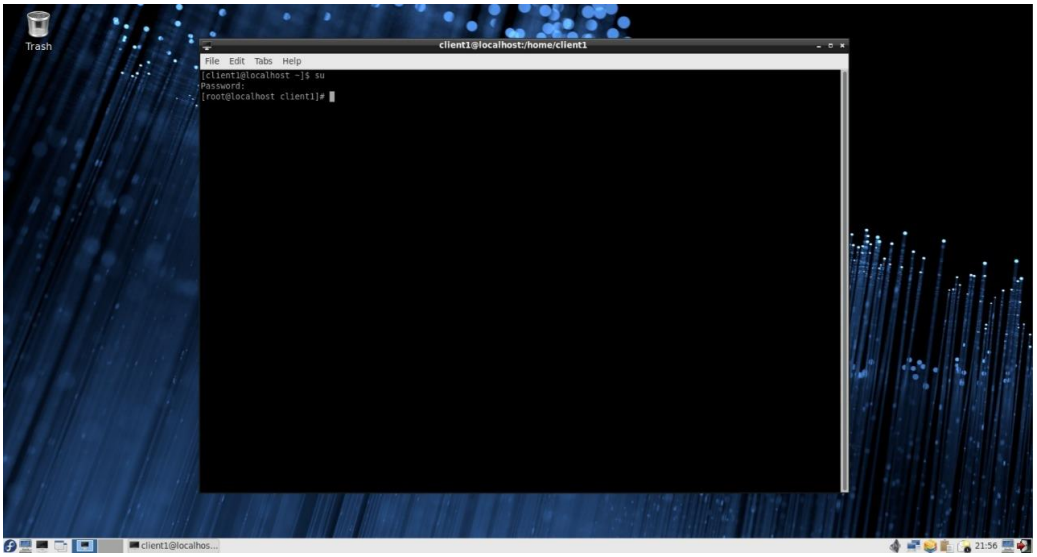

Figure 2.1: Login to client

2.2 Then, we need to display network devices status by entering the following command

- Command – #nmcli device (Fig 2.2)

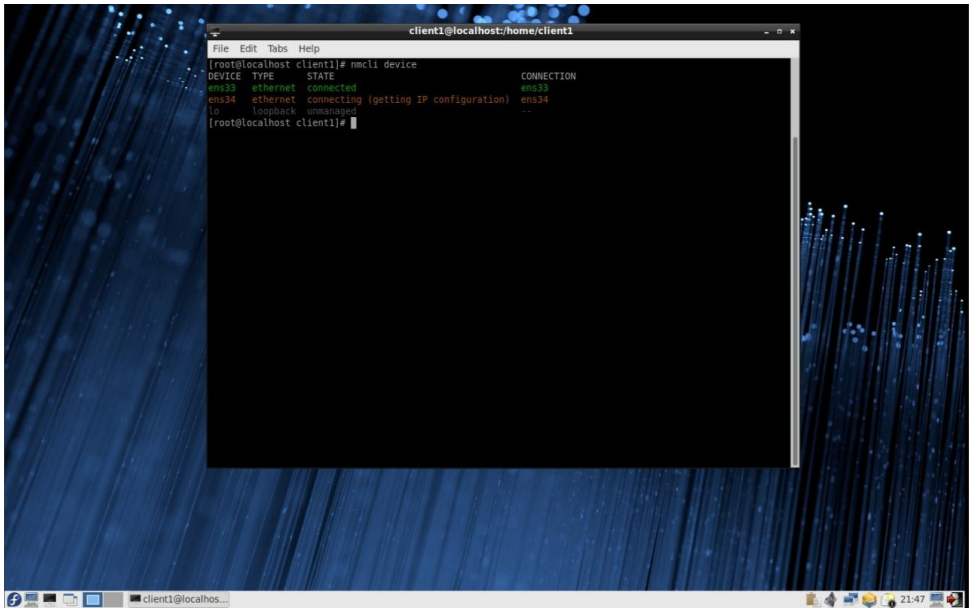

Figure 2.2: Display network devices

➢ Now we can identify what device is connect with server. (ex: ens34)

2.3 Then, we can modify ip address and default gateway for IPv4 by entering the following commands.

- Command – #nmcli connection mod ens34 ipv4.addresses 10.0.1.3/24 (Fig 2.3)
- Command – #nmcli connection mod ens34 ipv4.gateway 10.0.1.1 (Fig 2.3)

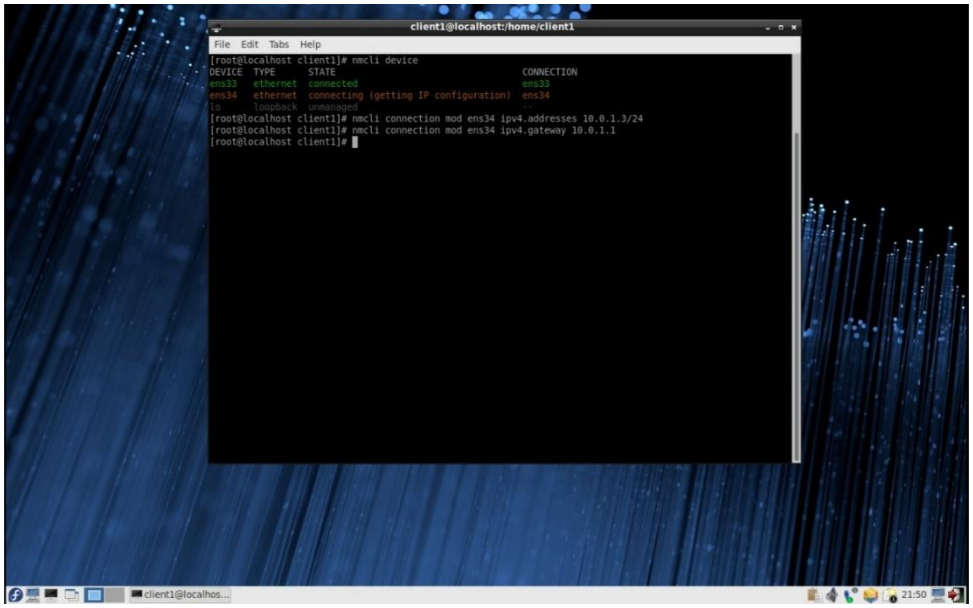

Figure 2.3: Modify ip address and default gateway

2.4 Then, we need to set IP configuration method to auto by entering the following command

- Command – # nmcli connection mod ens34 ipv4.method auto (Fig 2.4)

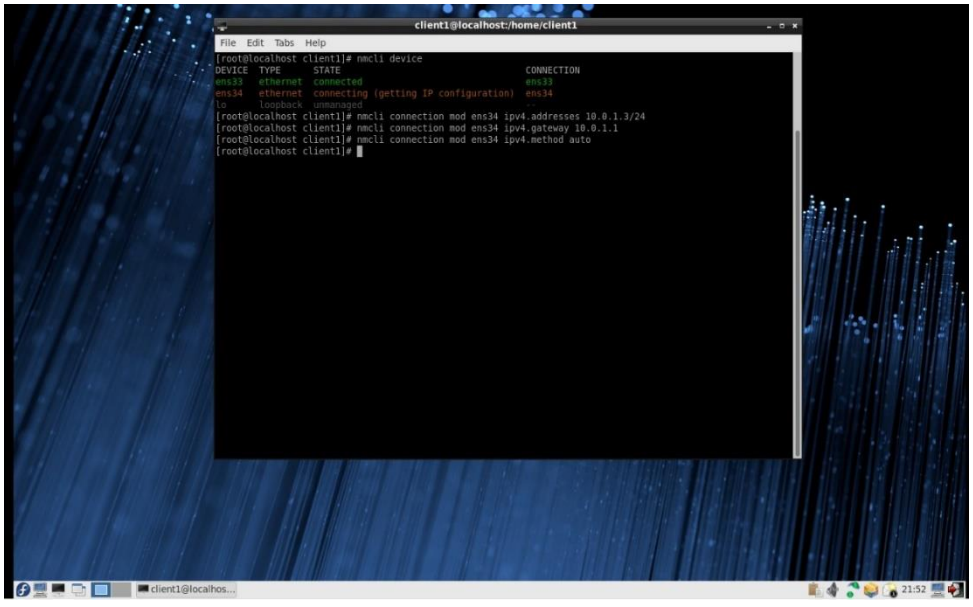

Figure 2.4: IP configuration method

2.5 Now, we need to ping with sever machine to identify configuration is success or not by entering the following command

- Command – # ping 10.0.1.2 (Fig 2.5)

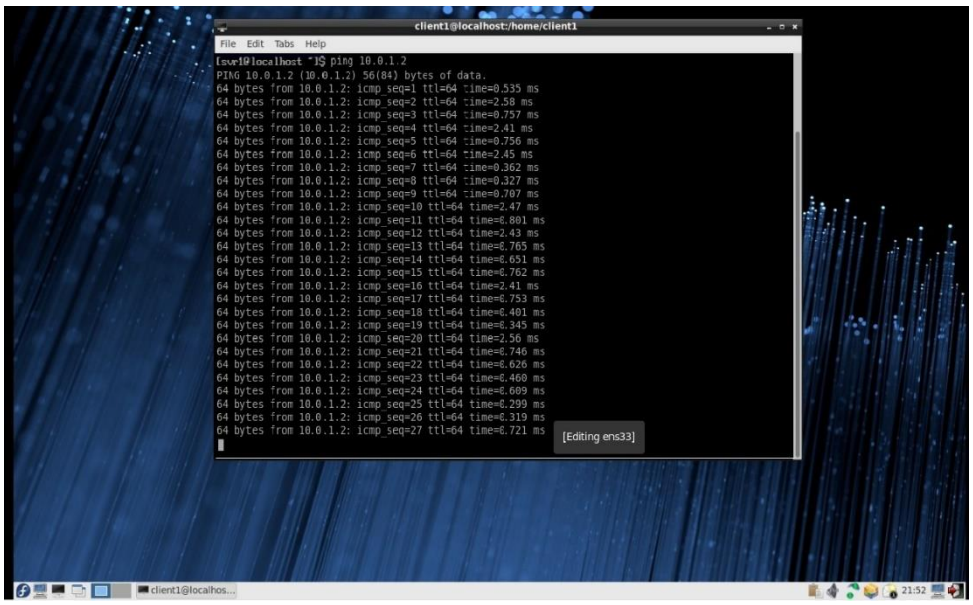

Figure 2.5: ping with sever machine