# The Installation Guide for the VM Image of EstiNet X Network Simulator and Emulator




**Release Date: November 30, 2018**

***Produced and maintained by EstiNet Technologies Inc.***

# Revision History

| Rev. | Date | Revision Description |
|---|---|---|
| 1.0 | November 30, 2018 | Initial version |
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| | | |
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**CONTENTS**

# Install VMware Workstation Player

Because "EstiNet Network Simulator and Emulator" must be installed in Fedora 24(64bit) Operation System, we recommended that user installed Operation System and Simulator in "Virtual Machine" **VMware Workstation Player**. We introduced how to install VMware Player as below.

a. Please download VMware Player from website of VMware Inc. as below and select the type of Operation System which you have. We selected **VMWare Workstation Player for Windows** (as Figure 1). https://my.vmware.com/en/web/vmware/free#desktop_end_user_computing/vmware_workstation_player/14_0|PLAYER-1410|product_downloads

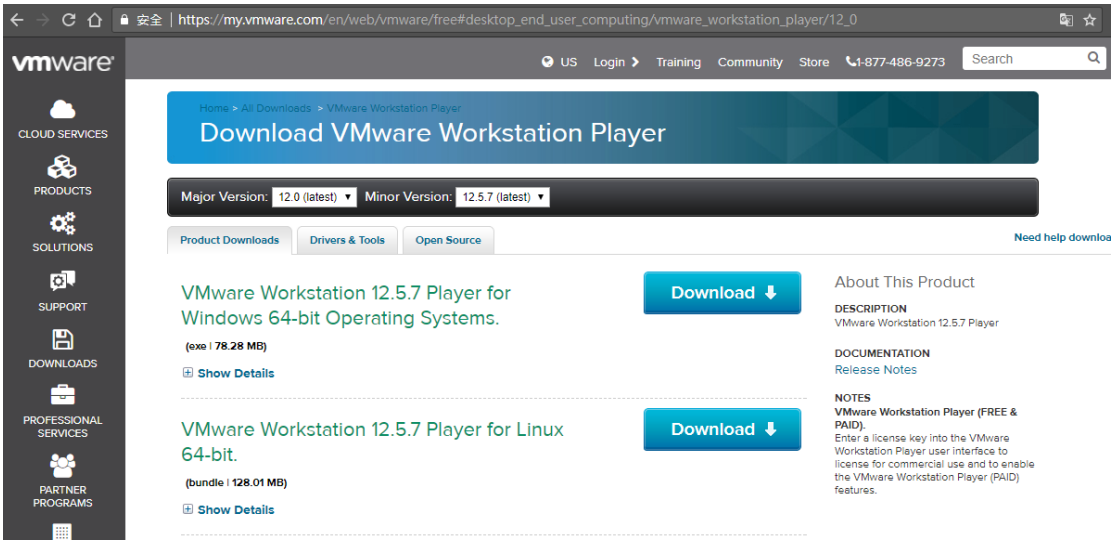


Figure 1 Download VMware Workstation Player

b. To download the EstiNet X VM Image, please reference the License Key and downloaded information from Delivery Notice.

EstiNet provides three ways to download the EstiNet VMImage.
The first one is MEGA (https://mega.nz/#F!Mv5nEY6D!A5_AdqZpo-8PQi266yBzXg).
The MEGA Monolithic of VM image is (https://mega.nz/#F!wmwDXKoS!Pw3oYKmnxYBQgauGHTEU8g).

The MEGA Sliced of VM image is (https://mega.nz/#F!Mv5nEY6D!A5_AdqZpo-8PQi266yBzXg!IjpFAKpQ).

The second one is Google Drive (https://drive.google.com/drive/folders/0Bx3dD-IqTv0IYlhrRFMzR2RZUU0).
The Google Drive Monolithic of VM image is (https://drive.google.com/drive/folders/1Ux4En_OWnWZ24LrjoiULmTScIv5cRvTu?usp=sharing).
The Google Drive Sliced of VM image is (https://drive.google.com/drive/folders/1ZcD2lQKrPMi8XKKffKBYAmNcD39bwjzg?usp=sharing).
Please reference Page 6 for the description of Sliced VMImage.

The third one is EstiNet FTP server.
FTP Download Link: "ftp://ftp.estinet.com/"
FTP Account: EstiNet10
FTP Password: estinet
directory /EstiNet10/EstiNet_Trial/VMImage/Monolithic

User could downloads VMImage from MEGA and Google Drive by browser.

User could download VMImage from EstiNet FTP server by FileZilla (The Free FTP solution https://filezilla-project.org/). Please uncompressed VMImage file after VMImage file is completed downloaded.

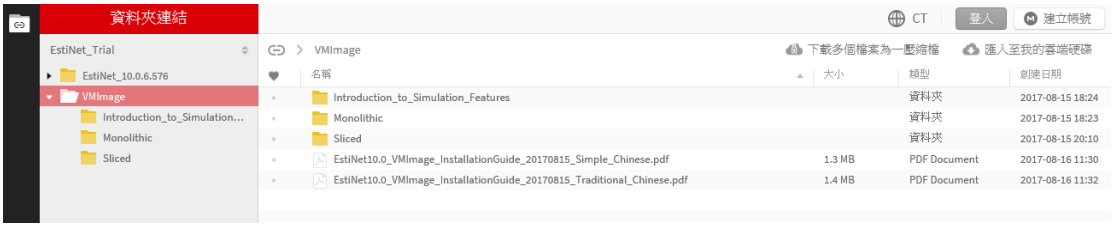


Figure 2 MEGA

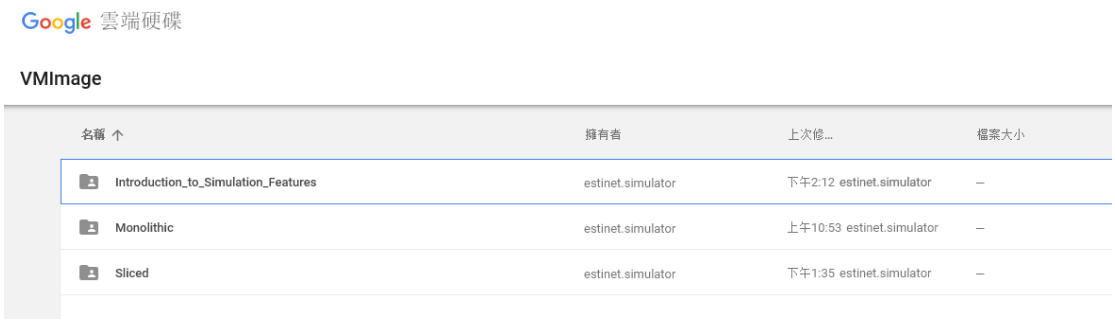


Figure 3 Google Drive

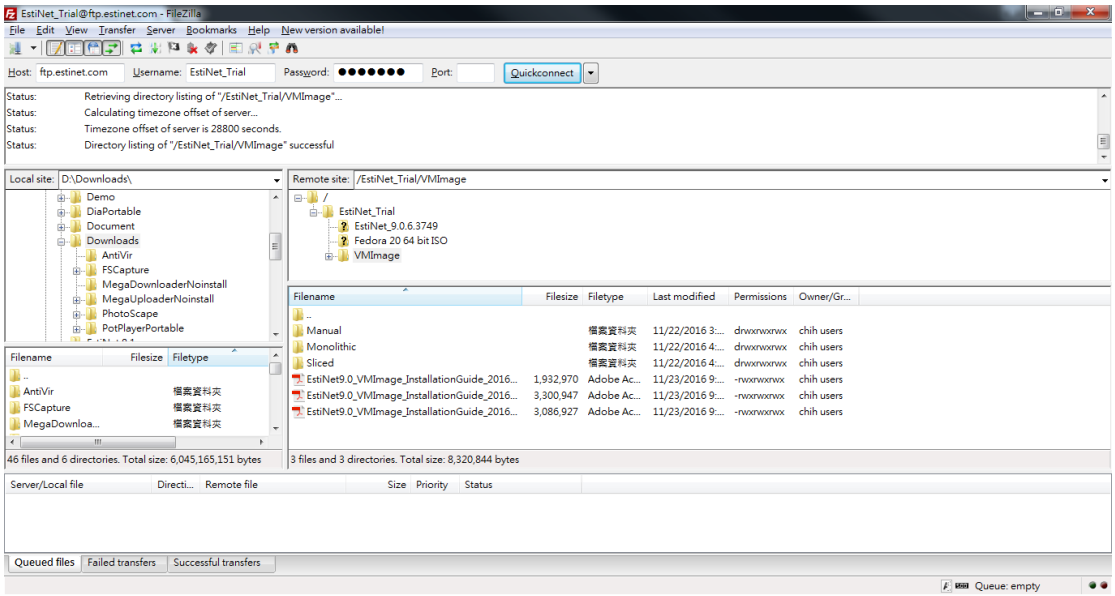


Figure 4 FileZilla

c. If user download Sliced files of VMImage, please download and install a free application7-Zip (http://www.developershome.com/7zip/) firstly. Open the application of 7-zip. Select the path of sliced files. Click the file such as **EstiNet_X.zip.001** and click the button “Extract” (as below figure). After extract processing is completed, user can get only a compressed file. Please

uncompressed this VMImage file.

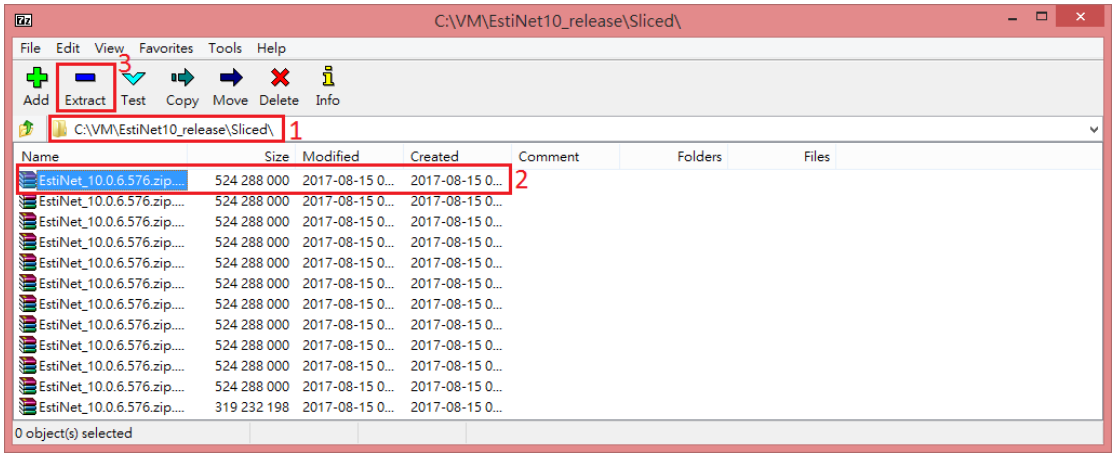


Figure 5 How to Extract the Sliced file use 7-zip

d. After install **VMWare Workstation Player** and unzip EstiNet VM Image, please click the icon "**Open a Virtual Machine**" .

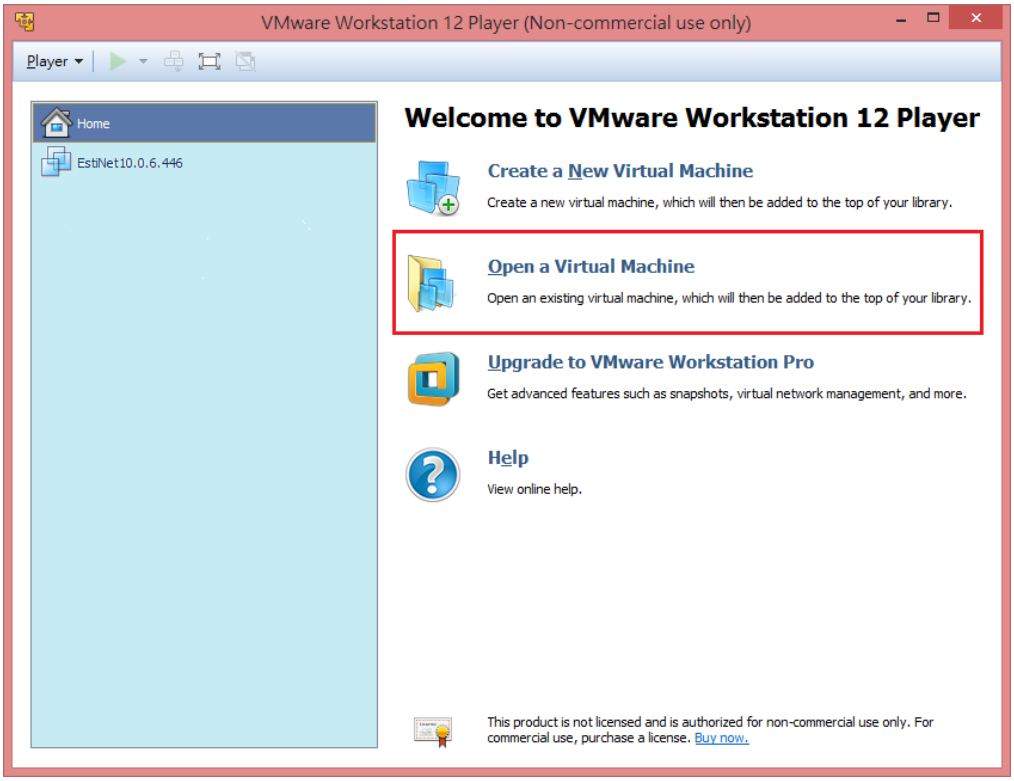


Figure 6 Click Open a Virtual Machine

e. Please select the path of VM image file then click file .vmx .

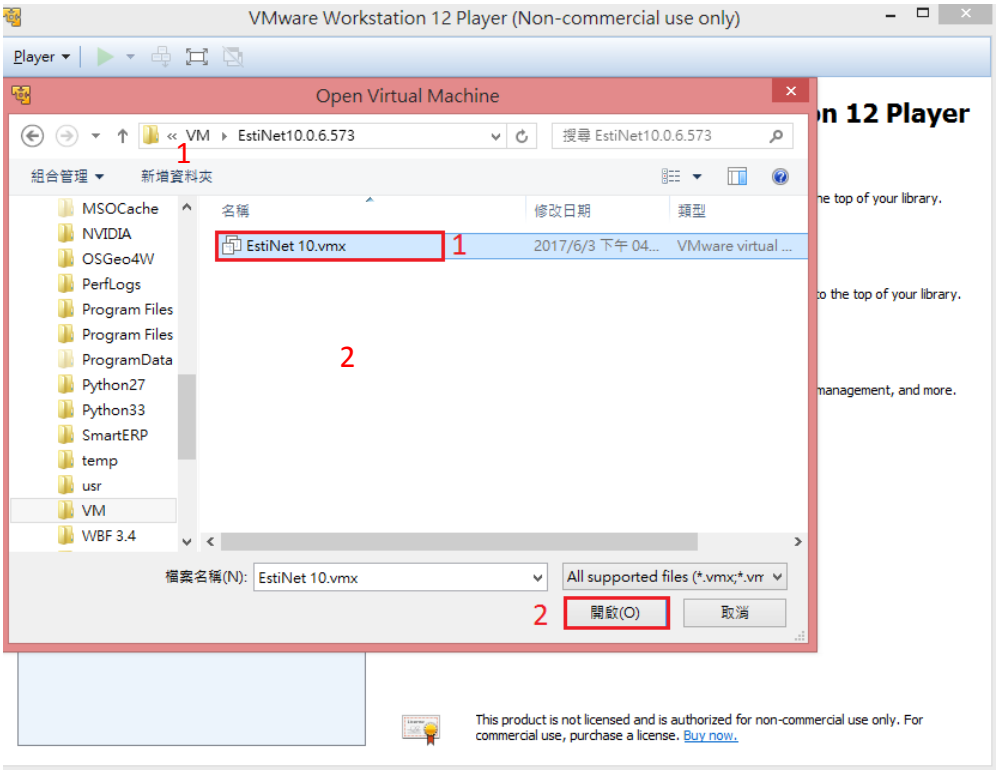


Figure 7 Click file .vmx

f. When loading EstiNet VM Image, it will pop-up a dialogue box. Please select **I Copied It** (as Figure 8 Dialogue box).

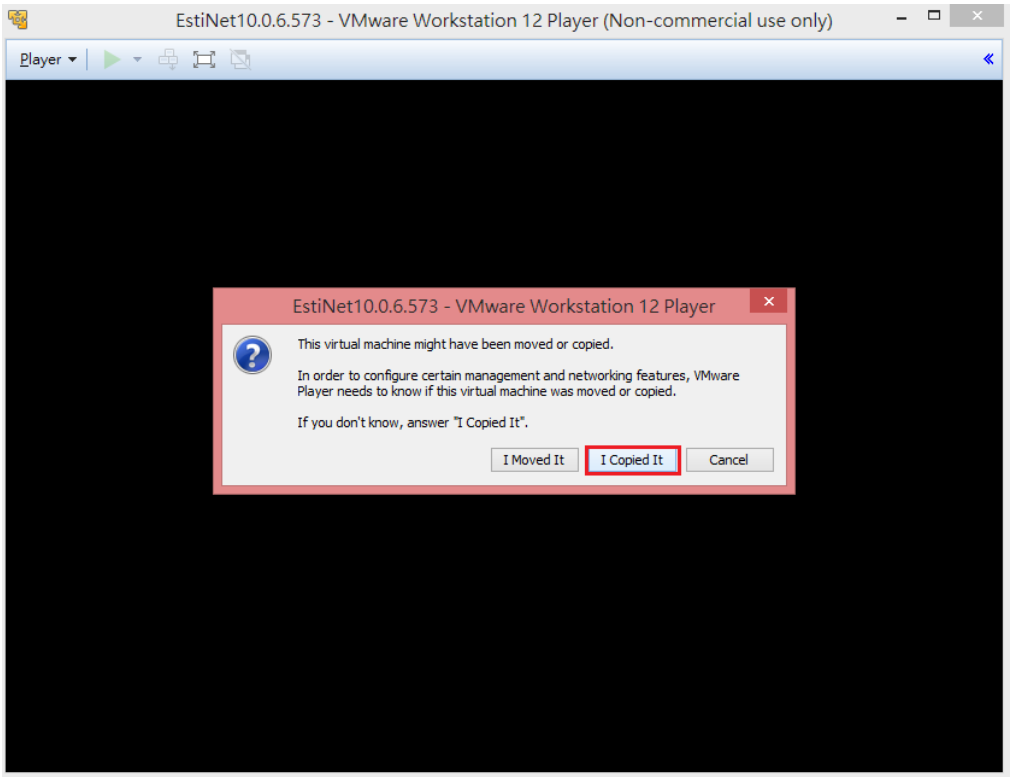


Figure 8 Dialogue box

g. After complete pre-steps, it will display the EstiNet Image file name that user loaded such as EstiNet_X. Please click "**Power on this virtual**

**machine**" to power on the Virtual machine.

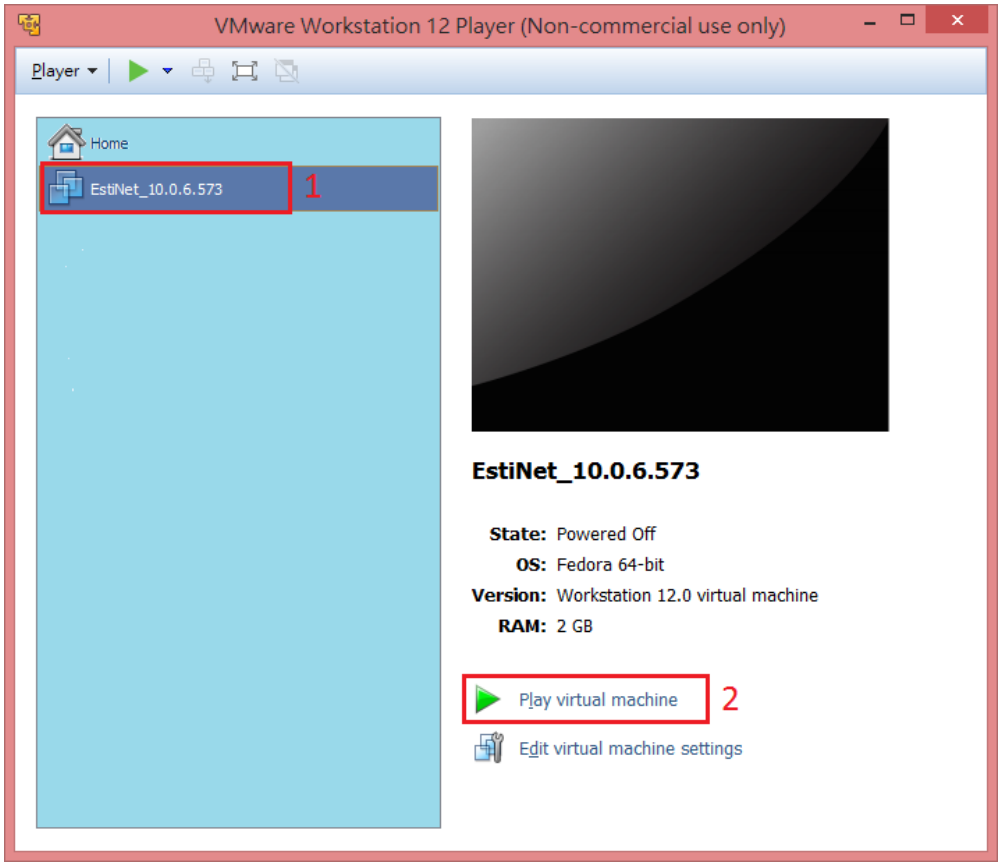


Figure 9 Power on virtual machine

# 2. To start up the EstiNet Simulator

## 2.1 The Boot menu

a. Choose the EstiNet kernel such as “Fedora (4.6.6. estinet20170711.fc24) 24 (Workstation Edition)” on the operation selection screen.

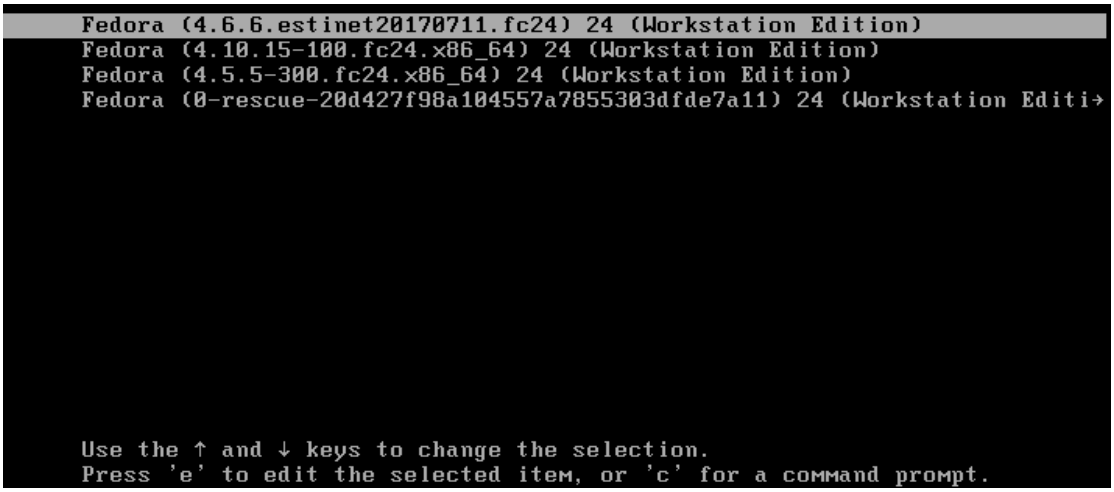


Figure 10 Choose the EstiNet kernel on the operation selection screen

b. Login to Fedora24 with user name “estinet” and password “estinet” .

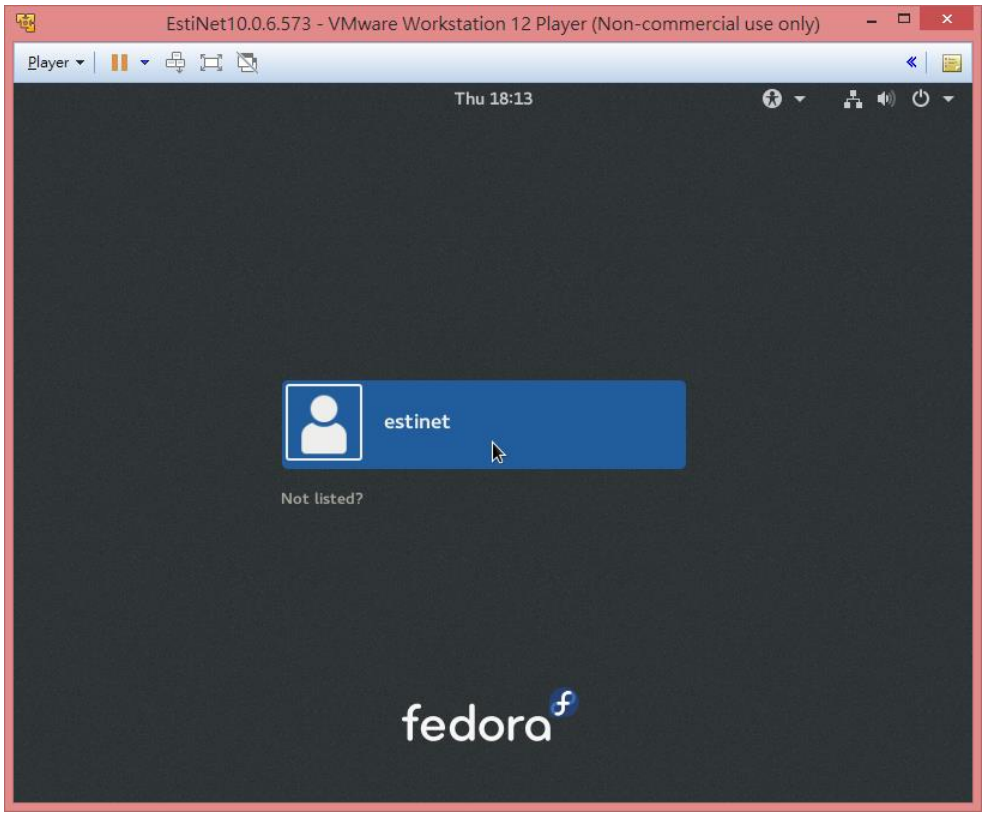


Figure 11 Login with user name “estinet”

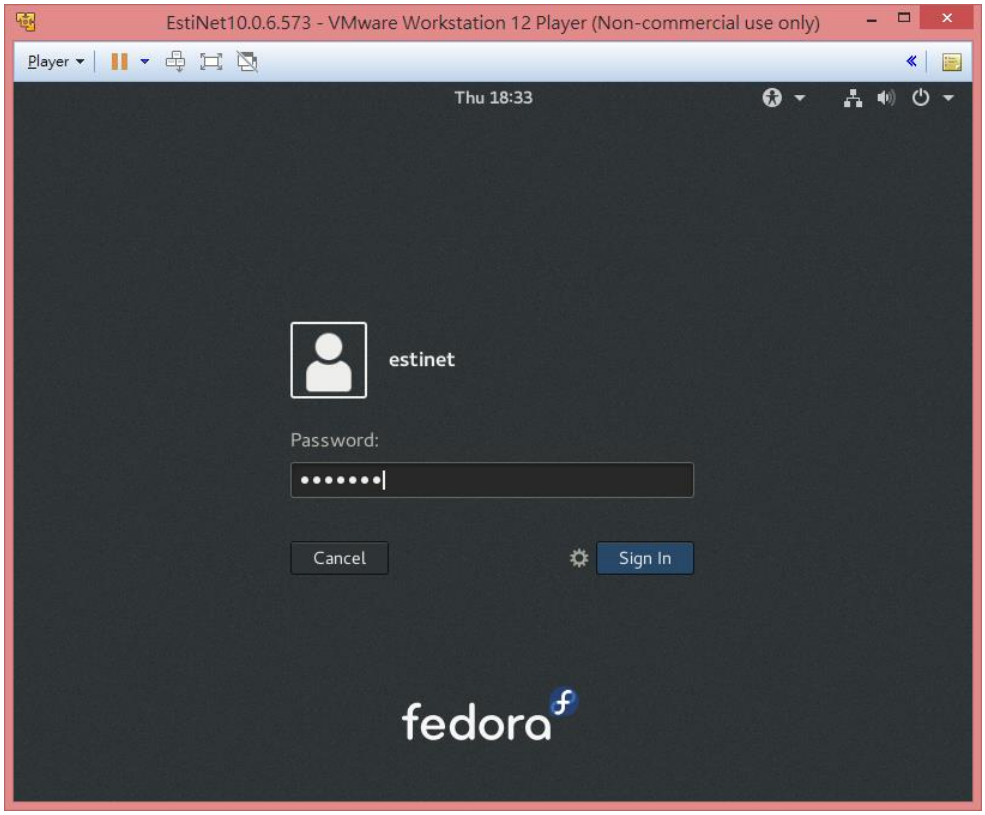


Figure 12 Login with password “estinet”

## 2.2 Network Setting

a. After login, please check the Network status is working properly or not. If your Fedora24 environment is the same, please jump to step j.


Figure 13 Network status is working properly

b. If the network connection status is failed, please reference below steps to make it work properly.


Figure 14 Network connection failed

c. Please click “Power button” then select “Settings”.

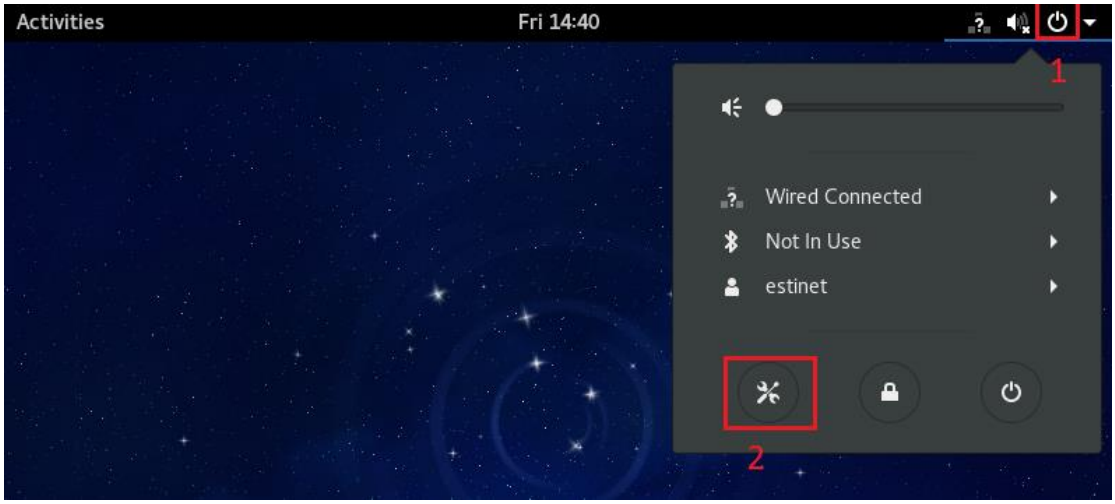


Figure 15 Click “Settings”

d. Click button Network

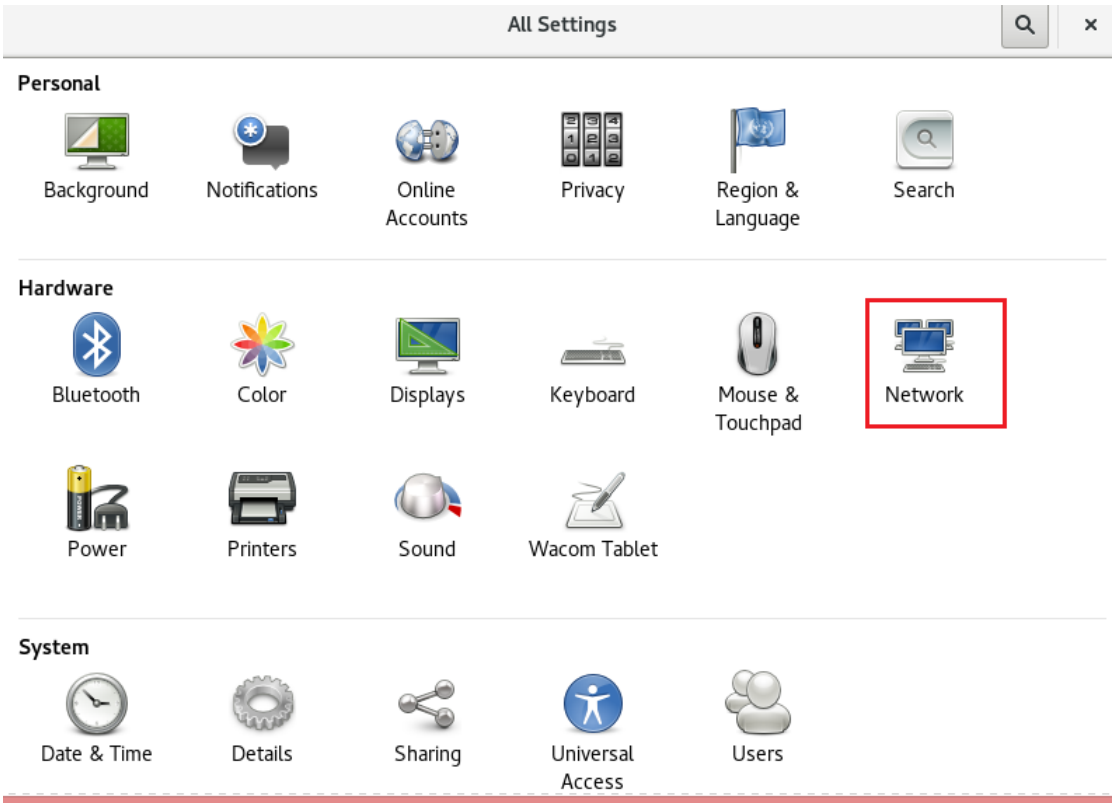


Figure 16 Click button Network

e. After go into the Network settings, please click “Add Profile“.

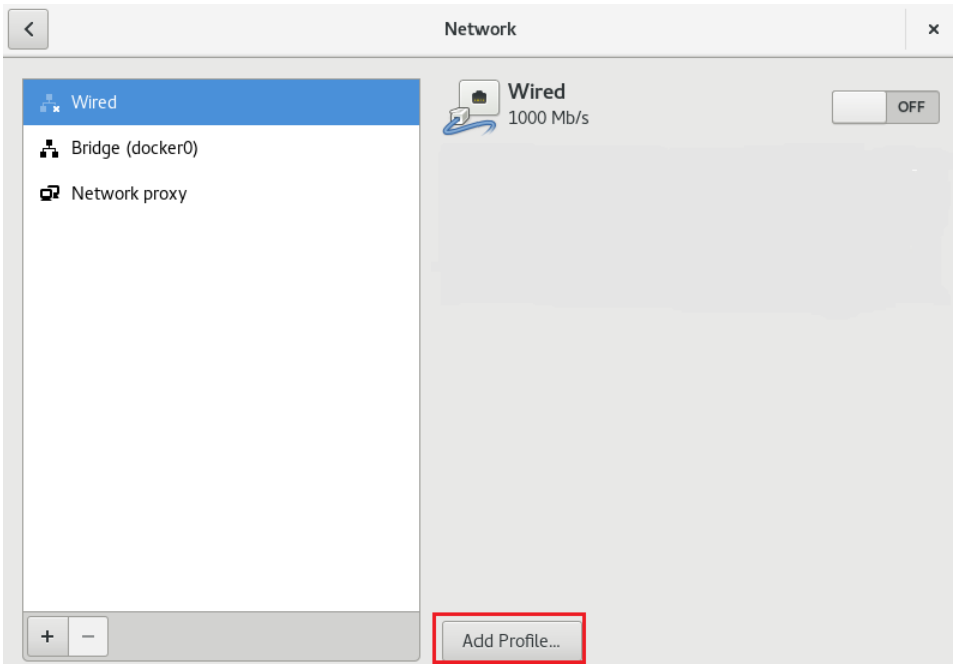

Figure 17 Click “Add Profile”

f. Go to the window “Profile” and click “Add”, the network should be worked well.

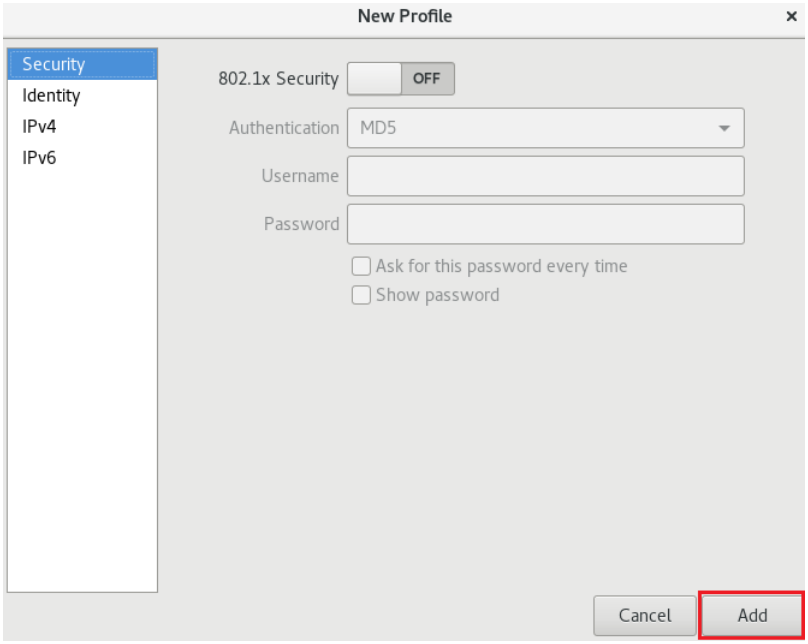


Figure 18 Click “Add”

g. If the network still can’t work well after pre-steps, please click **Player→Manage→Virtual Machine Settings** on the upper left corner.

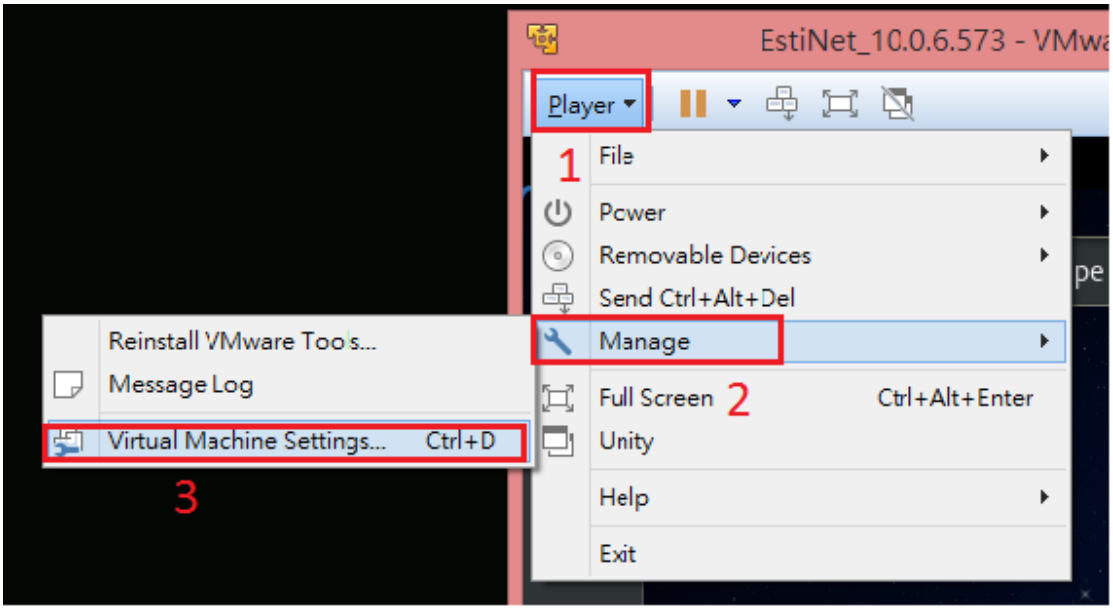

Figure 19 Click Player→Manage→Virtual Machine Settings

h. Click "**Network Adapter**" on window Virtual Machine Settings.

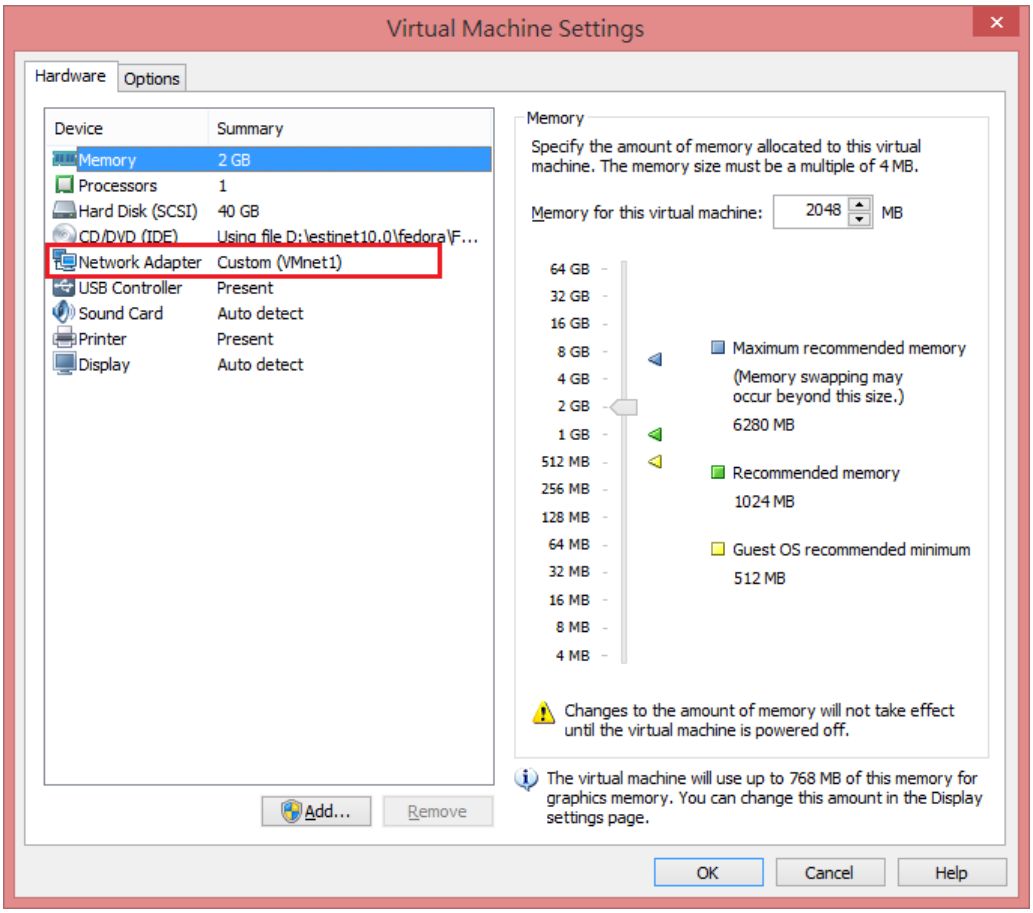


Figure 20 Click Network Adapter

i. There are two ways for this setting. The one is click "N**AT: Used to share the host's IP address**". The other is select "**VMnet (NAT)**" to replace "**WMnet (Host-only)**" on "**Custom: Specific virtual network**".

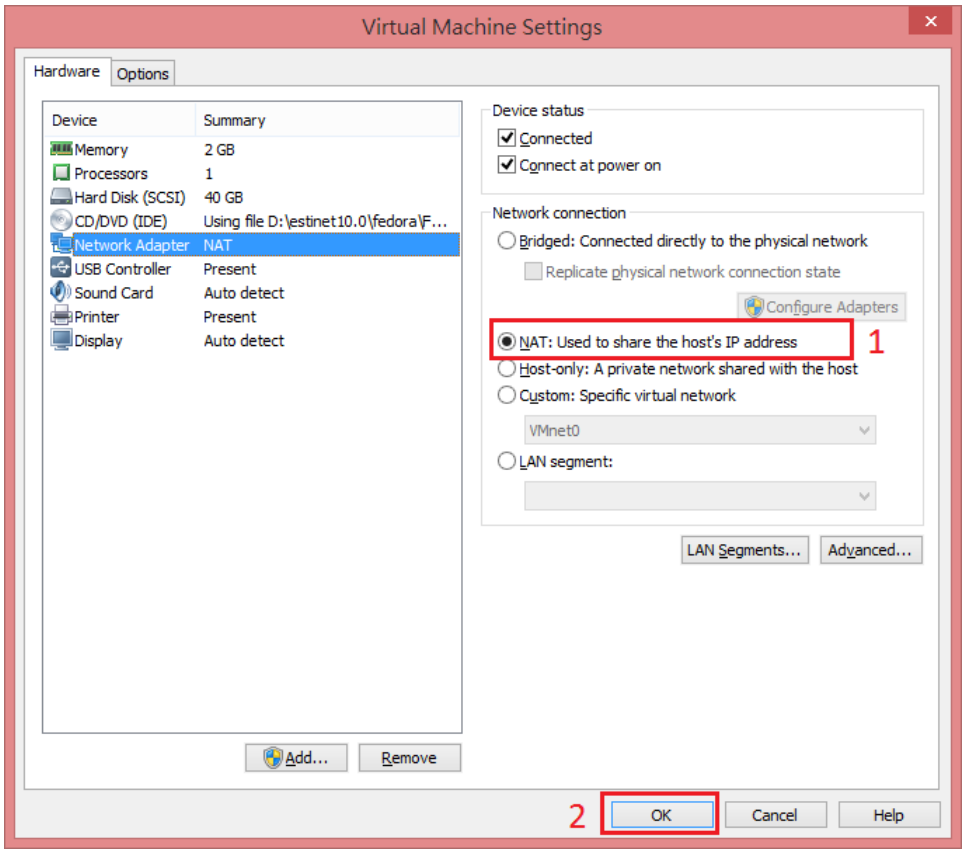


Figure 21 Choose NAT: Used to share the host's IP address

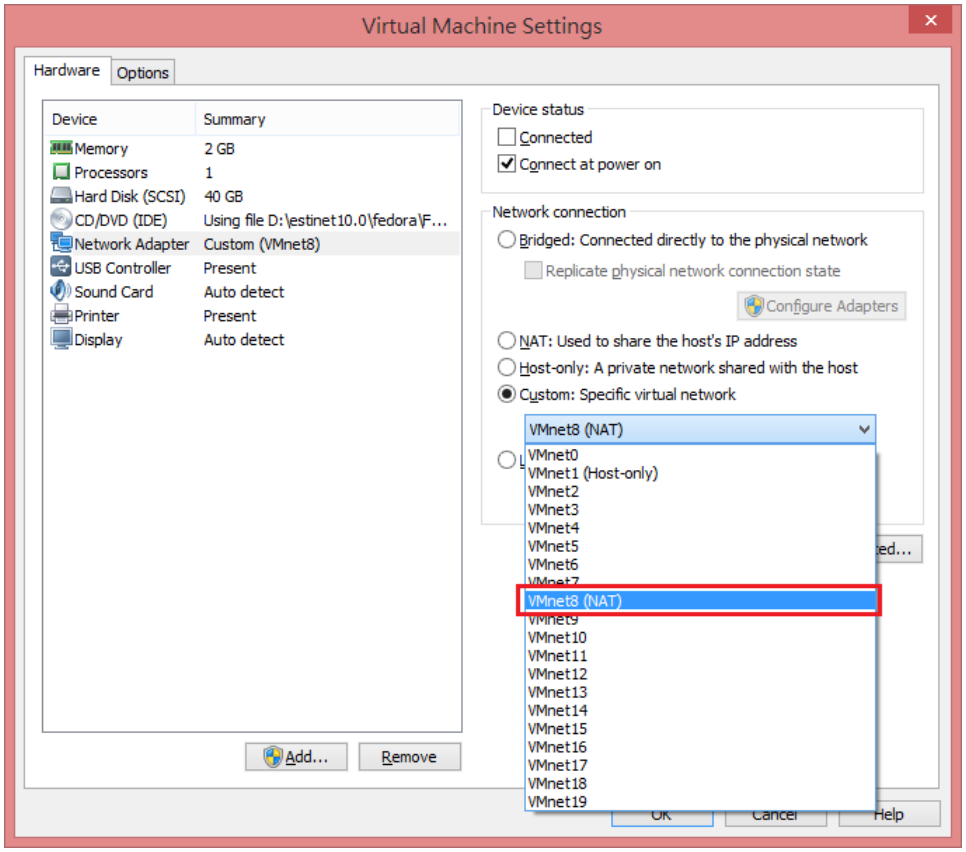


Figure 22 Choose VMnet (NAT) on Custom: Specific virtual network

j. To open a window “Terminal”, please click “Activities” on the upper left corner then select “Terminal”.

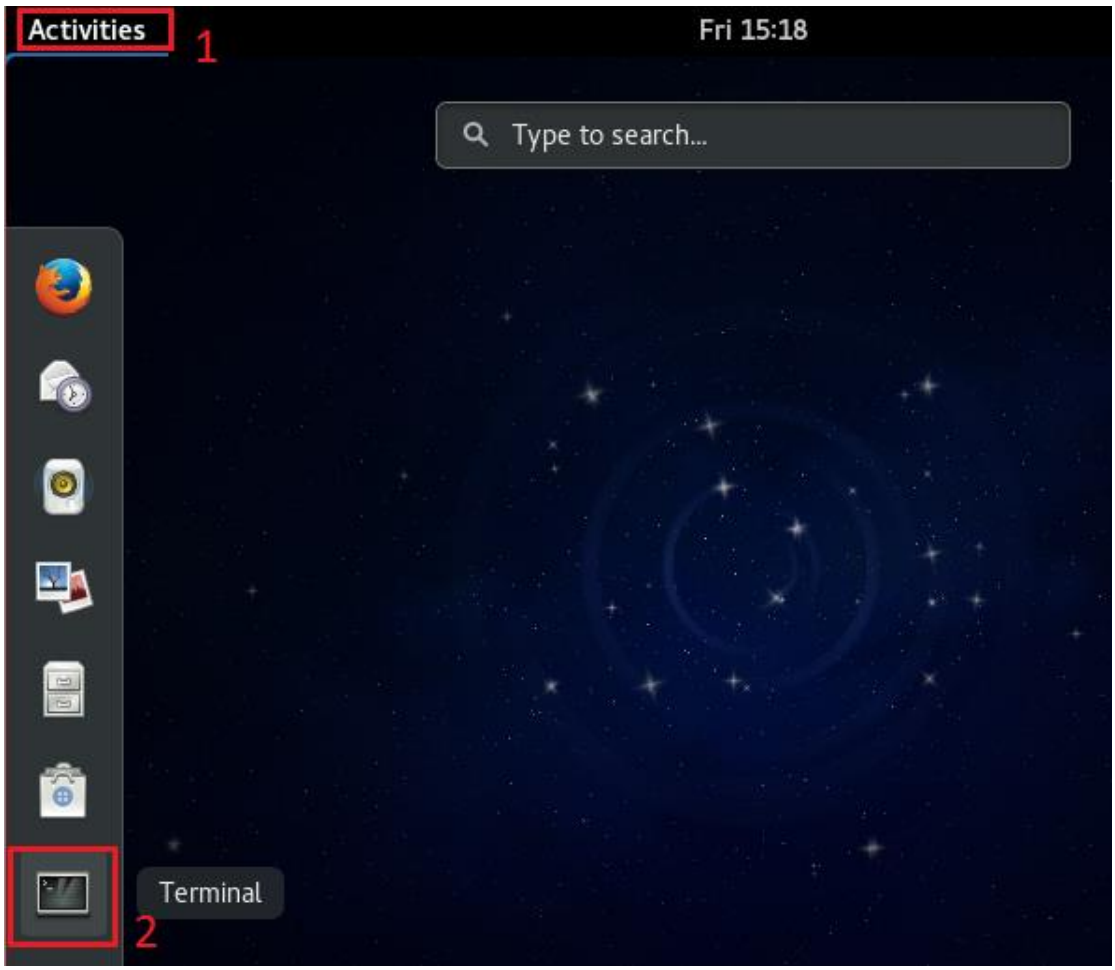


Figure 23 Open window “Terminal”

k. After open window “terminal”, please input “**su –**“ with Password “estinet” to get root privilege.

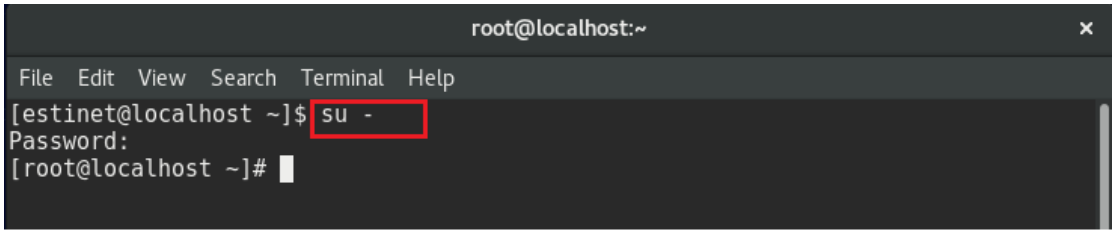


Figure 24 To get root privilege

## l. Execute #ifconfig to confirm the network device had got local IP

**after all settings.**

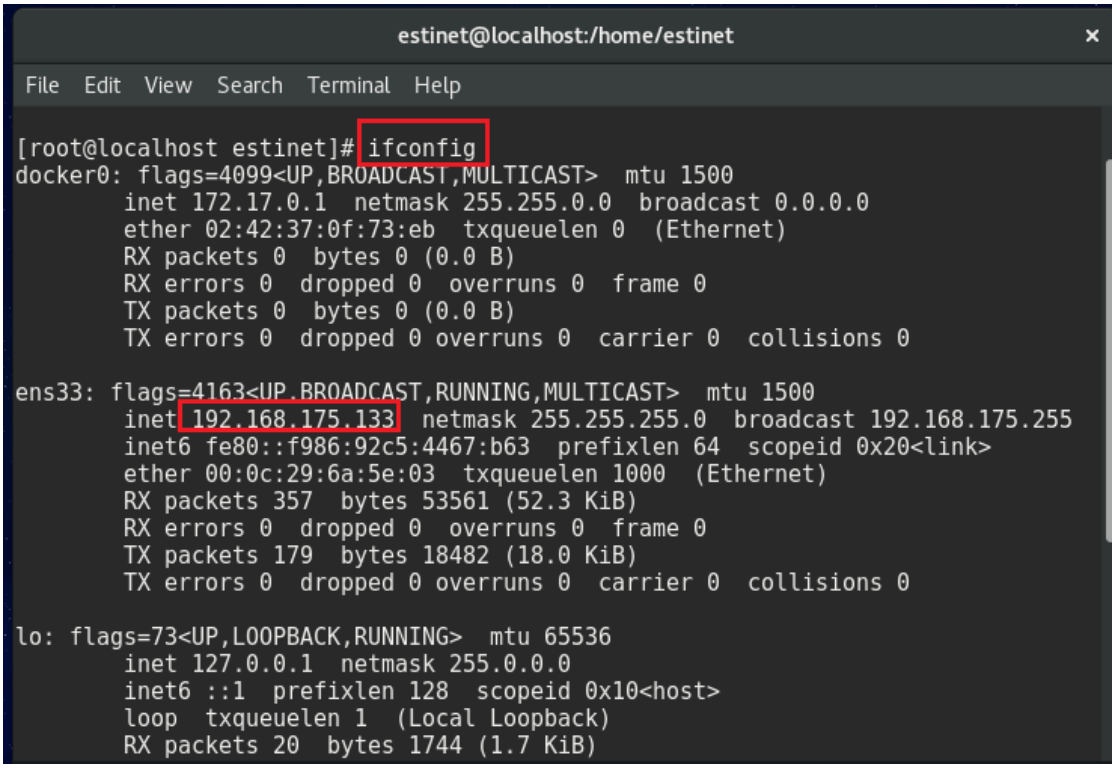


Figure 25 Ifconfig_getIP

**m.To make sure that the network device can connect to Internet.**

**For example: #ping www.google.com**

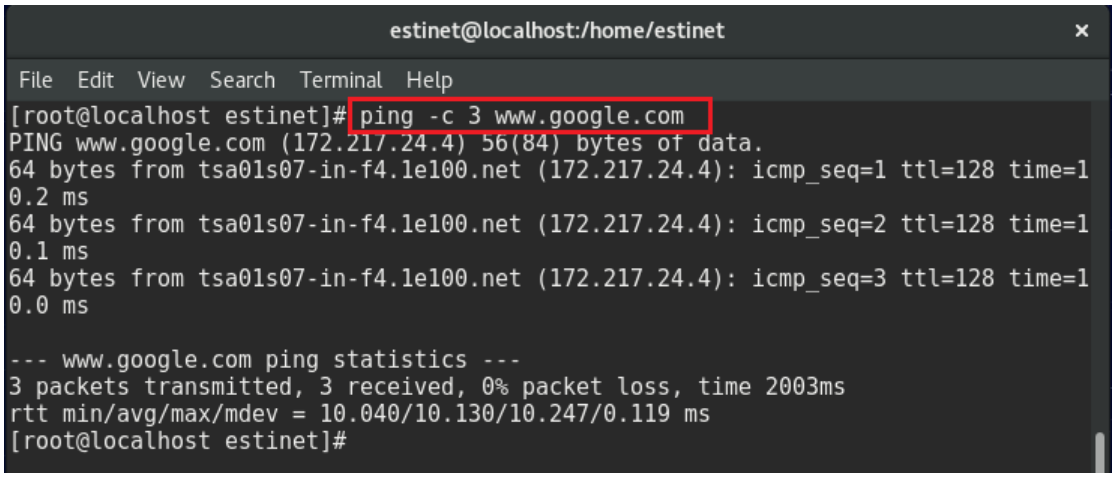


Figure 26 Ping www.google.com

**n. To make sure the network device can connect to EstiNet License Server correctly.**

EstiNet license server using domain name : lic1.estinet.com、IP : 59.124.181.130 and Port : 22220 to provide license service. If your internet has the firewall to block the specific IP and port connection, Please provide this information (domain name, IP and Port number) to the “Computer and Information Networking Center” or MIS (Management Information System) in your site.

Test 1: Get root privilege and execute # **telnet lic1.estinet.com 22220**. If the Network connection is successful, you could see this message.

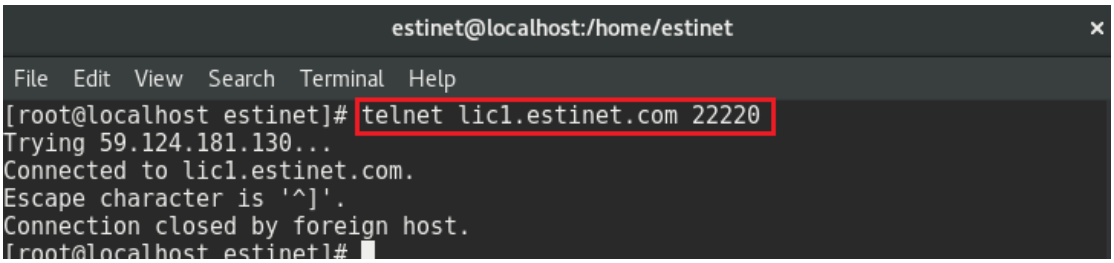


Figure 27 To execute # telnet lic1.estinet.com 22222

Test2: Get root privilege and execute # **nslookup lic1.estinet.com**. If your DNS server could parsing the EstiNet license server IP address successfully, you should get the result as: license server IP address is 59.124.181.130 and domain name is lic1.estinet.com.

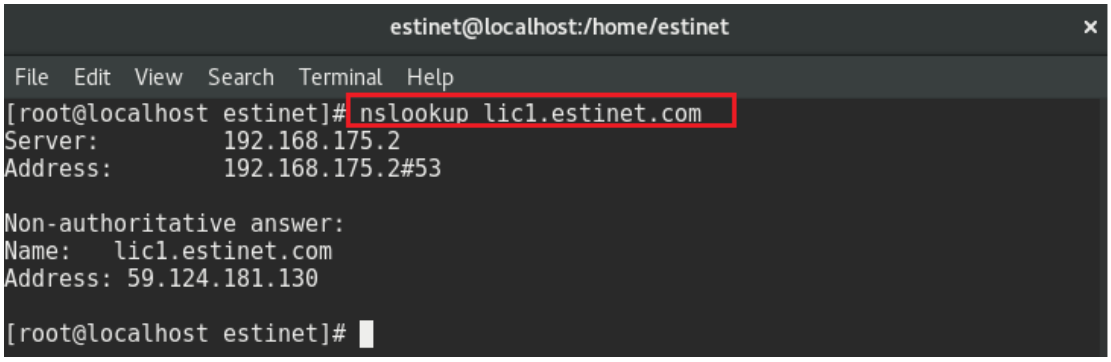


Figure 28 To execute # nslookup lic1.estinet.com

If you can connect Internet successfully, but you can't find any message that I mentioned above, please **apply to free them with TCP connection** for using EstiNet (domain name: lic1.estinet.com、IP: 59.124.181.130, Port: 22220).

## 2.3 First time to start up the EstiNet Simulator

**After login to Fedora24, please open a terminal.**


Figure 29 Open terminal

**You have to use the command "`su -`" to switch user with password "estinet" to get the root privilege.**

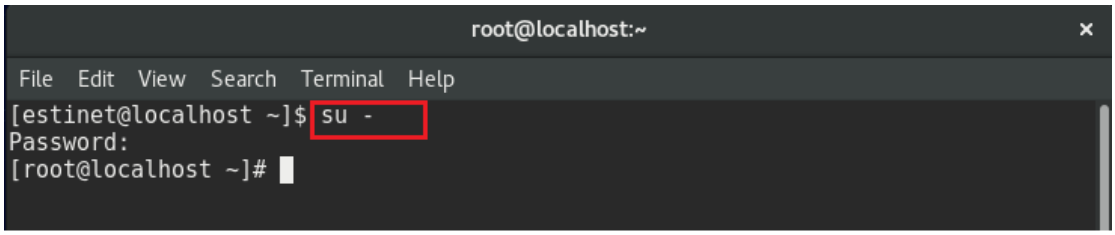


Figure 30 Get root privilege

**If this is your first time to run EstiNet, you have to execute the**

**command named “estinet_inputkey” to enter the license key which send to your e-mail by EstiNet. Next, you have to execute the command named “estinet_reserve” to obtain the permission from the license server to run EstiNet. The commands “estinet_inputkey” and “estinet_reserve” only need to be executed one time. Next time when users run EstiNet simulator, they don’t need to execute these two commands. Users should start up the EstiNet simulator as 2.4 General steps to star up the EstiNet**

**Simulator.**

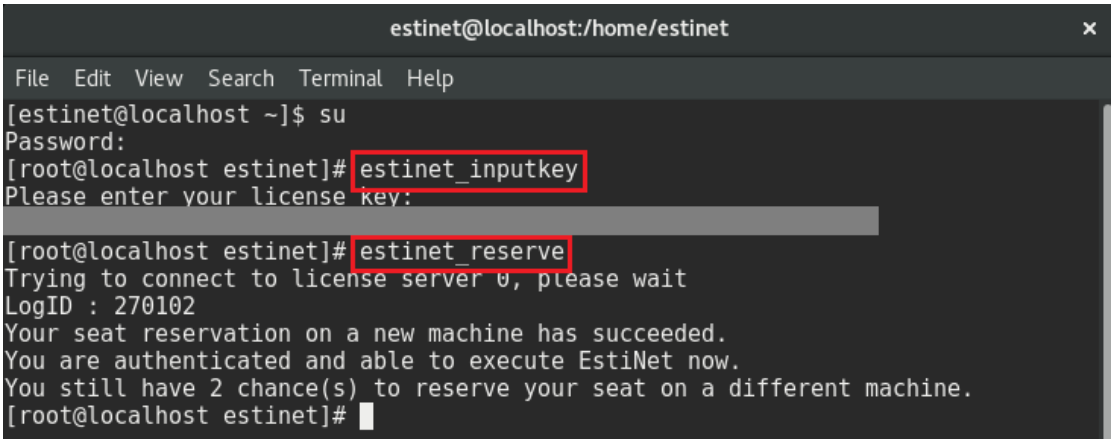


Figure 31 Obtain the permission from the license server to run EstiNet

## 2.4 General steps to star up the EstiNet Simulator

**After license identification, users could open the EstiNet simulator to do the simulation. There are two ways to open the EstiNet simulator. The first way is to click the "Activities" then search "EstiNet" or click the "Esti" icon directly .Please input**

**the root Password “estinet” to open the simulator.**

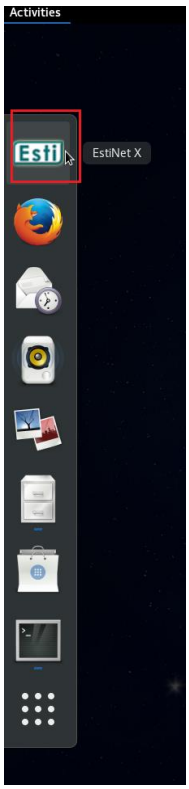


Figure 32 Click “Esti” icon

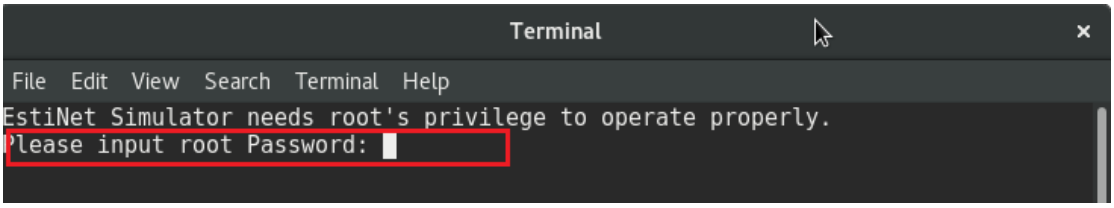


Figure 33 Input root Password

**The second way is to open a terminal. To execute the command “`su`**

**–” to switch user with password “estinet” to get the root privilege.**

**Then execute the command “estinetjd”.**

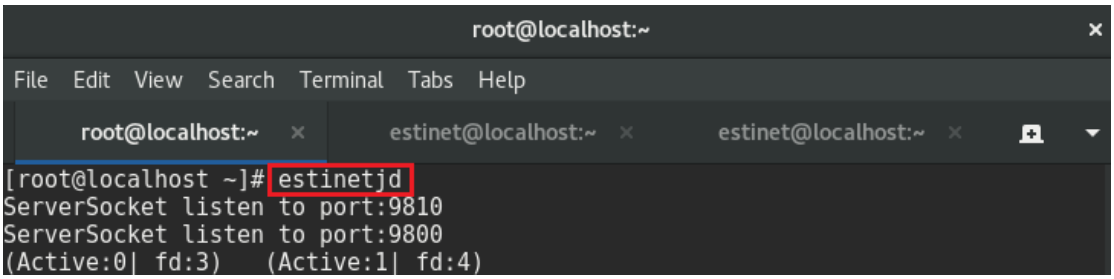


Figure 34 To execute the command estinetjd

**Open the second terminal (Users could use “Ctrl” + “Shift” + “T” to open another terminal). To execute the command “`su -`” with password “estinet” to get the root privilege. Then to execute the**

**command “estinetss”.**

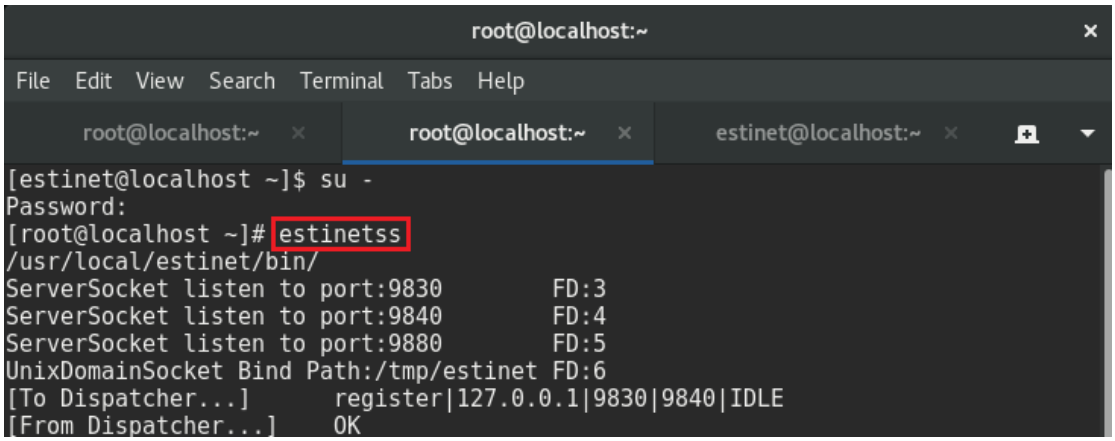


Figure 35 To execute the command estinetss

**Open the third terminal, to execute the command “`su -`” with password “estinet” to get the root privilege. Then execute the command “estinetgui”. The EstiNet simulator will be opened automatically.**

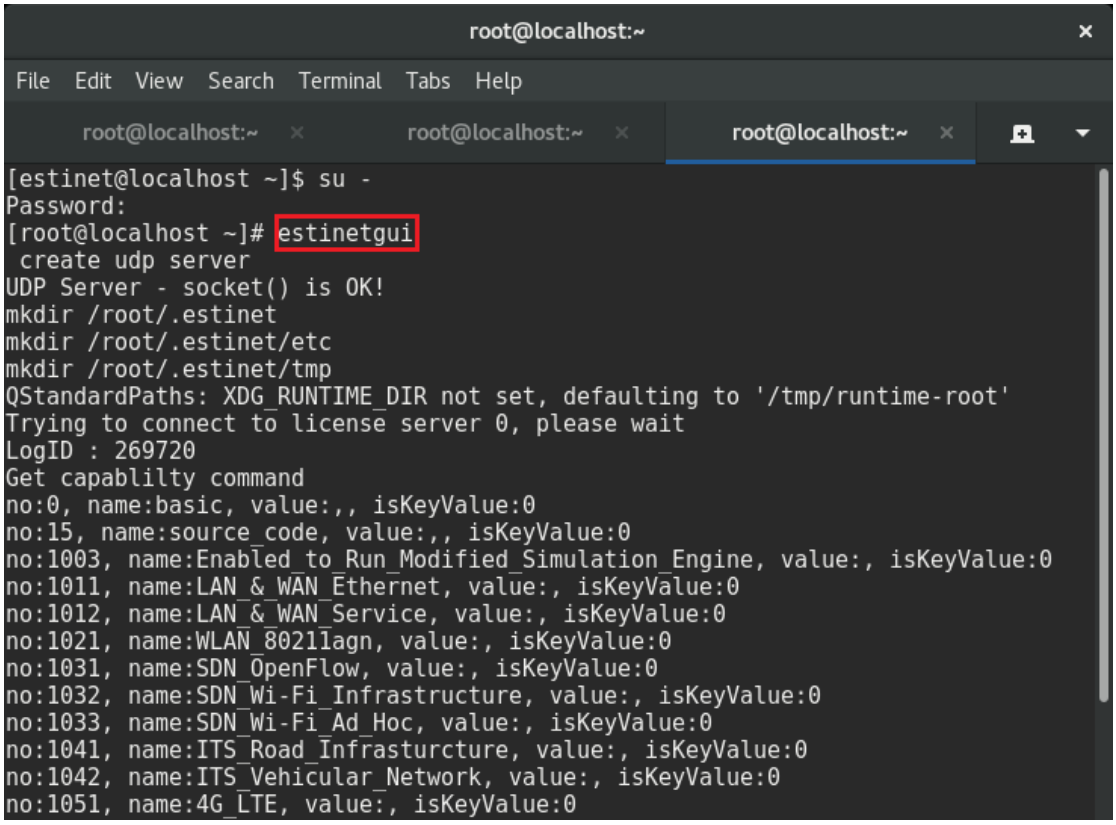


Figure 36 To execute the command estinetgui

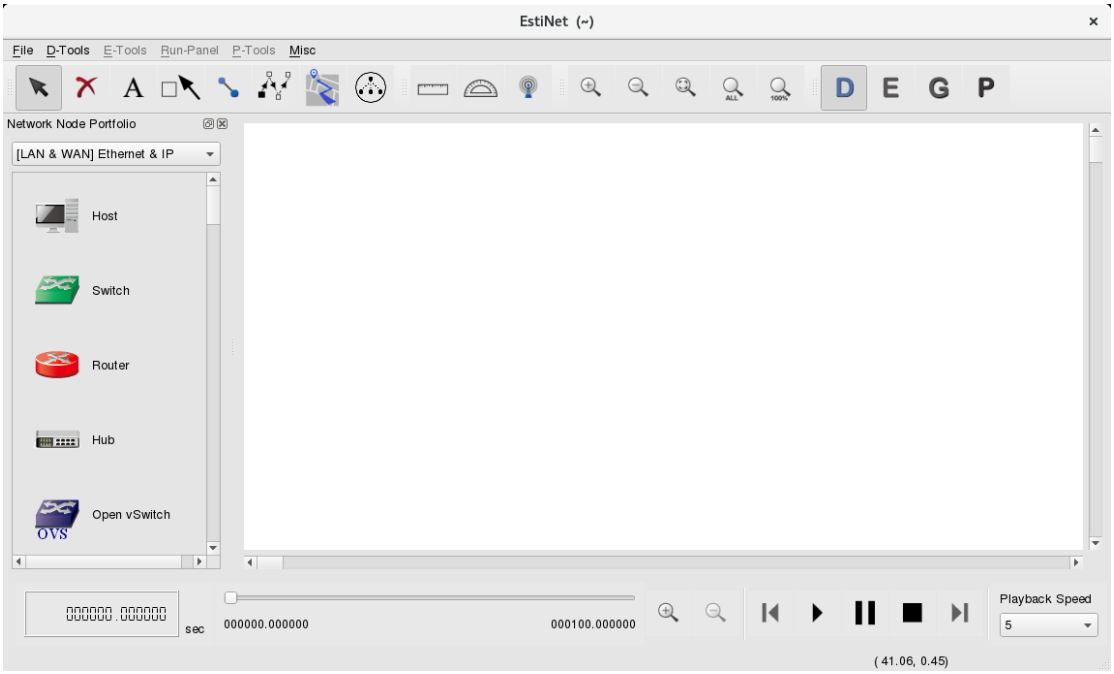


Figure 37 Complete the start of EstiNet Simulator

# Appendix

## Login information in VM Image

User name: estinet
Password: estinet
Root password: estinet

## The EstiNet operation demo video:

(1) Open an EstiNet Simulator
https://youtu.be/YfwaxbM42zM

(2) An introduction of Nodes on D state in EstiNet Simulator
https://youtu.be/6j3AABmzCKo

(3) How to create a simple SDN (Software Defined Network) topology in EstiNet Simulator
https://youtu.be/c6QUe2OYW9E

(4) How to use switch and router in EstiNet Simulator
https://youtu.be/71fG-DZz9TA

(5) How to use NAT, DNS and DHCP in EstiNet Simulator
https://youtu.be/o2Bx9jNP7WI

(6) How to simulate an ARP spoofing for security issue in EstiNet Simulator
https://youtu.be/qhCA_aizhrA

## File directory in VM Image

Installation package path:
/home/estinet/Downloads/estinet-10.0.6.xxx.xxxxxx- 1.fc24.x86_64.release
Source Code path: /home/estinet/Downloads/estinetse_all

## If user need to update a new version of EstiNet simulator:

(1) Please download the EstiNet X installation package and decompress this package.

#tar xvf estinet-10.0.6.xxx.xxxxxxx-1.fc24.x86_64.release.tar.bz2

(2) Then go into the directory of estinet-10.0.6.xxx.xxxxxxx--1.fc24.x86_64.release

#cd estinet-10.0.6.xxx.xxxxxxx--1.fc24.x86_64.release

To execute install.sh

#./install.sh

(3) After the installation is completed, please reboot the operation system. After restart the operation system and reopen the EstiNet simulator, user could check the installation version from Toolbar, Misc=> Copyright.