Mininet and XQuartz setup for **MAC** USERS

Step 1: - Download and Install Virtualbox from link given below: -

https://www.virtualbox.org/wiki/Downloads (Click on OS X host)

VirtualBox 6.0.4 platform packages

- Windows hosts
- OS X hosts
- Linux distributions
- Solaris hosts

The binaries are released under the terms of the GPL version 2.

See the changelog for what has changed.

Step 2: - Download and unzip Mininet Vm from Link Given below: -

https://github.com/mininet/mininet/wiki/Mininet-VM-Images

Click on: - 64 bit or 32 bit as required: -

- **Mininet 2.2.2 on Ubuntu 14.04 LTS - 64 bit** (recommended for most modern hardware and operating systems) (sha256)
- **Mininet 2.2.2 on Ubuntu 14.04 LTS - 32 bit** (recommended for **Windows users** using VirtualBox or Hyper-V) (sha256)

Step 3: - Download and Install XQuartz from Link Given below: -

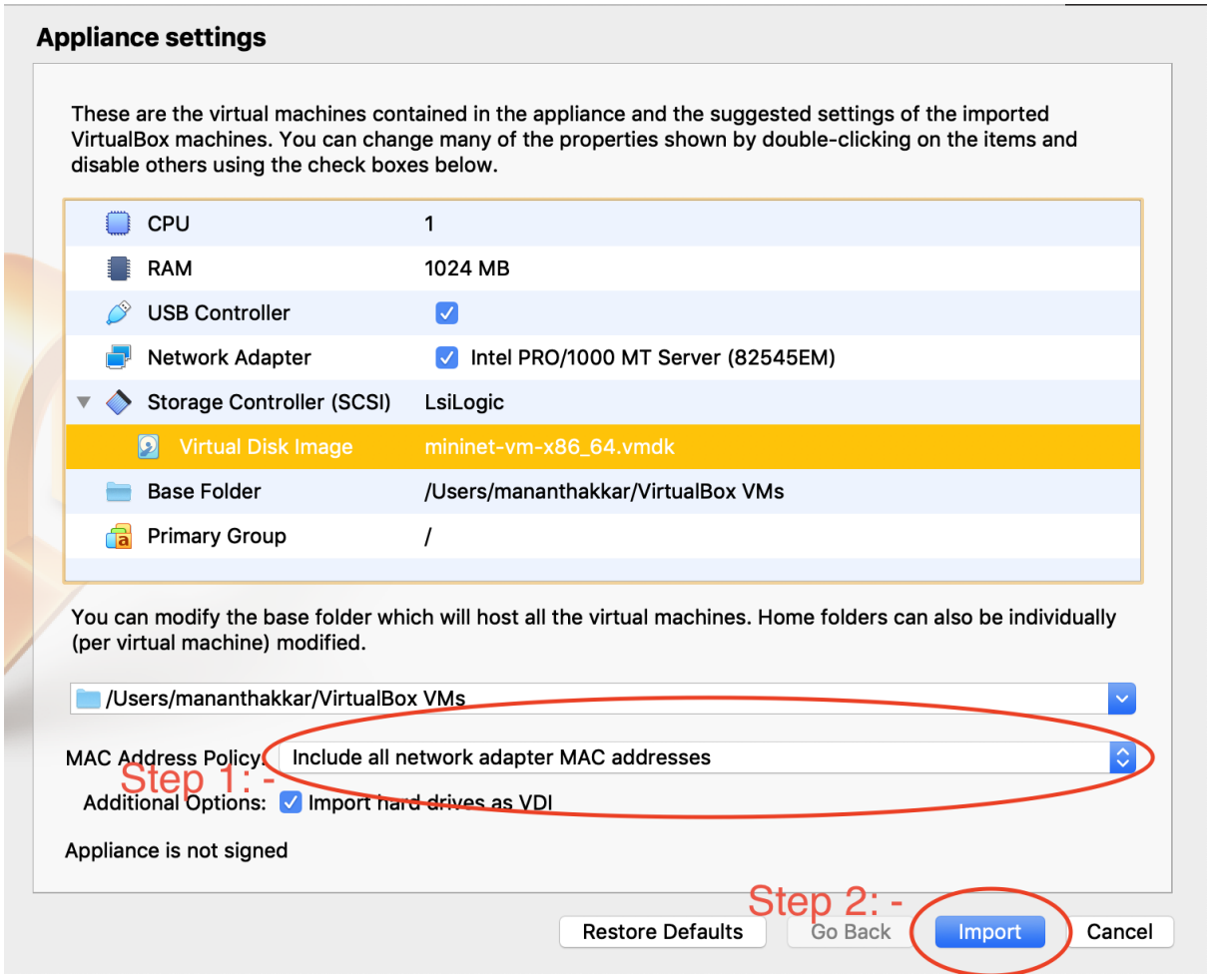
https://www.xquartz.org/

Quick Download

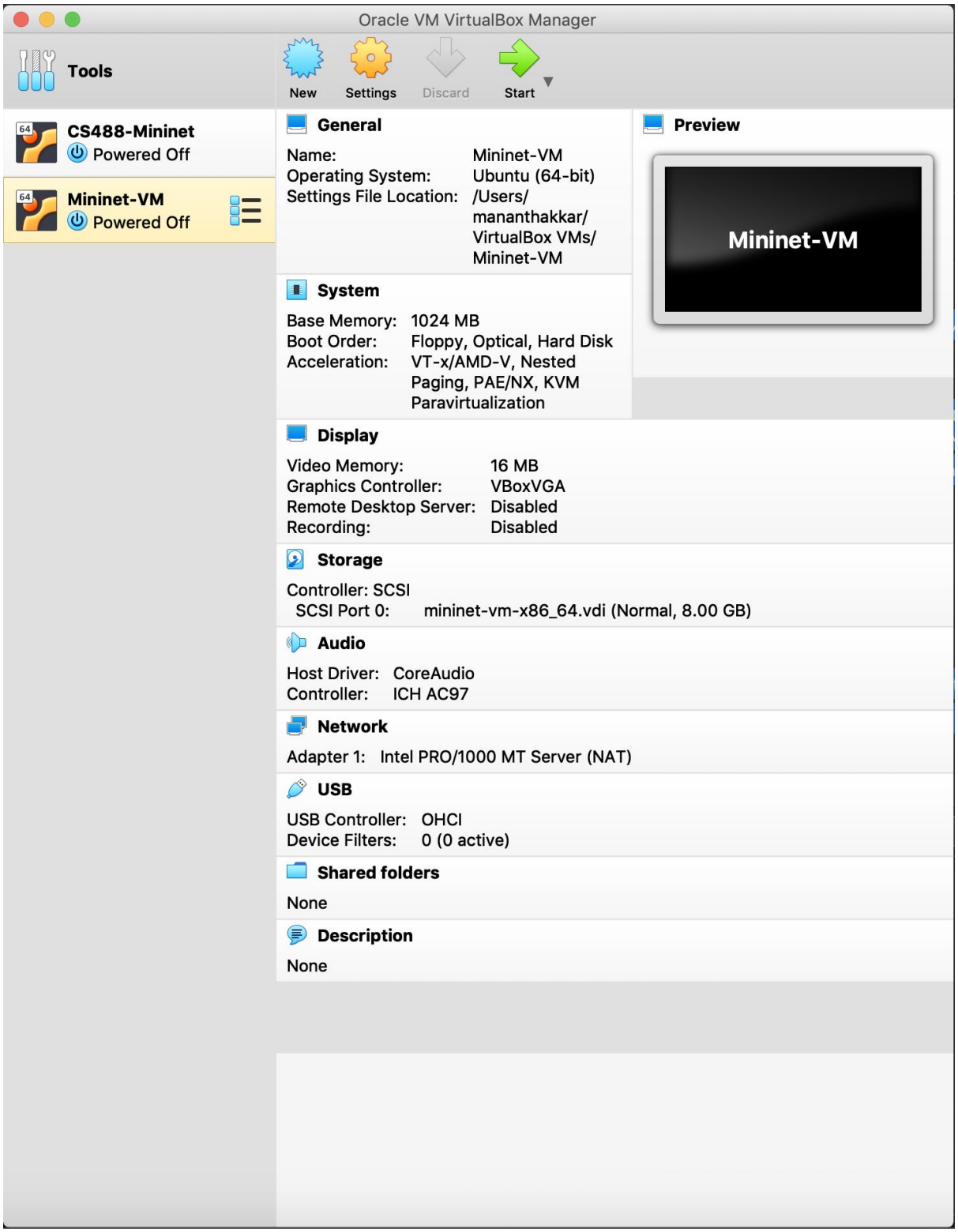
Download	Version	Released	Info
XQuartz-2.7.11.dmg	2.7.11	2016-10-29	For OS X 10.6.3 or later

Step 4: -

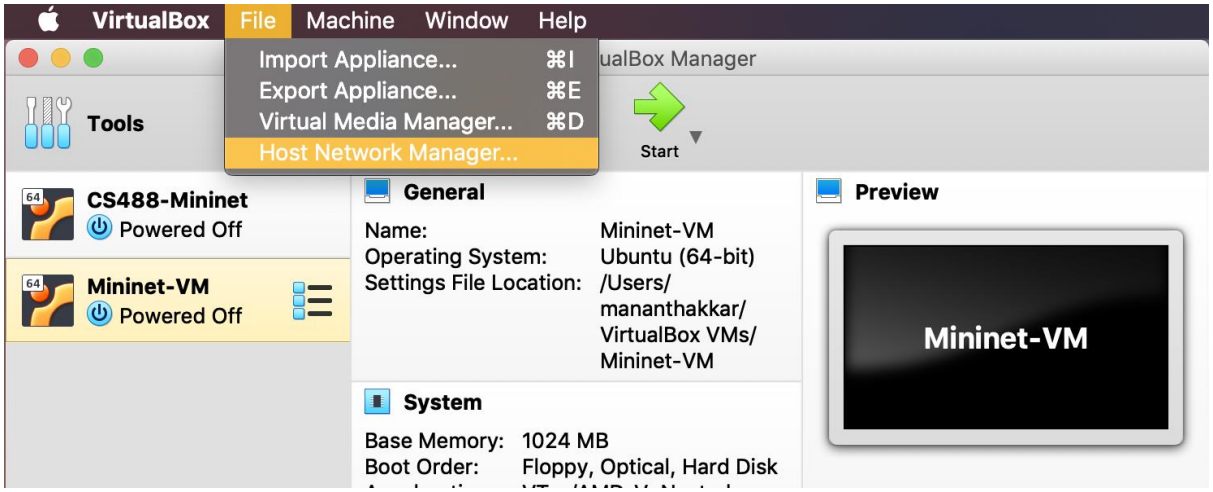
Open the unzipped Mininet folder and double click on “**OVF**”.



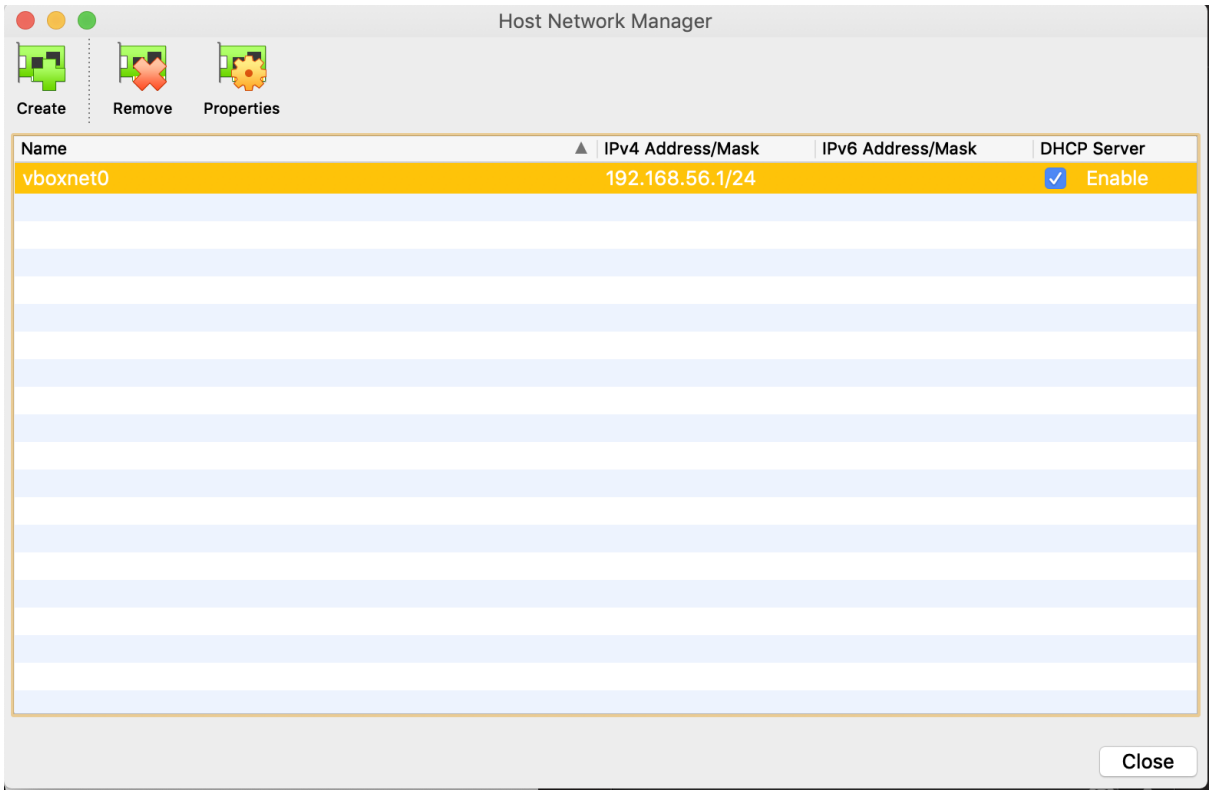
After importing: - You will have something like this (eg: -Mininet VM, or whatever name you set):-



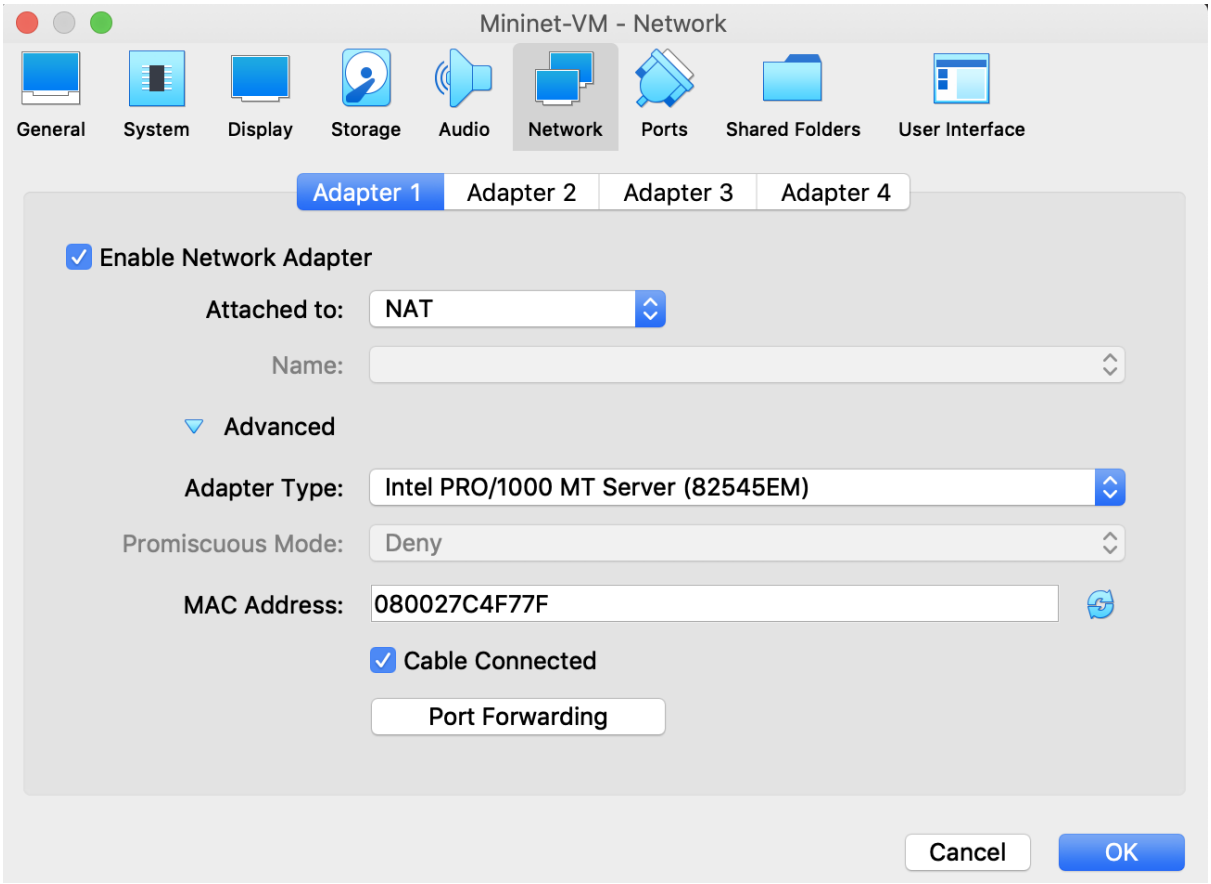
Step 5: - Go to file on top and select Host Network Manager: -



NOTE: - if your host manager is empty and has not files then click on create (top left) and it should create something like this (in the image below - vboxnet0). Make sure the DHCP server of Host network is "ENABLED" Close the window after that.

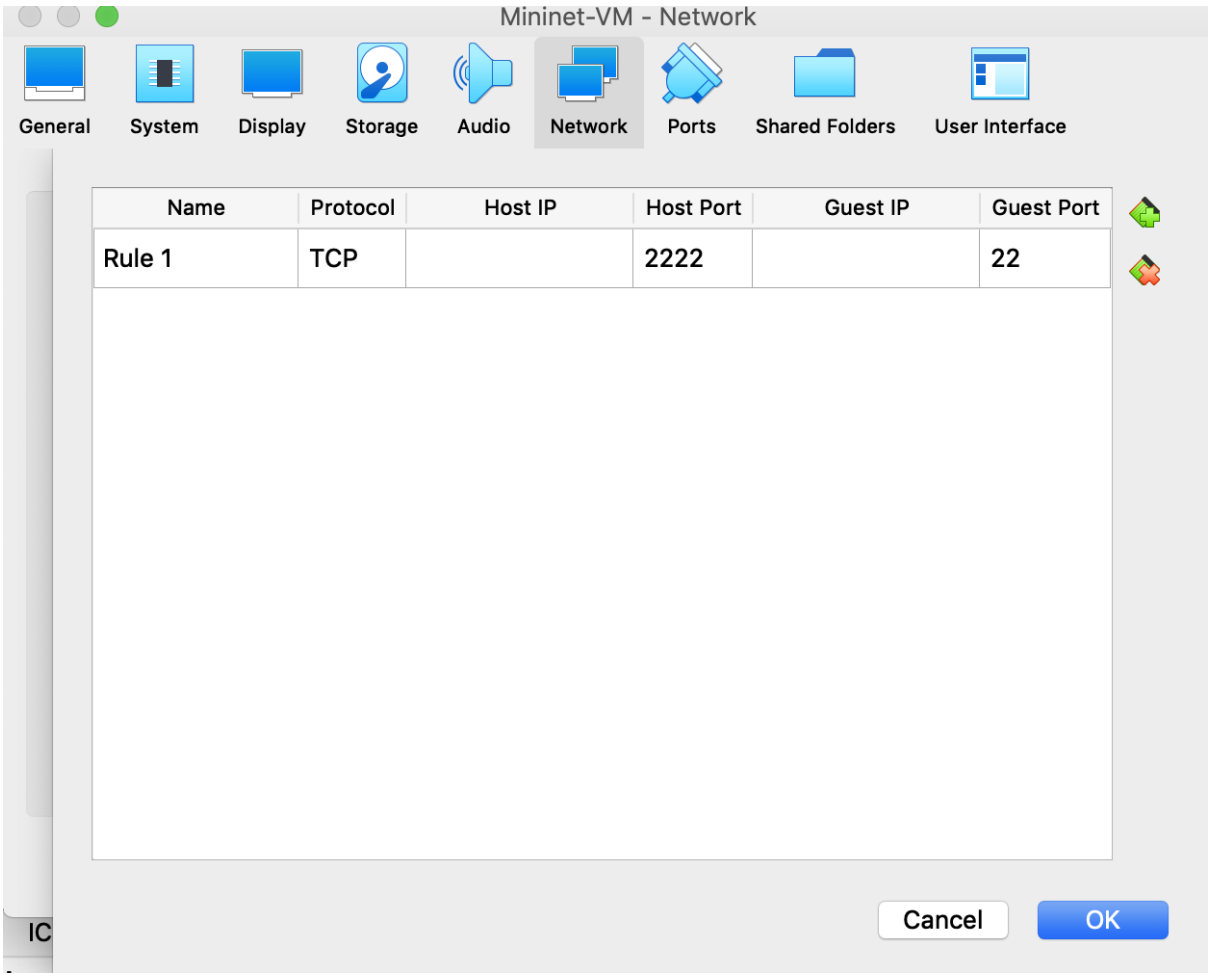


Step 6: - Go to the setting of the VM and go to network and you should see this (Image below): -

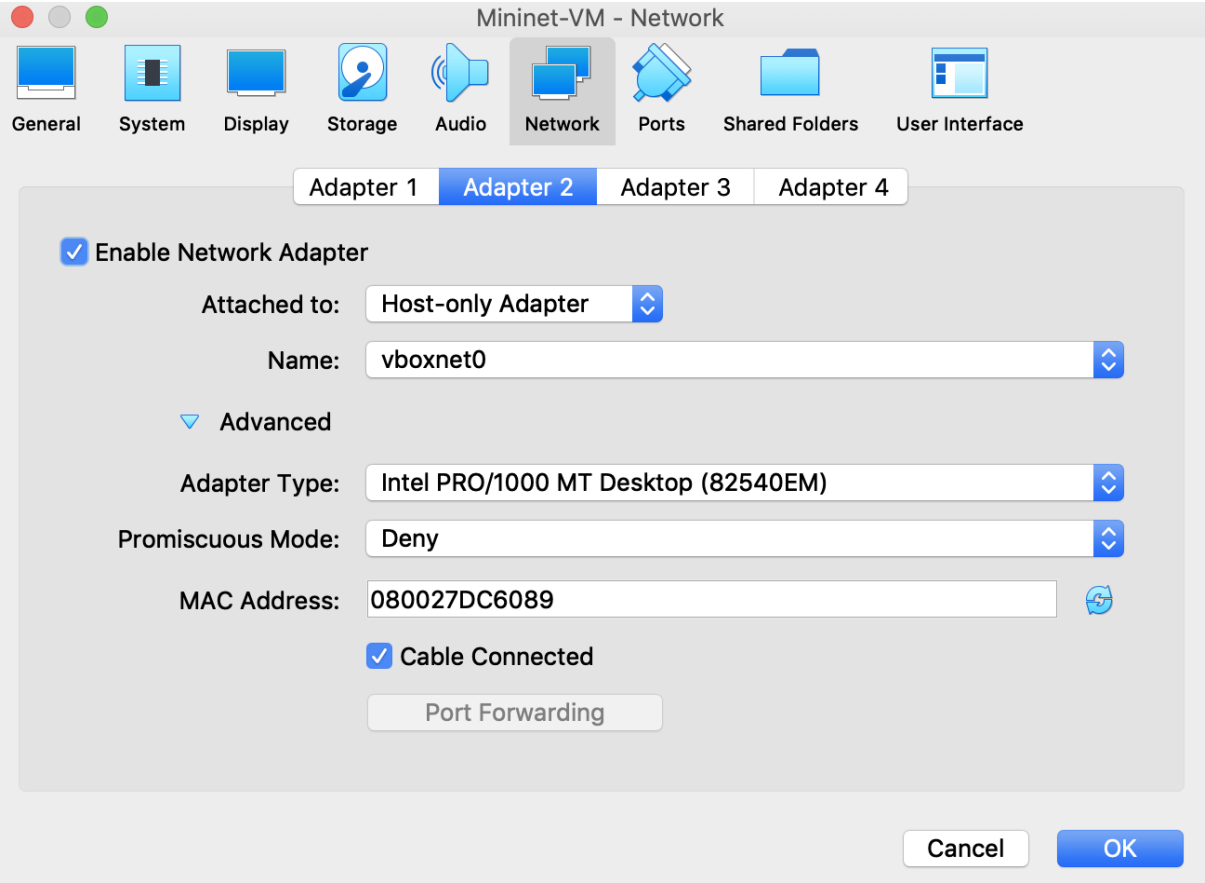


Note: - it should open Adapter 1 that is attached to NAT, and if you Advance dialog box is closed click on down arrow and it should open up.

Step 7: - after advance drops down click on Port Forwarding and create Rule 1 if it is empty and put Host Port as “2222” and GuestPort and “22”. And click “Ok”.

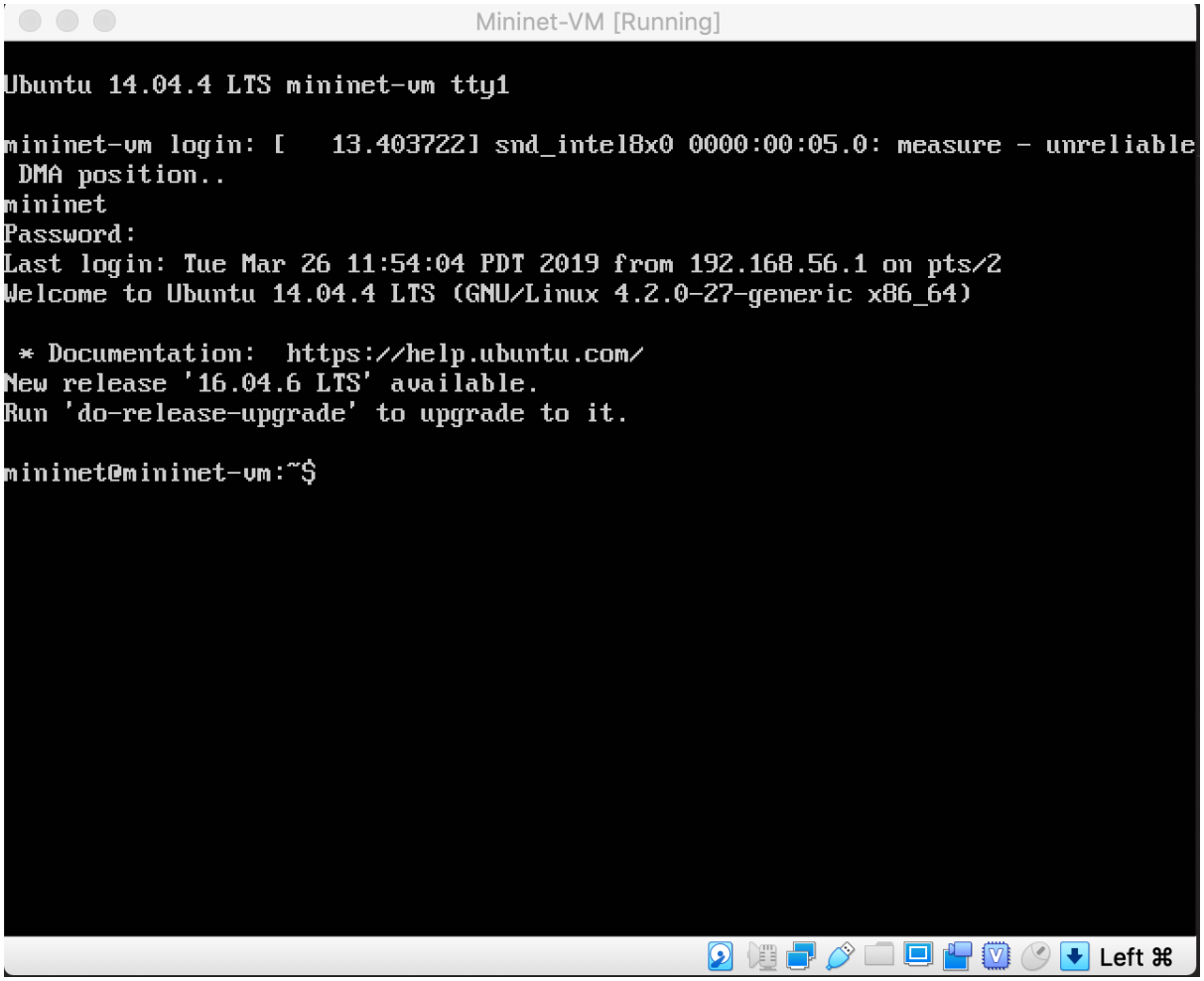


Step 8: - Go to Adapter 2 and enable it and select “Attached to:” as “Host-only Adapter” and it should automatically give the name if the Host address we created (i.e. vboxnet0). If not please select it manually and Click on “Ok”.



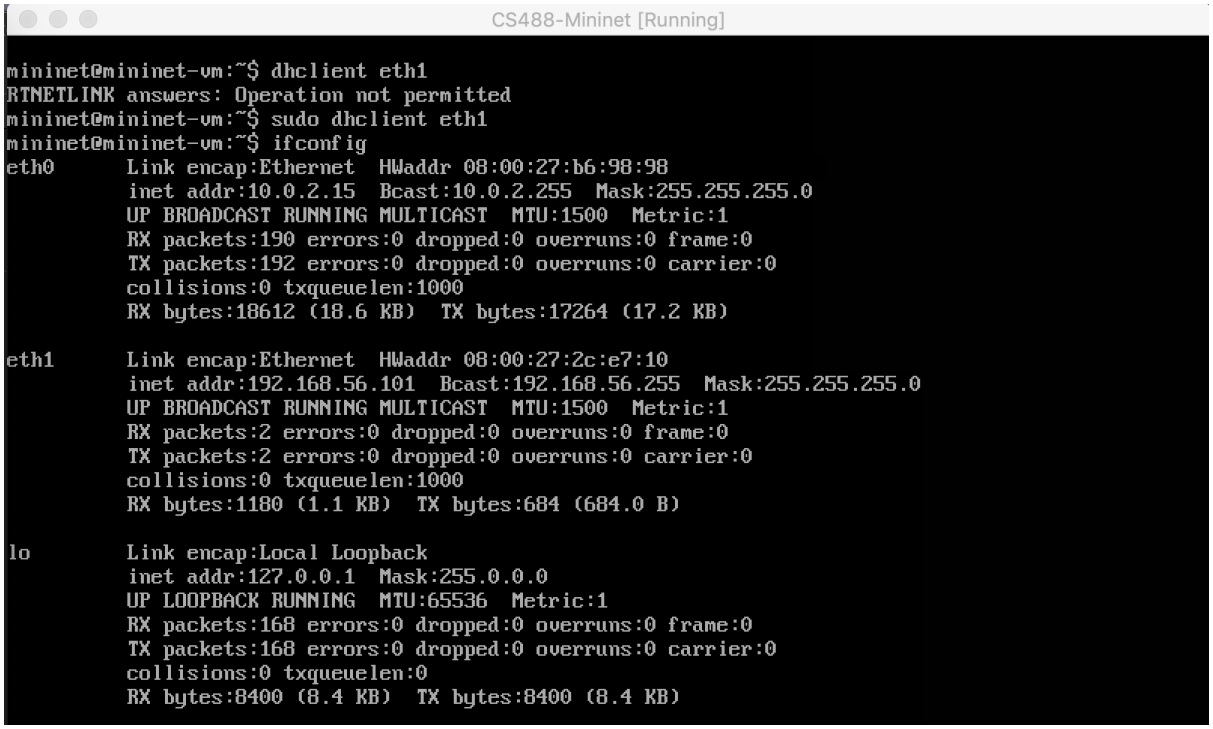
Step 9: - Run the VM and enter the ID as “mininet” and Pass as

“mininet”. And you will have something like this.



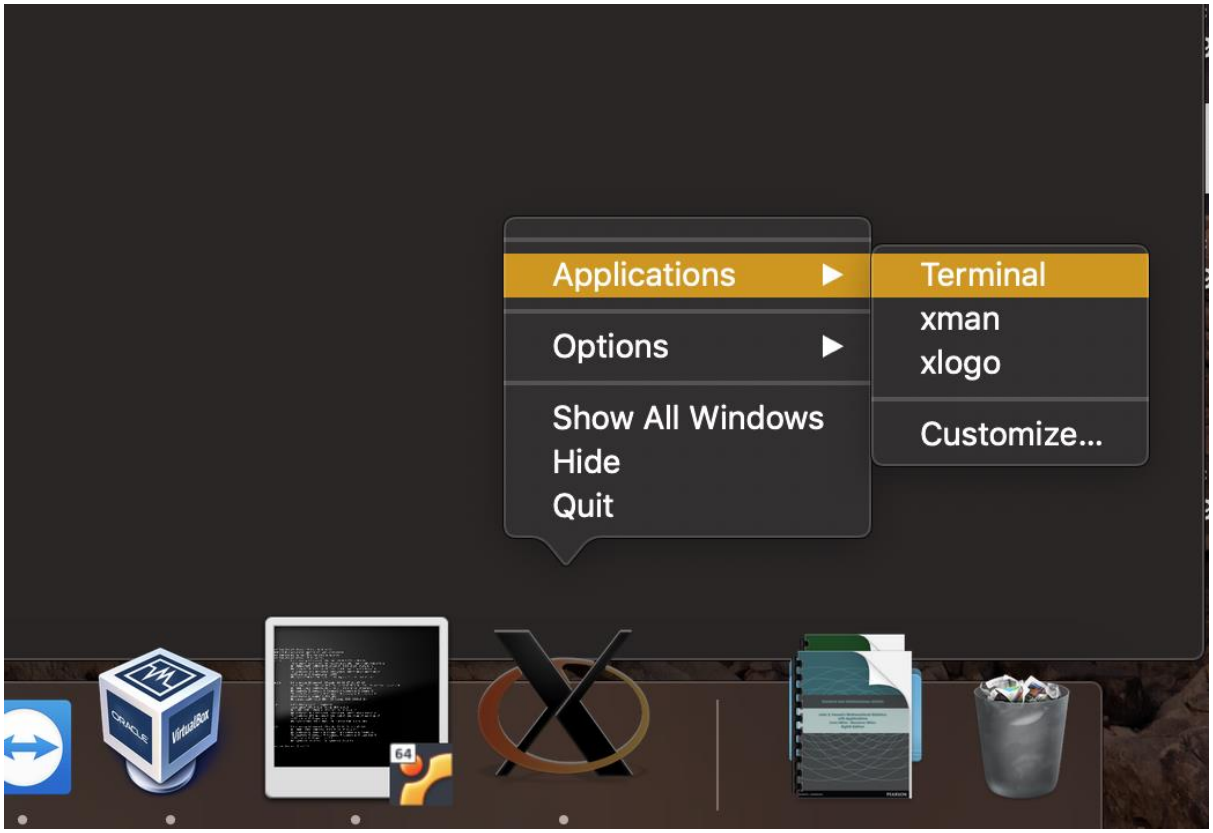
Step 10: - Run command (in specific order): - 1) `sudo dhclient eth1`
2) `ifconfig`

And now you should have something like this : -



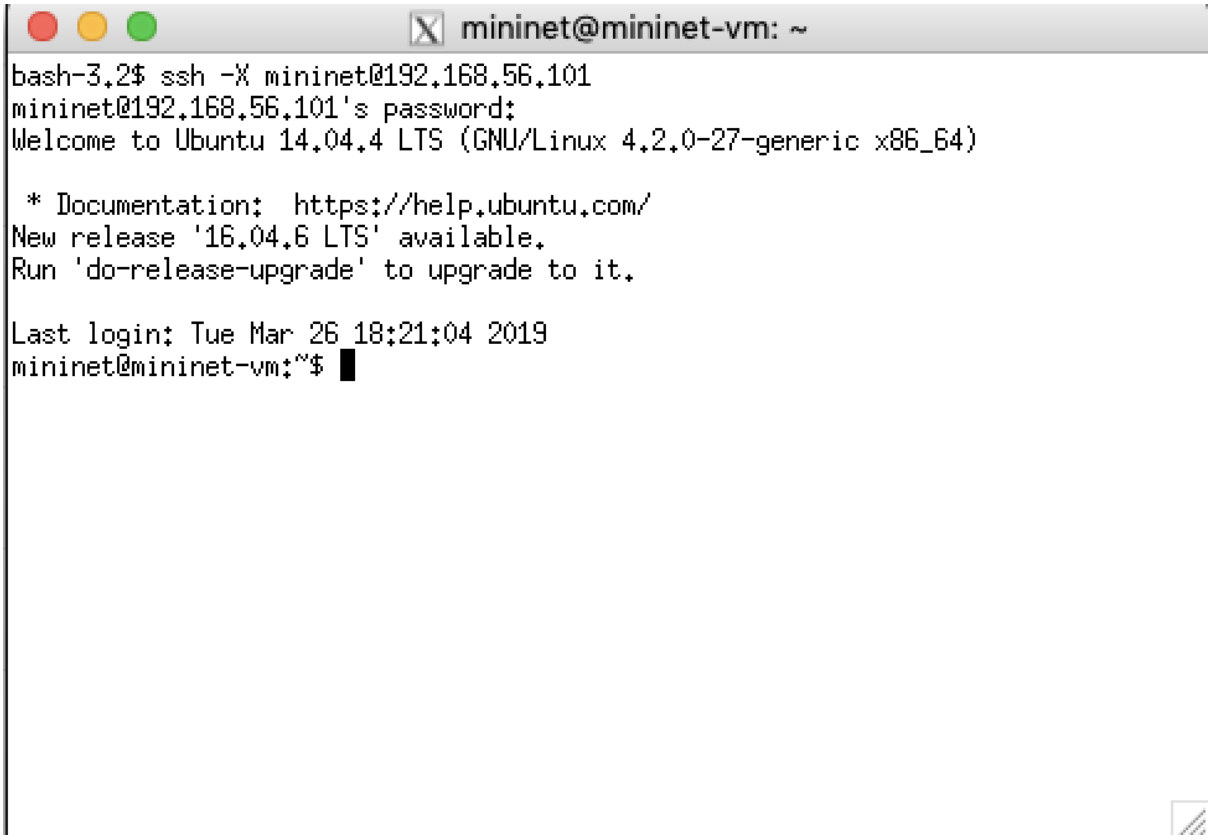
In eth1 you will see the “inet addr” that is the IP of VM and we will connect that to host using XQuartz.

Step 11: - Install XQuartz and Run the application and open the terminal.



This is how XQuartz looks like and run the command "`ssh -X mininet@192.168.56.101`". **Note** : -(192.168.56.101) is my IP which I found in VM under eth1. Can be same or different from you. Use your IP and run the command. Its

prompts to enter the password, which is “mininet”.



Now your VM is connect to the host and you can run the command such as: -

1) sudo wireshark &
2) xterm h1
3) xterm h2
4) sudo mn
    a) h1 pings h2

You can install eclipse using three command

1) sudo apt-get update
2) sudo apt-get install openjdk-7-jdk
3) sudo apt-get install eclipse-platform
4) After installing “ sudo eclipse &”

Note: - opening wireshark and eclipse for first time might take long to open so wait for few seconds or a min and then proceed”.