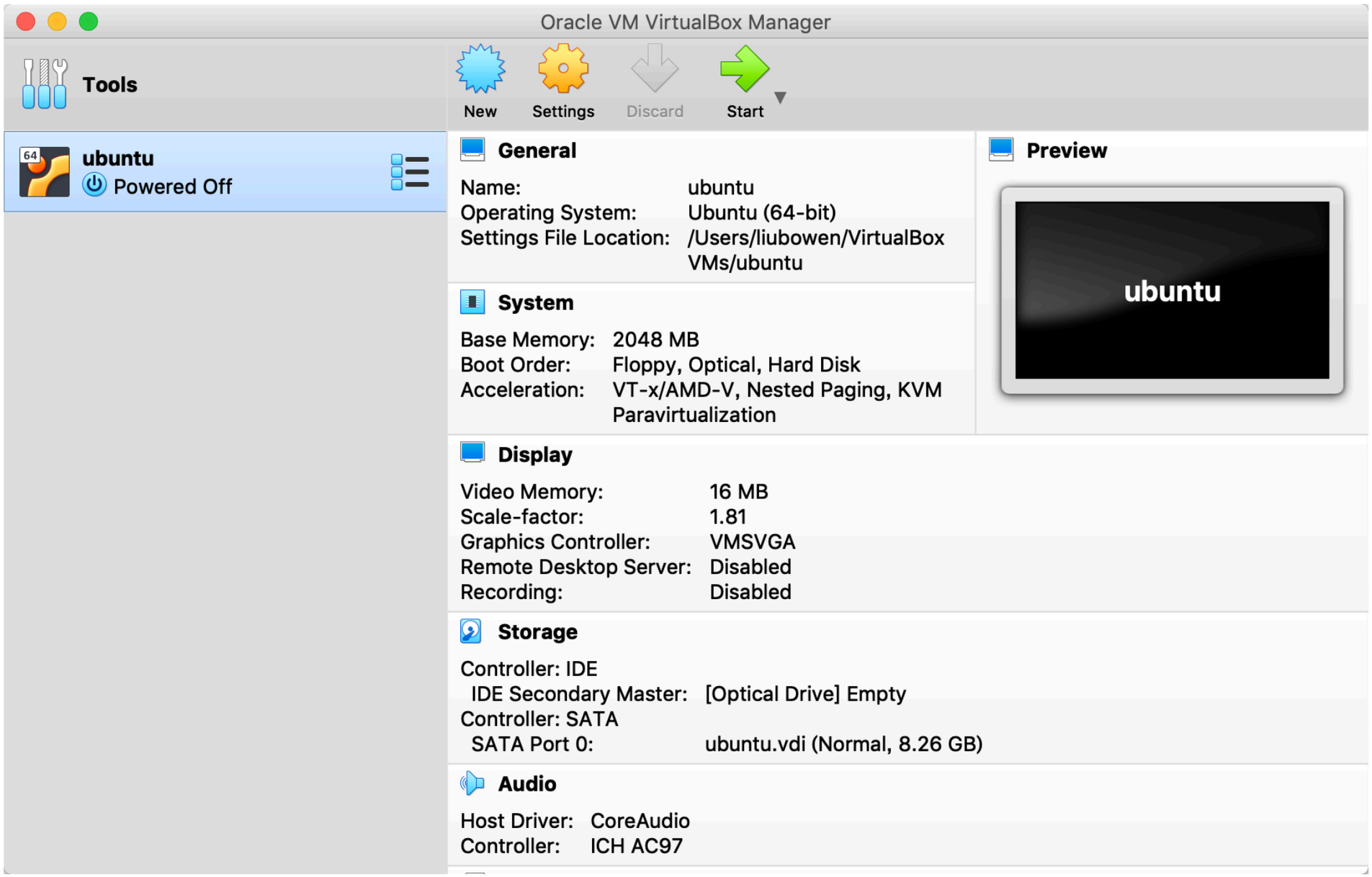
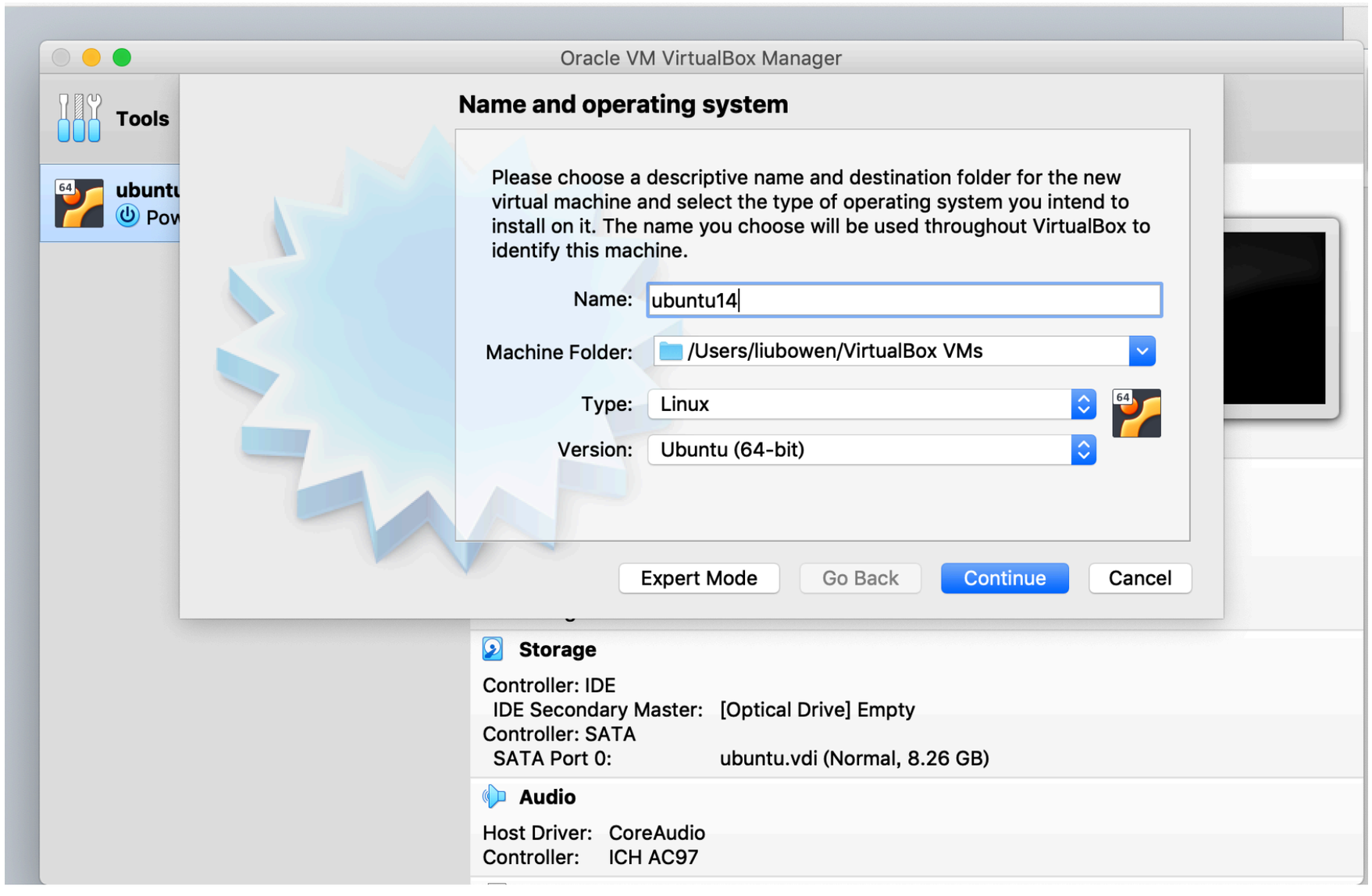
VirtualBox Installation

- **VirtualBox Binary Download**
  - **https://www.virtualbox.org/wiki/Downloads**

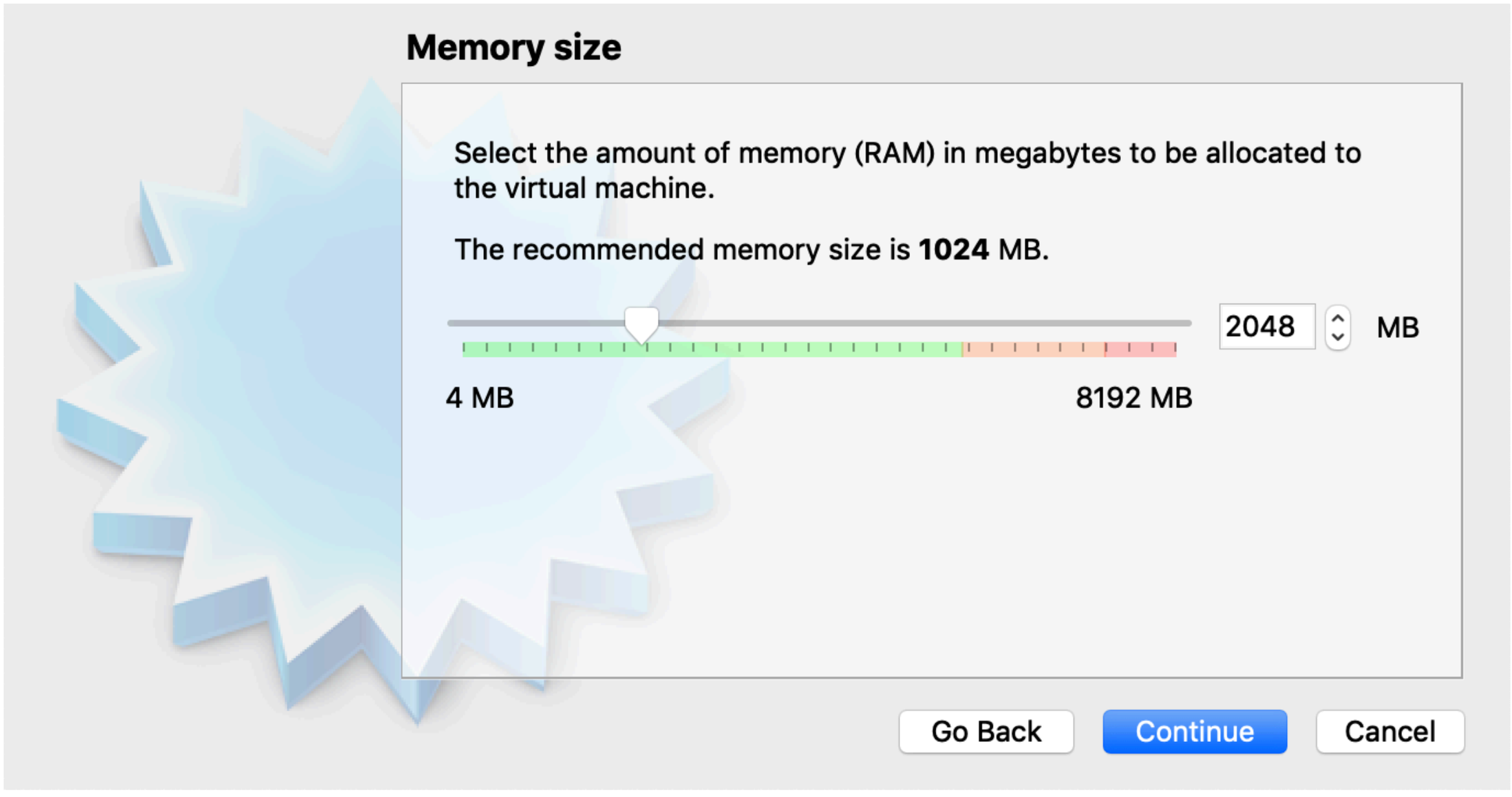


Ubuntu Image

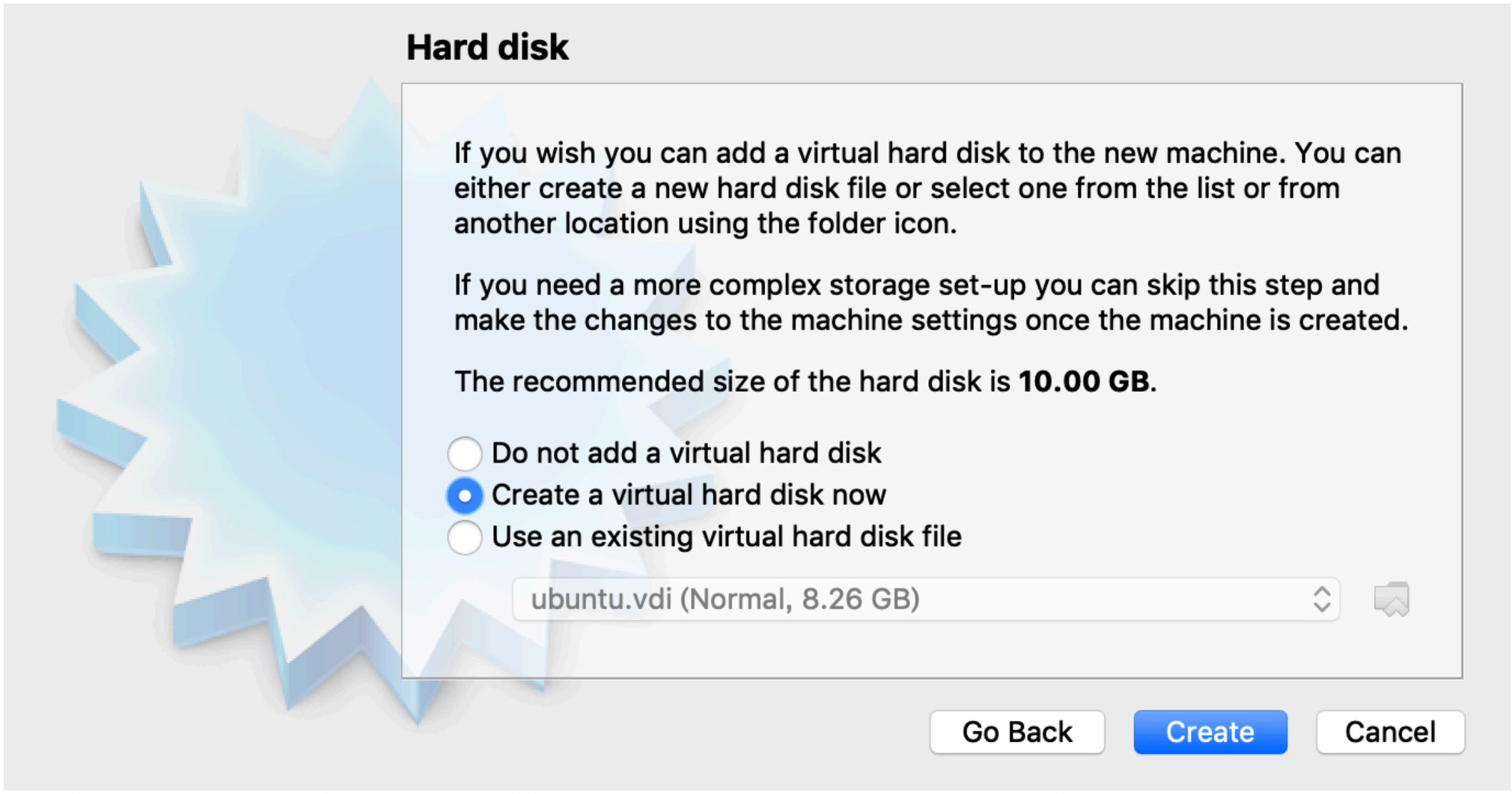
- **Ubuntu 14.04 Download**
  - **http://releases.ubuntu.com/14.04/**
  - **Desktop image (with Xterm) recommend**



Memory size setting

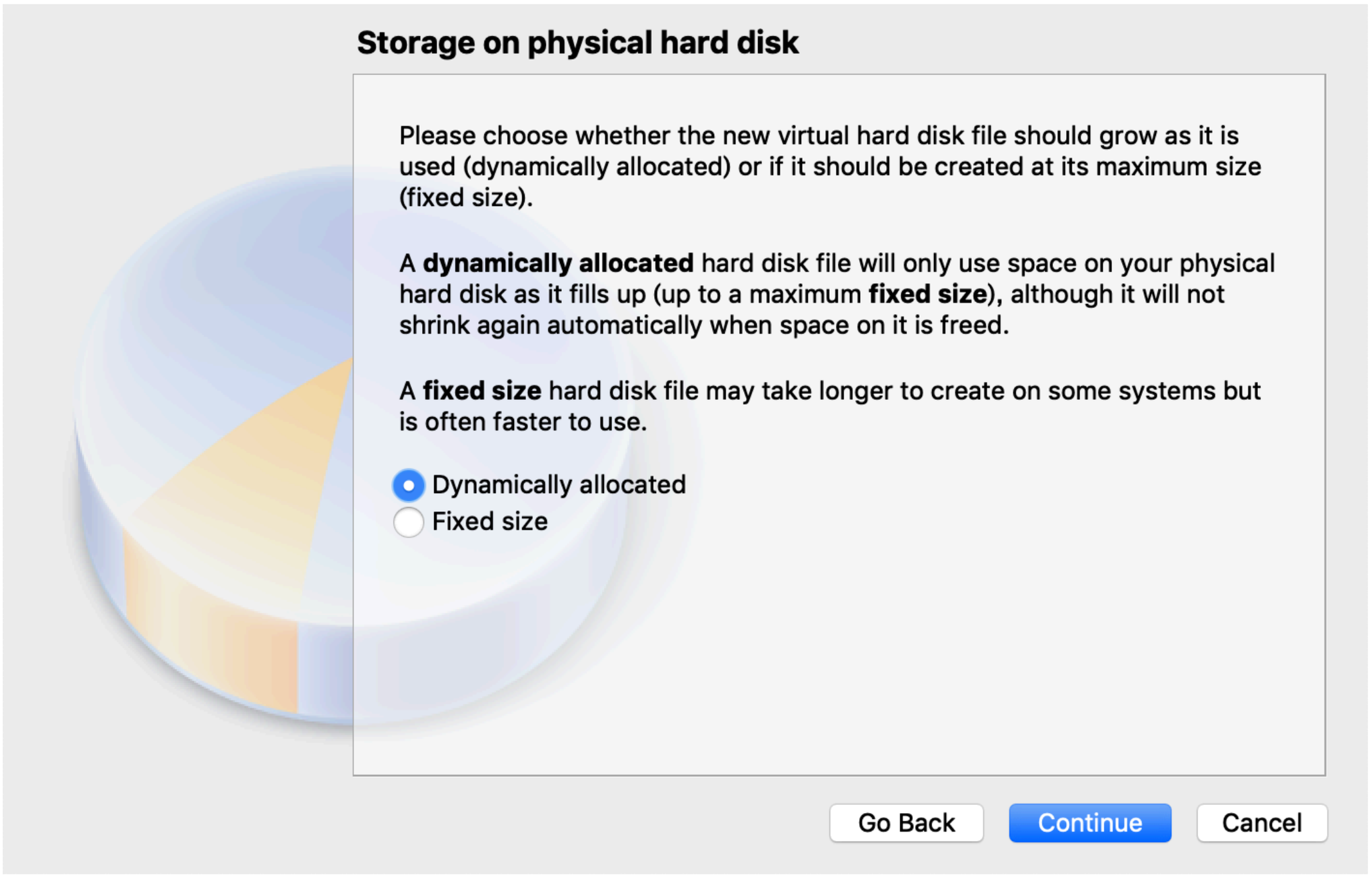


Disk space setting

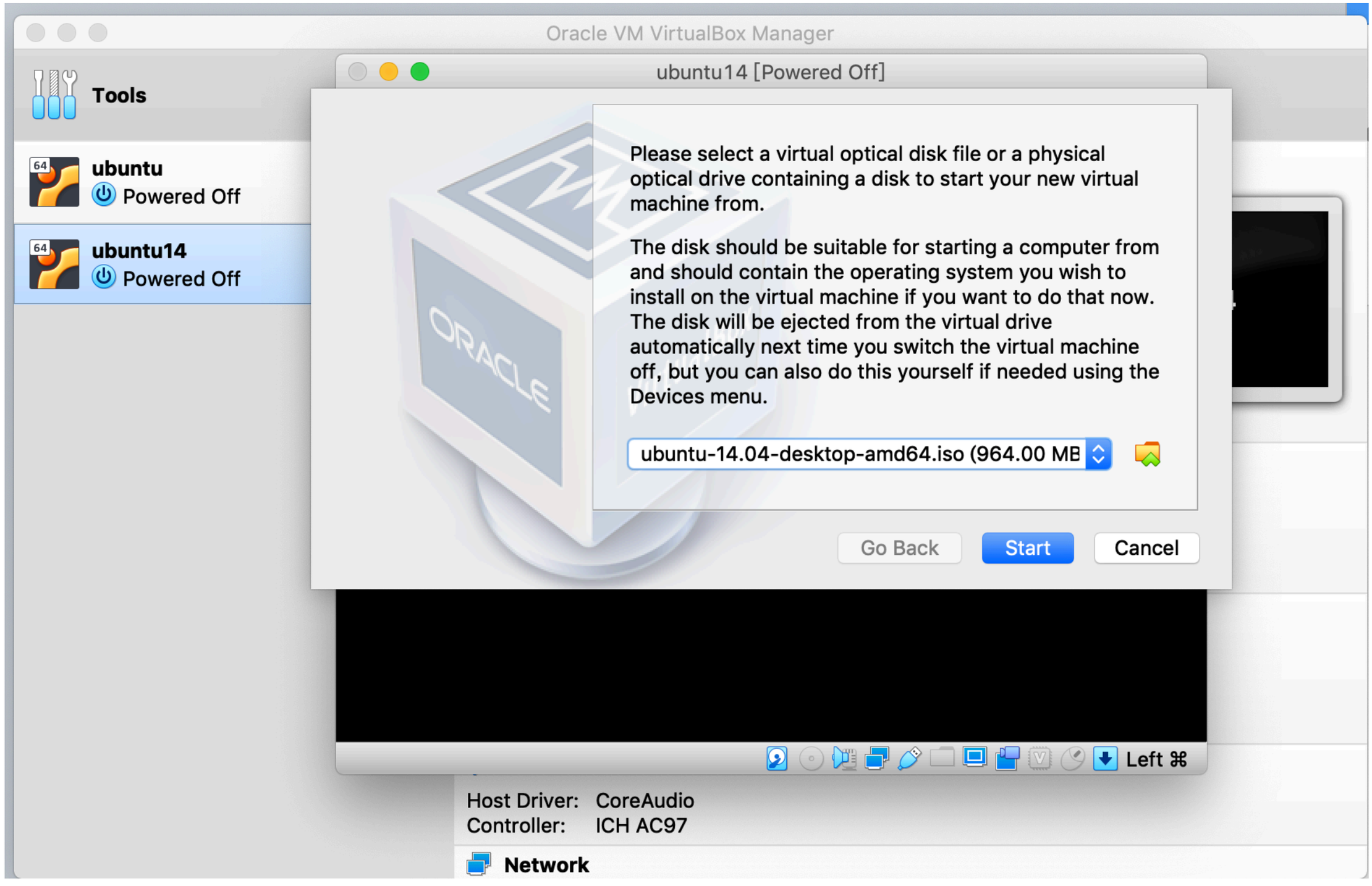


Disk file type setting

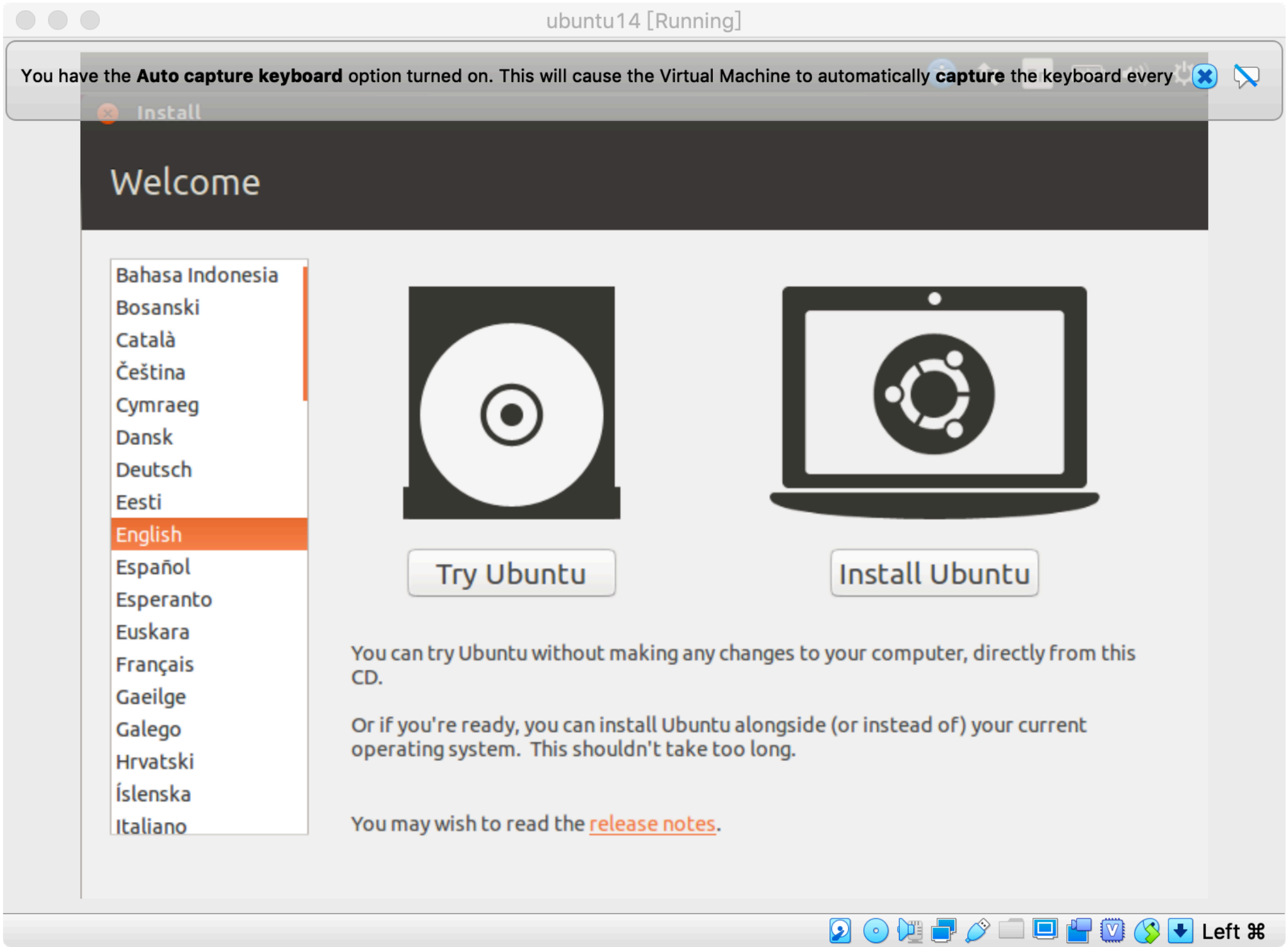
Storage setting



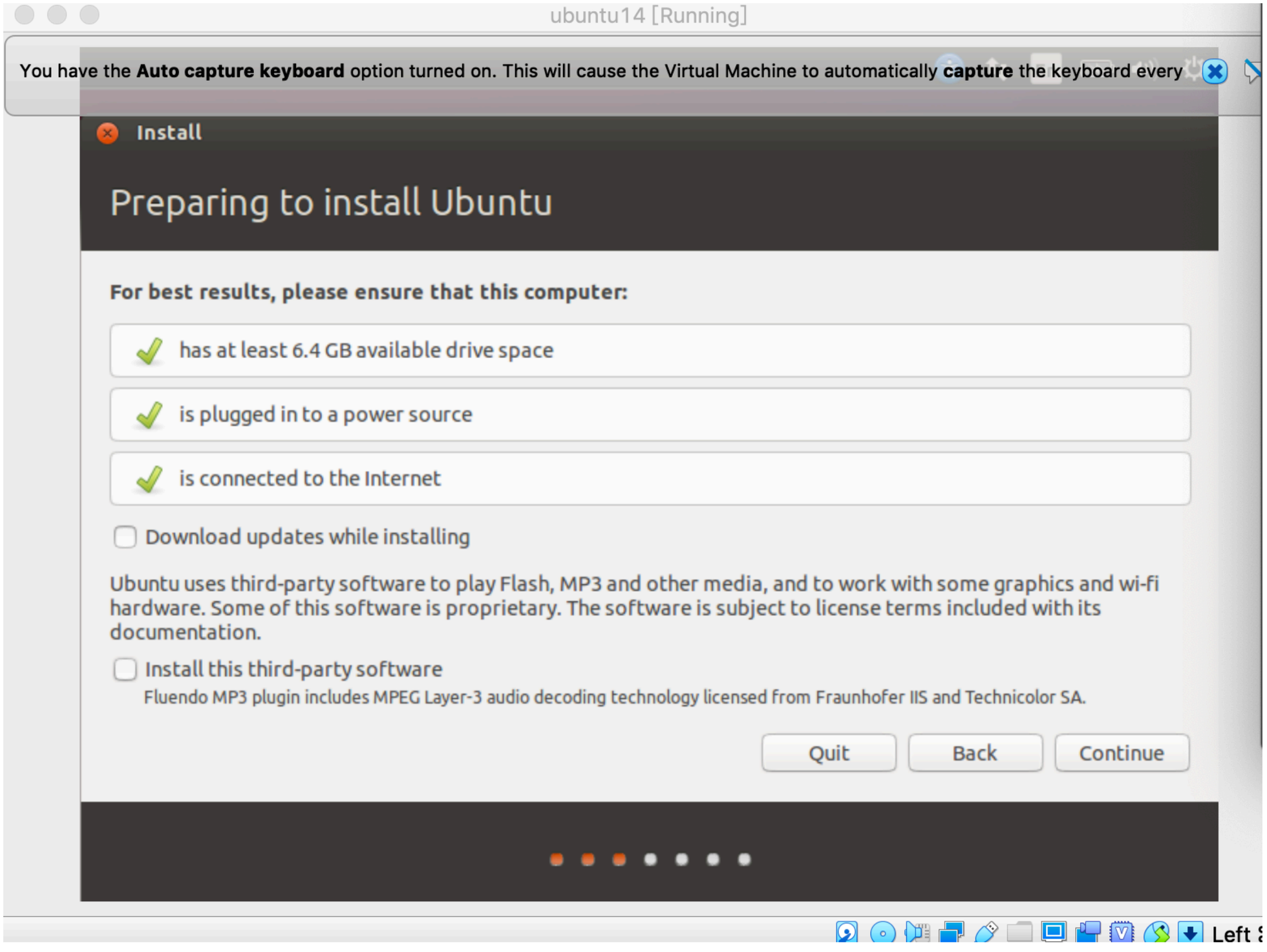
Insert ubuntu image



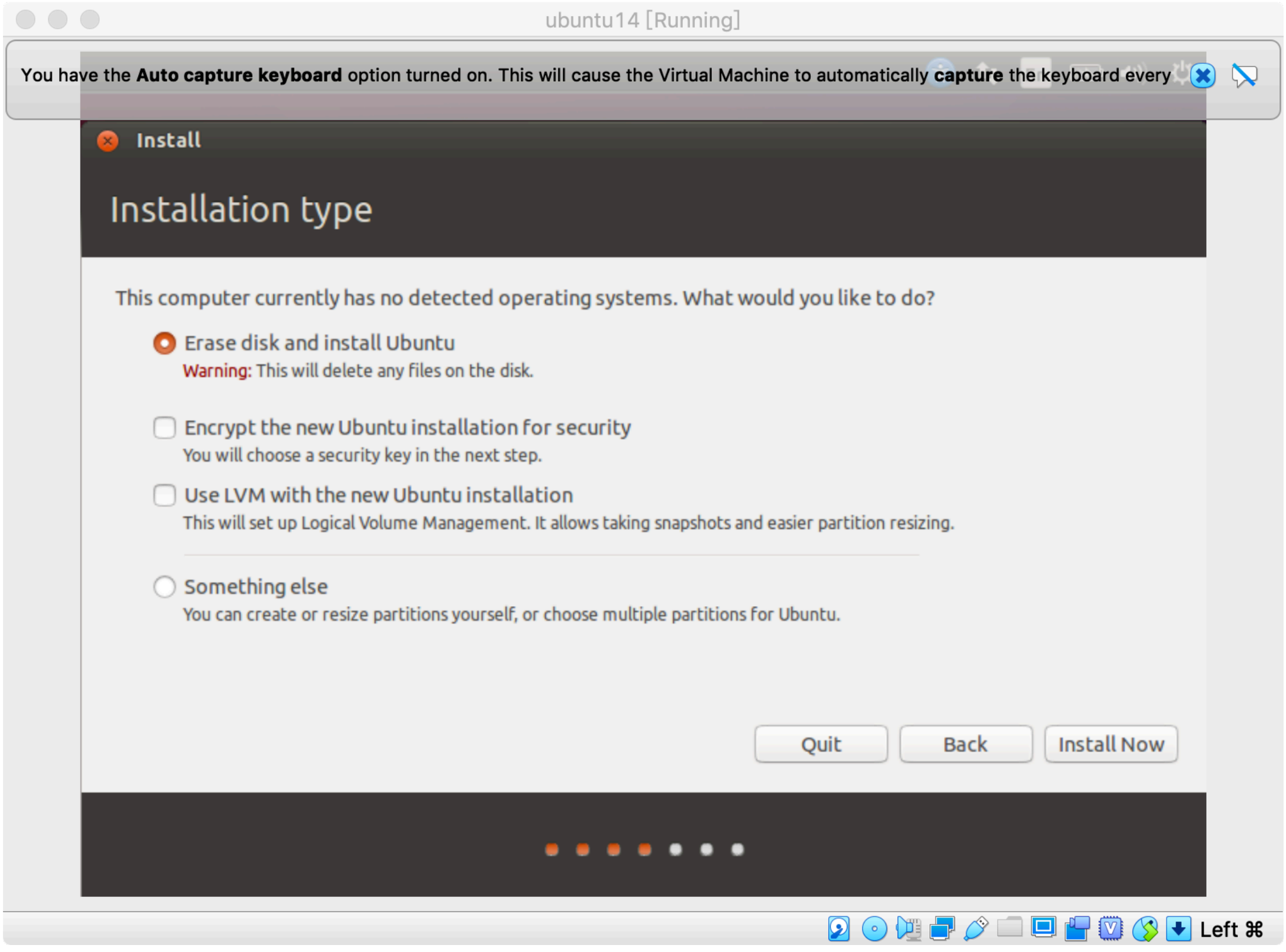
Click “Install ubuntu”



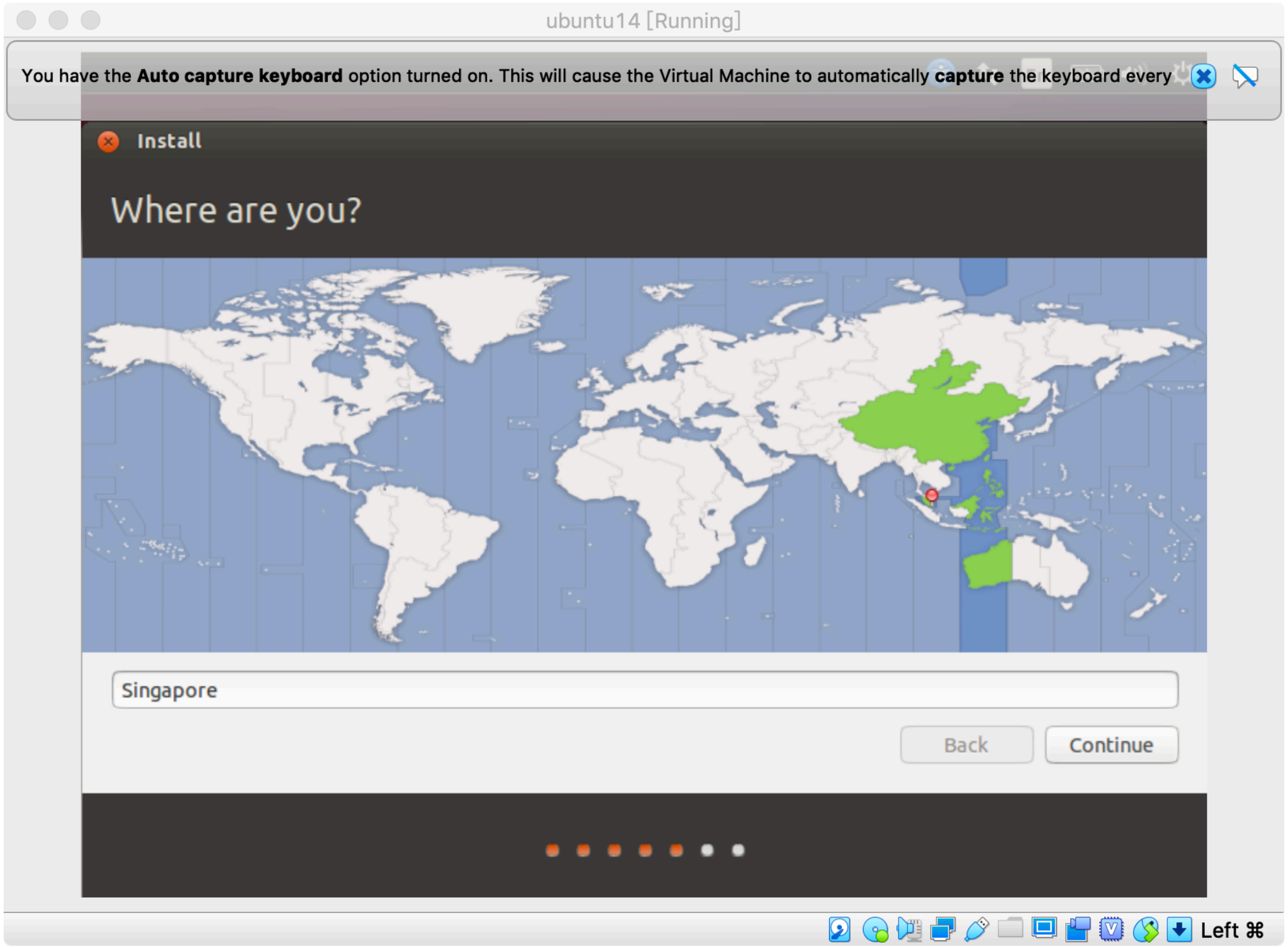
Click “Continue”



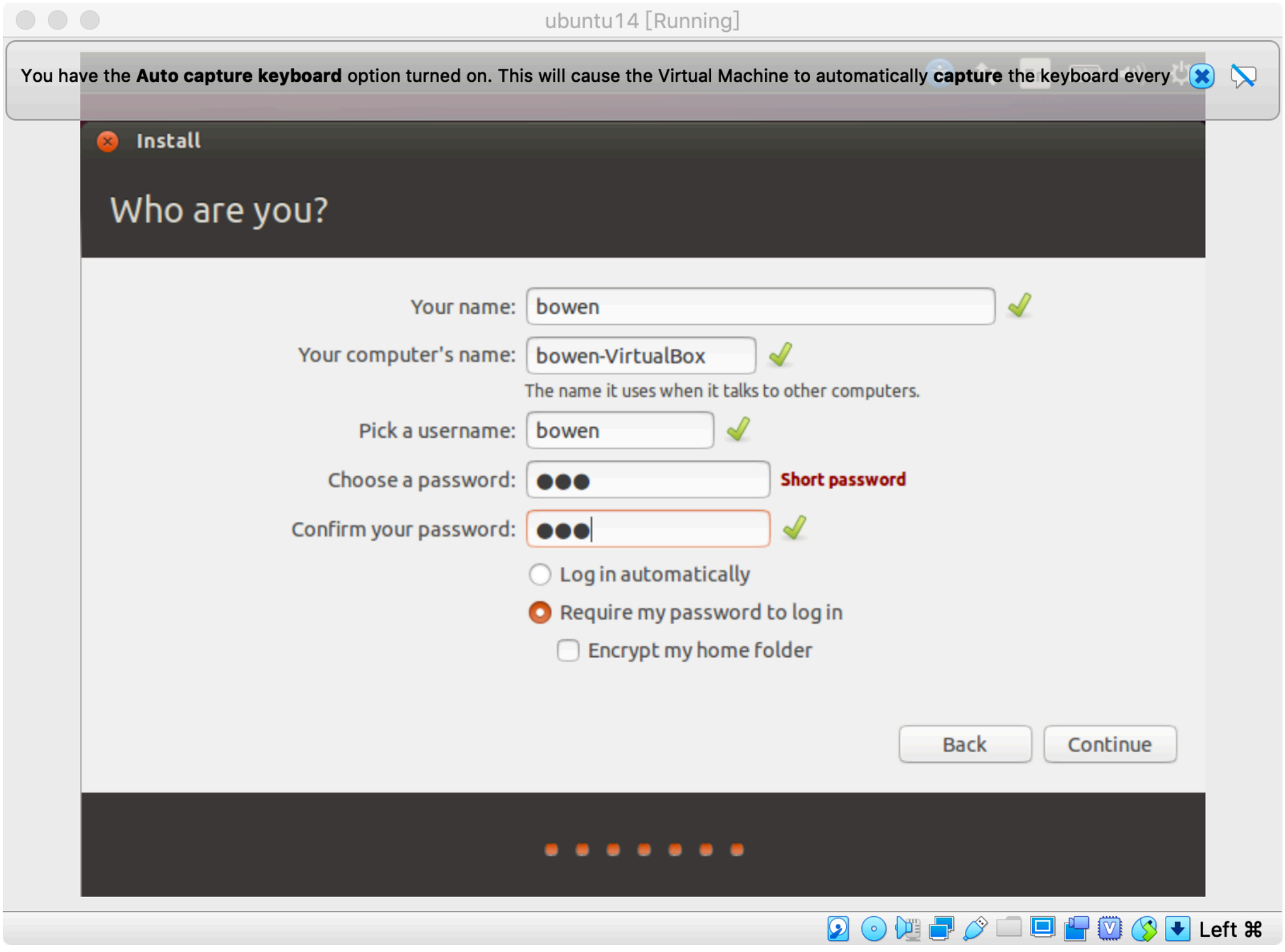
Click “Erase disk & install”



Choose time zone

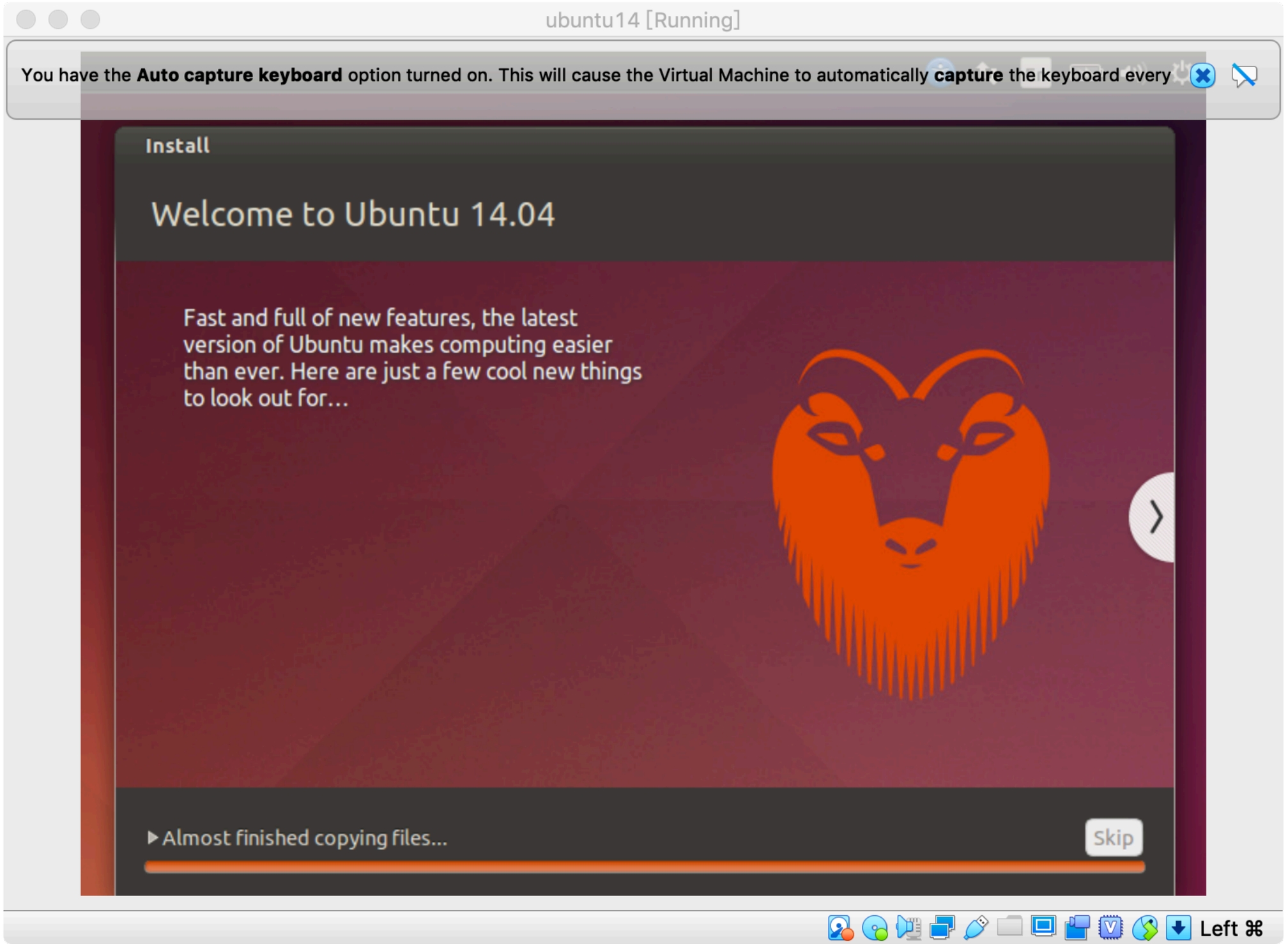


Customize Username & Password

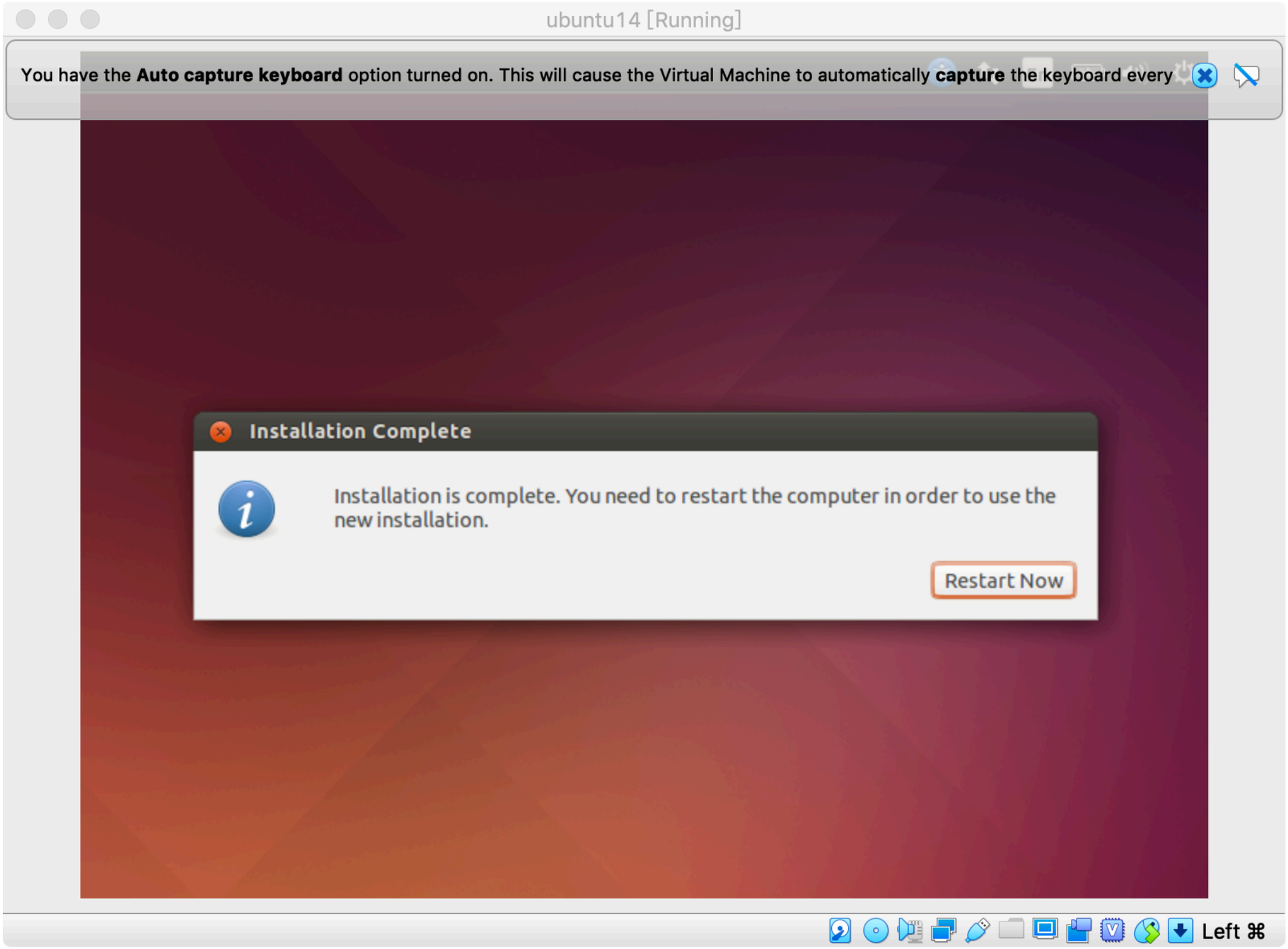


Installing…

Installing

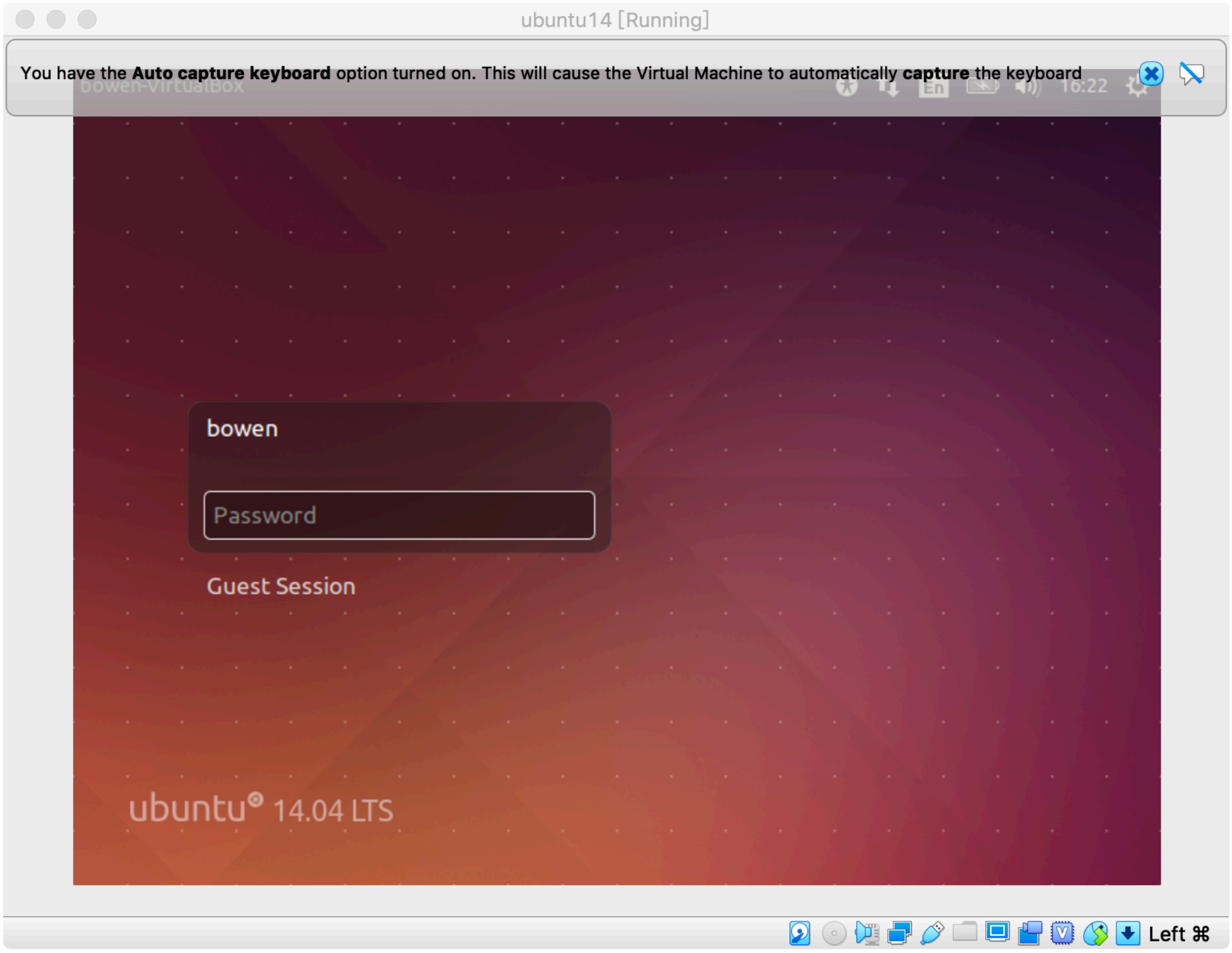

ubuntu14 [Running]
You have the Auto capture keyboard option turned on. This will cause the Virtual Machine to automatically capture the keyboard every
Install
Welcome to Ubuntu 14.04
Fast and full of new features, the latest version of Ubuntu makes computing easier than ever. Here are just a few cool new things to look out for…
Almost finished copying files...
Skip
Left ⌘

Restart

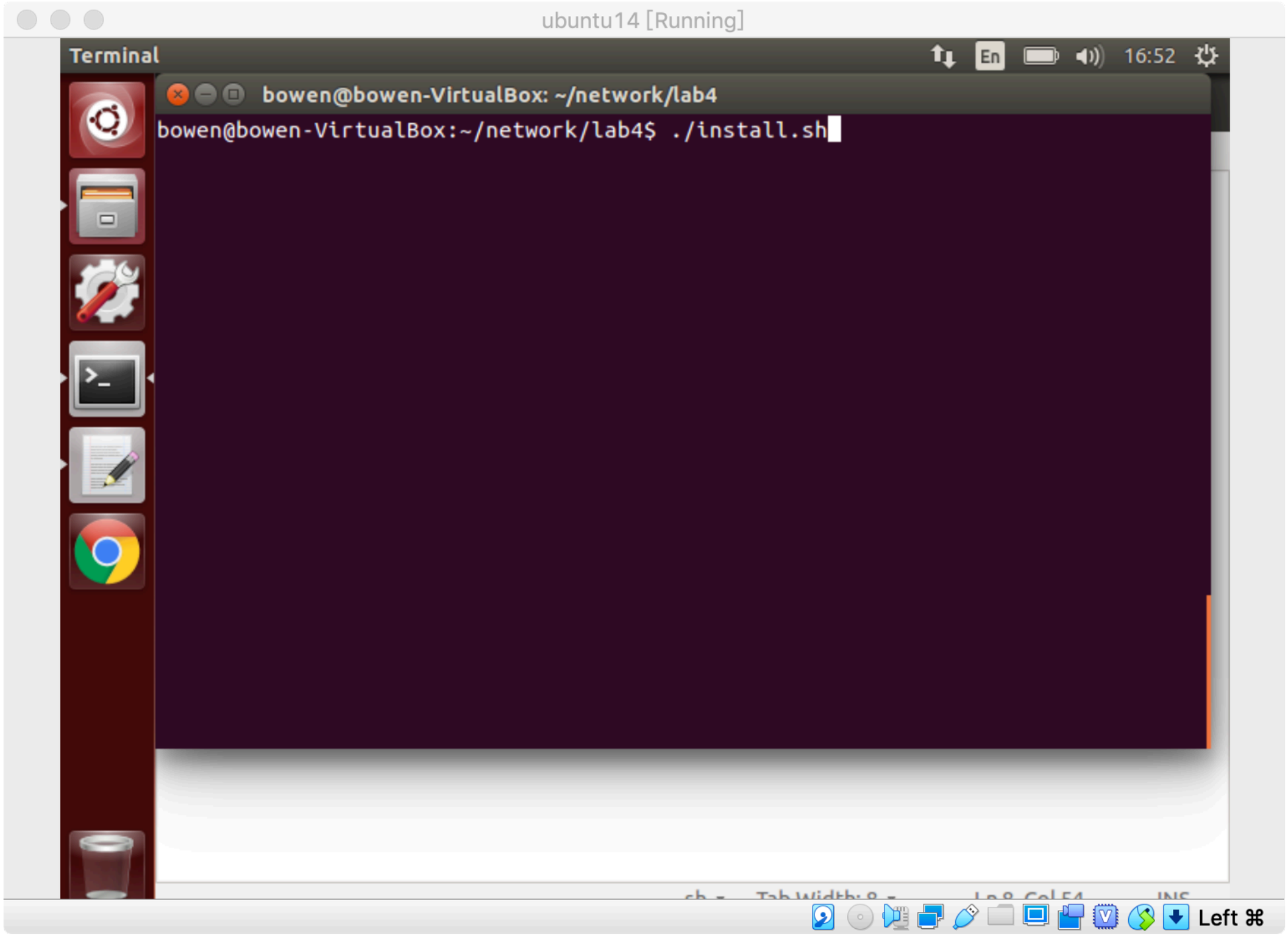

ubuntu14 [Running]
You have the Auto capture keyboard option turned on. This will cause the Virtual Machine to automatically capture the keyboard every
Installation Complete
Installation is complete. You need to restart the computer in order to use the new installation.
Restart Now
Left ⌘

Restart…

Type Password and login



Execute install.sh



What install.sh dose ?

```
# 50.012
# install mininet and supporting libraries
sudo apt -y install mininet
# install curl package for pip3.4 installation
sudo apt-get install curl
# install pip3.4
curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py
sudo python3.4 get-pip.py
# install matplotlib package for lab4 plotting figures
# if occur 'cannot uninstall six', try adding the flags --ignore-installed six
# sudo pip3.4 install matplotlib --ignore-installed six
sudo pip3.4 install matplotlib
```

mininet Introduction

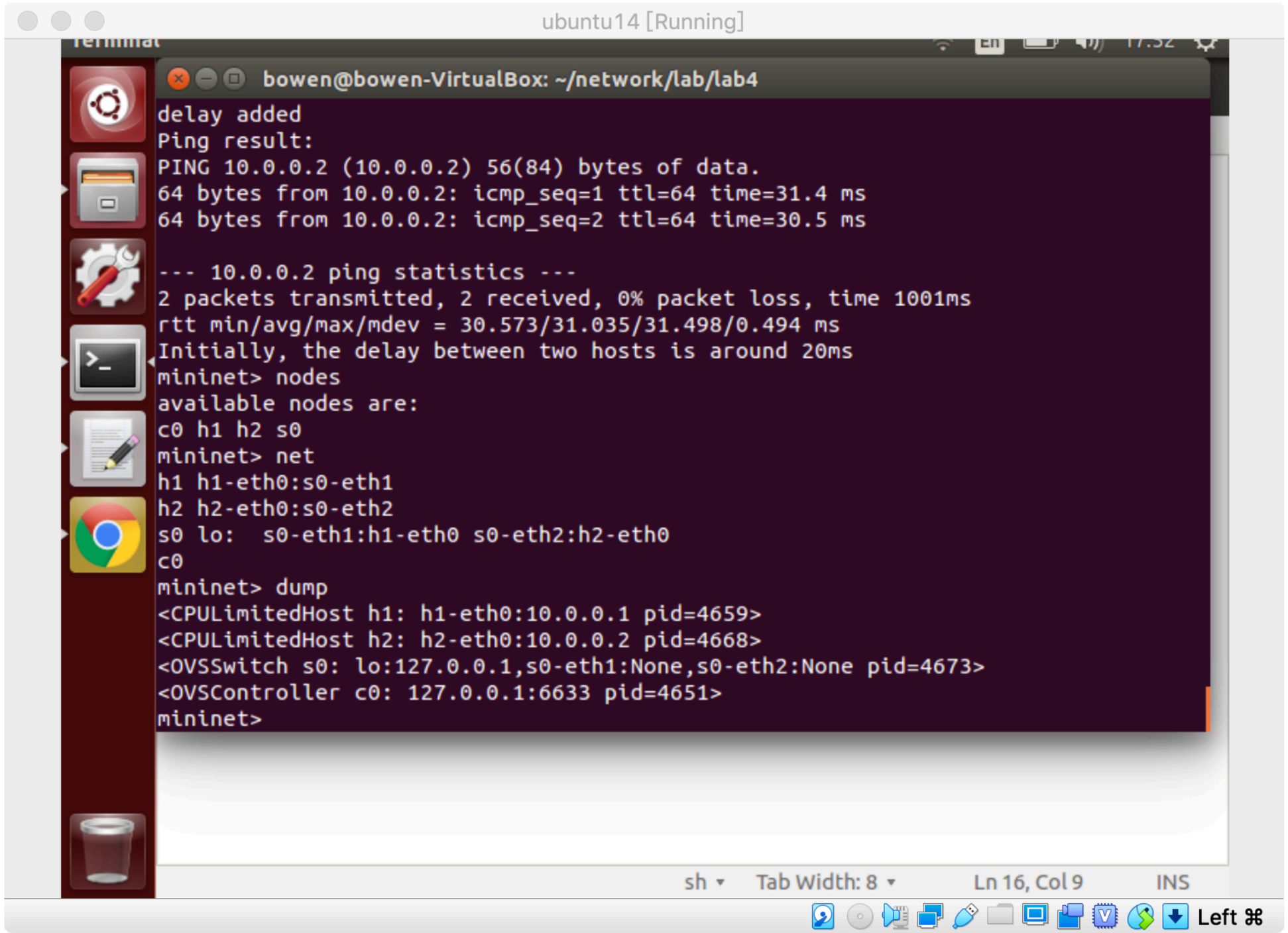
- **mininet**
  - **A *network emulator***
  - **Creates a network of virtual hosts, switches, controllers, and links.**

- **Useful links**
  - **Overview: http://mininet.org/overview/**
  - **Documents: https://github.com/mininet/mininet/wiki/Documentation**
  - **Walkthrough: http://mininet.org/walkthrough/**

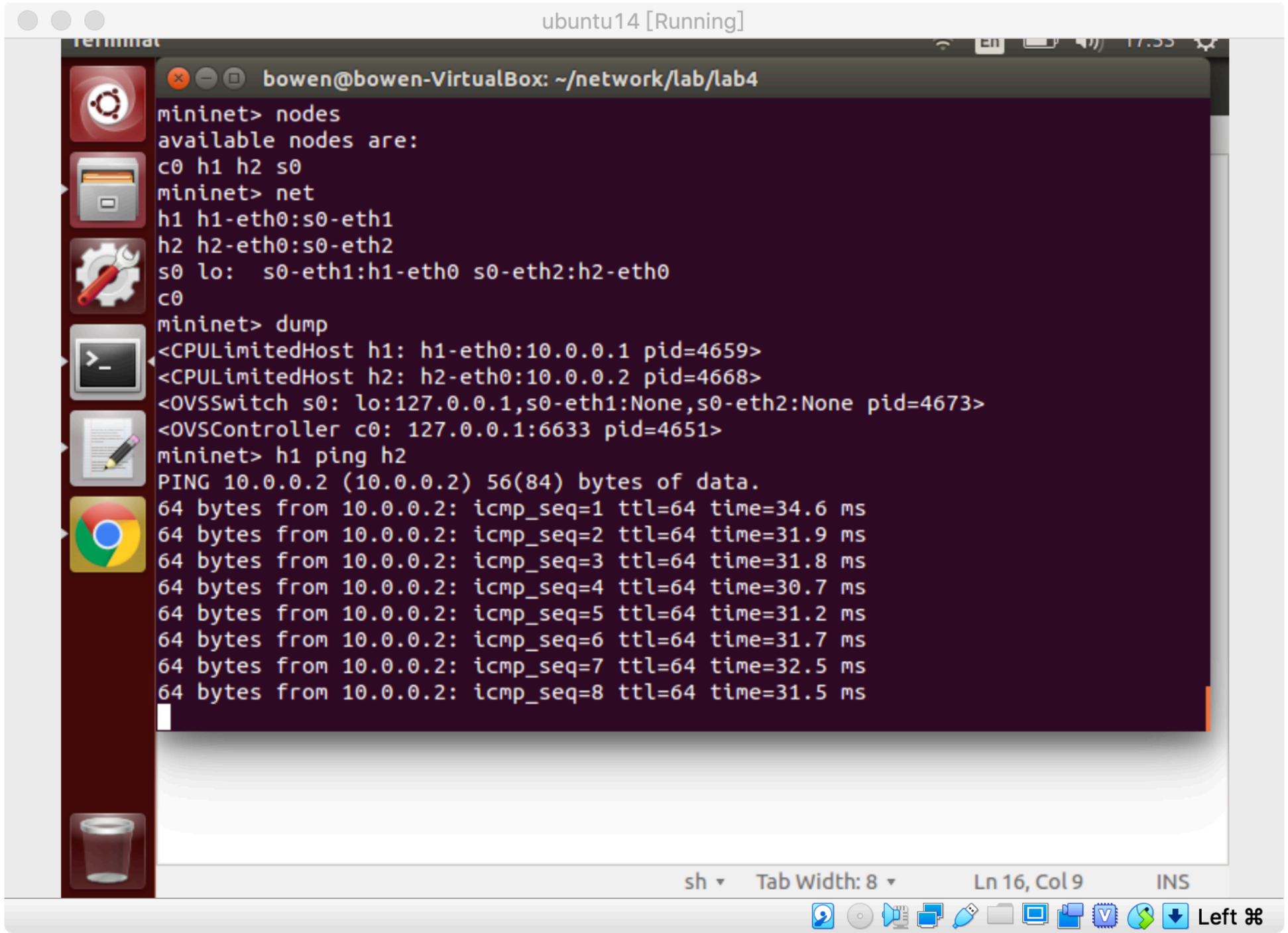
After installed & *sudo mn* to start mininet

Example 1: commands

- **nodes, net, dump…**



Example 2: Testing h1 & h2



- Thanks