

Ubuntu Virtual Machine Setup

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Adapted from ECE470 VM Tutorial

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1. System Requirements

- CPU: i3 desktop or equivalent/ i5 laptop or equivalent
- GPU: Integrated Graphics Unit/ Dedicated GPU
- Memory: 6G or above
- Disk Space: 20G or above

Note: Simulators are demanding software to run. If you have any problems running the virtual machine and/or the simulator, please let the TA know.

2. VMware Installation

The UIUC Webstore offers free VMware products under VMware Academic Program:

<https://e5.onthehub.com/WebStore/Welcome.aspx?ws=6c313875-25d6-e311-93fd-b8ca3a5db7a3>

- Windows 10/ Ubuntu: Follow the instructions and download VMware Workstation 16.x Player
- macOS: Follow the instructions and download VMware Fusion 12 Player

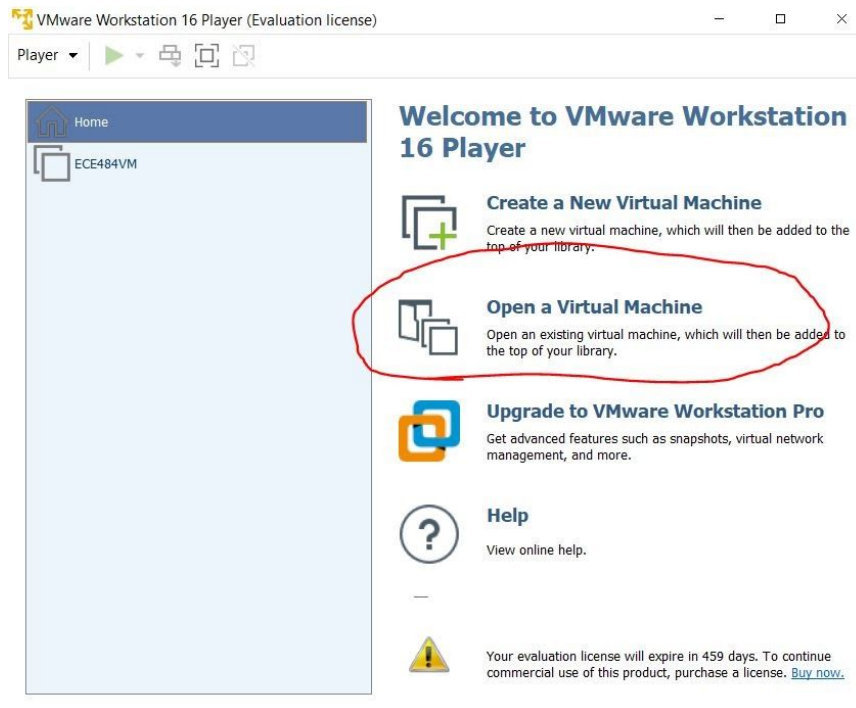
3. VMware Image

We provide a VMware image to you with Ubuntu 16.04 pre-installed. VMware uses those image files to run the operating system as well as store files. Please unzip the ECE484VM.zip file linked below and extract it into a working directory.

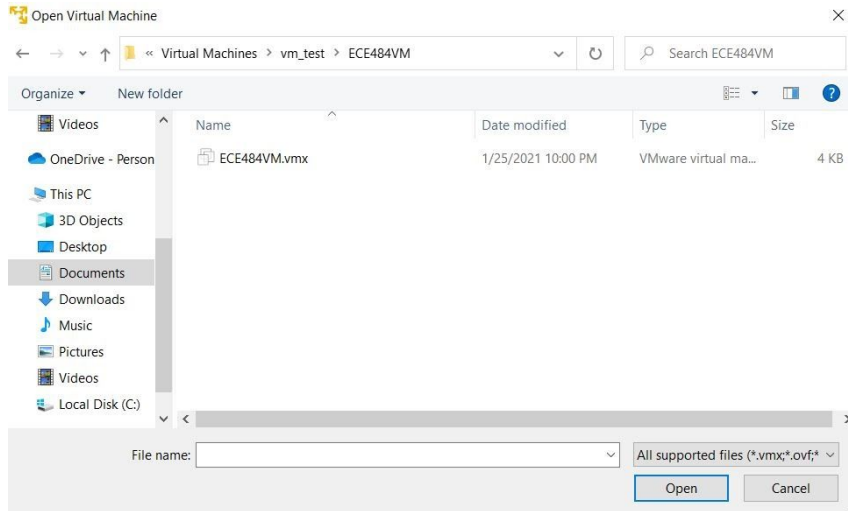
<https://uofi.box.com/s/iew7550ami7p3xvomv6oan52piiufkco>

- Windows 10/ Ubuntu

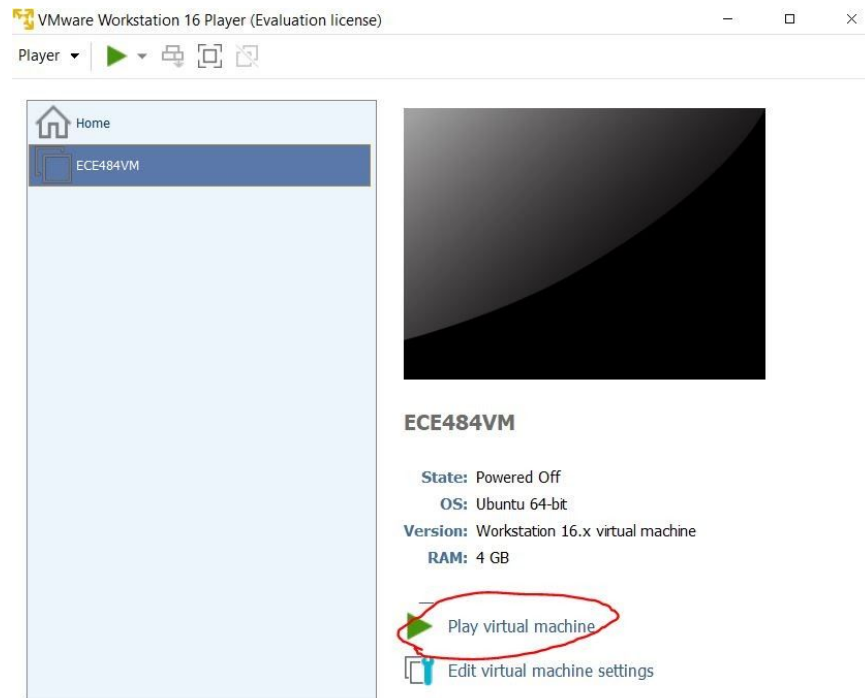
- Launch VMware Workstation Player and click “Open a Virtual Machine”



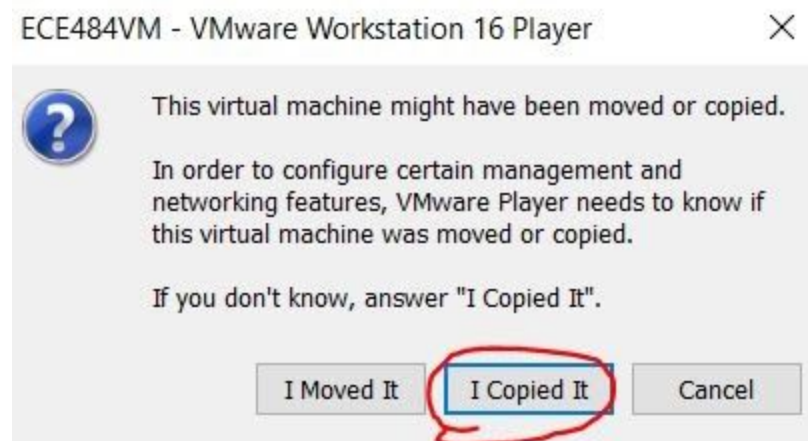
- Open the “ECE484VM.vmx” file



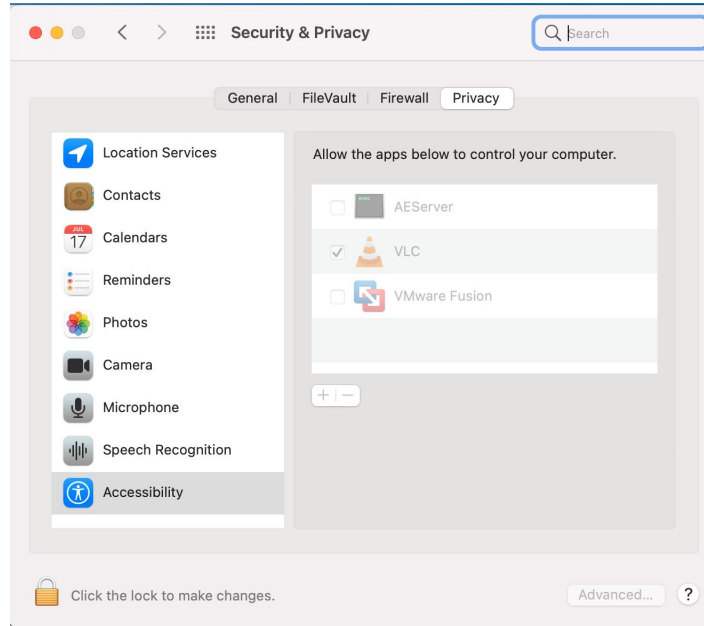
- Click "Play virtual machine"



- Click "I Copied It"



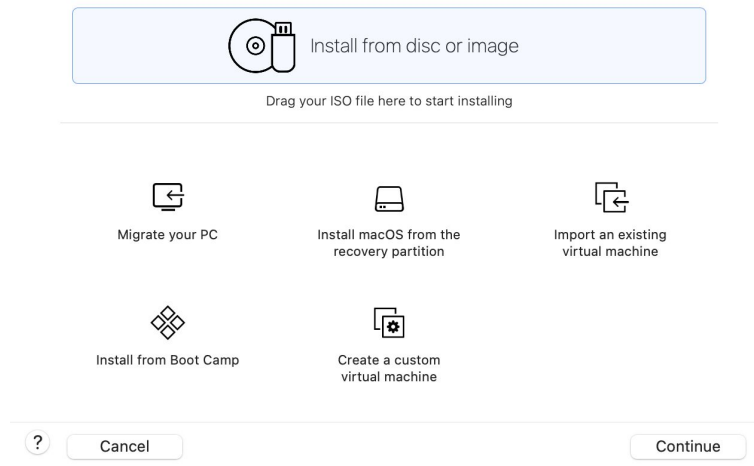
- macOS
 - Launch VMware Fusion Player
 - It might ask you for some Accessibility permissions, follow the instructions and allow VMware Fusion



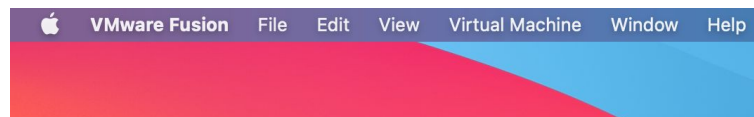
- If you see this window, close it



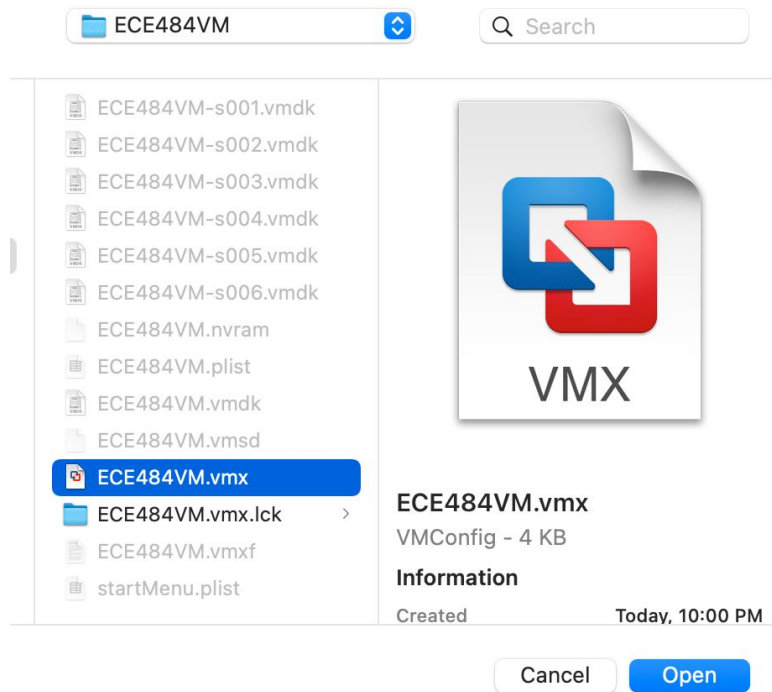
Select the Installation Method



- On the top bar, click "File->Open"



- Select “ECE484VM.vmx” and click “Open”

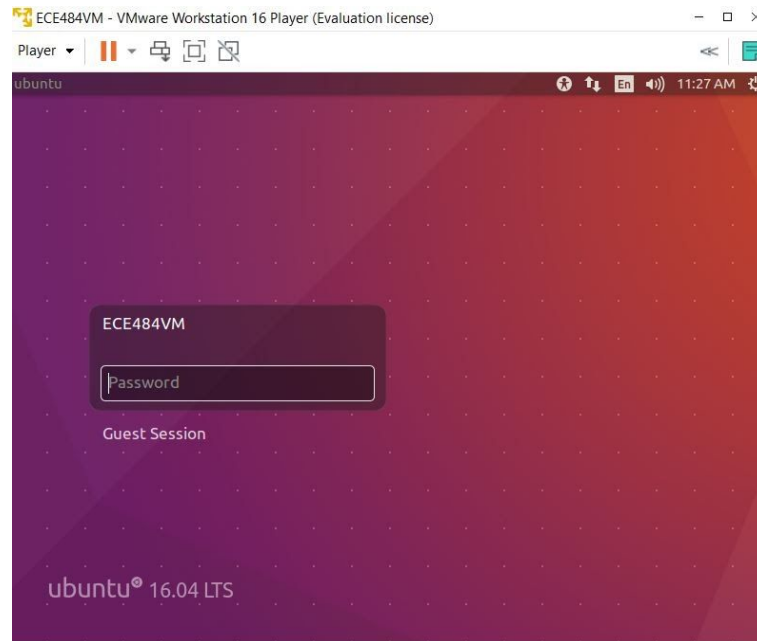


- Select “I Copied It”



4. Test

When the VM successfully launches, you should see a window like this:



The password is “ubuntu” for the VM. Please note this is your own operating system from this point on, so feel free to make changes to the system. Once you log in, open a terminal by “Ctrl+Alt+T”, “Right Click->Open Terminal”, or any other ways you prefer.

The first command you should run is “roscore”. Run that in the terminal window and check if the terminal output matches the following.

```
roscore http://ubuntu:11311/
ece484@ubuntu:~$ roscore
.. logging to /home/ece484/.ros/log/86450e5a-5ffc-11eb-800a-000c29412abd/roslau
ch-ubuntu-2791.log
Checking log directory for disk usage. This may take awhile.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://ubuntu:46031/
ros_comm version 1.12.17

SUMMARY
=====
PARAMETERS
* /rostdistro: kinetic
* /rosversion: 1.12.17

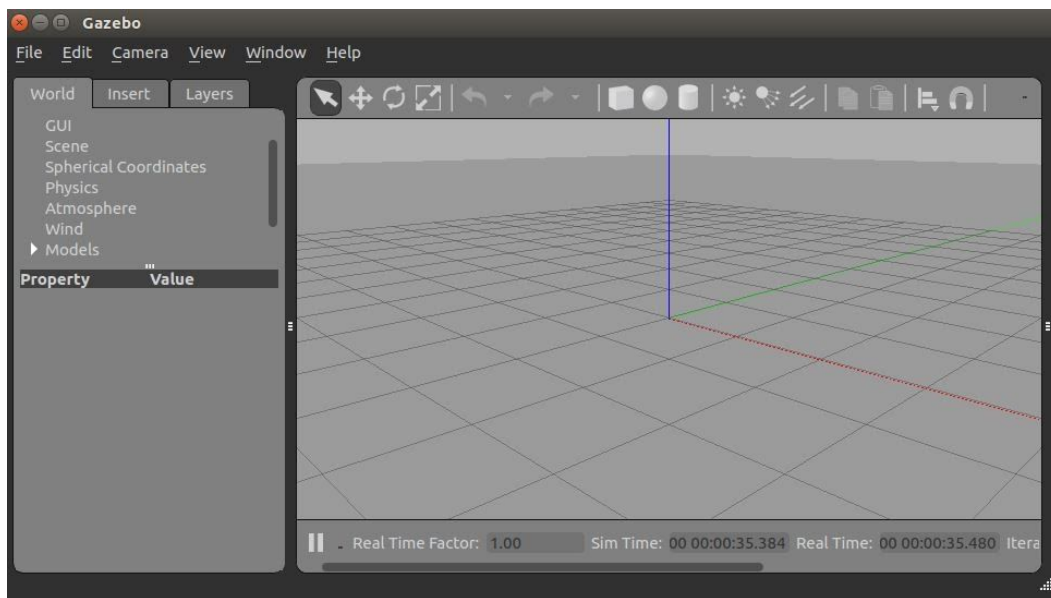
NODES

auto-starting new master
process[master]: started with pid [2802]
ROS_MASTER_URI=http://ubuntu:11311/

setting /run_id to 86450e5a-5ffc-11eb-800a-000c29412abd
process[rosout-1]: started with pid [2815]
started core service [/rosout]
```

Then either “Ctrl+C” to stop the ROS process or open another terminal, run “gazebo”. Another window should appear and show this.

```
ece484@ubuntu: ~  
ece484@ubuntu:~$ gazebo
```



Once you verify all the above works, you are good to go for the MPs!