Ubuntu Virtual Machine Setup

Eric Liang Adapted from ECE470 VM Tutorial Jan 26th, 2021

- 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: <u>https://e5.onthehub.com/WebStore/Welcome.aspx?ws=6c313875-25d6-e311-93fd-b8c</u> <u>a3a5db7a3</u>

- 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

open virtual iviacinite	/
\rightarrow \checkmark \uparrow ${}$ = « Virtual Machines \rightarrow vm_test \rightarrow ECE484VM	✓ Ů
Irganize 👻 New folder	B= • 🔲 🛛
Videos ^ Name	Date modified Type Size
OneDrive - Person ECE484VM.vmx	1/25/2021 10:00 PM VMware virtual ma 4 KB
🥦 This PC	
3D Objects	
Desktop	
Documents	
Downloads	
Music	
E Pictures	
Videos	
Local Disk (C:)	
* <	
File name:	 ✓ All supported files (*.vmx;*.ovf;* ∨
	Open Cancel

• Click "Play virtual machine"

😚 VMware Workstation 16 Player (Evaluation license)	-		×
Player - 🕨 - 🛱 🔃 🔯			
Home ECE484VM			
	ECE484VM		
	State: Powered Off		
	OS: Ubuntu 64-bit		
	RAM: 4 GB		
	Play virtual machine		
	Edit virtual machine settings		

• Click "I Copied It"

ECE484VM - VMware Workstation 16 Player

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

• • • < > IIII Security	/ & Privacy
General	FileVault Firewall Privacy
Location Services	Allow the apps below to control your computer.
Contacts	AEServer
17 Calendars	🛛 🛓 VLC
Reminders	VMware Fusion
Photos	_
Camera	T
Microphone	
Speech Recognition	
Accessibility	
Click the lock to make changes.	Advanced ?

• If you see this window, close it

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Select the Installation Method

			Install 1	from disc	c or image			
		Drag y	our ISO fil	le here to st	art installing			
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	Migrate your PC		Install n recov	nacOS from very partitic	n n	Import : virtual	an existing I machine	
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	Install from Boot Car	np	Crea virtu	ite a custon ual machine	n I			
	? Cancel						Cont	inue
0	On the top bar, c	lick "Fi	ile->0) Open	7			
	🗯 VMware Fusior	n File	Edit	View	Virtual Mac	hine	Window	Help

Select "ECE484VM.vmx" and click "Open"



• Select "I Copied It"

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	This virtual machine might have been moved or copied.	
	In order to configure certain management and networking features, VMware Fusion needs to know if this virtual machine was moved or copied.	
	If you don't know, answer "I Copied It".	
	I Copied It	
	I Moved It	
	Cancel	

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 hch-ubuntu-2791.log
checking log directory for disk usage. This may take awhile. Press Ctrl-C to interrupt
oone checking log file disk usage. Usage is <1GB.
started roslaunch server http://ubuntu:46031/ ros_comm version 1.12.17
SUMMARY =======
PARAMETERS * /rosdistro: 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.





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