

CS 2110 VM Installation

Michael Xu

Fall 2018

Contents

1	Download Ubuntu 18.04	2
2	VMWare Installation	2
2.1	macOS	2
2.1.1	Getting a VMWare Fusion 10 License Key	2
2.1.2	Installing VMWare Fusion 10	3
2.2	Windows	5
2.2.1	Getting a VMWare Workstation Player 14 License Key (OPTIONAL)	5
2.2.2	Installing VMWare Workstation Player 14	5
2.3	Troubleshooting	7
3	Install complx in the VM	7

This document walks through the steps to install a Linux Virtual Machine that CS 2110 officially supports. If you already have Ubuntu 18.04 running on your computer, skip straight to step 3!

We officially support VMware Fusion 10 (Mac) and VMware Player with Ubuntu 18.04, so if you are using other software for your VM such as VirtualBox, please note it will not be officially supported, and any bugs that happen because of your specific implementation of the VM will not be excused on home works or timed labs!

1 Download Ubuntu 18.04

1. Go to the download page for Ubuntu 18.04: <https://www.ubuntu.com/download/desktop>
2. Download Ubuntu 18.04, and move the `.iso` file somewhere so you remember where it is! It is important you don't accidentally delete where this file is located!

2 VMWare Installation

2.1 macOS

2.1.1 Getting a VMWare Fusion 10 License Key

(NOT REQUIRED TO COMPLETE NEXT STEP)

1. If you encounter problems at any point such as having to request an account from GATech, feel free to skip down to the next subsection, "Installing VMWare Fusion 10"!
2. Register for a VMware fusion license from Georgia Tech from **this link**
 - (a) Try to sign in with your gatech email and password first, you may already have an account
 - (b) If step (a) didn't work, click the "Register" button, and for the "Username" field, use your gatech email (example: `hxu317@gatech.edu`)
3. When your account is approved, you will need to "buy" VMware Fusion 10. Click on the icon that says VMware Fusion 10, and add it to your cart, and check-out.
 - (a) Go to **"Your Account/Orders"** through the drop-down menu next to the shopping cart icon at the top right of your screen. Click **"View Details"** on your order for VMWare Fusion 10
 - (b) On this page you'll find your license key for VMWare Fusion 10!

Orders & Downloads

Order Number: 100627211349

Date: 2018-09-22
Total: Free

Items

- VMware vRealize Suite 7 Enterprise - Download

View Details

View Invoice

Order Number: 100593577253

Date: 2018-02-05
Total: Free

Items

- VMware Fusion 10 (for Mac OS) - Download

View Details

View Invoice

2.1.2 Installing VMWare Fusion 10

1. Download VMWare Fusion 10 from: <https://www.vmware.com/products/fusion/fusion-evaluation.html>
2. Install VMware Fusion 10
 - (a) a. If asked for a license key, and your account hasn't been approved yet by GT, just use the 30 day free trial for now and enter your license later
3. Drag your Ubuntu .iso file over to the installation screen, and click continue
4. Create a username and a password, also make sure "Use Easy Install" is checked!
5. At the bottom of that page, also make sure "Make your home folder accessible to the virtual machine" is checked, and that the Virtual Machine can "Read & Write."
6. Click "Continue", then click "Finish"
7. Now we wait...
8. And wait...
9. And wait...
10. Restart your virtual machine using the top menu bar under "Virtual Machine" → "Restart"
11. Try to follow this guide to setup shared folders so you can access files on your computer in your virtual machine: <https://kb.vmware.com/s/article/1004055> (If this doesn't work, continue on with this guide)
12. Install VMWare Tools: Using the "Help" option in the top menu bar, search for "VMWare Tools." Click the option that says "reinstall/install VMware Tools" and click "Install" in the next option that pops up!
 - (a) Now follow this guide for "Ubuntu or Ubuntu Server with a graphical user interface": **click here**
 - (b) **Note:** If you get into a problem when trying to right click and extract to a folder, double click the tar.gz file, and use the extract button in the top left of the interface that pops up!

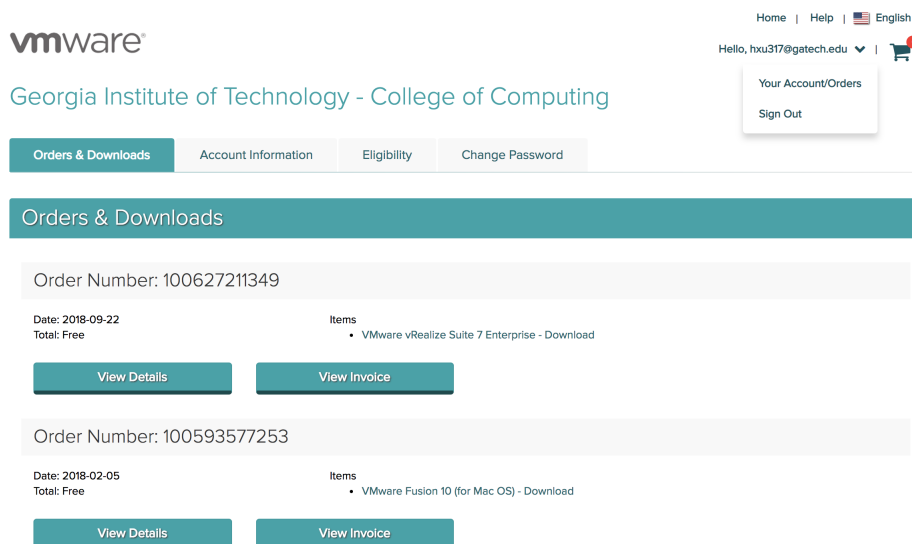
13. Now that VMware tools is set up, try setting up shared folders again with <https://kb.vmware.com/s/article/1004055>
14. You'll find your shared folder under the directory `/mnt/hgfs`. Get to it with "Other Location" → "Computer" → "mnt" → "hgfs"

2.2 Windows

2.2.1 Getting a VMWare Workstation Player 14 License Key (OPTIONAL)

You can use VMware Workstation Player 14 on Windows for free, as long as what you are doing isn't for commercial use!

1. Register for a VMWare Workstation Player license from Georgia Tech from **this link**
 - (a) Try to sign in with your gatech email and password first, you may already have an account
 - (b) If step (a) didn't work, click the "Register" button, and for the "Username" field, use your gatech email (example: hxu317@gatech.edu)
2. When your account is approved, you will need to "buy" VMware Workstation Player 14. Click on the icon that says VMware Workstation Player 14, and add it to your cart, and check-out.
 - (a) Go to **"Your Account/Orders"** through the drop-down menu next to the shopping cart icon at the top right of your screen. Click **"View Details"** on your order for VMWare Workstation Player 14
 - (b) On this page you'll find your license key for VMWare Workstation Player 14!



2.2.2 Installing VMWare Workstation Player 14

Note: On some Windows machines, there's an issue where virtualization is not enabled in the BIOS. Check this page if you run into some troubles: <https://stackoverflow.com/questions/27884846/virtualization-not-enabled>

1. Download VMWare Workstation Player 14 from: https://my.vmware.com/en/web/vmware/free#desktop_end_user_computing/vmware_workstation_player/14_0
2. Launch the installer and follow the prompts to Install VMWare Workstation Player 14! If asked for a license key, it's not necessary if you don't plan on using it for commercial use!
3. After the program loads, go to "Player" → "File" → "New Virtual Machine". Click the Browse option for "Installer disc image file" and find the .iso you saved earlier for Ubuntu 18.04
4. Continue through the installation prompts, and if asked, choose to install "VMware Tools for Linux"

5. Now we wait...
6. And wait...
7. And wait...
8. Restart your virtual machine using the top menu bar under “Player” → “Power” → “Restart”
9. Install VMWare Tools: “Player” → “Manage” → “Reinstall/Install VMware Tools”
 - (a) Now follow this guide for “Ubuntu or Ubuntu Server with a graphical user interface”: **click here**
 - (b) **Note:** If you get into a problem when trying to right click and extract to a folder, double click the tar.gz file, and use the extract button in the top left of the interface that pops up!
10. To setup shared folders, go to the “Player” → “Manage” → “Virtual Machine Settings” → “Options” → “Shared Folders” option. Set it to be always enabled, and then add a folder using the setup wizard
11. You’ll find your shared folder under the directory `/mnt/hgfs`. Get to it with “Other Location” → “Computer” → “mnt” → “hgfs”

2.3 Troubleshooting

If at any point during the installation you get an error, try the following:

1. Restart your computer — This fixes more errors that I’m willing to admit
2. If your VM is running slowly, make sure it has at least 1GB of RAM, and at least 16GB of storage.
3. IF ON MAC: Follow these instructions if you get a “Cannot find a valid peer process to connect to error”
<https://superuser.com/questions/1256489/how-to-fix-vmware-fusion-pro-10-cannot-find-a-valid-peer-p>
 - (a) Note you may have to quit out of Chrome if clicking ”allow” doesn’t do anything.

3 Install complx in the VM

1. Now that you’ve installed the VM and have it up and running, we need to install the LC3 simulator we are using called Complx.
2. Run the following commands in terminal:

```
1. sudo add-apt-repository ppa:tricksterguy87/ppa-gt-cs2110
2. sudo apt-get update
3. sudo apt-get install complx-tools
```

If 3 fails, run:

```
sudo dpkg --configure -a
```

3. If you’ve installed everything correctly, running the command `complx` in terminal should open up the program! If it gives an error about canberra-gtk-module, run this:

```
sudo apt-get install --reinstall libcanberra-gtk-module
```

THAT’S IT, YOU’RE DONE! GO GET CHECKED OFF BY A TA!