

CIS2400 VMware Set-up Instructions

Installing the VM

To use the virtual machine, you will need a virtual machine monitor (VMM). For Windows and Linux, we recommend VMWare Workstation Player; for macOS users, we recommend VMWare Fusion Player.

If you are using VMWare Workstation Player (Linux/Windows):

1. Navigate to <https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html> and scroll down till you see “Try Workstation 16.0 Player for Windows” and “Try Workstation 16.0 Player for Linux”. Click the appropriate “Download Now” that corresponds to your system. It should be free to download and install.
2. Once you have downloaded the software, run the installer and follow the instructions to finish installation.
3. We also recommend that you check for updates for VMWare Workstation by Clicking on “Help” -> “Software Updates” -> “Check for Updates”
4. After you have installed VMware Workstation Player, download the zip file here: <https://drive.google.com/file/d/1I8kY-2chzj5VqPLE3NQ4qbGBRSARkI3q/view?usp=sharing>
5. Unzip the file once you have downloaded it. You should then have a folder called cis2400.vmwarevm and inside that folder, a file called cis2400.vmx. Do not touch these files yet.
6. Open VMWare Workstation Player and select the option to “open a virtual machine”. You will then have to specify a file, and you should navigate to the previously mentioned cis2400.vmwarevm folder, select the cis2400.vmx file and hit the “open” button.
 - a. While VMware opens the VM, it may ask you if you have moved or copied the VM. If it does, say that you moved it.
 - b. If you get an import failed error message, click Retry
7. You should now have the VM installed! All you have to do now is select the VM and hit the green triangle button that may be labeled “power on the virtual machine”. It may take a while but it will boot up. There will be one existing user with User name cis2400, and the password is also cis2400
 - a. While the VM may be set up now, we highly suggest that you look into our “Setting up a Shared Folder”, “Important Information”, and “Tips” sections below.

If you are using a Mac:

1. First you will need to find out if your Mac has an M1 or M2 Chip. To do this, select the Apple menu > select ‘About This Mac’ > Look for ‘Processor’ or ‘Chip’ in the About This

Mac window. Here it should say 'Apple M1' if your machine has an M1 chip or 'Apple M2' for an M2 chip. Once you have confirmed whether or not the machine has an M1 or M2 chip, follow the appropriate instructions below.

If your Mac does NOT have an M1 or M2 chip:

1. Navigate to <https://customerconnect.vmware.com/evalcenter?p=fusion-player-personal> and select "Create an account" which should appear towards the right side of the page. You should then create an account and sign in.
2. Once you are signed in, you should see that you have VMWare Fusion Player 12.0 with a personal license listed as an available download. Download the installer. This should not cost you anything.
3. Once you have downloaded the software, run the installer and follow the instructions to finish installation.
4. After you have installed VMWare Fusion Player, download the x86.zip file here: <https://drive.google.com/file/d/1I8kY-2chzj5VqPLE3NQ4qbGBRSARkI3q/view?usp=sharing>
5. Unzip the file once you have downloaded it. You should then have a folder called cis2400.vmwarevm. (Note: that if you are using finder, cis2400.vmwarevm may not look like a folder and instead appear as a file, that is ok.)
6. If you have VMWare Fusion installed, you should be able to double click cis2400.vmwarevm in finder and VMWare Fusion will open it for you.
 - a. If it doesn't open automatically, navigate to where the cis2400.vmwarevm "file" is downloaded, right click --> open with --> VMWare Fusion
 - b. While VMware opens the VM, it may ask you if you have moved or copied the VM. If it does, say that you moved it.
 - c. When opening the VM, if you get "Could not open /dev/vmmon: Broken pipe" error message, go to System Preferences -> Security & Privacy -> General and make sure the choice of "Allow apps downloaded from" is App Stores and identified developers. Try to reboot the host after installation of VMWare Fusion.
7. You should now have the VM installed! All you have to do now is select the VM and hit the green triangle button that may be labeled "power on the virtual machine". It may take a second but it will boot up. There will be one existing user with User name cis2400, and the password is also cis2400
 - a. While the VM may be set up now, we highly suggest that you look into our "Setting up a Shared Folder", "Important Information" and "tips" sections below.
 - b. If you are having trouble booting the vm (e.g. it says "A fault has occurred causing a virtual CPU to enter the shutdown state", try updating your mac OS and also try selecting "VMWare Fusion" -> "check for updates"

If your Mac has an M1 or M2 Chip:

1. Go to the following link: <https://customerconnect.vmware.com/downloads/get-download?downloadGroup=FUS-P>

[UBTP-22H2](#) and install the VMware Fusion Technology Preview 22H2 (for ARM). This should be free, but you will have to make an account with the vmware community to do this.

2. Go to the following link and download the zip file
https://drive.google.com/file/d/1eXl1j_HzzeSeMeQ6RIUQySnJFMxBqeXa/view?usp=sharing
3. Unzip the file once you have downloaded it. You should then have a folder called cis2400.vmwarevm. (Note: that if you are using finder, cis2400.vmwarevm may not look like a folder and instead appear as a file, that is ok.)
4. If you have the tech preview installed, you should be able to double click cis2400.vmwarevm in finder and the tech preview will open it for you.
 - a. If it doesn't open automatically, navigate to where the cis2400.vmwarevm "file" is downloaded, right click --> open with --> VMWare Fusion Tech Preview
 - b. While VMware opens the VM, it may ask you if you have moved or copied the VM. If it does, say that you moved it.
5. You should now have the VM installed! It may take a second but it will boot up. There will be one existing user with User name cis2400, and the password is also cis2400
 - a. While the VM may be set up now, we highly suggest that you read the following points, the "Important Information", and the "Tips" sections below.
 - b. You should NOT update the ubuntu version if you are ever prompted. This will most likely break the VM.
 - c. Note that the resolution of the environment may be small, and unadjustable.
 - d. Shared folders currently seem to not work for this VM. You can use email/git/scp or other options to get your files off of the VM
 - e. Note that you are running a tech preview, it is not a finished product. Be sure to back up your files.

Setting up a Shared Folder

If you want to set up a shared folder between your VM and your own machine to easily access files in your VM when you are outside the VM, you can set up a shared folder as follows.

Note: Setting up a shared folder will likely not work for M1 and M2 Macs.

If you are using VMWare Workstation:

1. Open VMware Workstation and select the CIS 2400 Fall 2022 virtual machine
2. Select VM > Settings. On the Options tab, select Shared Folders
3. Click Add to add a shared folder. On Windows hosts, the Add Shared Folder wizard will start; on Linux hosts, the Shared Folder Properties dialog box will open.
4. Browse to, or type, the path on your host system to the directory to share. Specify the name of the shared folder as it should appear inside the VM and click Next.
5. Select the desired shared folder attributes and click Finish to add the folder.

6. Click OK to save your change.
7. Your shared folder will appear inside the VM under `/mnt/hgfs`.

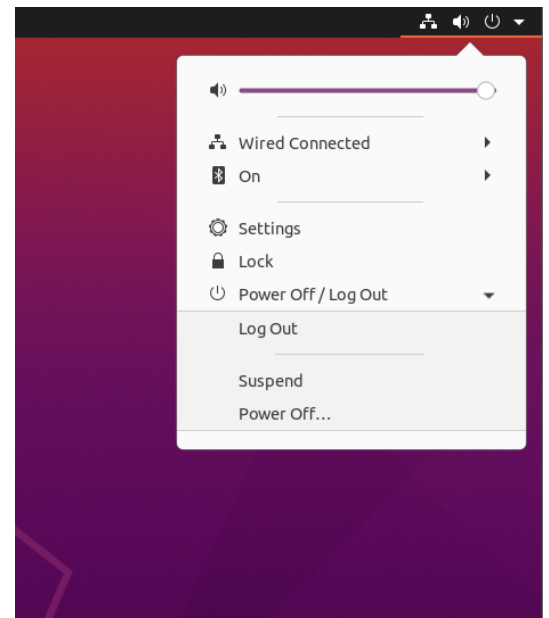
If you are using VMWare Fusion

Note: If you have an M1 or M2 Mac, a shared folder will probably not work.

1. Go to "Virtual Machine" / "Sharing" / "Sharing Settings..."
2. Check the "Enabled Shared Folders" box
3. Click the Plus icon, and pick a folder on your host machine that you want to access from within the VM.
4. Your shared folder will appear inside the VM under `/mnt/hgfs`.

Important Information Regarding the VM

- **Always** shut down the VM properly before closing VMware or closing your laptop. (by clicking the power button in the upper right corner, selecting 'Power Off/Logout' and then 'Power Off'). **If you do not do this, the VM image can become corrupted**, just like your operating system can become corrupted if you switch off your computer before shutting it down properly. In particular, do not just 'power off' the virtual machine using the command in Workstation/Fusion, and do not just close VMWare altogether. *Always hit the 'Power Off' button that is in the screenshot on the right, and wait for the VM to power off on its own. This is especially important for apple silicon*



A few tips regarding the virtual machine

- If you're having trouble viewing the shared folder, run the following commands in your terminal:
 - `sudo mkdir -p /mnt/hgfs`
 - `sudo chmod 777 /mnt/`
 - `sudo chmod 777 /mnt/hgfs`
 - `vmhgfs-fuse /mnt/hgfs`
- We highly recommend that you regularly check for updates for VMWare before you boot it up. Not doing this has been known to cause various problems.
- If the screen size of your VM is tiny, try resizing it or putting it into full-screen mode.

- The mouse pointer has to be over the VM window; otherwise your inputs will not be accepted. If at any point your mouse or keyboard are 'captured' by the VM (i.e., you can no longer move the mouse outside of the VM window or switch to other applications), press the 'Ctrl' and 'Alt' keys simultaneously (or 'Right Ctrl' in VirtualBox). This also helps you to get out of 'fullscreen mode'
- The password for the cis2400 user is cis2400. You shouldn't normally need to become root, but if this ever becomes necessary, you can use sudo with the same password.