Ubuntu Installation and Environment Setup

Contents

Objectives

- ✓ By the end of this manual, you should have properly installed Ubuntu 22.04 on a virtual machine (please note that this solution was tested on Windows environments, for MacOS Intel chip users some settings might be different. This solution does not work for MacOS M1/M2 chips).
- ✓ No report is required.
- ✓ (Not supported) For dual **boot option**, you can see the overall procedures use the video in the More References section. Since the installation is long, the video can provide you more visual cues on following the steps.
- ✓ Use the contents table above for navigation.

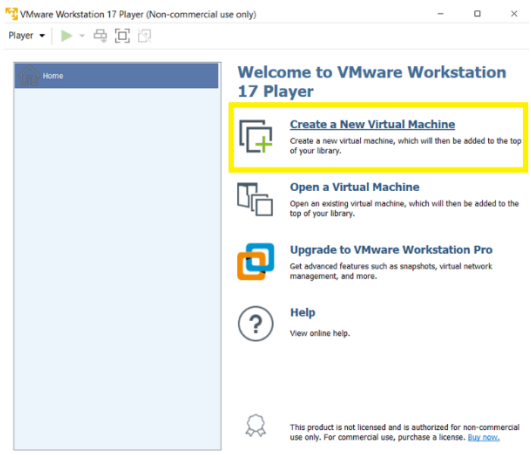
Minimum System Requirements Recommended

1. Disk space: 30 GB
2. RAM: 16 GB
3. CPU @ least 10 GHz in total (~ 4 cores)

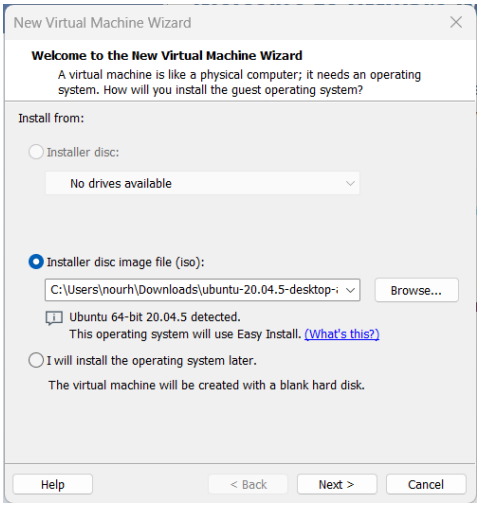
Virtual Machine Instructions

Note: this guide was written based on Windows OS.

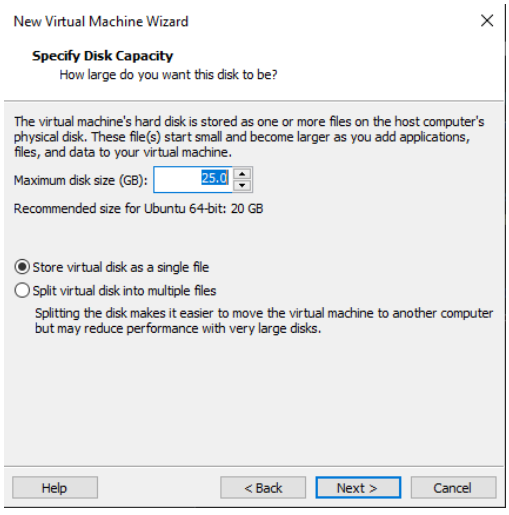
1. Download Ubuntu 22.04.3 Desktop AMD64.
2. Download VMware Workstation Player 17.
3. Run the downloaded application.
4. Follow the setup wizard and keep the default settings.
5. Run VMware and keep the default settings.
6. Choose “Create a New Virtual Machine” as shown below:



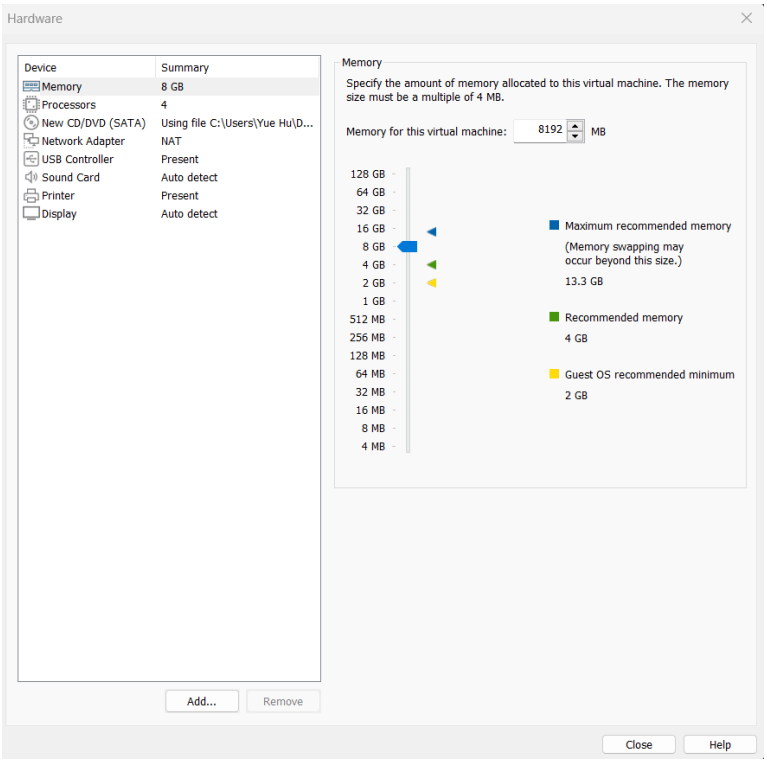
7. Select “Browse” and choose the directory for the Ubuntu disc image you have just downloaded:



8. Select “Next” and follow the Wizard instructions until you reach “Specify Disk Capacity”.
9. As shown below, changes the settings under “Specify Disk Capacity” to be:
   I. 30 (or more if you wish) in “Maximum disk size (GB)” instead of 25.
   II. “Store virtual disk as a single file” for the virtual disk setting instead of multiple files.



10. Select “Next”, you will see a summary of your settings. Click on “Customize Hardware…”. The window below will open. Here you can select computational resources you want to reserve to your virtual machine. It is recommended to provide at least 4GB of RAM (8 if possible, depending on your host machine, you can see on the window the recommendations by VMWare based on the host machine), and 2 processor cores (4 if possible, depending on host machine, do not use all or more cores than your host has). You can also change these settings after the VM is created if you need to increase or decrease.

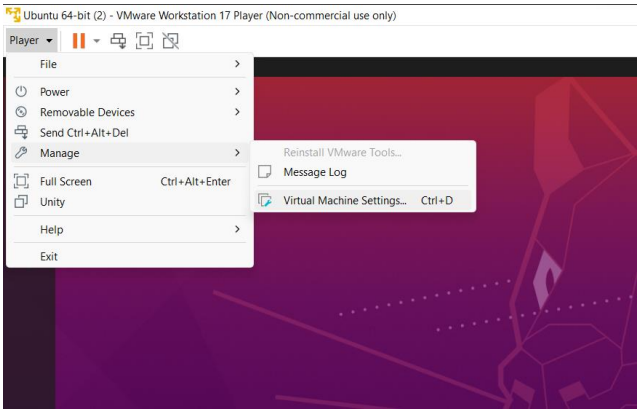


11. Close the Customize Hardware window, and then click on “Finish”.
12. VMware should open and Ubuntu installation will start automatically. This step will take some time.
13. Enter your password.
14. Follow the setup.
15. To make sure you installed everything correctly, open a terminal `Ctrl + Shift + T`, and run:

    ```
    $> sudo apt update && sudo apt install lsb-core lsb-release
    $> lsb_release -a
    ```

    You should see the following output:

    Distributor ID: Ubuntu
    Description: Ubuntu 22.04.3 LTS
    Release: 22.04
    Codename: jammy
16. Make sure the host machine is connected to **the internet.**
17. Go to VMware settings: Click “Player” at the top left and choose “Manage”, as shown below:



18. In the left menu, select “Network Adapter”. By default, NAT should be selected.
19. Make sure that under Device Status, you have ‘Connected’ and ‘Connected at power on’ both selected.
20. Surf the internet using Firefox. If you have internet, you have successfully configured the VMware network settings.

Installing and configuring for the course

Once you have finished the installation of the VM, you can proceed with installing the packages and dependencies needed for the course. We have prepared a script to facilitate this. Follow the instructions here: https://github.com/aalghooneh/MTE544_student/tree/setup

More references:

This option is not technically supported by the teaching team, but if you wish to install Ubuntu in dual boot, you may check this nice installation tutorial video.