<u>**How to Install Type 2 Hypervisor: Oracle VM Virtualbox**</u>

<u>**Things to know before starting:**</u>

- There may be limited support for Apple Silicon processors. Please ensure that your computer is compatible during the creation of this project, only Intel and AMD processors were supported for VirtualBox.
- Virtualization must be enabled in your BIOS. If not, you will receive an error upon starting the VM saying that Virtualization is not enabled for the computer's chipsets. See your motherboard manual for information on how to access your BIOS to enable virtualization.

<u>**Step 1**</u>: Install Oracle VM VirtualBox onto Computer

- https://www.virtualbox.org/wiki/Downloads

<u>**Step 2**</u>: Run through setup
- Open the .exe file that you have downloaded from virtualbox.org (the link above).
- Run through the steps that will lead you to the install of VM VirtualBox until you get to the screen below, then click **Finish**.
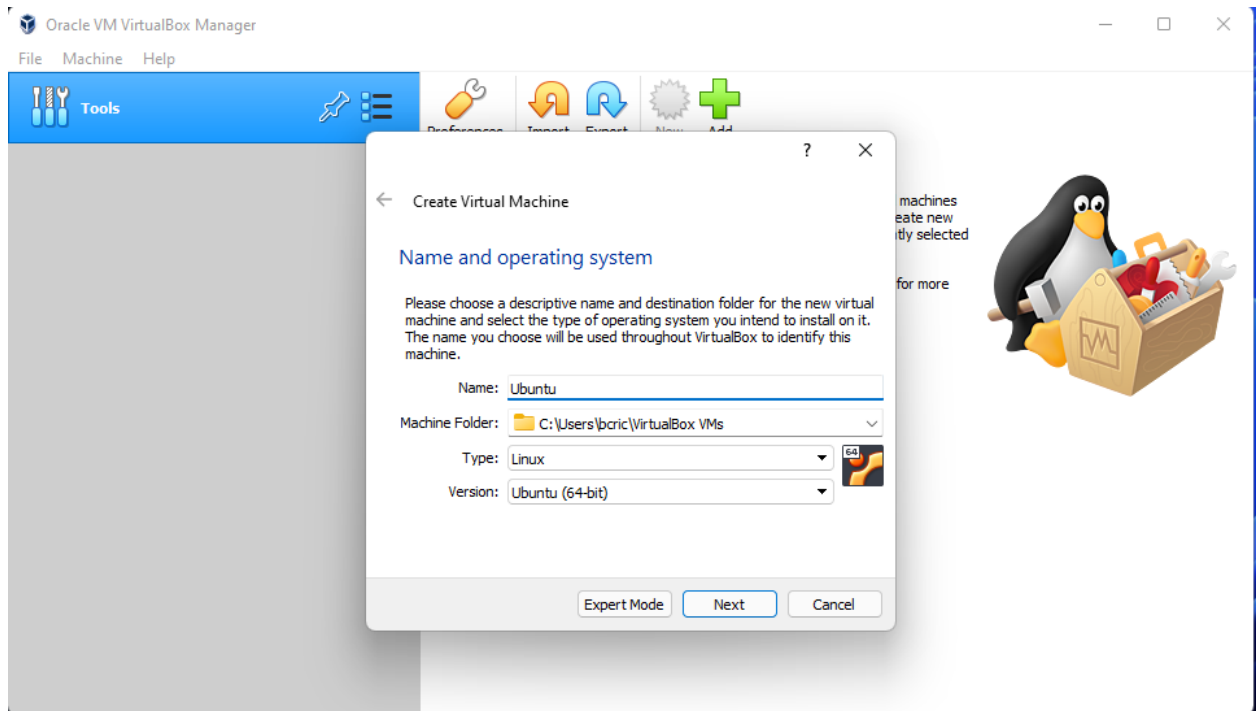


<u>**Step 3:**</u> Download .iso File
- https://releases.ubuntu.com/20.04.1/ubuntu-20.04.1-desktop-amd64.iso?

**Step 4:** Open Oracle VM VirtualBox Manager
- Click the **New** button
- Give your operating system a name.
- Set the **file path** to where you want the VM to be saved to.
- Make sure the type and version of the VM that you are creating match the .iso file that you are going to be using.
- Press next

**Step 5:** Allocate Memory
- Type in the amount of memory that you want the VM to have
  - You can adjust the slider, or you can type directly into the text box.
  - For this case, we are just going to leave it at the default, whenever you have selected the amount of memory that you want allocated, click **Next**.

? ✕

← Create Virtual Machine

## Memory size

Select the amount of memory (RAM) in megabytes to be allocated to the virtual machine.

The recommended memory size is **1024** MB.

[ 1024 ⇕ ] MB

4 MB                     16384 MB

[ Next ]    [ Cancel ]

**Step 6:** Hard disk
- Make sure that **Create a virtual hard disk** is bubbled in, then click **Create**.

? ✕

← Create Virtual Machine

## Hard disk

If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file or select one from the list or from another location using the folder icon.

If you need a more complex storage set-up you can skip this step and make the changes to the machine settings once the machine is created.

The recommended size of the hard disk is **10.00 GB**.

○ Do not add a virtual hard disk
● Create a virtual hard disk now
○ Use an existing virtual hard disk file

[ Empty                              ▾ ] 🖾

[ Create ]    [ Cancel ]

**Step 7:** Hard disk file type
- **Select VDI, then click Next.**

? ✕

← Create Virtual Hard Disk

## Hard disk file type

Please choose the type of file that you would like to use for the new virtual hard disk. If you do not need to use it with other virtualization software you can leave this setting unchanged.

🔘 VDI (VirtualBox Disk Image)

◯ VHD (Virtual Hard Disk)

◯ VMDK (Virtual Machine Disk)

Expert Mode    Next    Cancel
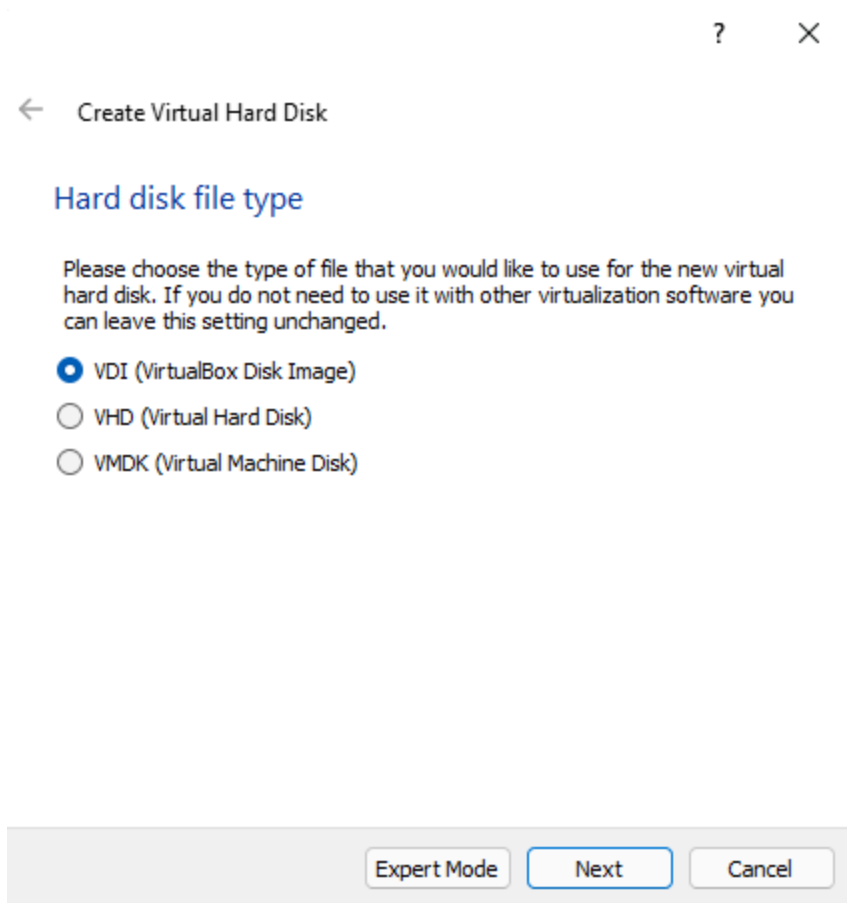
**Step 8:** Storage on physical hard disk
- Select whether you want the disk space to be **dynamically allocated**, or if you want to have a **fixed size**.
  - For this example, we are going to use **dynamically allocated**.
    - Selecting dynamically allocated will use up only the amount of storage that is needed in the VM. A fixed size will give you a certain amount of storage to use.
      - Example: if you install a 3GB file in the VM, it will take up only 3GB of space on your hard disk.
        - If you set a fixed size, you will give the VM only, say, 10GB of storage capacity to work with.
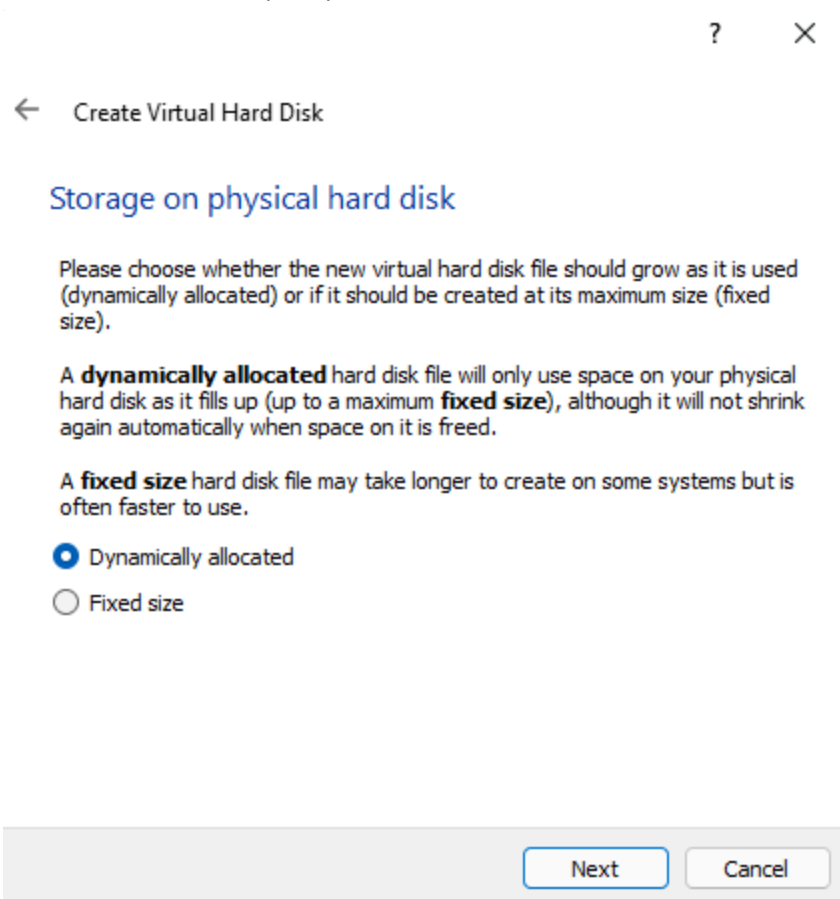


**Step 9:** Click Next twice.

**Step 10:** Click the Settings button, then on the side bar, click Storage.

**Step 11:** Import .iso file
- Under **Controller: IDE**, click the empty disk.
- To the right, there is a drop down menu right next the words **Optical drive.**
- To the right of the drop down menu, there is a **disk icon**.
  - Click this icon, then click **Choose a disk file** and locate the .iso file that you downloaded in the beginning of the tutorial.
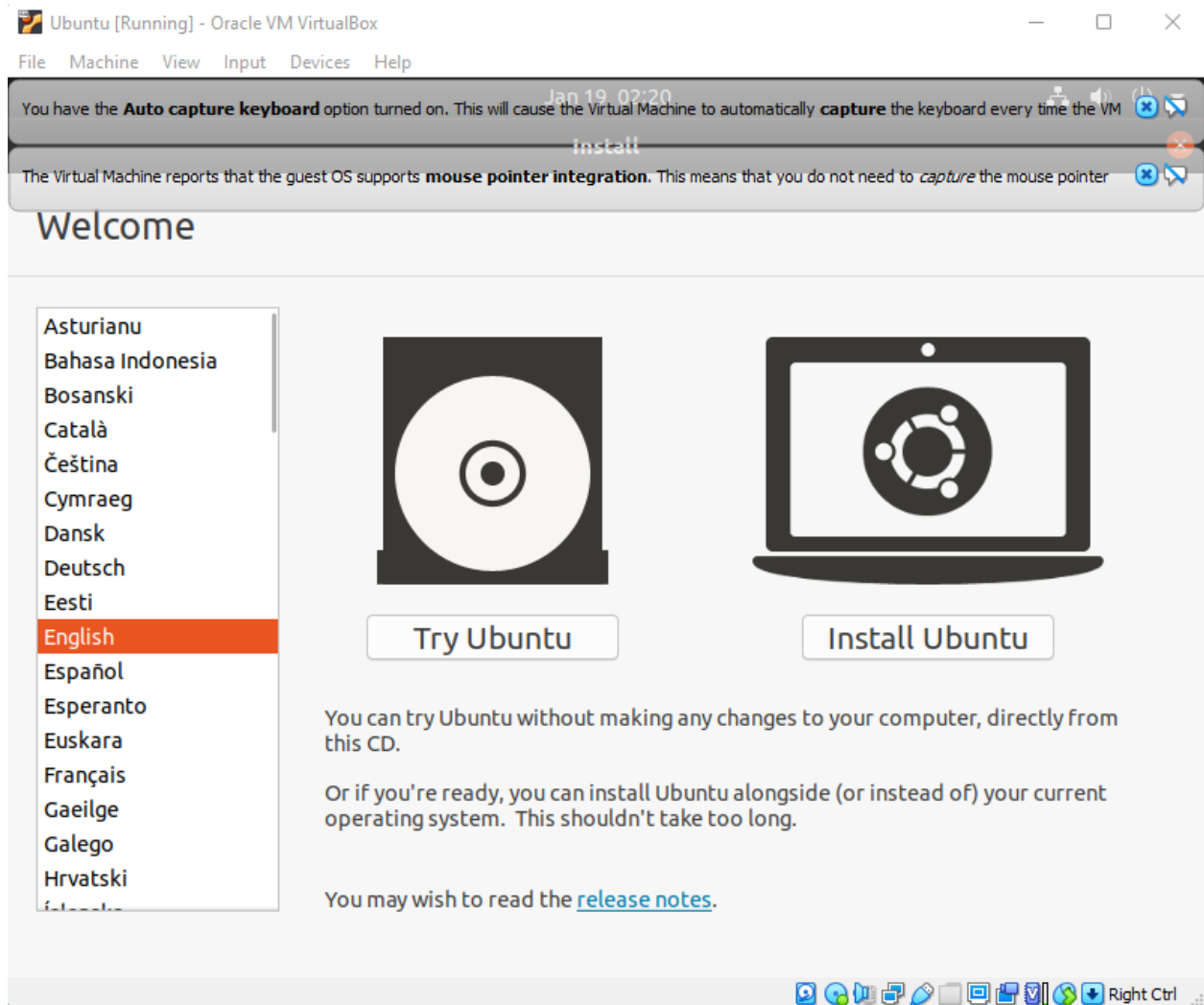
- Click **OK**

**Step 11:** Start the VM
- Click the **start** icon.
- The VM will boot up and configure itself.

**Step 12:** Try or install
- Select your **language**
- Select whether you want to **try Ubuntu** without making any changes to your local PC, or whether you want to **install Ubuntu** directly onto your local PC.



Note: if you select **Try Ubuntu**, you will still have the option to install later.

You now should be able to use the VM that you have created.