

Guideline - Install VirtualBox and URSim on your Windows PC

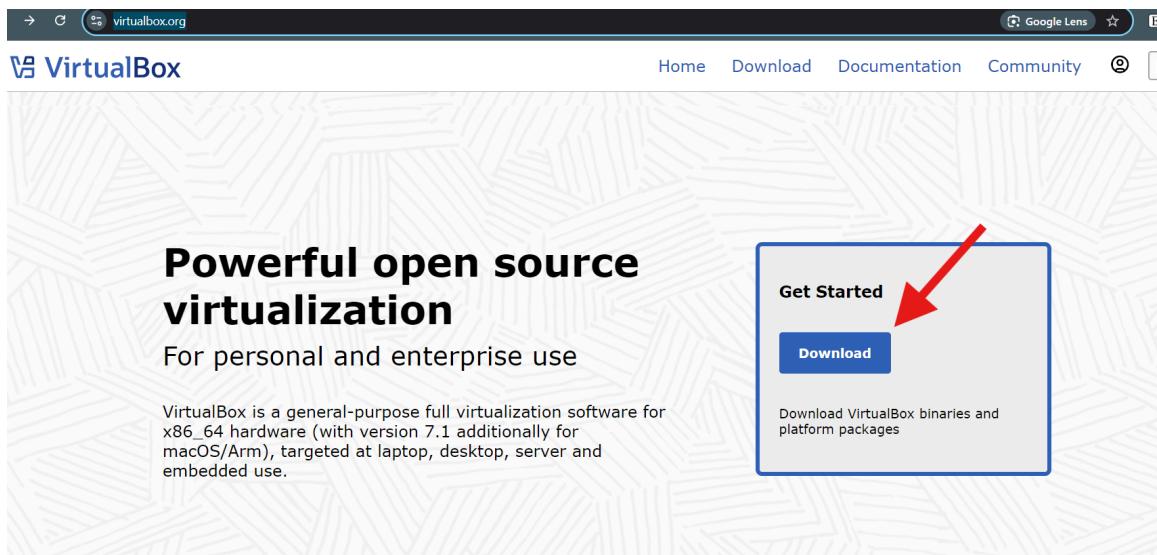
Shawn Li, 10/7/2024

To get started with controlling the UR5 robot arm using simulation software, you'll need to install VirtualBox and URSim on your Windows PC. VirtualBox is a free, open-source virtualization tool that allows you to run virtual machines on your system, while URSim is the official simulation environment for Universal Robots. By setting up these tools, you can simulate the UR5 robot's movements and functions without needing to connect to the physical robot, making it a powerful tool for development and testing. This guideline will walk you through the installation process, ensuring that you can get your simulation environment up and running smoothly.

Install VirtualBox

Step 1: Get the installer of [VirtualBox](#).

1. Once opened the website, click the [Download] button as below to download page.



2. Click the link with "Windows hosts" to start downloading the installer for VirtualBox.



3. You should be able to get an installer as below.

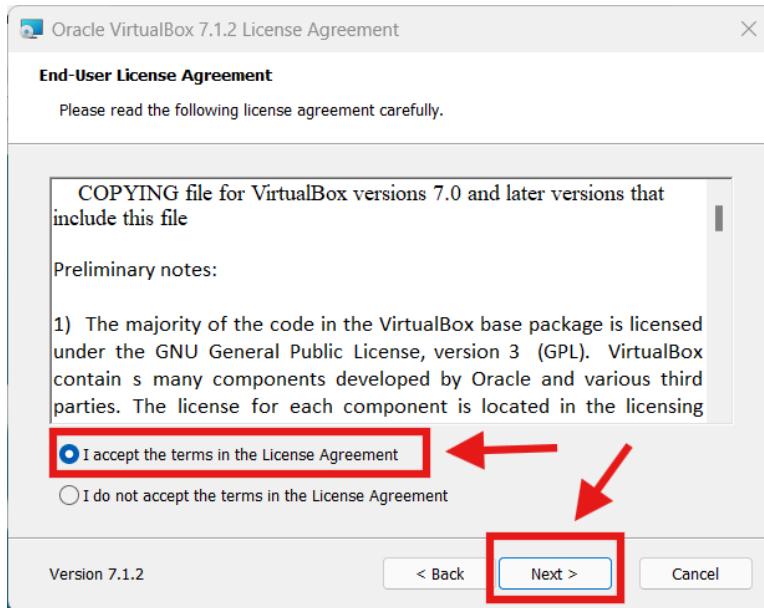


Step 2: Install the VirtualBox on your computer.

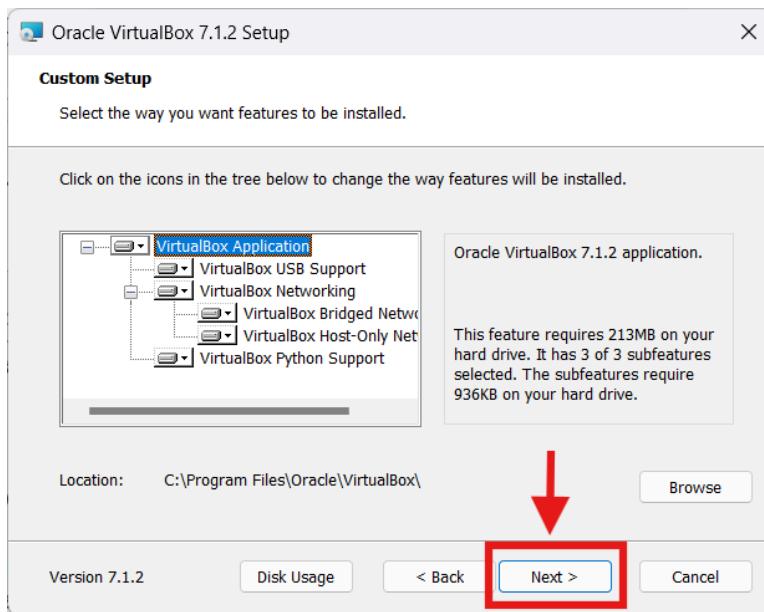
Simply following the installation wizards.

1. Double click the installer to start installation then click [Next >].

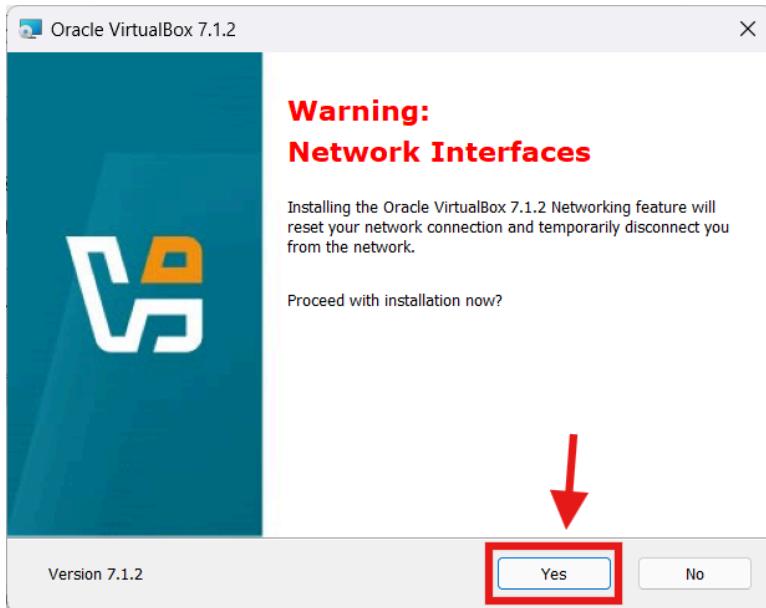
2. Accept the terms then click [Next >].



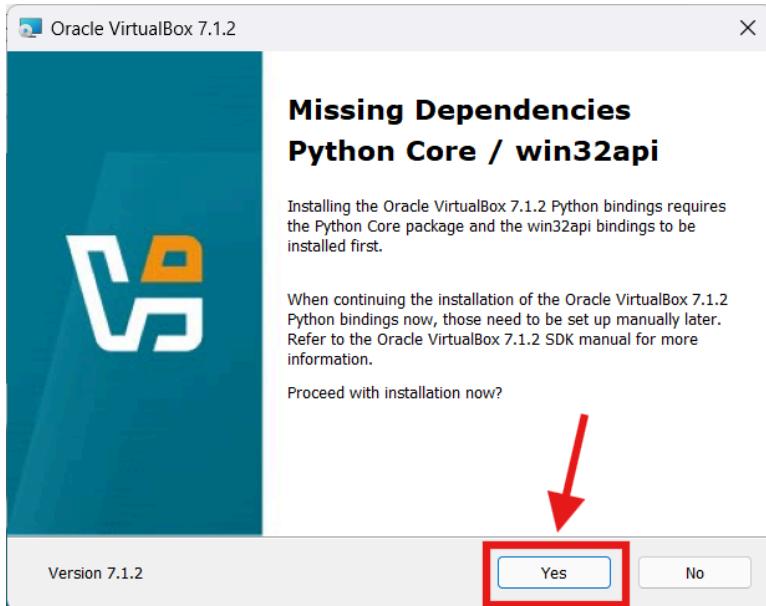
3. Leave everything in default then click [Next >].



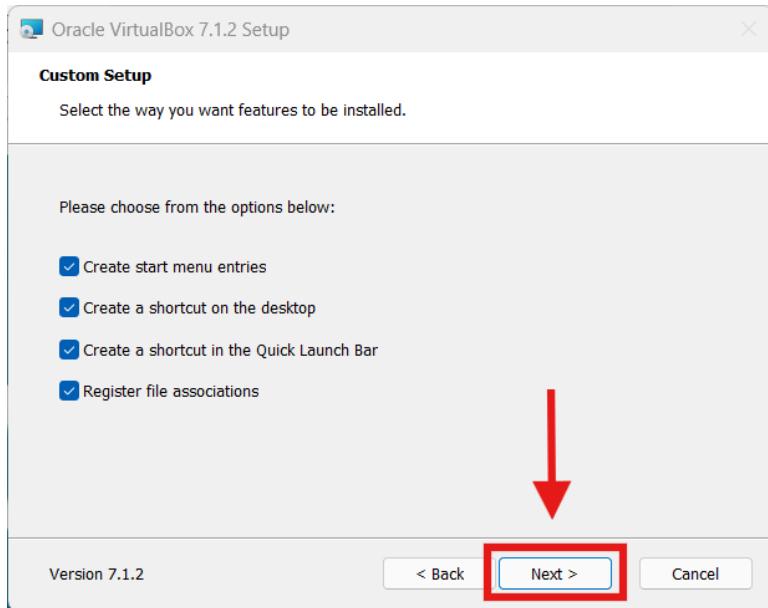
4. Click [Yes] on the warning.



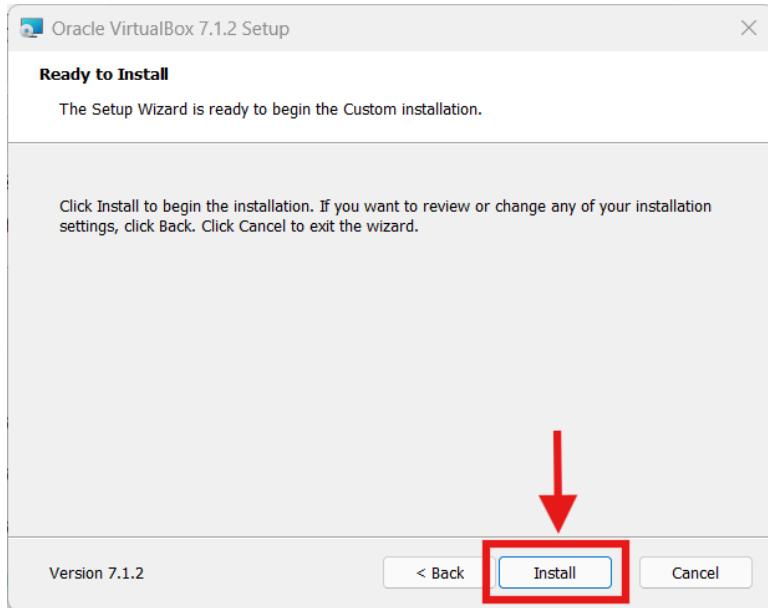
5. Click [Yes] to any possible warnings.



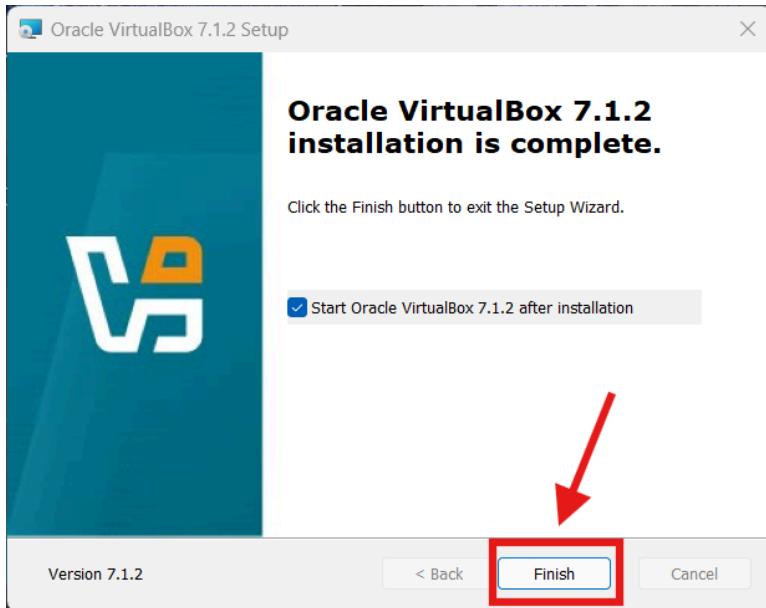
6. You can choose any options but recommend to leave them be, then click [Next >].



7. Click [Install] to install.

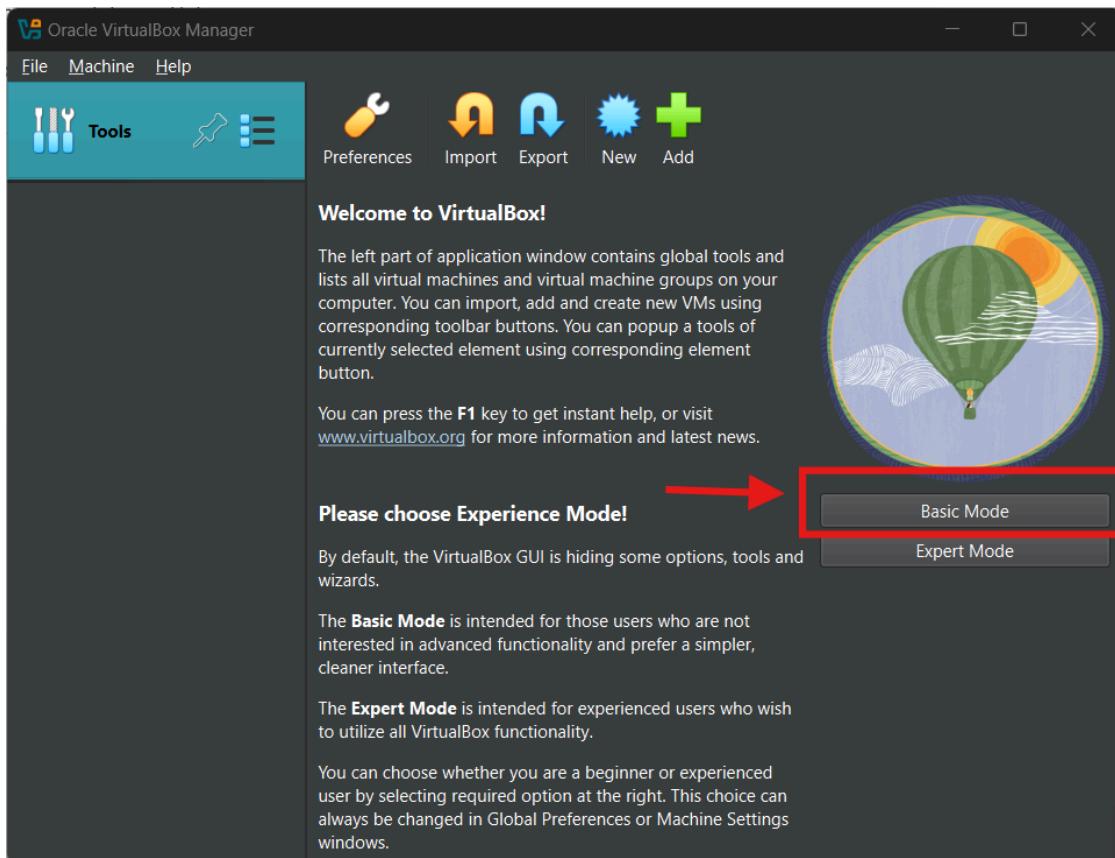


8. Click [Finish] to finish the installation. You can uncheck "Start Oracle VirtualBox ... installation" but recommend leaving it be. You need to find the shortcut for VirtualBox then open it later if you uncheck it.



Step 3: Choose basic mode to make things simple.

Once VirtualBox is opened, choose [Basic Mode] to make things simple at this time.



Install URSim

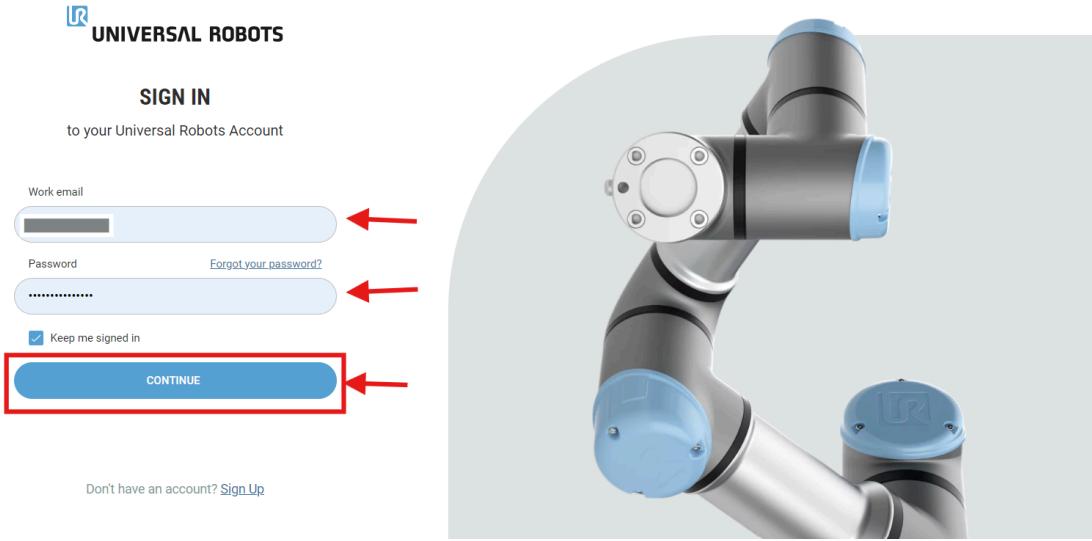
Step 1: Get URSim file (*Offline Simulator - CB-Series - Non Linux - URSim 3.15.8*) from the following website:

<https://www.universal-robots.com/download/software-cb-series/simulator-non-linux/offline-simulator-cb-series-non-linux-ursim-3158/>

1. Click on the link above to get the following page. Choose “Create account” if you don’t have one.

The screenshot shows a web browser displaying the Universal Robots Support website. The URL in the address bar is [universal-robots.com/download/software-cb-series/simulator-non-linux/offline-simulator-cb-series-non-linux-ursim-3158/](https://www.universal-robots.com/download/software-cb-series/simulator-non-linux/offline-simulator-cb-series-non-linux-ursim-3158/). The page title is "OFFLINE SIMULATOR - CB-SERIES - NON LINUX - URSIM 3.15.8". Below the title, it says "A Virtual Machine is needed to run this offline simulator version 3.15.8 for non Linux computers". There are "Support", "Download", and "Offline Simulator - CB-Series - Non Linux - URSim 3.15.8" links in the breadcrumb navigation. On the right, there are "Go to Main Site" and a user profile icon. Below the title, it says "YOUR FILES ARE READY TO DOWNLOAD" and "LOGIN IS REQUIRED TO ACCESS THE FILES". It notes that "In order to download the file(s) you'll need to login in or create an account". There are "LOG IN" and "CREATE ACCOUNT" buttons. A red arrow points to the "CREATE ACCOUNT" button, which is highlighted with a red border.

2. After creating an account (if you don't have one with Universal Robots), sign in.



3. After continuing from the previous login page, you can get the download link. Click [DOWNLOAD] to get the installer.

The screenshot shows a web browser window with the URL universal-robots.com/download/software-cb-series/simulator-non-linux/offline-simulator-cb-series-non-linux-ursim-3158/. The page title is 'OFFLINE SIMULATOR - CB-SERIES - NON LINUX - URSIM 3.15.8'. Below the title, it says 'A Virtual Machine is needed to run this offline simulator version 3.15.8 for non Linux computers'. At the bottom, there is a 'YOUR FILES ARE READY TO DOWNLOAD' section with a 'DOWNLOAD' button, which is highlighted with a red box and a red arrow pointing to it.

4. Unzip the .rar file (*URSim_VIRTUAL-3.15.8.106339.rar*) into a folder you prefer and get the following files:

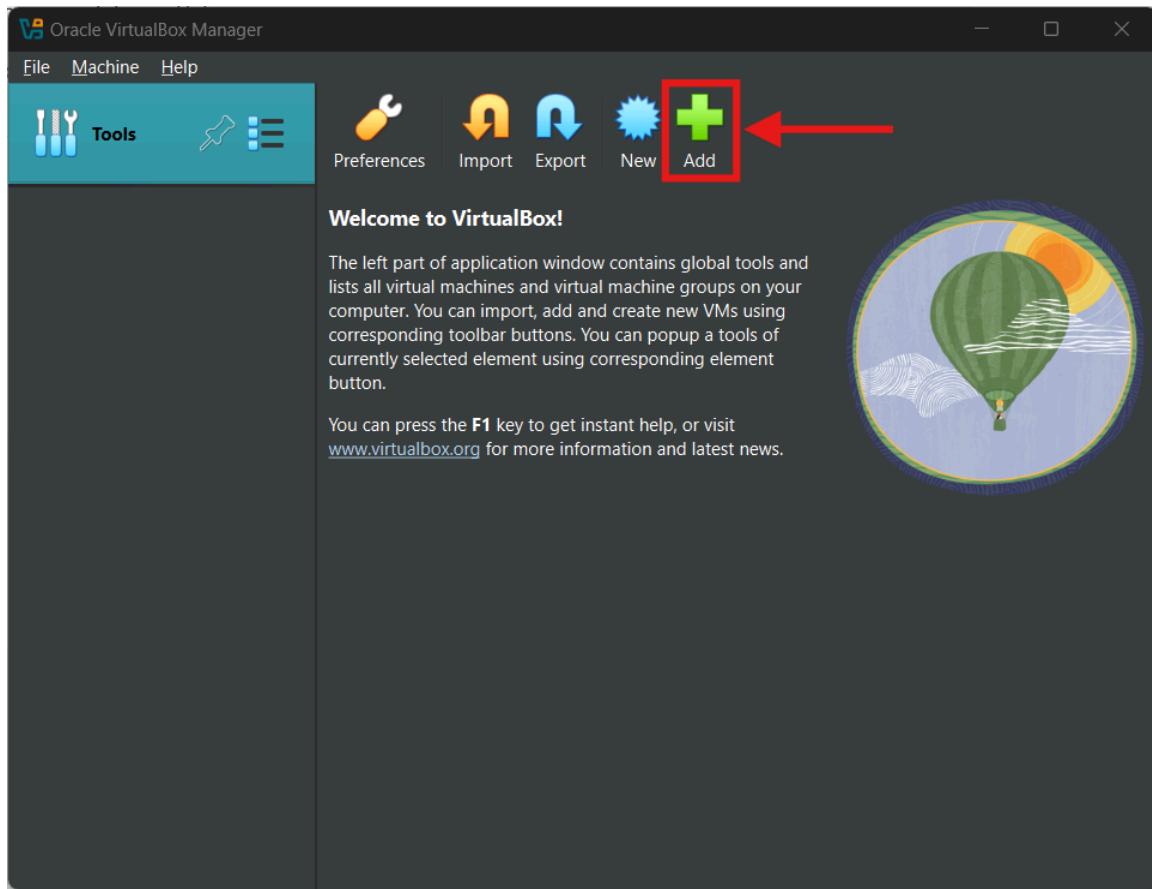
Name	Date modified	Type	Size	
∨ A long time ago				
URSim_VIRTUAL-3.15.8.106339	7/11/2022 3:06 AM	VirtualBox Machin...	7 KB	
URSim_VIRTUAL-3.15.8.106339	7/11/2022 3:06 AM	Virtual Machine Di...	1 KB	
URSim_VIRTUAL-3.15.8.106339.vmx	7/11/2022 3:06 AM	VMX File	2 KB	
URSim_VIRTUAL-3.15.8.106339-s001	7/11/2022 3:06 AM	Virtual Machine Di...	1,332,608 ...	
URSim_VIRTUAL-3.15.8.106339-s002	7/11/2022 3:06 AM	Virtual Machine Di...	553,792 KB	
URSim_VIRTUAL-3.15.8.106339-s003	7/11/2022 3:06 AM	Virtual Machine Di...	303,872 KB	
URSim_VIRTUAL-3.15.8.106339-s004	7/11/2022 3:06 AM	Virtual Machine Di...	165,248 KB	
URSim_VIRTUAL-3.15.8.106339-s005	7/11/2022 3:06 AM	Virtual Machine Di...	242,880 KB	
URSim_VIRTUAL-3.15.8.106339-s006	7/11/2022 3:06 AM	Virtual Machine Di...	64 KB	

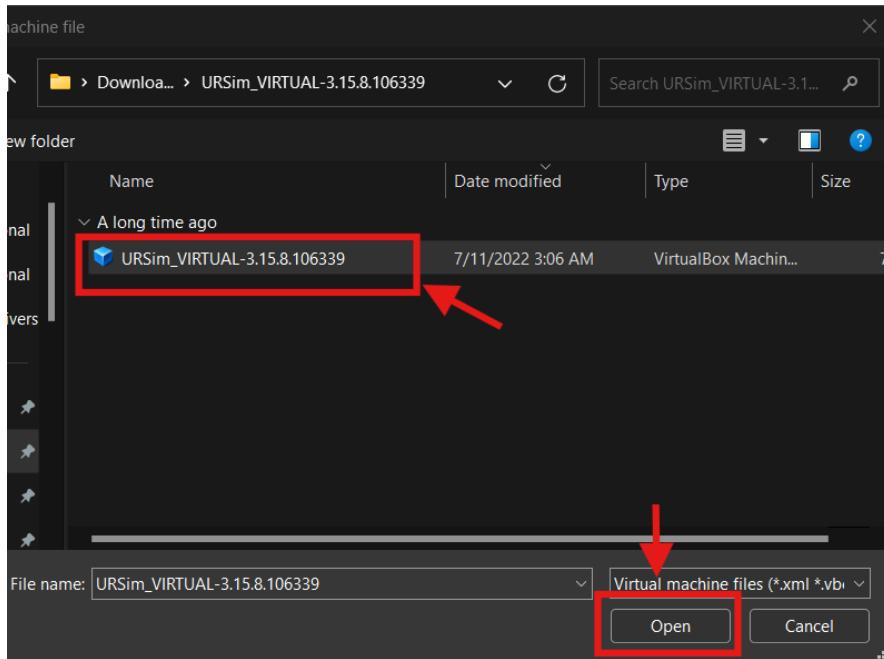
URSim_VIRTUAL-3.15.8.106339 (9 items)

Select a single file to get more information and share your cloud content.

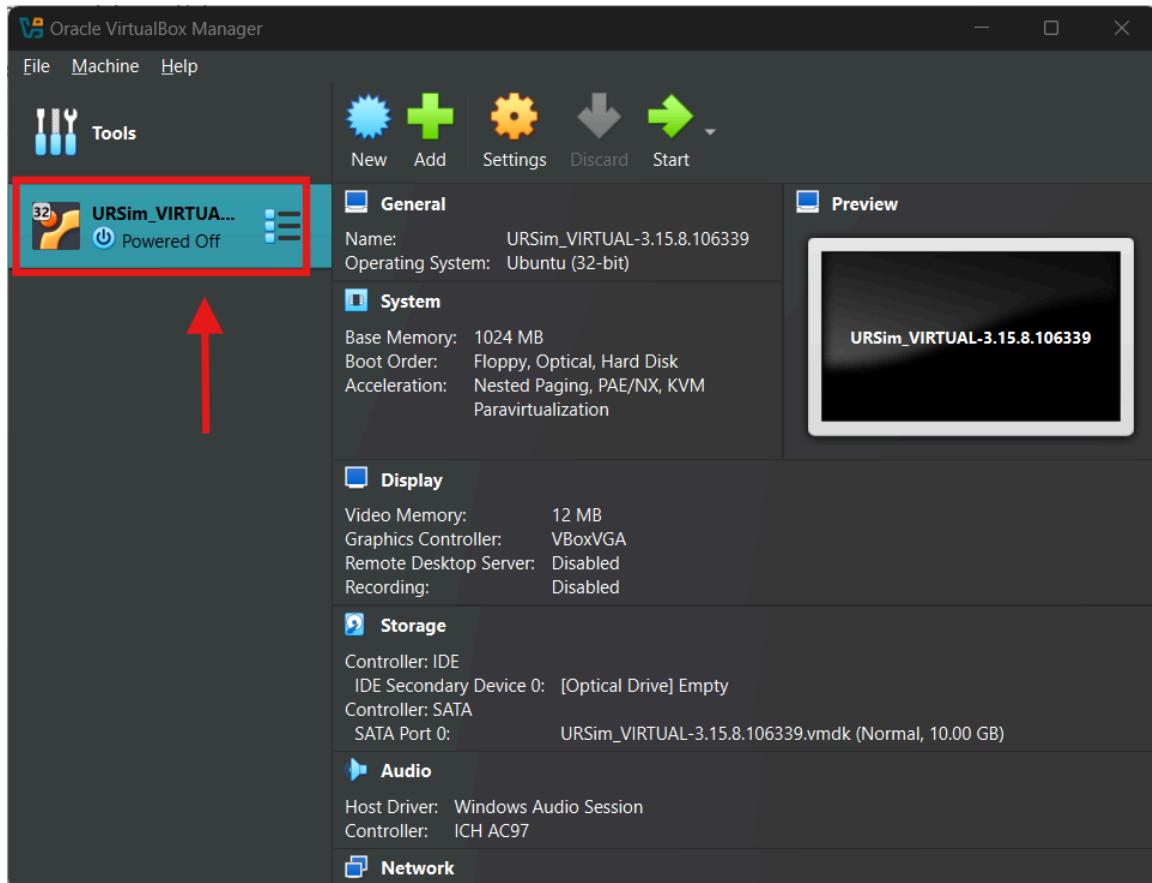
Step 2: Install URSim on your computer

1. Then Add the URSim file and keep it in your VirtualBox

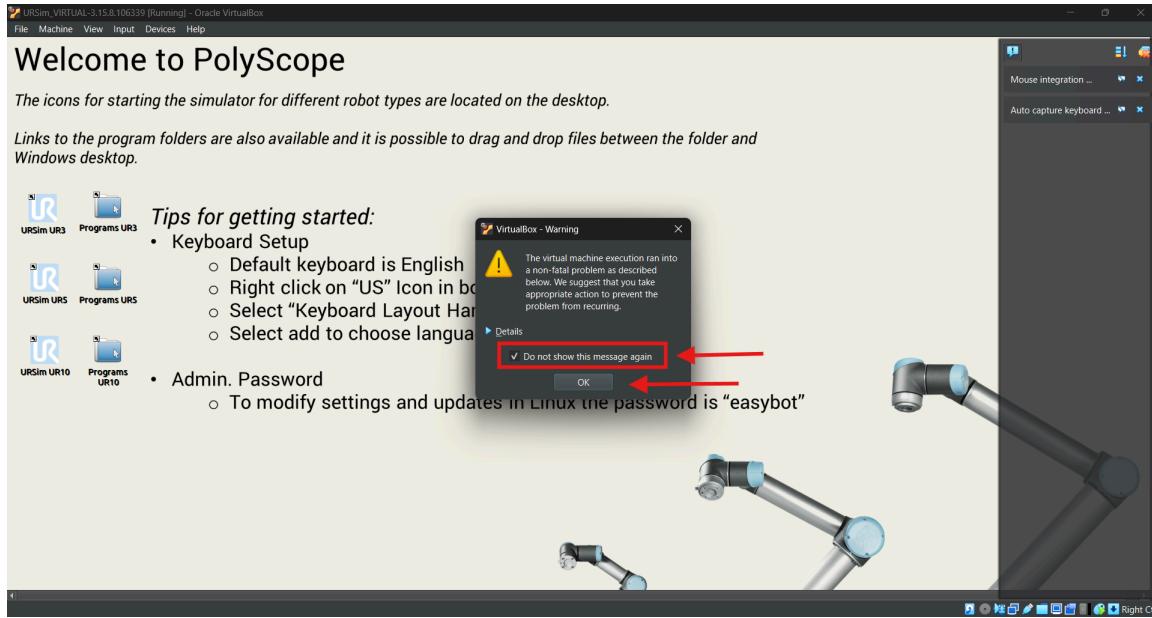




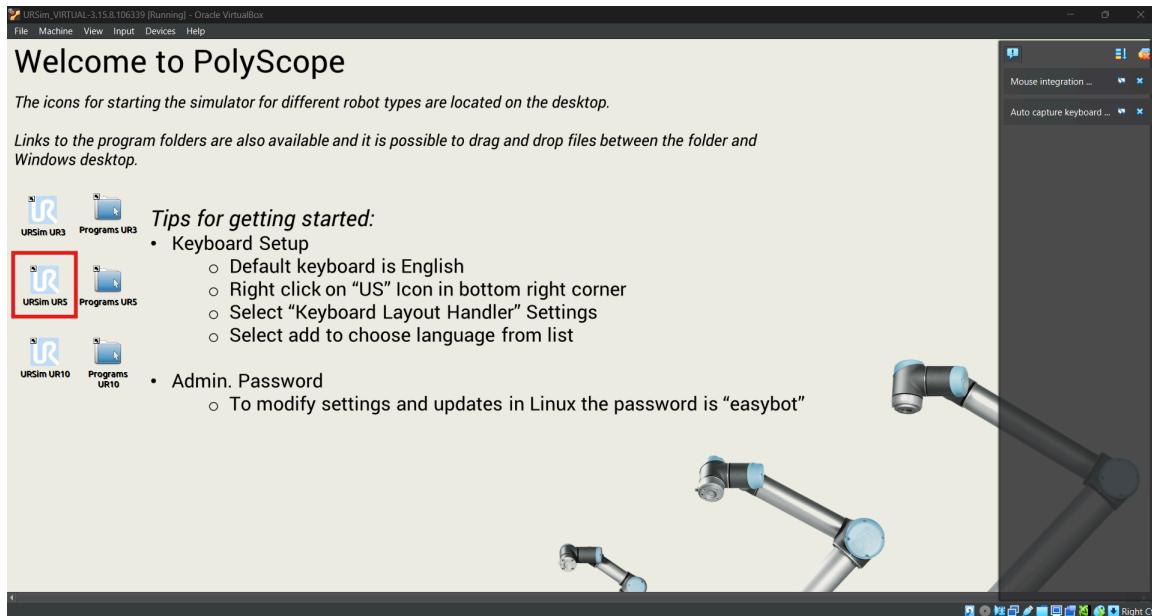
2. Double click the 'URSim' as below (or right click then choose from the menu) to turn on the URSim virtual machine.



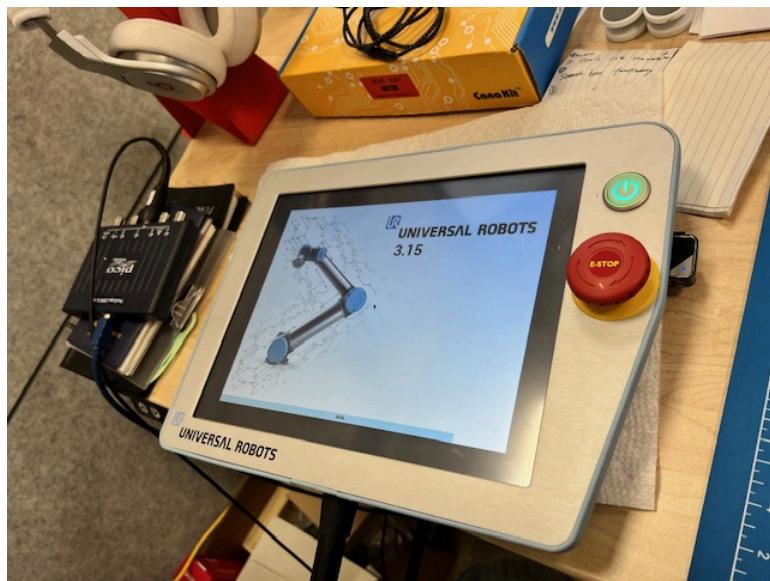
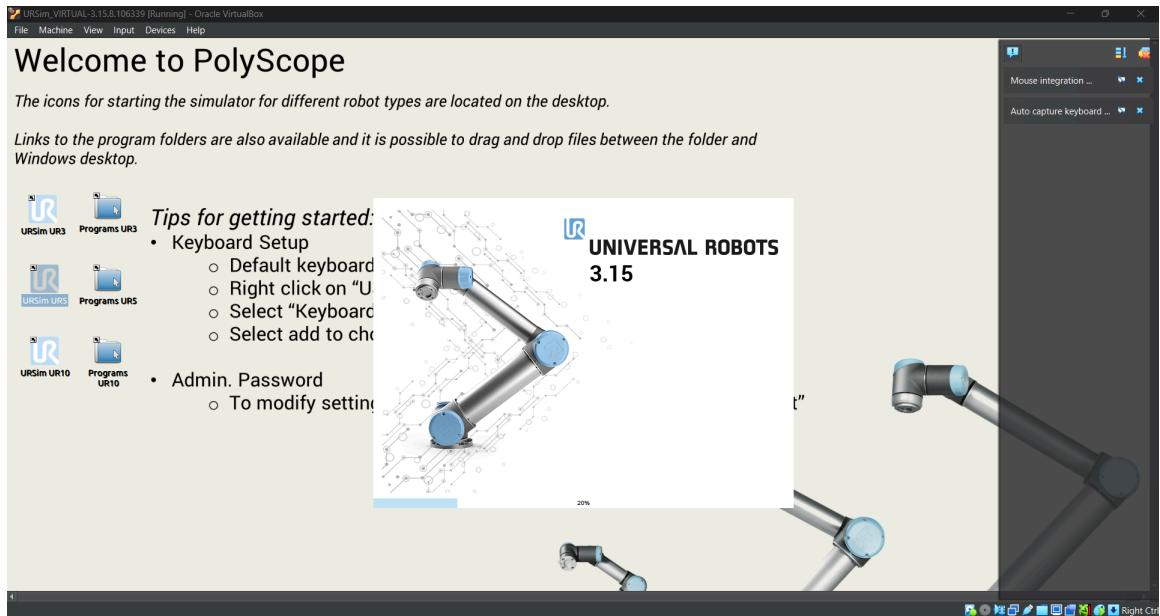
- Check "Do not show this message again" then click [OK] to close the warning.



- You will see a virtual desktop running URSim, which is essentially a Linux machine (Lubuntu) running on VirtualBox. One application called URSim UR5 is what we need (this is the same PolyScope application found on the UR5's Teach Pendant).



- You will see the welcome page identical to the one on the Teach Pendant.



6. Once in PolyScope, leave all settings at their default for now.

