

Installing the Oracle VirtualBox Tool

To prepare your Physics 3340/6361 assignments you may either use the Linux machines in the Physics department or a virtual Linux system on your personal laptop or desktop computer. A virtual Ubuntu Linux system has been prepared for you that is similar to the Ubuntu Linux systems in the department.

To run the virtual Ubuntu Linux system as a guest operating system on your own computer, a supervising virtualizer tool is needed that runs on your host machine. The first step is to download and install the free Oracle VirtualBox tool. Go to the home page:

<https://www.virtualbox.org/>

for information and documentation, and

<https://www.virtualbox.org/wiki/Downloads>

to download the version appropriate for your computer's operating system: Windows, MacOS, etc.

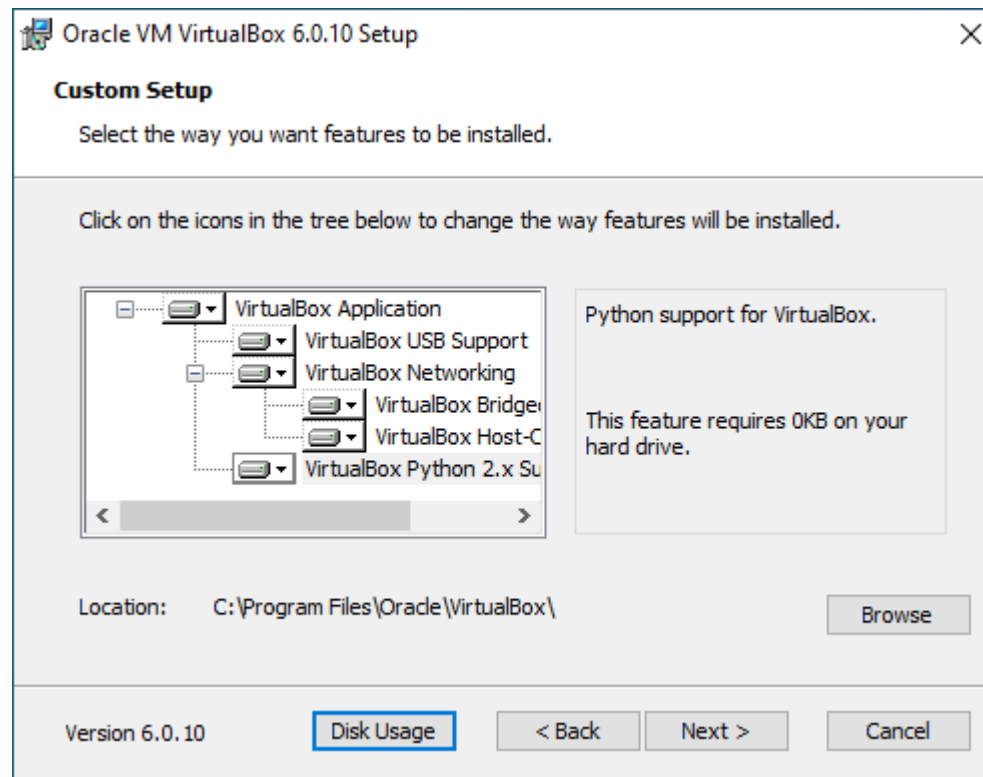
Running the VirtualBox Installer

These examples show the installation process for the Windows version, and the MacOS version will be similar.



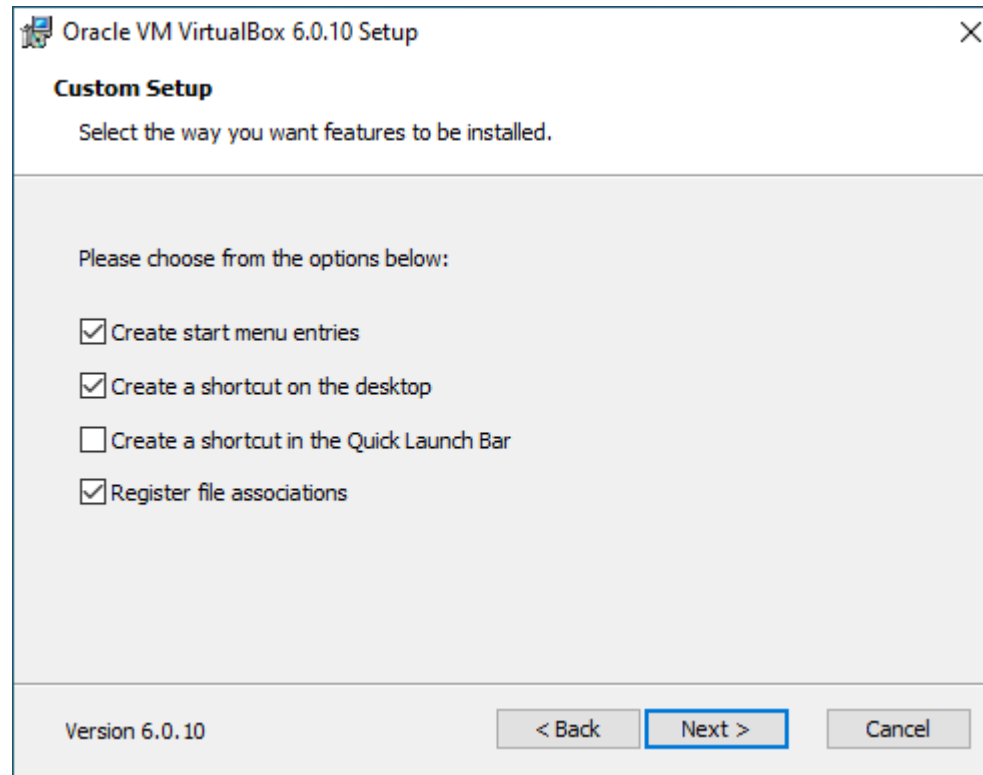
Just click “Next”

Running the VirtualBox Installer



Accept the defaults and click “Next”

Running the VirtualBox Installer



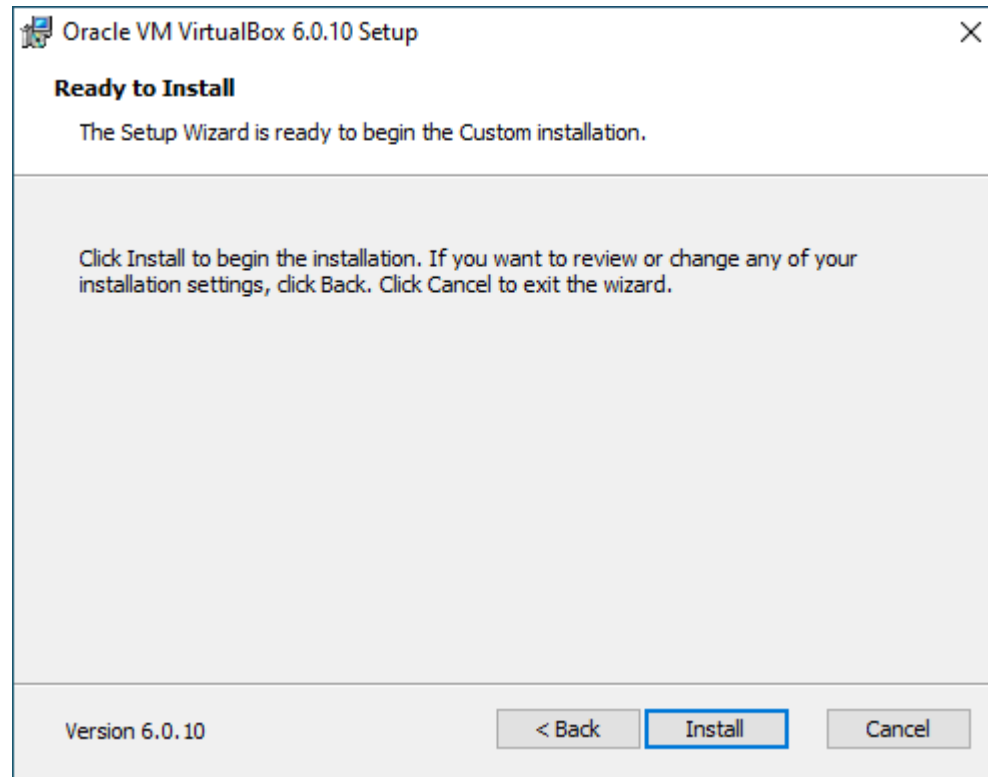
Select your preferences and click “Next”

Running the VirtualBox Installer



Click “Yes”

Running the VirtualBox Installer



Click "Install"

Running the VirtualBox Installer

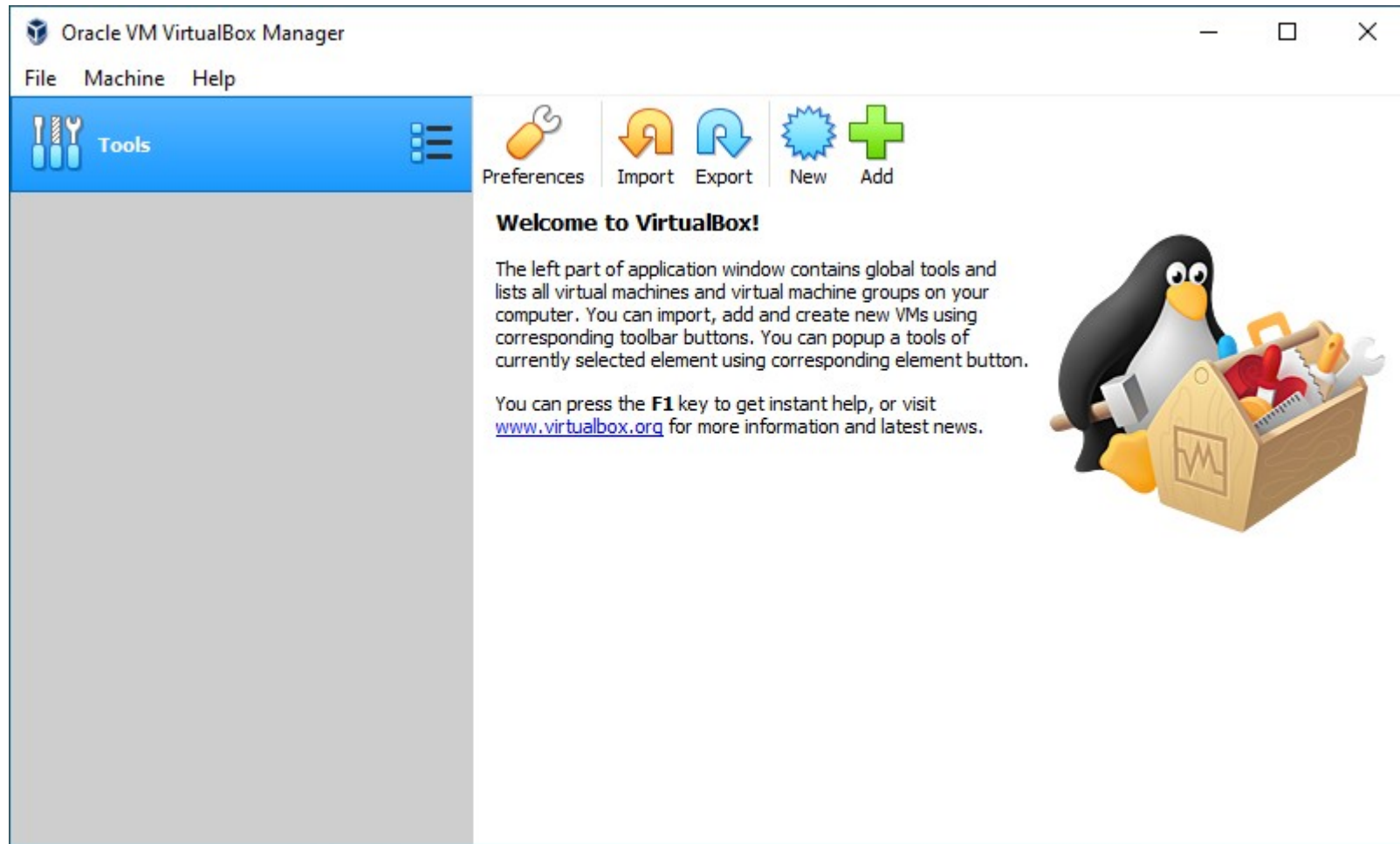
Assuming all goes well with the installation, you should get:



Click “Finish”

Configuring Your VirtualBox Tool

When started initially, the new virtualizer tool has no virtual machines to manage:

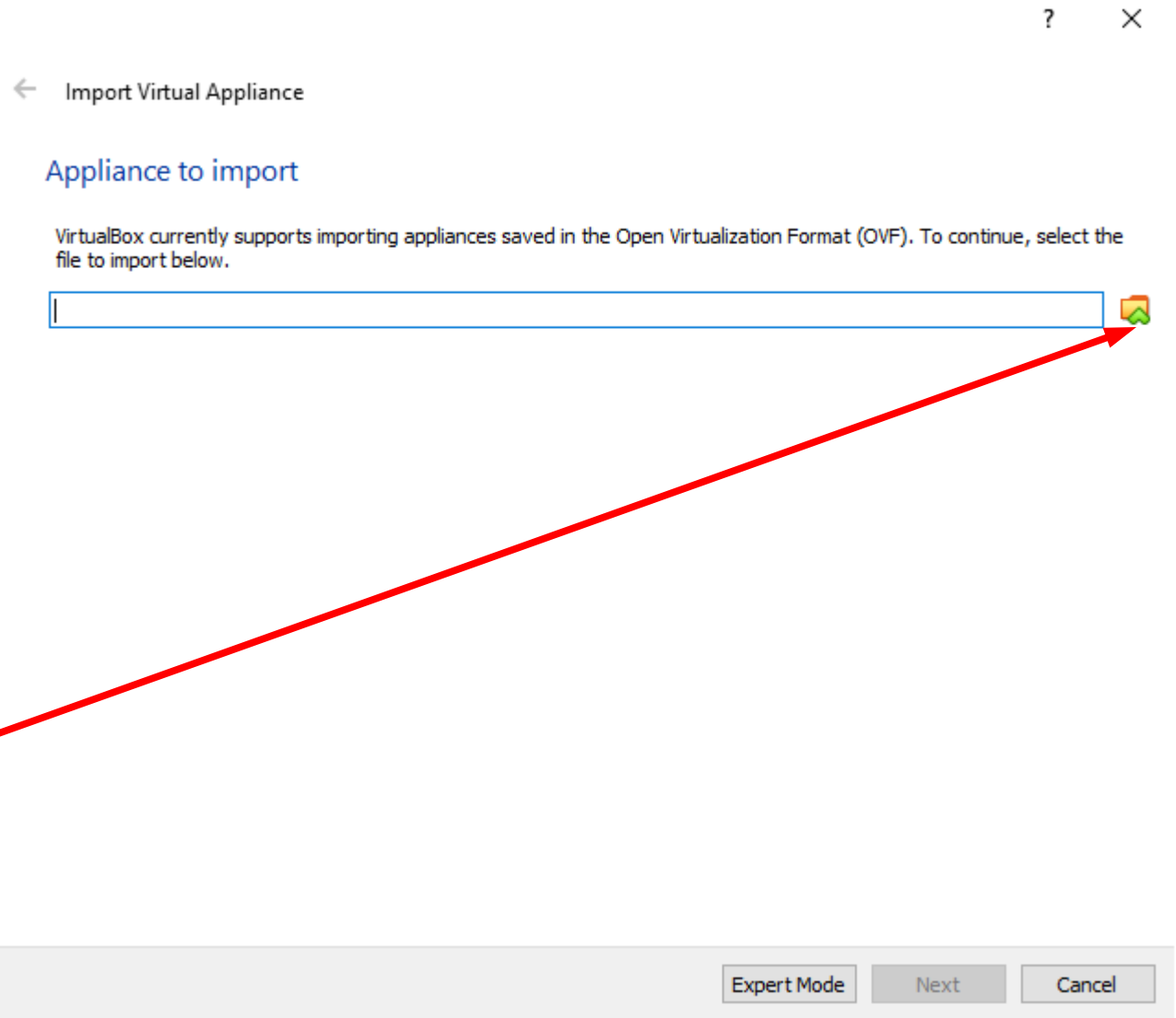


Download the pre-configured Ubuntu 20.04 Linux operating system from the physics web server at www.physics.smu.edu/fattarus/Ubuntu20.ova Note: This file is over 2GB in size, since it contains an entire computer operating system and development applications. Store the file on your computer.

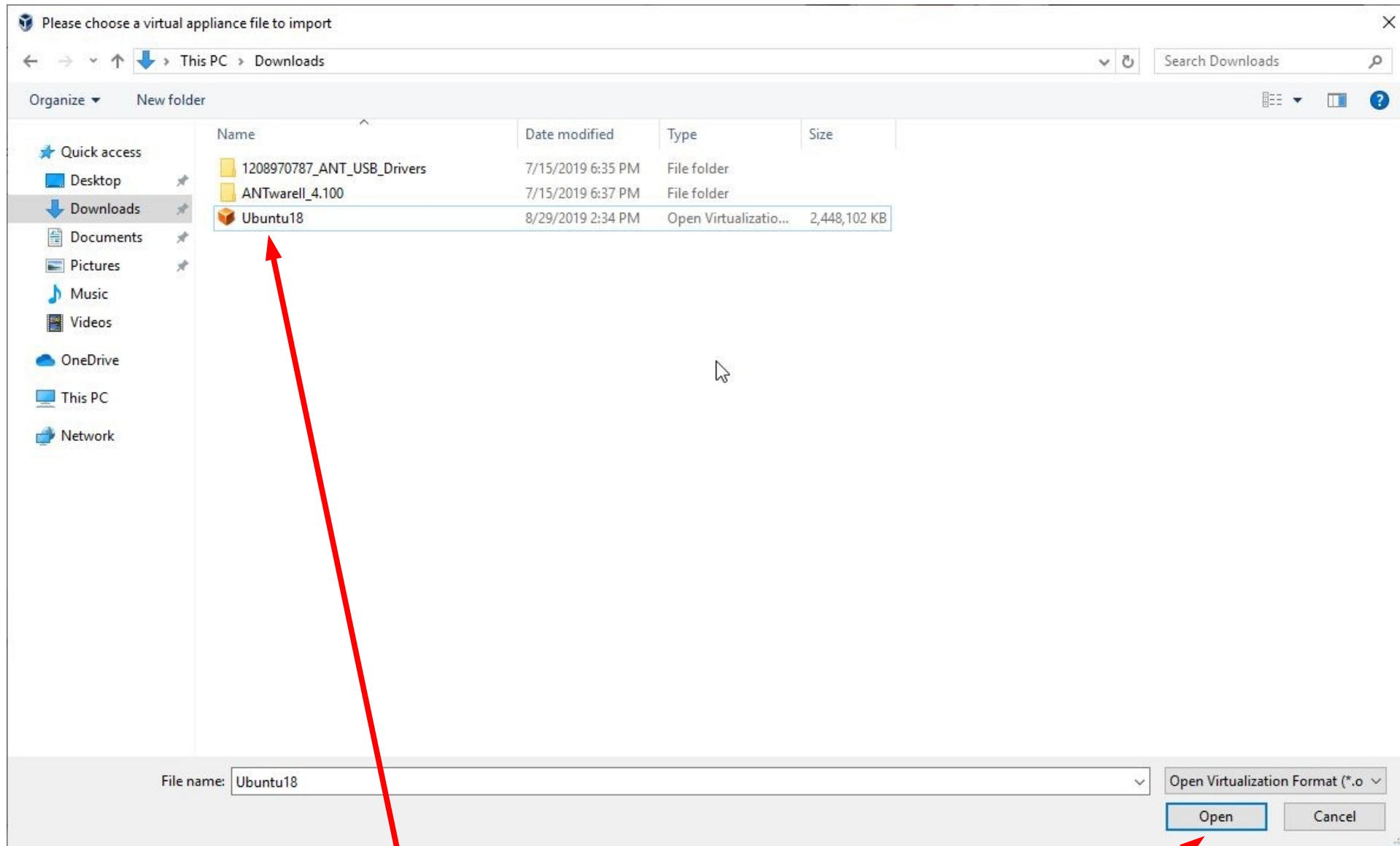
Configuring Your VirtualBox Tool

Click on the orange “Import” button on the virtualizer tool to pop up this dialog to specify a virtual operating system (“appliance”) to manage:

Click on the file select button and use the next dialog to point to the Ubuntu20.ova file you downloaded to your computer.

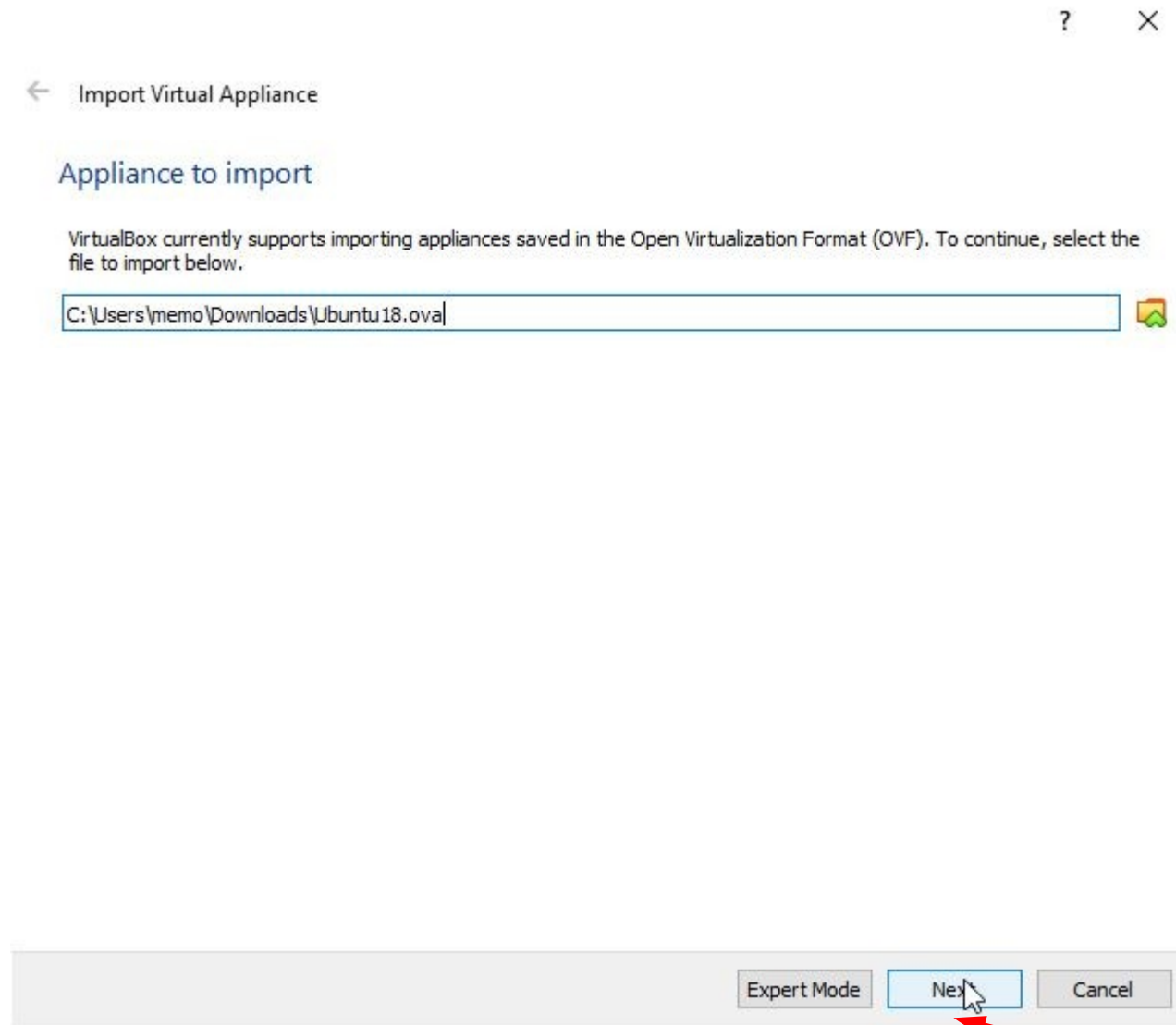


Configuring Your VirtualBox Tool



Navigate to and select the Ubuntu20.ova file that you downloaded and click "Open"

Configuring Your VirtualBox Tool

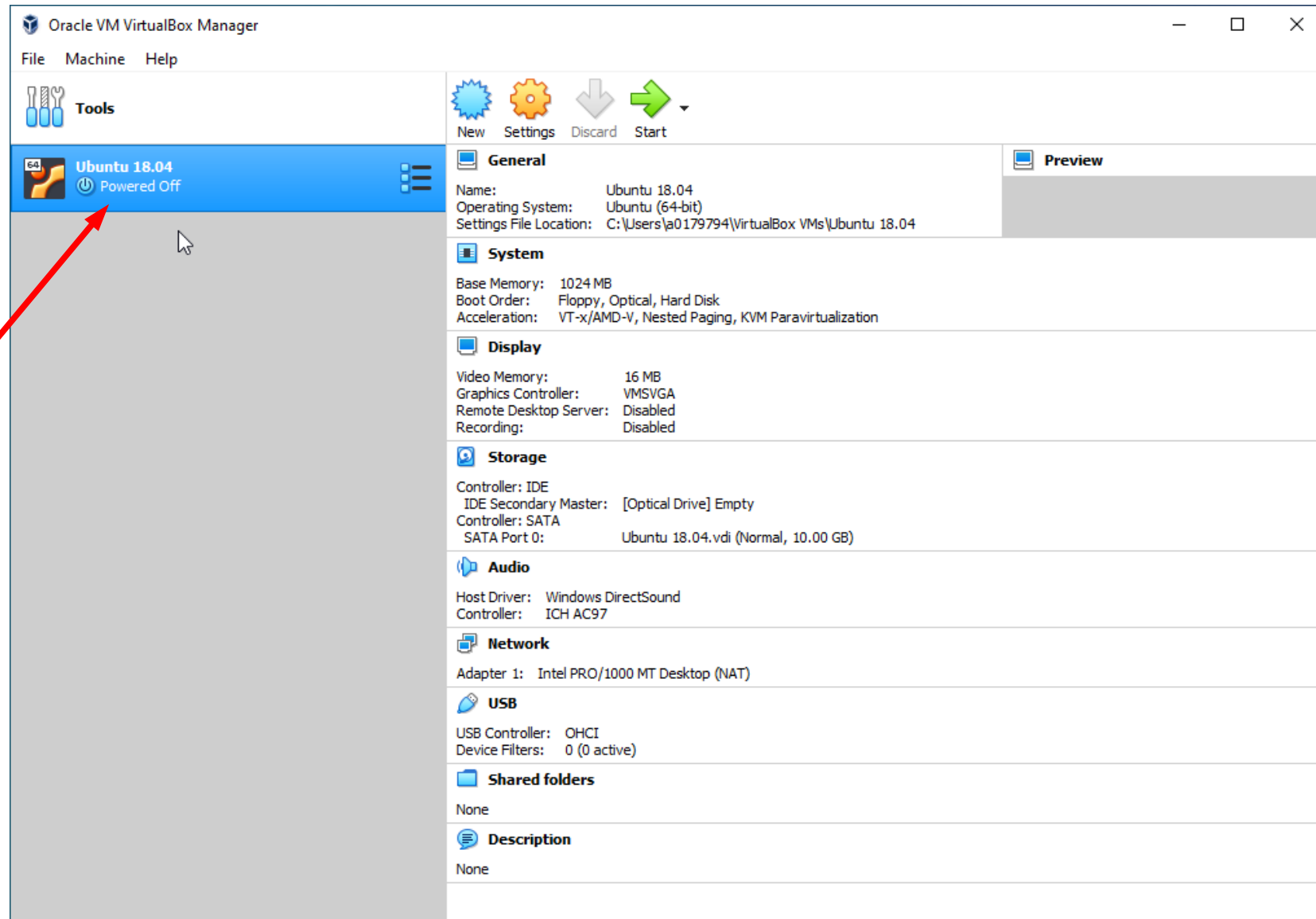


Now that the Ubuntu20.ova file that you downloaded has been specified, click “Next”

Configuring Your VirtualBox Tool

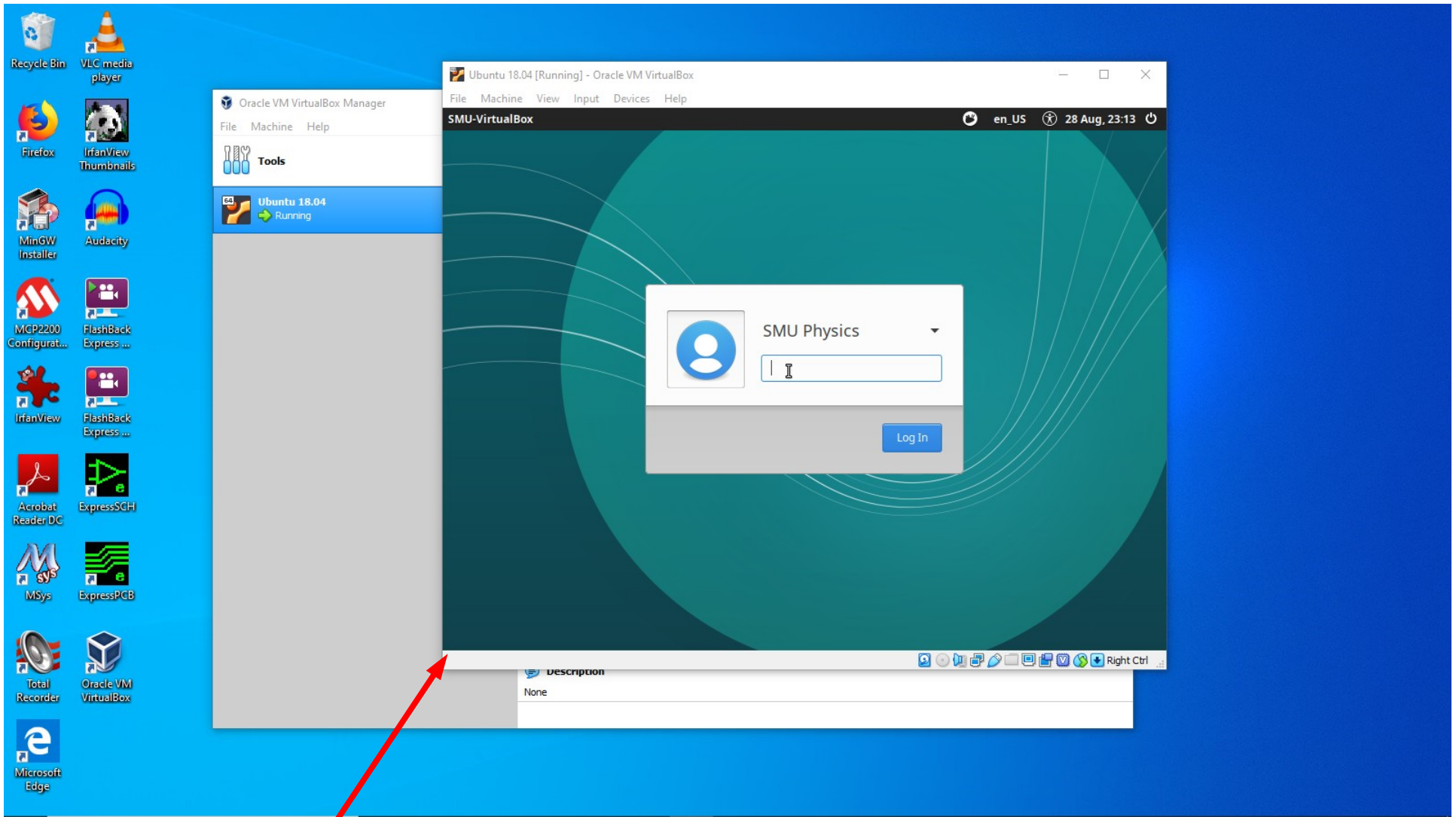
This dialog allows you to override the setting for how much of your native computer hardware will be consumed by the virtual machine. If these defaults look OK, click “Import”

Starting Your Virtual Linux System



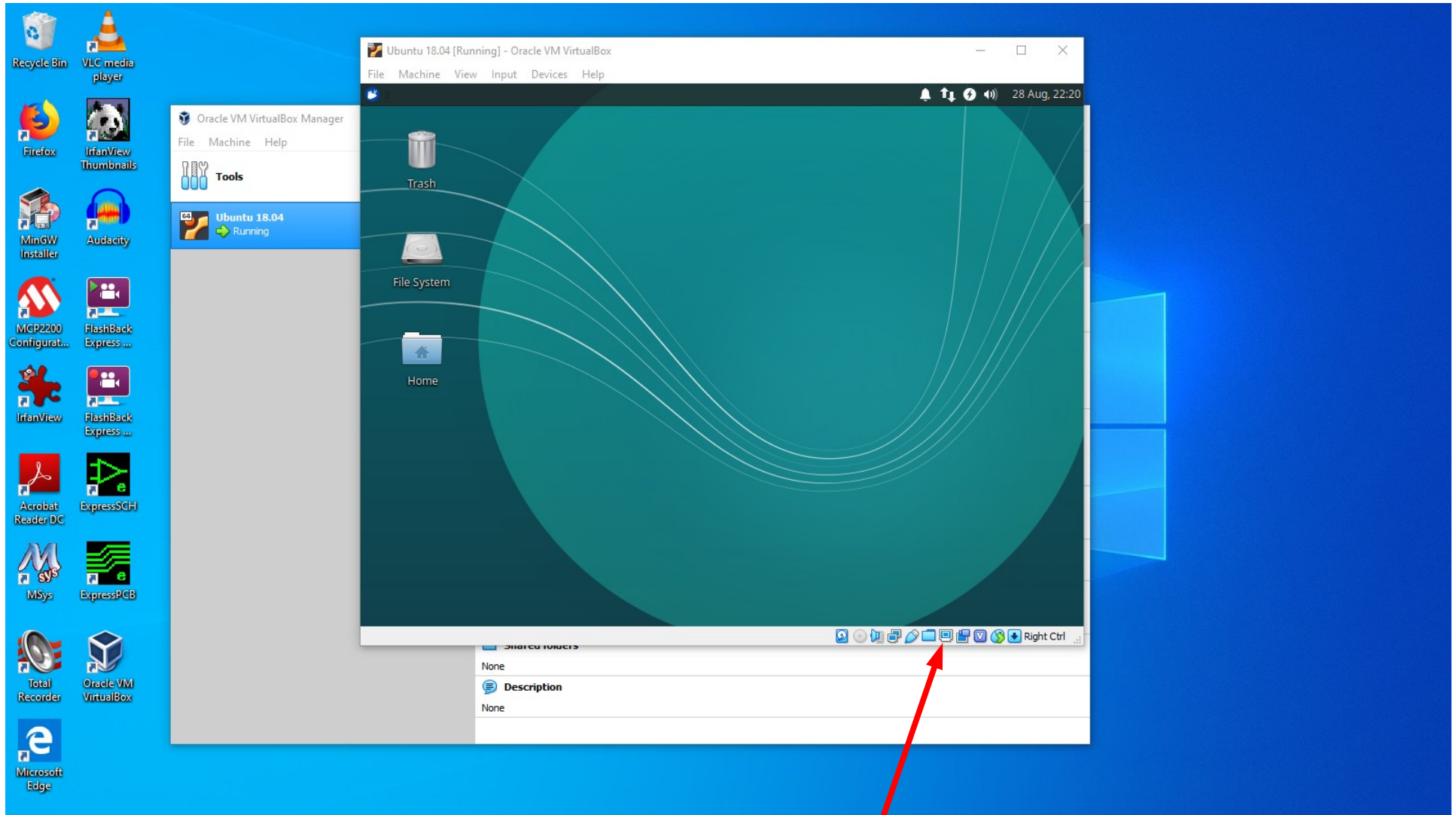
After importing, the virtual Ubuntu 20.04 Linux system is now listed in the VirtualBox manager tool window. Double click on the panel to start the boot-up process of this virtual operating system.

Starting Your Virtual Linux System



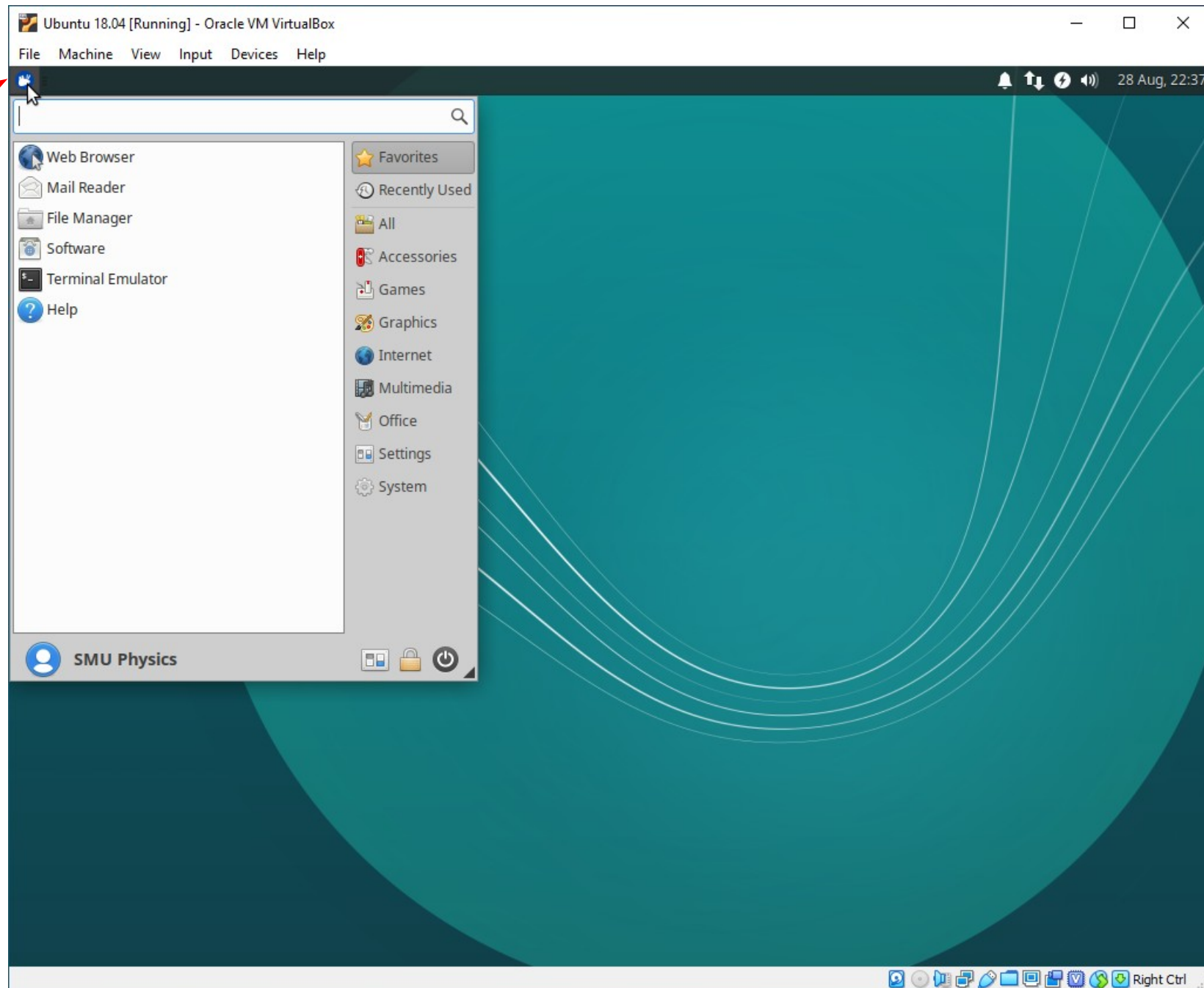
A new application window will pop up that is a virtual simulation of the hardware display screen of a physical computer running the Ubuntu Linux operating system that has just booted up, but running on your computer. The login credentials are the same as in the Physics department lab machines, with a user name of 'user' and a password as 'Fondrenlabuser'

Starting Your Virtual Linux System



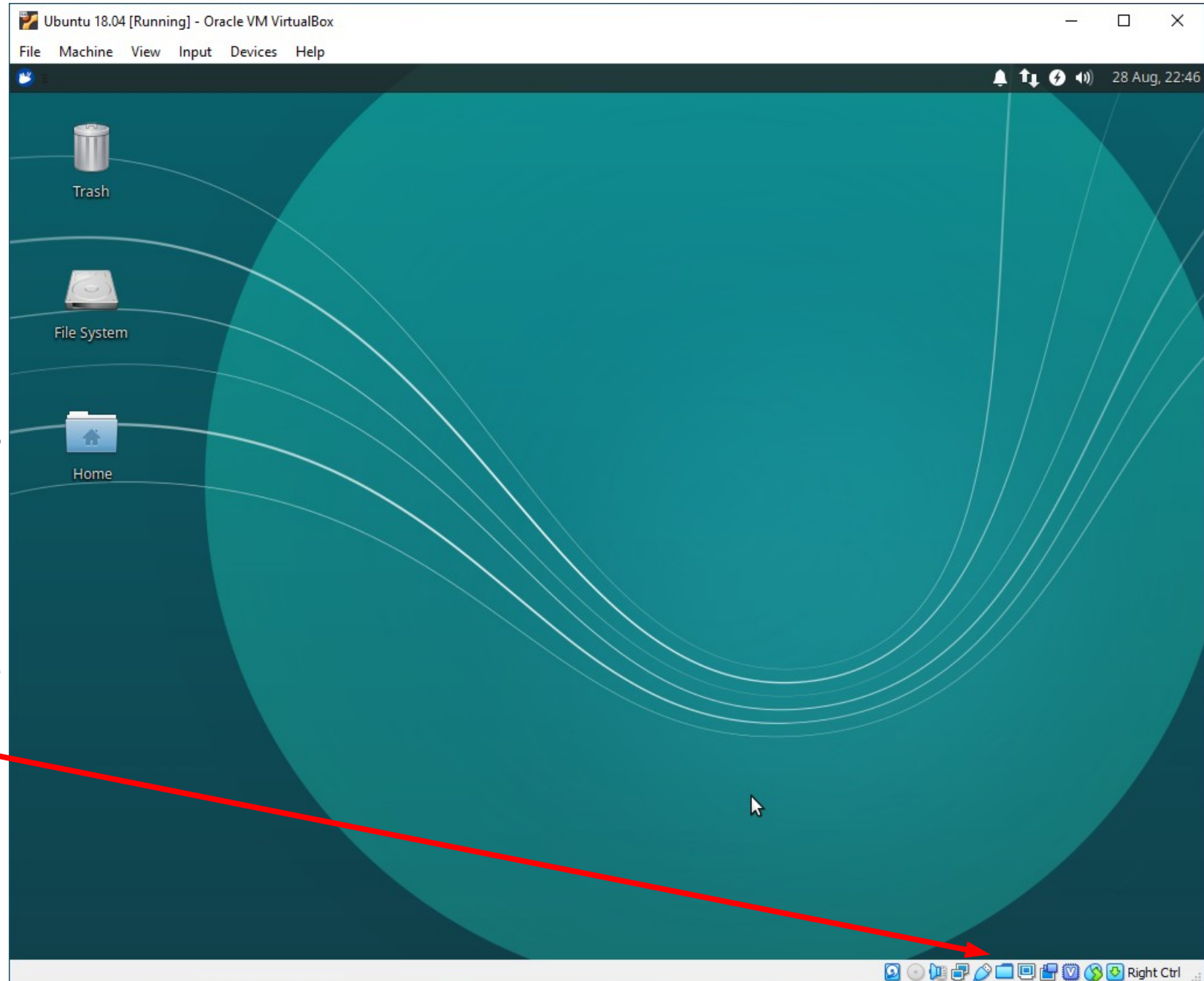
After logging in, you can right-click on the little screen icon to resize the display 'Virtual Screen 1' to something large, but that fits on your hardware screen.

Running Your Virtual Linux System



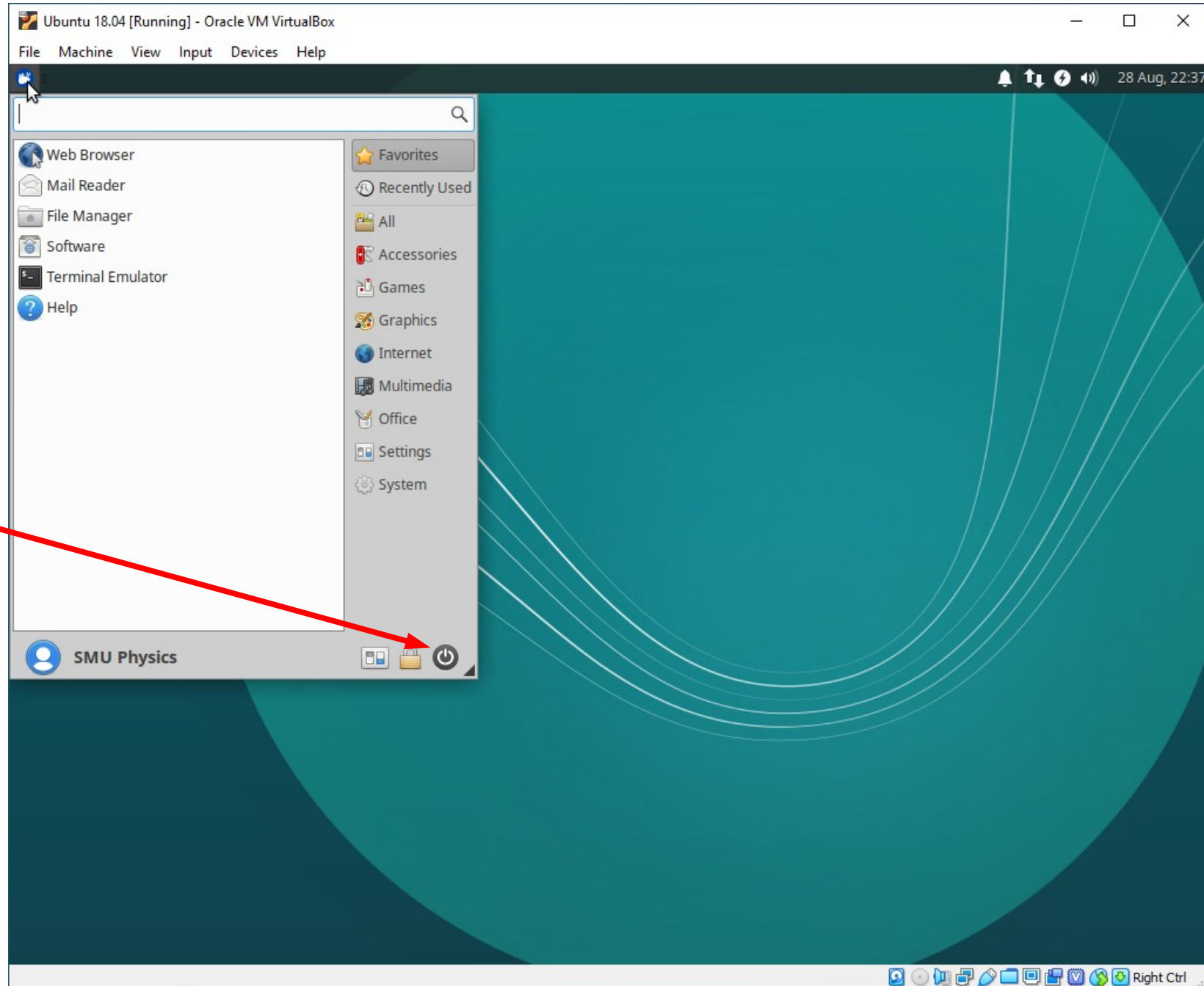
Use the mouse icon in the upper left corner to pull up the dialog to start Linux applications for program development. You will need the terminal emulator, the gedit file editor, the Firefox web browser, and others.

Running Your Virtual Linux System



By default, files in the virtual system are isolated within the virtual system. But you can always use the Firefox browser to upload assignment files to Canvas or email them. In addition, right-clicking on the USB or File System icons will allow setting up shared file folders.

Shutting Down Your Virtual Linux System



Important!

Always use the virtual shutdown button to properly shut down your virtual Linux system, just as you would any physical computer system.