Windows 11 Virtualization with VirtualBox

Contents

Time required: 60 minutes

NOTE: If you need a Windows 11 VM for more than one class, you can use the same one for all classes.

Watch: [Windows 11 Installation Video Walkthrough](#)

Watch: [How to Take a Screenshot of a Virtual Machine](#)

Download Windows 11 Enterprise Evaluation

DANGER!! Will Robinson!!!!

When downloading this ISO:

- **DO NOT OPEN IT.**

- **DO NOT TOUCH IT!**

You can wipe the hard drive of your computer if you don't pay attention. It has happened before with other students.

1. Download the evaluation copy of **Windows 11 Enterprise**.
   https://www.microsoft.com/en-us/evalcenter/evaluate-windows-11-enterprise

2. Download the ISO – Enterprise. You will need to Register.

3. Download the **ISO** to a folder on your hard drive where you can find it.

VirtualBox

VirtualBox is an open-source virtualization hypervisor that works on multiple operating systems.

You may have to enable virtualization technology (VT) on your computer's processor by editing the BIOS settings at boot-up (many computer BIOS have VT disabled). You may have to research how to do this.

Install VirtualBox

NOTE: You must have the latest version of VirtualBox to install Windows 11 as a virtual machine.

1. Download the latest version of VirtualBox from www.virtualbox.org

2. Double Click the file you downloaded to start the VirtualBox installation.

3. If you receive an error that says install Microsoft Visual C++ 2019 Redistributable Package; download and install the following.
   https://aka.ms/vs/17/release/vc_redist.x64.exe

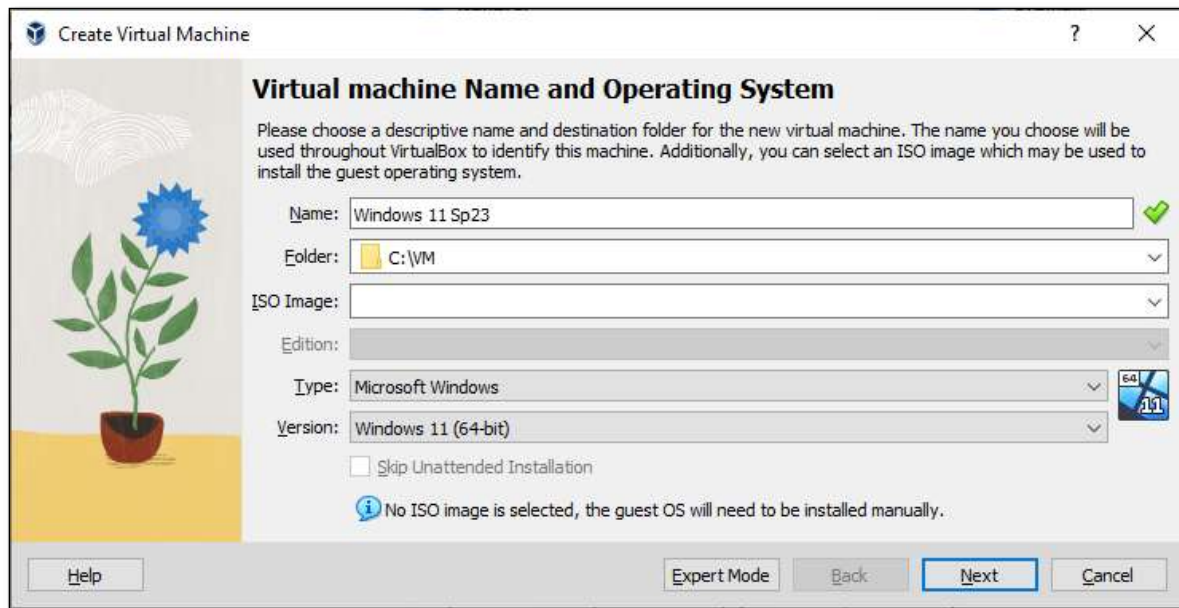4. Install VirtualBox. Accept the default choices on the installation screens and prompts.

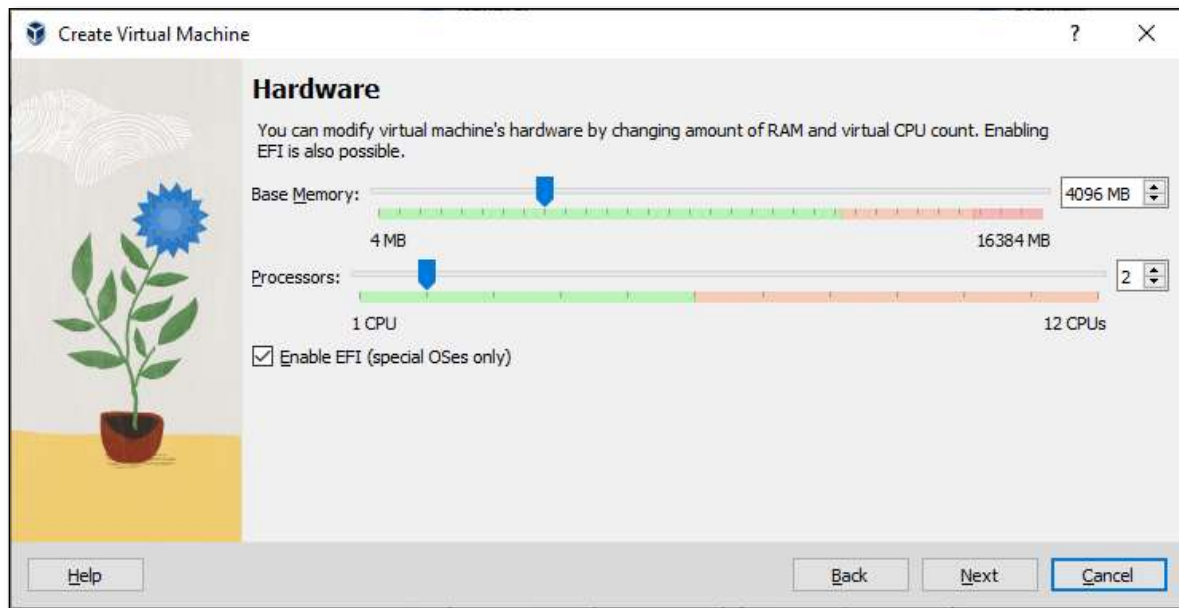# Create a Windows 11 Virtual Machine
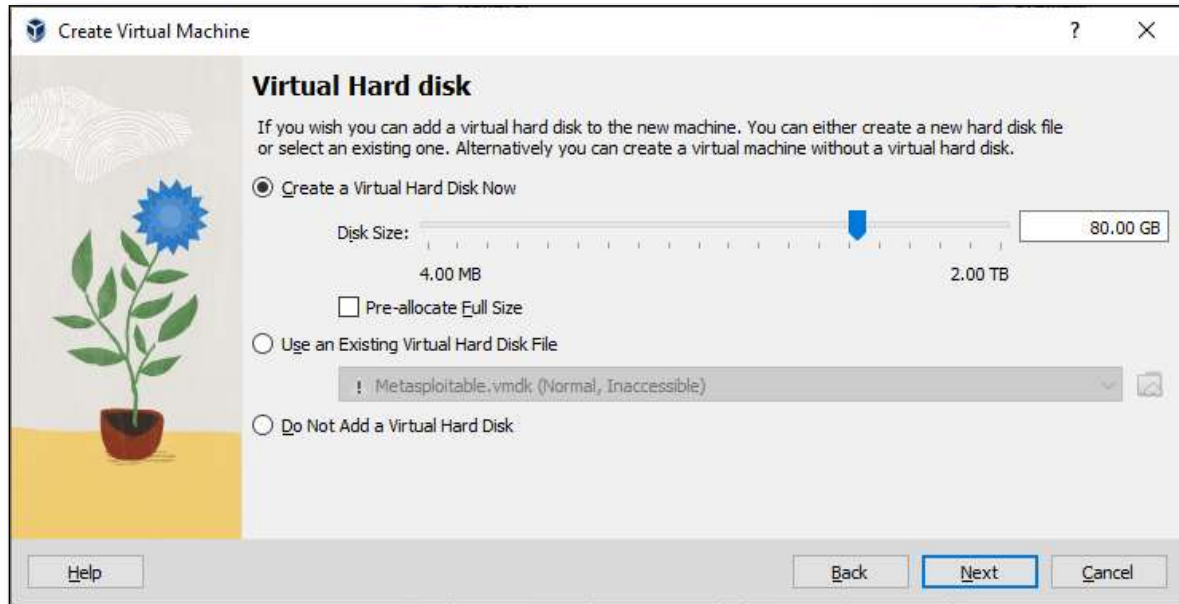
1. Start VirtualBox.

2. Click **New.**
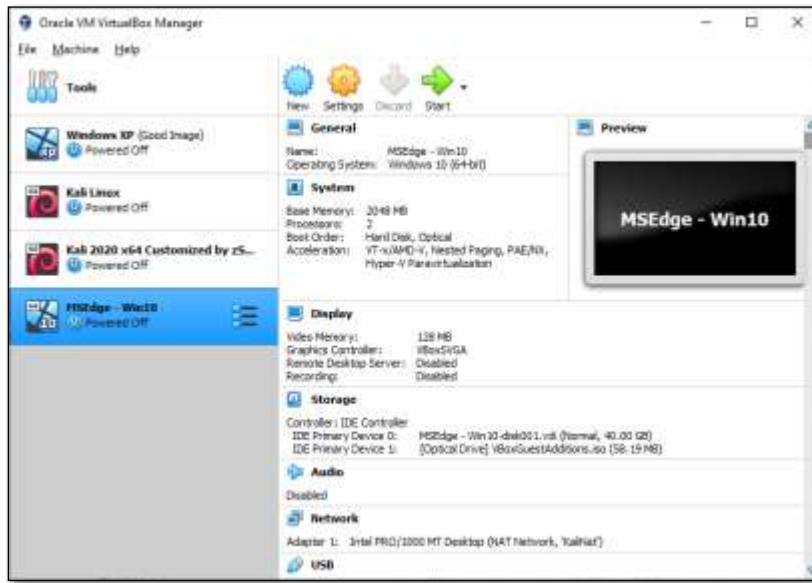
3. Name and operating system: Enter **Windows 11** for the Name. The Version should automatically be Windows 11 (64-bit). Click **Next**.
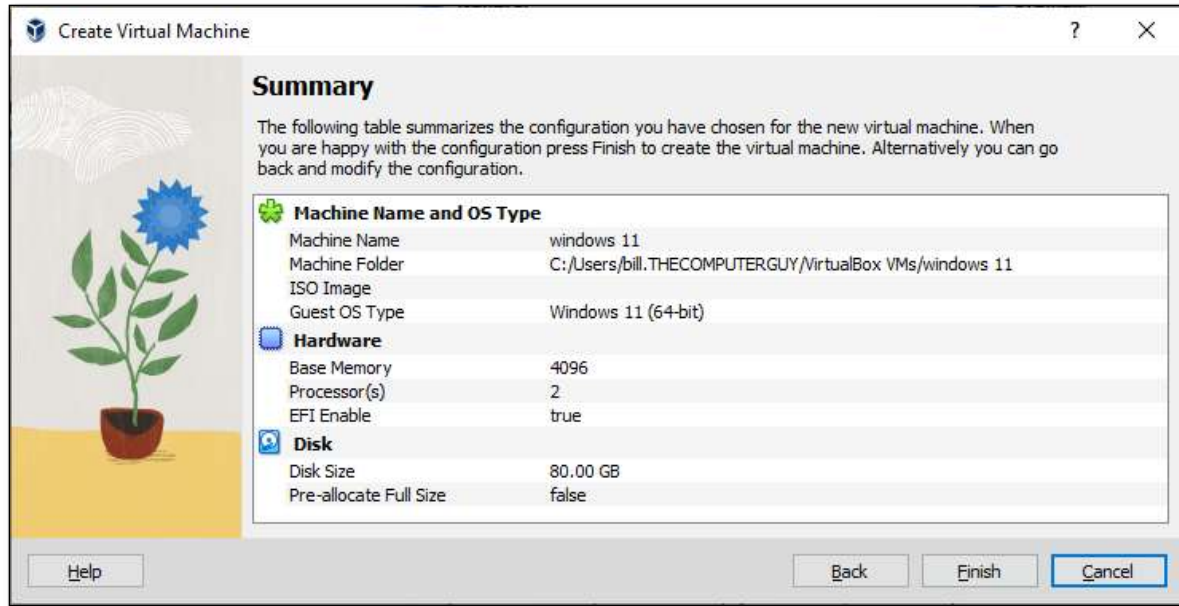
4. Memory Size: Accept default size of 4096 MB.

5. Processors: Change to 3. Click **Next**.

6. Accept the default File size of 80 GB. Click **Create**.

7. Click Finish.

Install Windows 11 Enterprise

1. Click **Start** on your new virtual machine.

2. Click the drop-down menu next to DVD → Select **Other** →Browse for your Windows 11 ISO file.
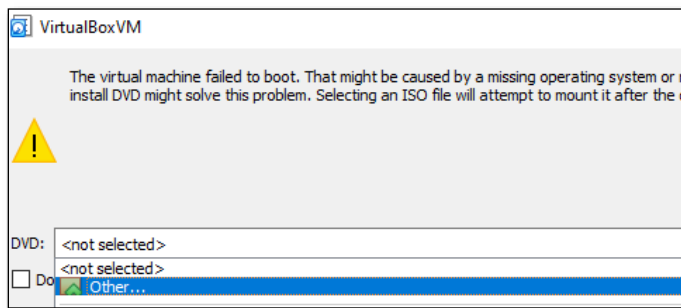
3. Click **Start** (You will be asked to press any key to boot from CD or DVD.) → Press any key on your keyboard. Your virtual machine will boot from the ISO and start setup.

4. The Windows 11 installation screen should appear.

5. Click **Next → Install now**.

6. Accept the license terms → Click **Next**.

7. Click **Custom: Install Windows only (advanced)**.

8. Click **Disk 0 Unallocated Space** → Click **Next**.

9. Windows will install. This may take some time. Windows will reboot. Work on other homework while the installation does its thing.

10. After Windows 11 boots up → Go to the **Devices** menu → **Optical Drives** → **Remove disk from virtual drive**.

11. After a bit Windows will reboot again.

12. When you shut down the virtual machine → you can go to settings and set Processors to 1 or 2.

Configure Windows 11

**NOTE:** These configuration steps can change without notice.

1. When the installation is complete, the screen will say **Is this the right country or region?** Click **Yes**.

2. **Is this the right keyboard layout or input method?** Click **Yes**.

3. **Want to add a second keyboard layout**? Click **Skip**.

4. **Let's set things up for your work or school:** Click **Sign-in options**.

5. **Sign-in options** → **Domain join instead**

6. **Enter your name** → Type in **User** for the username. Click **Next**.

7. **Password:** Use **Password01**. Click **Next**.

8. Confirm your password. Click **Next**.

9. Make up security answers. If you have trouble with your password, create a new Windows 11 Virtual Machine. Click **Next**.

10. **Choose privacy settings for your device:** You can turn them all off if you wish. Click **Next** then **Accept**.

11. Right Click **Start** (Power User menu) → Click **System**. This will bring up the System Properties. Click **Rename this PC**.

12. Change the computer name to **Win11<yourlastname> Example: Win11Loring**

13. Click **Restart Now**.

14. Log in to **Windows 11**. At the top of the Virtual machine window → go to the **Devices** menu → Choose **Insert Guest Additions CD image**.

15. Open **File Explorer** →
    Click the **VirtualBox Guest Additions CD Drive** →
    Double Click **VBoxWindowsAdditions** →
    Install and agree with default settings.

16. Accept all prompts. Restart when prompted.

17. Shutdown the virtual machine just like a regular computer. Use the **Start** button, Click the **Power** button, Click **Shutdown**.

VirtualBox Local Network Access

The labs in this class require our VirtualBox virtual machines to directly access our local network. The default network access is NAT (Network Address Translation). This is a bit like a firewall and does not allow direct access to your local network.

1. In **VirtualBox Manager** → **Right Click** your virtual machine → Click **Settings**.

2. Click **Network** → Change **NAT** to **Bridged Adapter** →

3. Pick the adapter that connects to your local network → Click **OK**.

4. This example has a wired connection. You might have a wireless adapter.
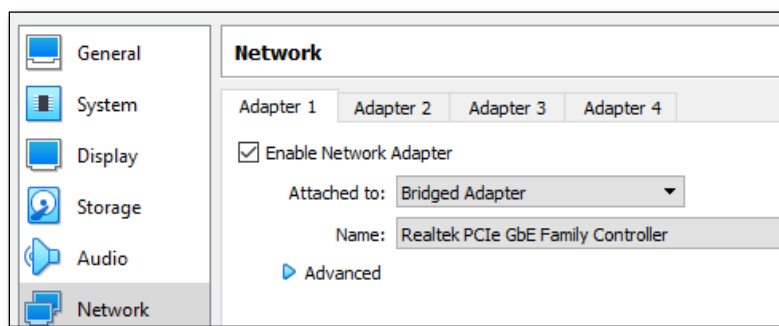
Snapshots are Important!

Create a Snapshot when you make major changes. Too many snapshots can eat up disk space. If you have issues, you can revert to a previous working image.

1. Select the powered off virtual machine.

2. Click the **Tools** menu → **Tools** → **Snapshots**.

3. Click the **Take** button → Snapshot Name: **Clean Install** → Click **OK**.

If Needed: Reset the Evaluation Period

Windows 11 has a 90-day evaluation period. You do not need to do this until you start getting warnings about the evaluation period expiring.

Check your Windows Enterprise desktop. If it says that the evaluation is expired, you haven't connected it to your network yet. It will start shutting down every hour until you activate it by connecting your virtual machine to your local network.

When the initial 90-day evaluation period nears its end, run the Slmgr.vbs script to extend the evaluation period. To do this, follow these steps:

1. Click Start→ type **Command Prompt**.

2. Right Click the **Command Prompt** that appears in your search → Choose **Run as Administrator**.

3. Reset the evaluation period. Type **slmgr.vbs -rearm** → press **ENTER**.

4. Check licensing: **slmgr -dlv**

5. Activate license: **slmgr -ato**

6. Restart the computer.

This resets the evaluation period to 90 days.

Video walkthrough: VirtualBox User Created NAT

Assignment Submission

1. Take a screenshot of your desktop showing your virtual machine running.

2. Paste the screenshot into a new Word document.

3. Attach and submit the Word document to the assignment in Blackboard.