

Building Your Virtual Homelab: Windows Server & Client Setup

1. Download Windows Server 2022:

- Navigate to the evaluation center:
<https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2022>.
(Note: While Windows Server 2025 is available, we will continue with 2022 for this lab setup.)
- Under the "Get started for free" section, click on **"Download the ISO"**.
- This will take us to the registration page. We do not need to input our actual information here. **We can create** a fictitious name, email, company name, and other required information, and then click **Download**. This information is not needed for anything else.
- Select the **64-bit edition for English (United States) ISO Download**. Save the file to an easily accessible location.

2. Downloading the Windows 11 Enterprise ISO

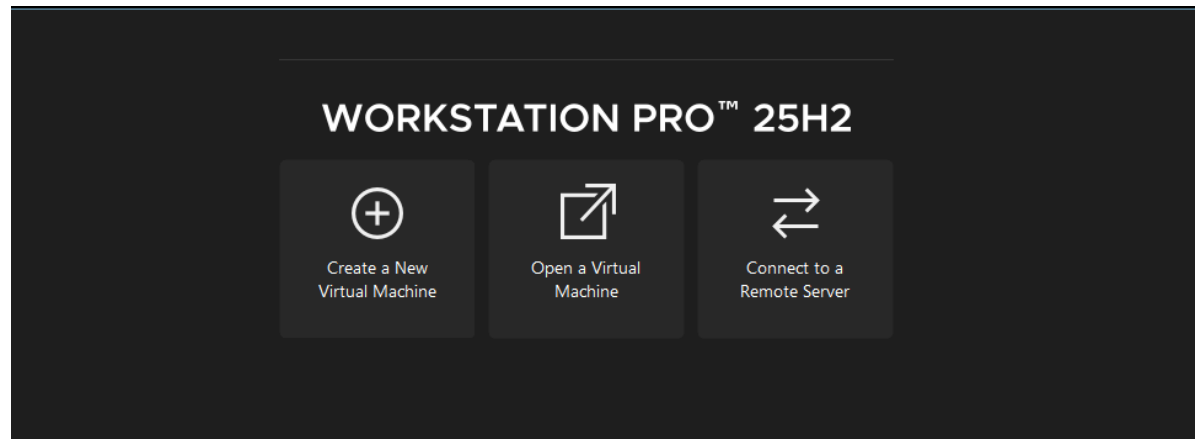
- Select the **64-bit edition for English (United States) ISO Download**. Save the file to an easily accessible location.
- Navigate to the official Microsoft Evaluation Center:
<https://www.microsoft.com/en-us/evalcenter/evaluate-windows-11-enterprise>
- Scroll down to the "Get started for free" section and click **"Download the ISO"**.
- This will take you to the "Register for your free trial today" page. We are required to fill out the registration form. **We can create** a fictitious name, email, company name, and other required information, and then click **Download**. This information is not needed for anything else.
- Once the form is complete, click **"Download"**.
- On the following page, select the **64-bit edition for English (United States) ISO Download**.
- Choose a convenient location on your computer to save the ISO file and start the download.

3. Download VMware Workstation Pro:

- Download VMware Workstation Pro by following the link:
<https://knowledge.broadcom.com/external/article?articleNumber=368667>. The download link is at the end of the page.
- We will be redirected and asked to log in. If we do not have a Broadcom account, we must create a free account first, then follow the link again to quickly access the download section.
- Select **VMware Workstation Pro 25H2 for Windows** (a Linux version is also available), as this is the latest version.
- After selecting the latest version, click the **Terms and Conditions** link, check the **"I agree to the Terms and Condition"** box, and then click the **download icon** on the right side to get the .exe file.
- Ensure **we select** the correct location for the download. (Saving it to the desktop is recommended for easier access later.)

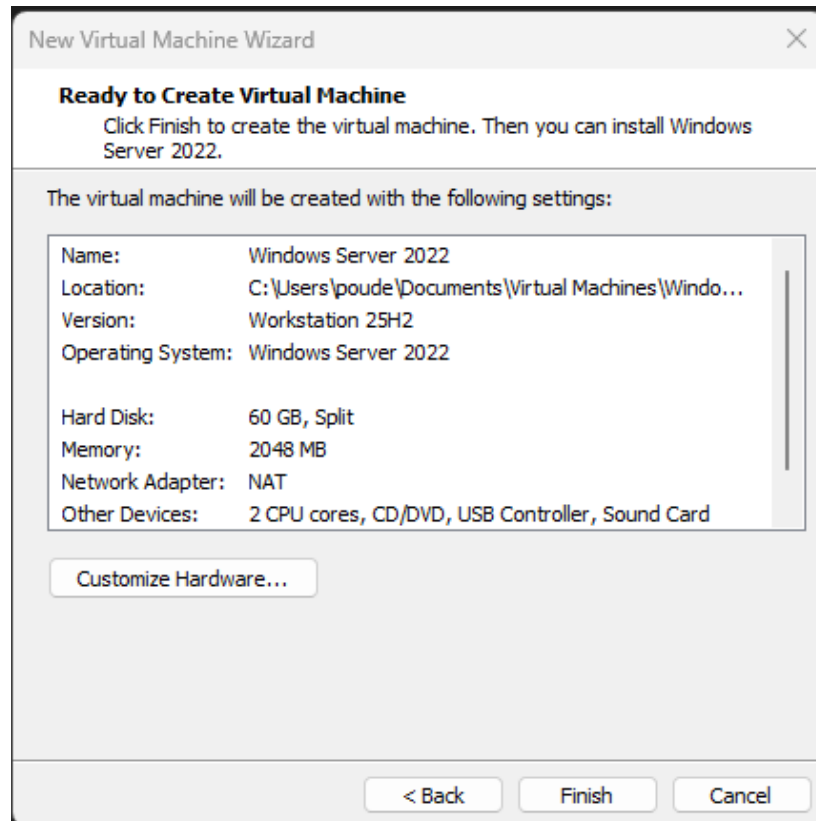
4. Install VMware Workstation Pro:

- Once the file is downloaded, **double-click** it to run the installer. If prompted with "Do you want to allow this app to make changes to your device?", click **Yes**.
- Follow the VMware Workstation Pro Setup instructions. We must **accept the terms** in the license agreement.
- We can generally click **Next** on every page, but we may choose to change the installation destination if desired. Continue clicking **Next** and finally click **Install**.
- A desktop shortcut for the VMware application should appear (if we didn't change the defaults). **Double-click** the icon to run the application.
- The home screen should display options: **Create a New Virtual Machine**, Open a Virtual Machine, and Connect to a Remote Server.



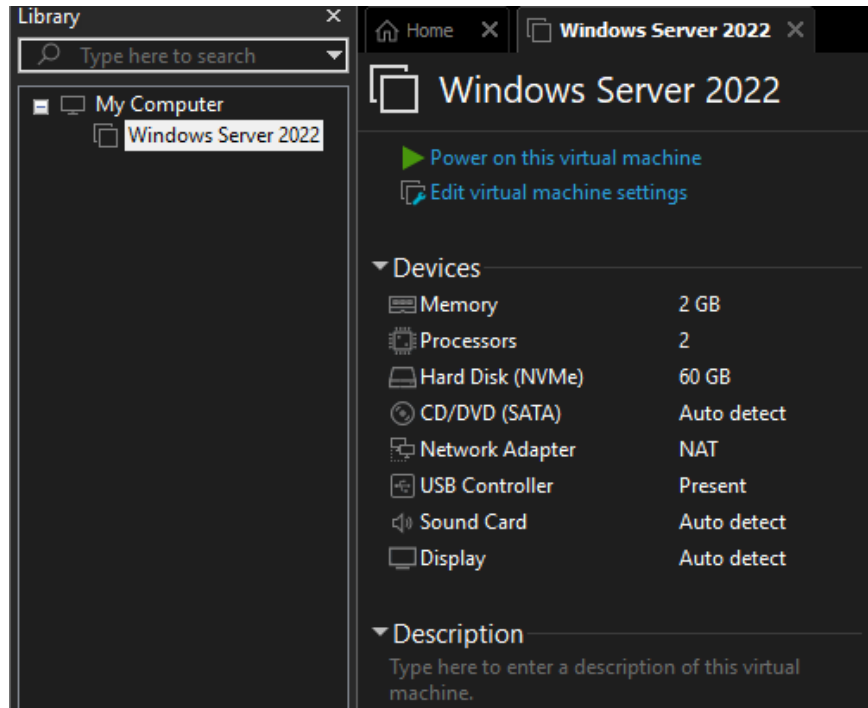
5. **Create the Windows Server 2022 Virtual Machine (VM):**

- Click "**Create a New Virtual Machine**". In the box that appears, **Typical (recommended)** is already selected; click **Next**. (Custom is for more advanced users who want fine-grained control.)
- When asked to select a Guest Operating System, select "**I will install the operating system later**" instead of using the "Installer disk image file (iso)" option. Attaching the ISO later often prevents potential issues when running the OS. Then, click **Next**.
- In the dropdown menu, select **Windows Server 2022** and click **Next**.
- We will be asked to name **our VM** and confirm the location. **We will leave** it as the default and click **Next**.
- For **Specify Disk Capacity**, **we will leave** the default size, but we can change it based on **our computer's** specifications. Click **Next**.
- Review the final specifications for the VM and click **Finish**.

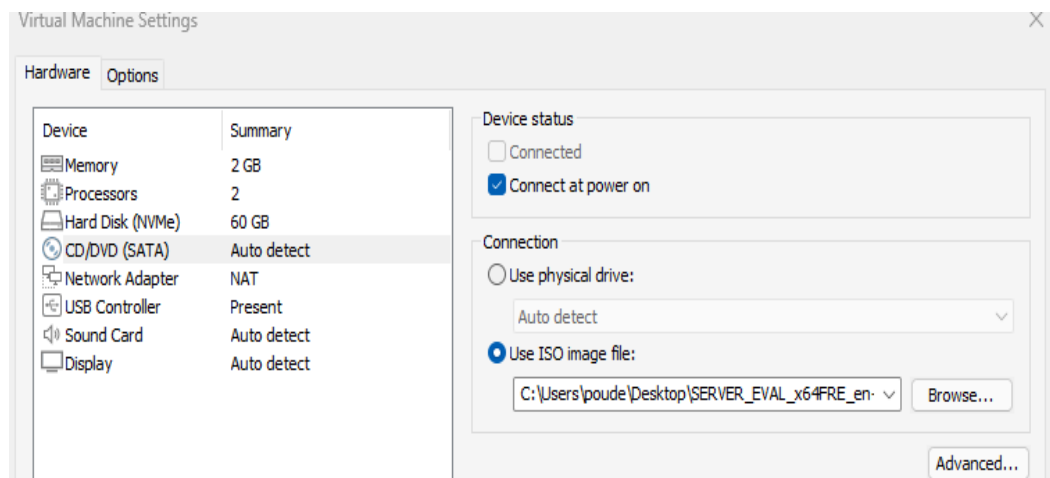


6. **Attach the Server ISO and Start Installation:**

- The VM is now created. **Right-click** on the VM and go to **Settings**.



- Click on **CD/DVD (SATA)**. Select **"Use ISO image file:"** and click **Browse**. Find and select the downloaded Windows Server 2022 ISO file, then click **OK** to finalize.

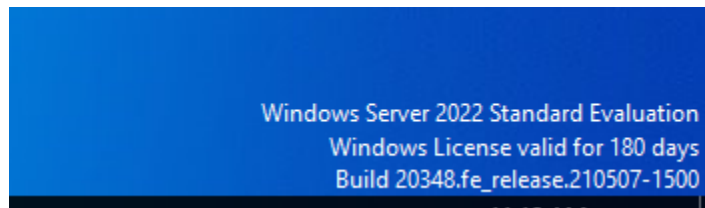


- Click on **"Power on this virtual machine"**.
- The VM will quickly prompt us to "Press any key to boot from CD or DVD...". We must press any key **very quickly**. If we miss it, we will get a Time out. If that happens, right-click the Windows Server 2022 VM on the left panel, go to **Power > Restart Guest**.

- Windows will load the setup. We will select **our Language** and other preferences, and click **Next**. Then, click **"Install now"**.
- When asked to choose the operating system, we will select **Standard Evaluation (Desktop Experience)**, as we want a server with a Graphical User Interface (GUI) rather than just the Command Line Interface (CLI). Click **Next**.
- We will accept the Microsoft Software License Terms and click **Next**.
- Click on **"Custom: Install Microsoft Server OS only (advanced)"**. We will see the Drive information. We will not create any partitions; click **Next**. The installation of the MS Server OS will begin and will take a few minutes.

7. Complete Server Setup:

- After the installation is complete, the VM will reboot. When it comes back up, we will be prompted to create an Administrator password. Create the password and click **Finish**.
- We will be at the login screen. Press **CTRL+ALT+DELETE** to unlock, then input the password we just created.
- To verify the version of the server, type winver on run command Win + R. (Note: This evaluation license is valid for only 180 days.)

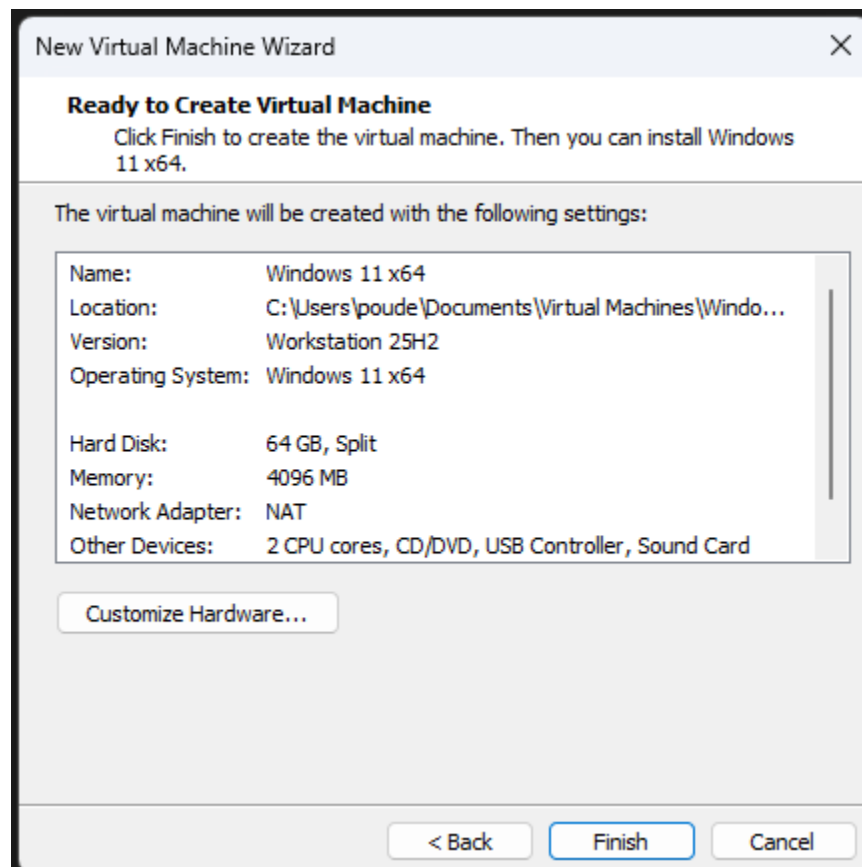


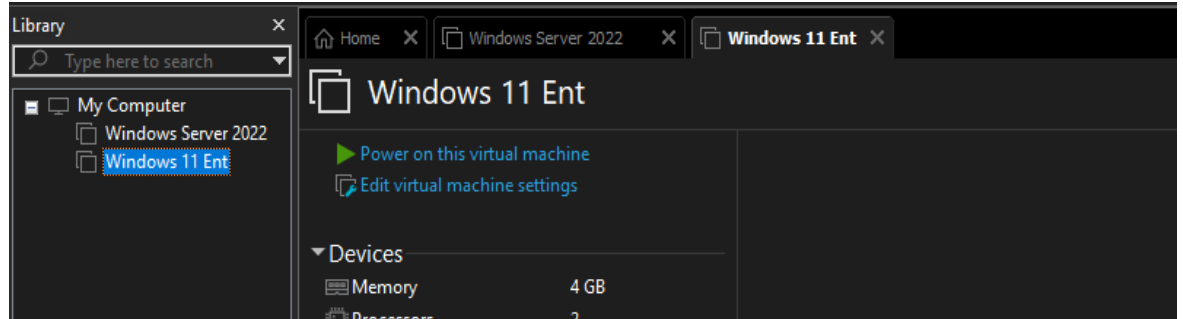
8. Download Windows 11 Enterprise (Client OS):

- First, download Windows 11 Enterprise (Pro can be used, but Home edition cannot join a domain). Download the ISO file from:
<https://www.microsoft.com/en-us/evalcenter/evaluate-windows-11-enterprise>.
- Under the "Get started for free" section, click on **"Download the ISO"**.
- As before, register for the free trial with fictitious information and click **Download**.
- Select the **64-bit edition for English (United States) ISO Download**. Save the download to an easily accessible location.

9. Create the Windows 11 Client VM:

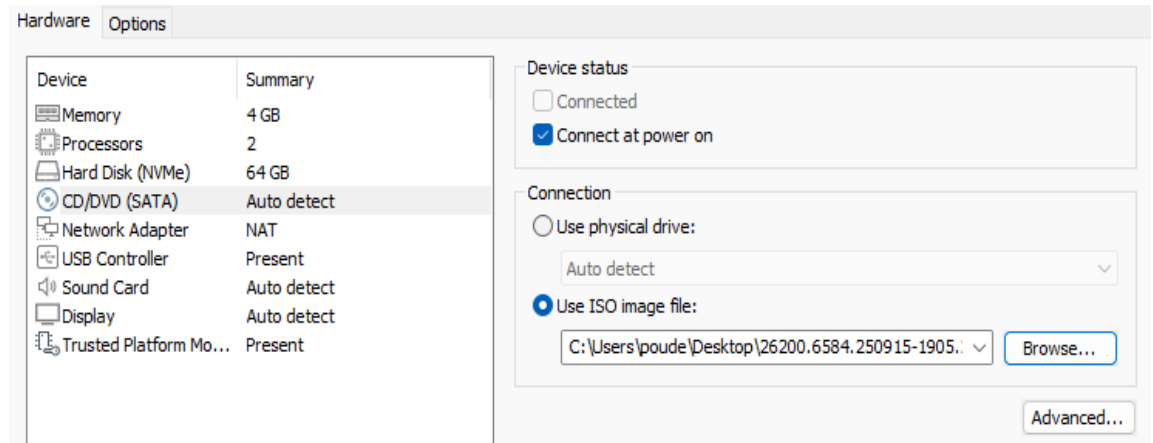
- Open the VMware application. If we are on the home screen, click **"Create a New Virtual Machine"**. If another VM is running, click the **Home** tab or go to **File > New Virtual Machine...**
- Click **"Create a New Virtual Machine"**. Select **Typical (recommended)** and click **Next**.
- Select **"I will install the operating system later"** and click **Next**.
- Select **Windows 11 X64** from the dropdown and click **Next**.
- We will name the VM **"Windows 11 Ent"** and confirm the location. Click **Next**.
- We will be asked to select what to encrypt. We will select the **"All the file"** option and create a password for the VM's encryption.
- For **Specify Disk Capacity**, we will leave the default size or change it based on our specs. Click **Next**.
- Review the final specifications and click **Finish**.





10. Attach the Client ISO and Start Installation:

- **Right-click** on the new VM and go to **Settings**.
- Click on **CD/DVD (SATA)**. Select **"Use ISO image file:"** and click **Browse**. Find and select the downloaded Windows 11 ISO file, then click **OK**.



- Click on **"Power on this virtual machine"**.
- The VM will quickly prompt us to "Press any key to boot from CD or DVD...". We must press any key **very quickly** (or restart the guest if we miss it).
- Windows will load the setup. We will select **our Language** and other preferences and click **Next**, as well as the keyboard settings.
- On the Select setup option screen, click **Install Windows 11**, check the **"I agree..."** box, and click **Next**.
- We will accept the Microsoft Software License Terms. For the installation location, we will not create any partitions; click **Next**.
- The installation will start and take a few minutes to complete.

11. Complete Client Setup and Join Domain:

- When the system is ready, we will be asked to choose the country and region. Select **our own** and click **Yes**.
- Select the right keyboard layout (**US** is common) and click **Yes**. The system will check for updates and may restart.
- When asked to sign in with an email, click on **sign-in options** right under the email input field. Select the option "**Domain join instead**".
- Enter a local account name (e.g., "**User101**") and create a password, then click **Next**.
- Add three security questions and click **Next**. We will change the privacy settings as desired, and click **Next** and **Accept**.
- The final update process will start and may take some time.
- Finally, Windows 11 Enterprise is ready. We will log in with the password we created.

