Windows Server Virtualization

Activities

Time required: 90 minutes

Watch: [Install Windows Server in VirtualBox](#)

Watch: [Configure Windows Server](#)

Watch: [Setup a User Created NAT Network](#)

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

Download Windows Server 2025 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.

1. Go to the following URL.
   https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2025

2. Choose the **Download the ISO** option. You will need to **register**.

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

WARNING: Stay away from the ISO file! Only use the ISO file from within VirtualBox.

About VirtualBox

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

- VirtualBox runs much, much better if your computer processor supports virtualization technology (VT). Most processors in the past 5 years support VT (pretty much all Intel i-series processors, i3, i5, i7).

- 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.

How to install VirtualBox:

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. Accept the default choices on the installation screens and prompts. Your network connection will be temporarily disrupted during the installation.

Create the Windows Server Virtual Machine

1. Start **VirtualBox**.

2. Click **New** → Enter **Server1** for the Name.
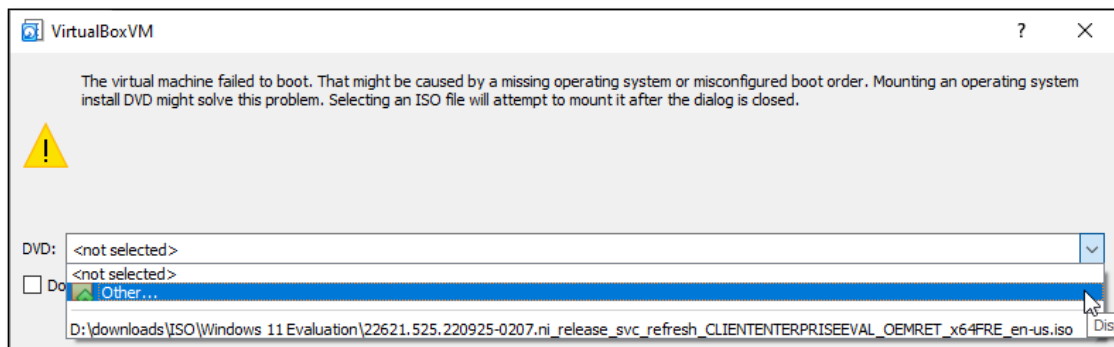
3. Choose **Version**: **Windows 2022 (64-bit)**.
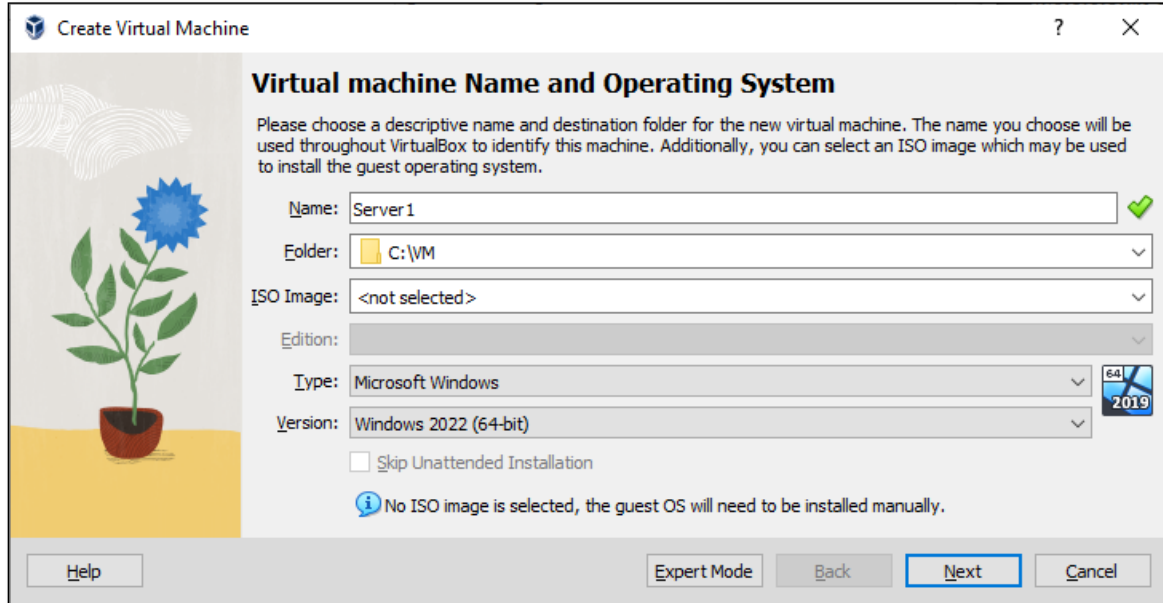
4. Click **Next**.

5. **Memory size: 2048**. Click **Next**.

6. **Virtual Hard disk**: Click **Next.**

7. Click **Finish**

Attach the Windows Server Evaluation ISO

1. In **VirtualBox** → Click **Server1** → Click **Start**.

2. Click **Other.**

3. **Browse** to your Server 2025 ISO → Click **Mount and Retry Boot**.

Install Windows Server Evaluation

1. The **Windows Server Operating System Setup** screen should appear.

2. Click **Next**. Click **Install now**.

3. Select the operating system you want to install: Choose **Windows Server 2025 Standard Evaluation (Desktop Experience).**

4. Click **Next**.

5. Accept the License agreement.

6. Click **Next**.

7. Click **Custom: Install Microsoft Server Operating system only (advanced)**.

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

9. Windows Server will start installing. This may take some time. Windows Server will reboot.

10. In the **Server1** virtual machine window: Go to the **Devices** menu, **Optical Drives**, **Remove Disk from Virtual Drive**.

Configure Windows Server

1. **Customize settings:** Password: **Password01**. Click **Finish**.

2. To Log in, Press and hold down the **Right CTRL key**, and type the **Delete** key.

3. **Server Manager** will load. On the left side, Click **Local Server**.

4. Click the random computer name next to **Computer Name.**

5. **System Properties:** Click **Change**. Computer name: **Server1**

6. Click **OK** → Click **Close** → Click **Close** → Click **Restart Now.**

7. Log in to the Server. At the top of the Virtual machine window, go to the **Devices** menu, Choose **Insert Guest Additions CD image**.

8. Open **File Explorer.** Double Click the **VirtualBox Guest Editions CD Drive**.

9. Accept all prompts. Restart when prompted.

10. Shutdown the virtual machine just like a regular computer.
Click the **Start** button → Click the **Power** button → Click **Shutdown**.

Install Windows 11 Evaluation

Time required: 30 minutes

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

If you already have Windows 11 Evaluation installed, you can skip this part.

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 **64-bit ISO** option to a folder on your hard drive.

4. Use the Server directions to setup and install a Windows 11 virtual machine. Use **Win11** for the virtual machine name. Leave the memory settings at 4096 MB.

5. When the installation is complete, the screen will say

6. **Let's start with region?** United States, Click **Yes**.

7. **Is this the right keyboard layout?** US, Click **Yes**.

8. **Want to add a second keyboard layout**, Click **Skip**.

9. **Let's connect you to a network**, Click **Skip for Now**.

10. Who's going to use this PC? **User**

11. Password: **Password01**

12. Make Cortana your personal assistant? Click **No**.

13. Choose privacy settings for your device, Click **Accept**.

14. Click **Start** → **Type in System** → Click **System** → Click **Rename this PC** → **Win11** → Click **Next.** You will be asked to restart your computer.

NOTE: This VM will not have internet access until the next assignment.

Setup a User Created NAT Network

In this activity we add internet access to our VirtualBox network. We want our virtual network to be isolated from your local network. A user created NAT network is like putting our virtual network behind a firewall.

1. **Oracle VM VirtualBox Manager → Tools → Network Manager**

2. Click **NatNetworks** → Click **Create.**

3. Rename the network to **Server**

4. **IPv4 Prefix: 10.10.1.0/24**

5. Un Check **Supports DHCP.** Click **Apply.**
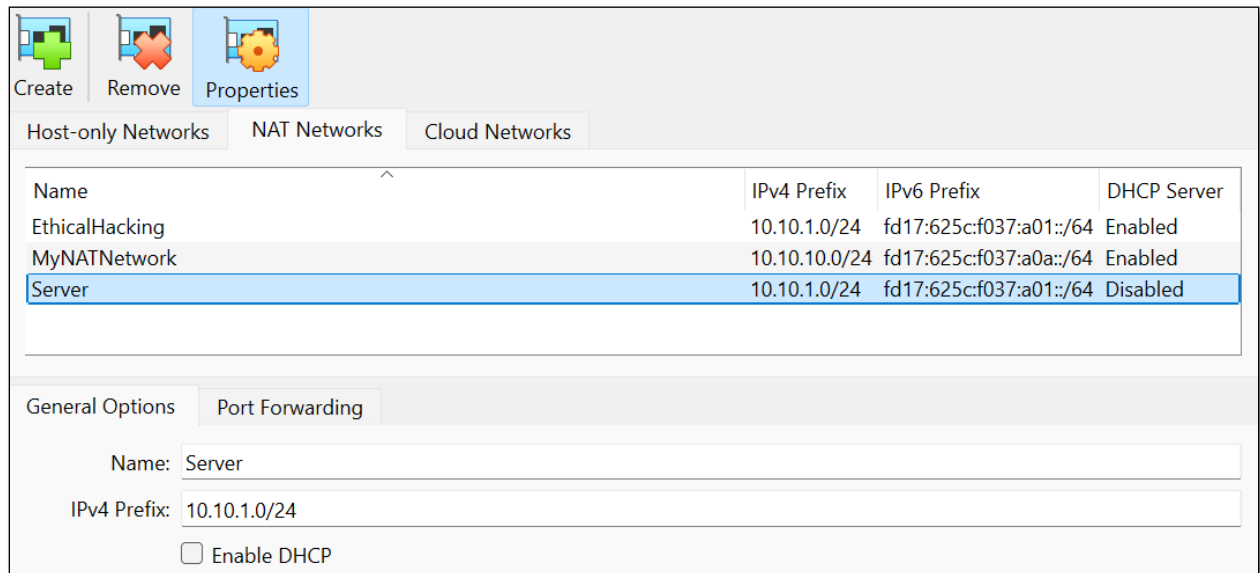
6. **In Oracle VM VirtualBox Manager:** Right Click each Virtual Machine → **Settings**.

7. **Network → Attached to**: **Server**

Set Server1 to a Static IP

Time required: 10 minutes

Set the server to a static IP address.

1. In **Server Manager → Local Server →** choose **Ethernet** (IPv4 Address assignment by DHCP)

2. Right Click **Ethernet → Properties → Internet Protocol Version 4 → Properties.**

Server1:
IP Address: 10.10.1.10
Subnet Mask: 255.255.255.0
Default Gateway: 10.10.1.1
DNS: 8.8.8.8

Snapshots are Important!

Create a Checkpoint or a Snapshot at the end of each lab. If you have issues, you can revert to a previous working image.

NOTE: If you are low on hard drive space, Snapshots can eat up a lot of disk storage.

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**.

VirtualBox NAT Network Troubleshooting

There can be issues using a user created NAT network in VirtualBox. Here are some steps that may help resolve issues.

1. Delete and recreate the NAT Network.

2. Run the following command at a command prompt to reset the DHCP settings.

NOTE: NatNetwork is the default name for the first NAT network created.

```
"c:\Program Files\Oracle\VirtualBox\VBoxManage.exe" dhcpserver remove --network=NatNetwork
```

3. Set the VM to the Bridged Adapter.

4. Set the VM to the NAT Network.

Reset the Evaluation Period for Windows Evaluation

When the initial 180-day evaluation period for Server, or 90 days for Windows 10 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. Type **slmgr.vbs -dli**, and then press **ENTER** to check the status of your evaluation period.

4. Reset the evaluation period. Type **slmgr.vbs –rearm**, and then press **ENTER**.

5. Restart the computer.

This resets the evaluation period to 90 days.

Assignment Submission

1. Take a screenshot of your local computer desktop showing your **Windows Server 2025** and **Windows 11** virtual machine running.

2. Paste the screenshot into a new Word document.

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