

Exercise 2 - Configuring the Environment to Create a Virtual Machine.

Hyper-V is a Microsoft machine virtualization framework that lets you install and run multiple 32-bit or 64-bit operating systems in parallel on a single physical machine.

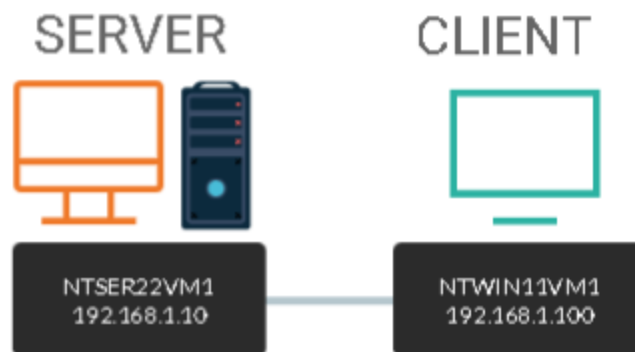
This allows you to operate on a variety of operating systems without having to buy expensive computer hardware for each one. You may also use Hyper-V to deploy and test different virtual machine configurations without compromising the functioning of other virtual or physical computers.

Note: Please read the Microsoft official docs for [Hyper-V system requirement](#)

In this exercise,

1. Installation of Hyper-V Services
2. Creating a Hyper-V virtual network on a Windows 11 machine.

Topology



DOMAIN = networktute.com

NTSER22VM1 = Windows Server 2022 – Domain Controller

NTWIN11VM1 = Windows 11 – Domain Member

Prerequisite

- *VMware Workstation 16 Pro*
 - When making this tutorial, we used the “Windows Server 2019” VM Template and “Windows 10 & later” VM Template. Since VMware didn’t have the updated templates.

- *Microsoft Windows Server 2022*
- *Microsoft Windows 11*

Task 1: Install Hyper-V

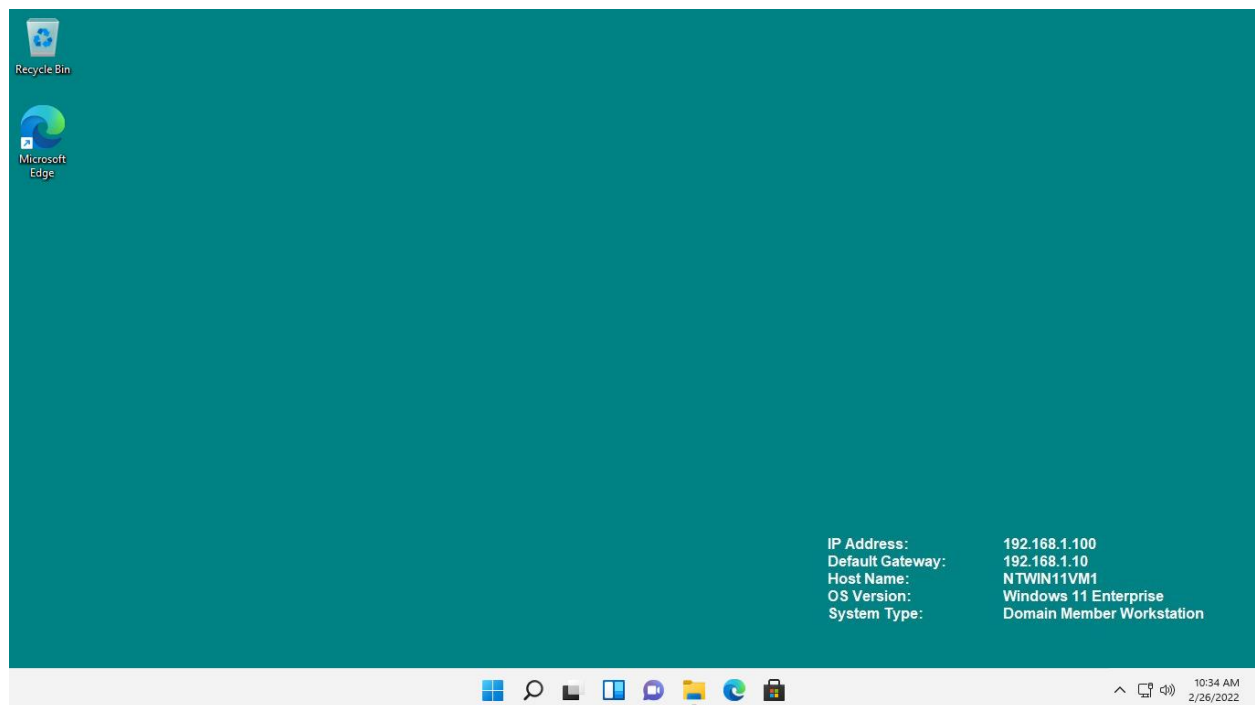
When you install Hyper-V, you can create a guest virtual machine but this service in windows 11 needs to be enable and not installed by default

In this task, we will install the Hyper-V service on NTWIN11VM1 - a Windows 11 machine.

Step 1:

Make sure all of the devices listed in the exercise introduction are turned on.

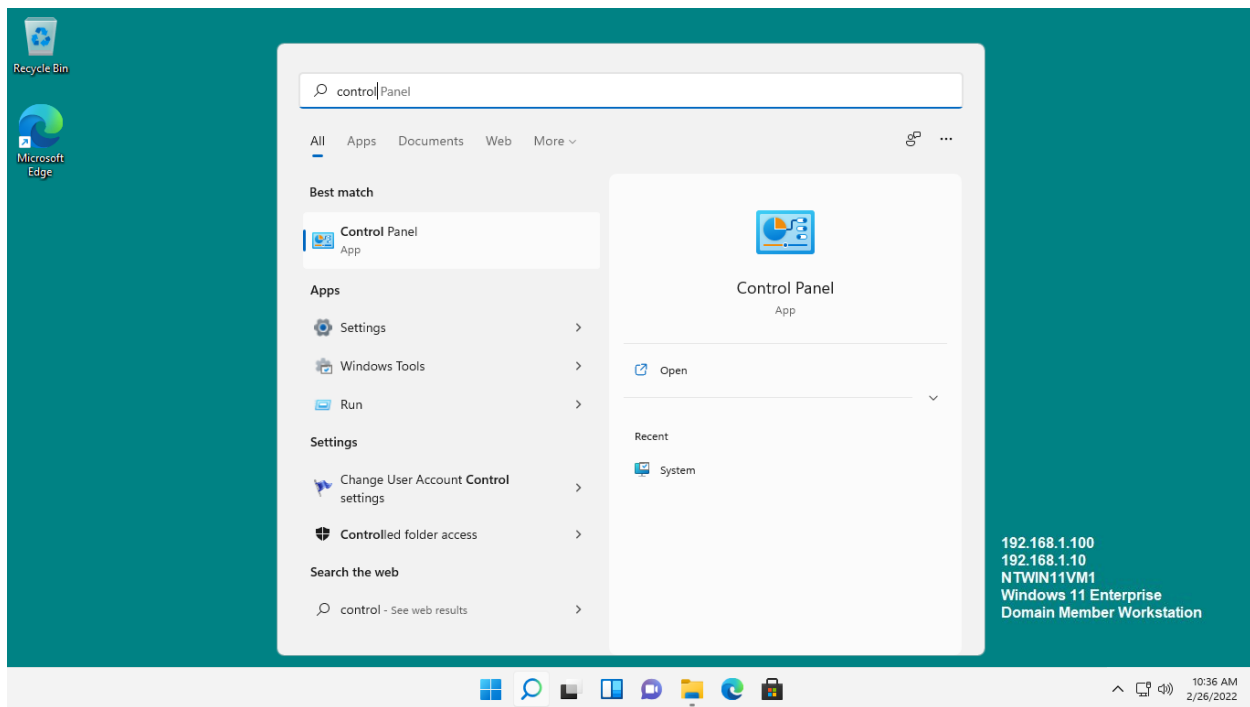
Connect to **NTWIN11VM1**.



Step 2:

When signed on, click in the **Type here to search** box and type: **control**

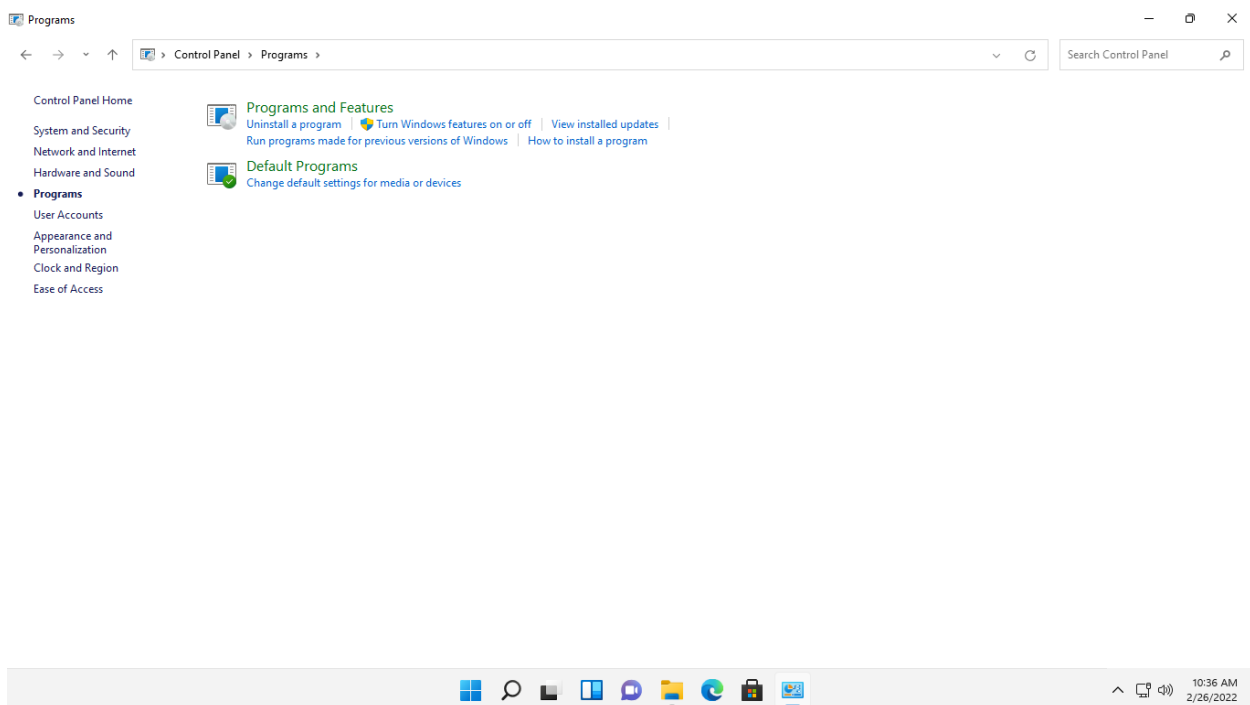
On the popup menu, select **Control Panel** and press **Enter**.



Step 3:

On the **Control Panel** home window, click **Programs**.

On the **Programs** screen, select the **Turn Windows features on or off** option.

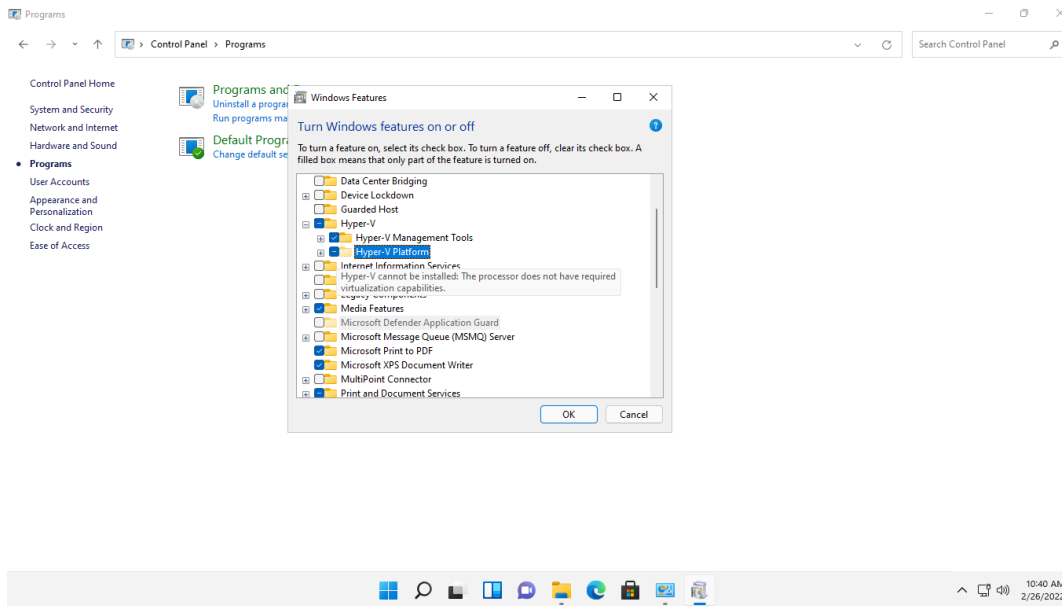


Step 4:

On the **Turn Windows features on or off** dialog box, tick the **Hyper-V** checkbox and expand the **Hyper-V** folder.

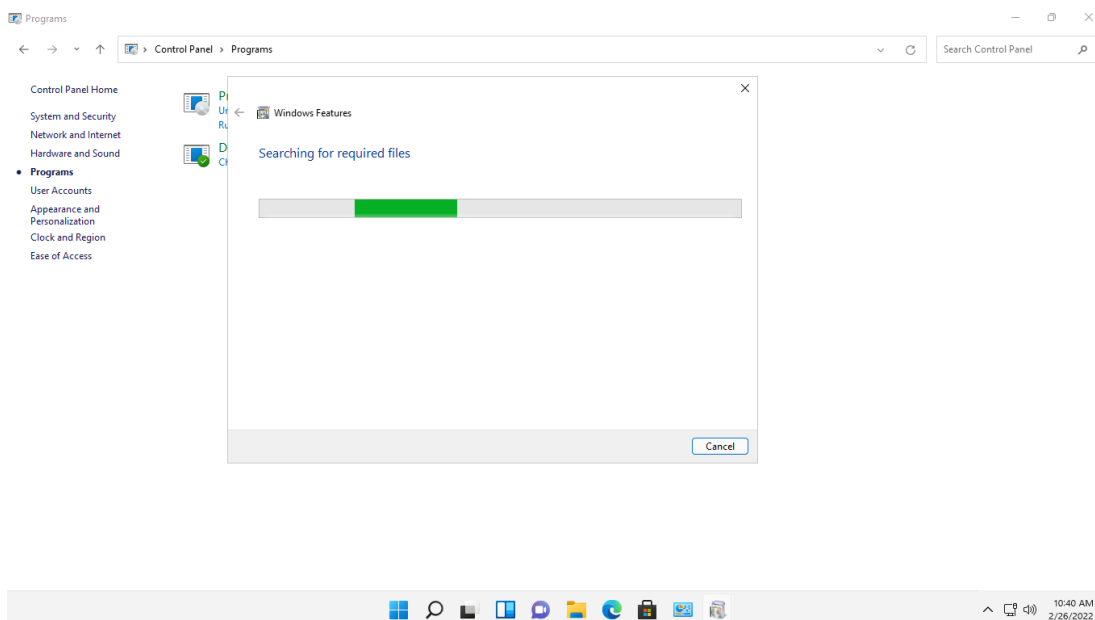
Notice that this automatically selects its subcomponents.

Click **OK**.



Step 5:

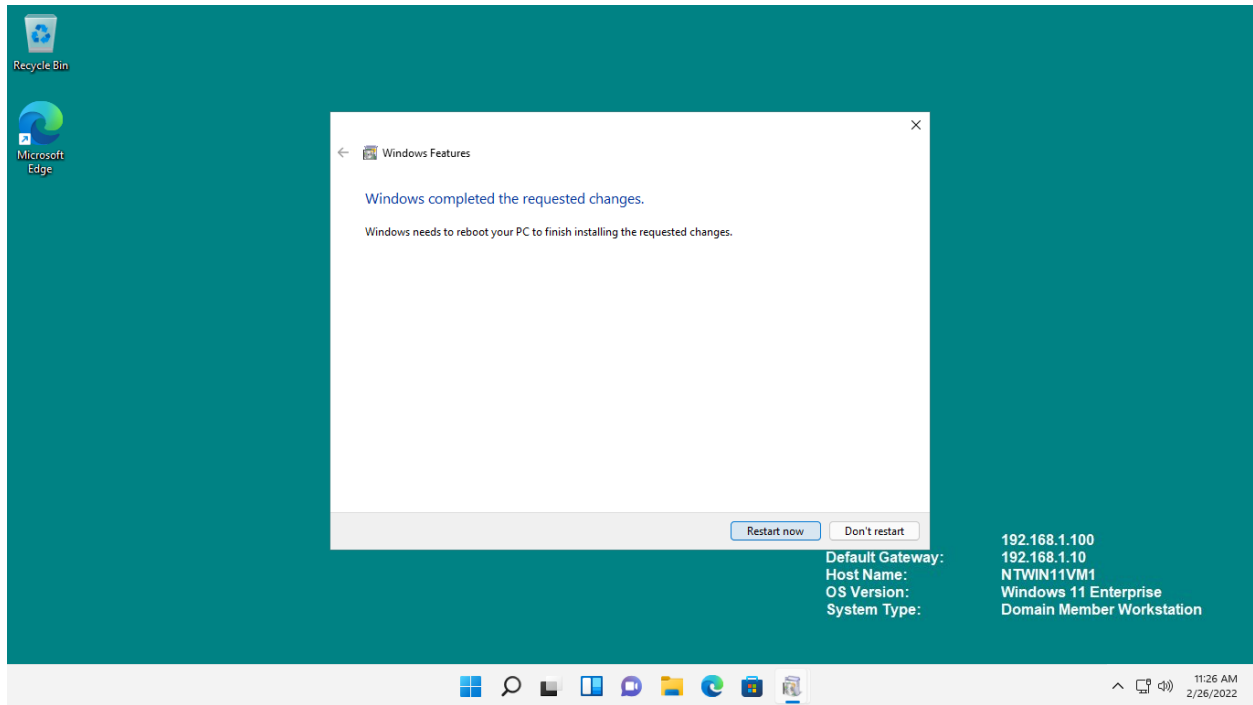
Please wait a few moments while the Installation of the **Hyper-V** component takes place.



Step 6:

When Windows has successfully completed the configuration change, it prompts for a restart.

Click **Restart now**.

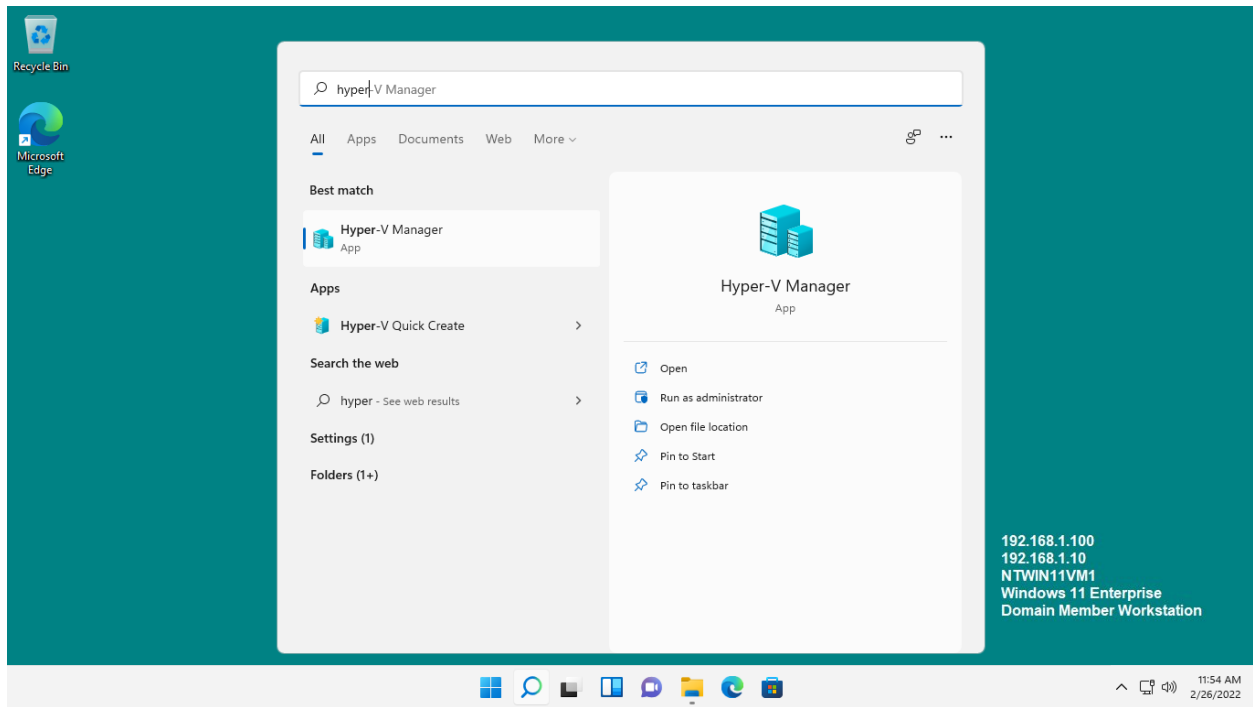


Step 7:

Connect to the machine after a couple of minutes; if the connection doesn't happen automatically, press **F5** to refresh the lab

Click in the **Type here to search** box and type: **hyper-v manager**

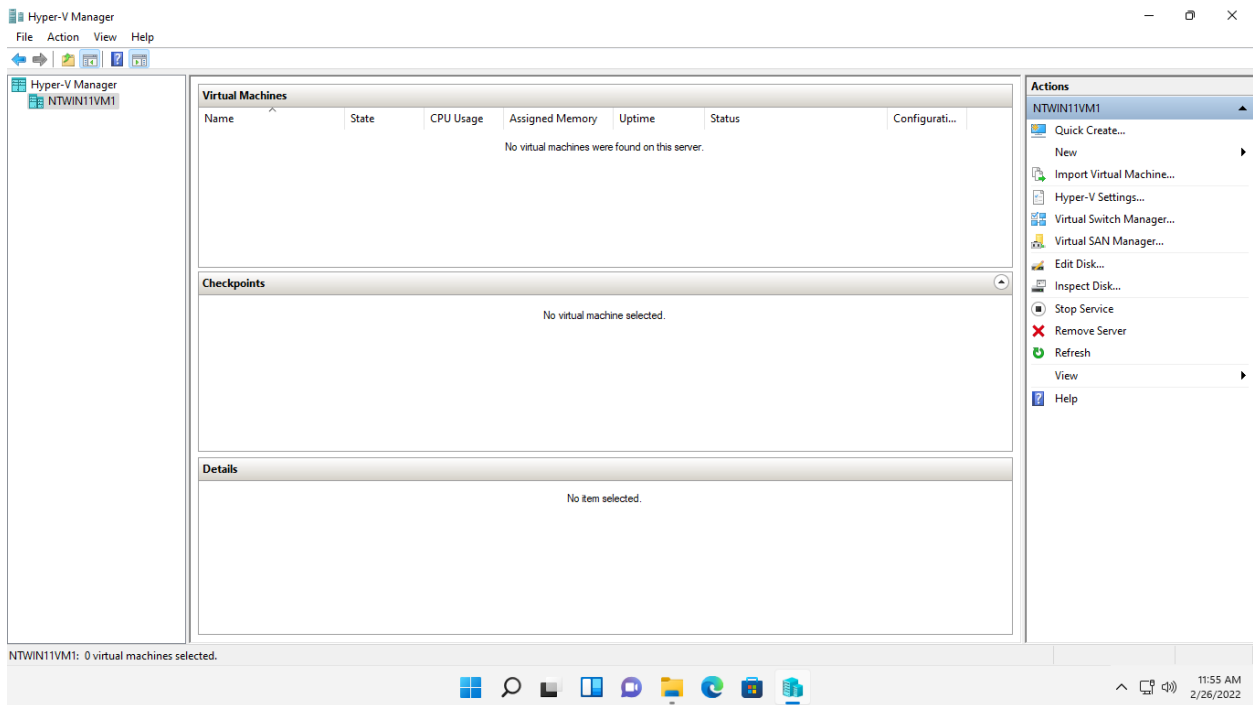
Click **Hyper-V Manager** on the **Best match** pop-up menu.



Step 8:

The **Hyper-V Manager** console is displayed.

Keep this console open for the next task.



Task 2: Create a Hyper-V Virtual Network

A virtual network switch functions similarly to a physical network switch, however it is software-based. To join or disconnect virtual machines on a virtual network, ports are added or withdrawn.

Three types of virtual networks are available with a Hyper-V Virtual Network Manager:

1. Internal virtual networks - Allow virtual machines on the same virtualization server, as well as virtual machines and the management operating system, to communicate across the network.
2. External virtual networks - Connect the virtual computers to a physical network and communicate with servers and clients located elsewhere.
3. Private virtual networks - Allow virtual machines on the same virtualization server to communicate across the network. This can be used to establish a network environment that is isolated. A physical network adapter is not required for a private virtual network.

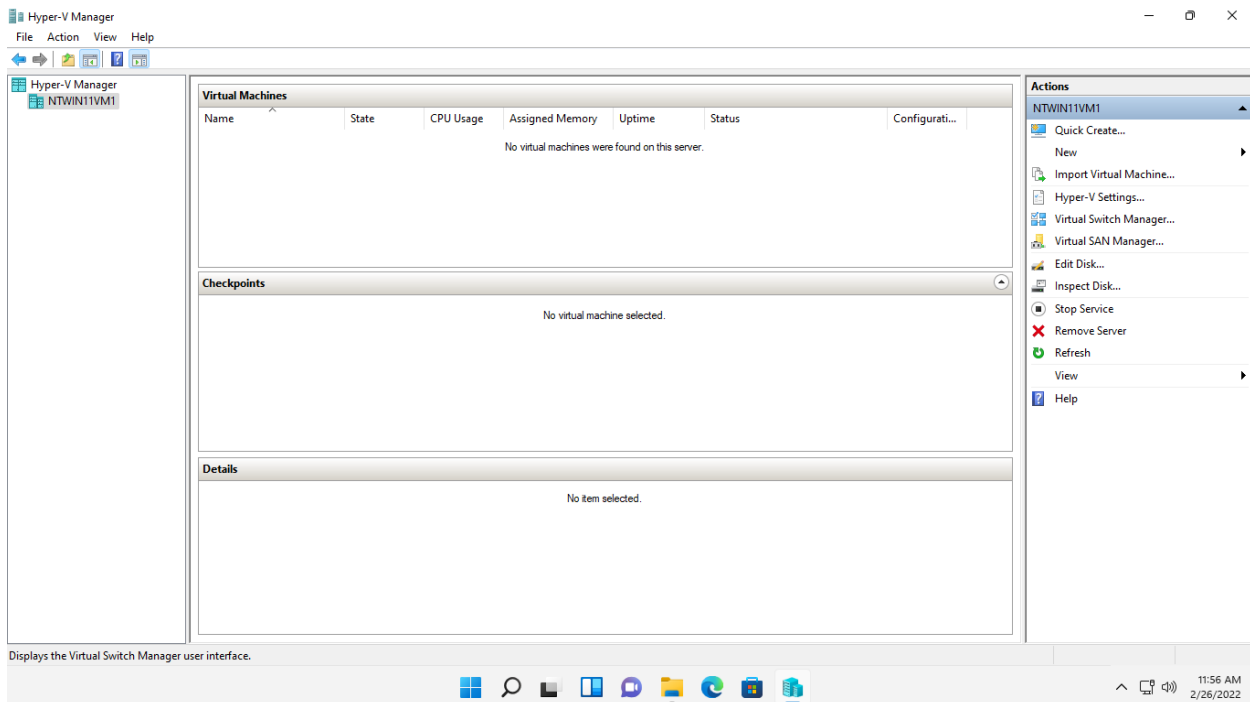
In this task, we will create a virtual network on **NTWIN11VM1**.

Step 1:

On **NTWIN11VM1**, the **Hyper-V Manager** console is displayed.

On the navigation pane on the left, select **NTWIN11VM1**.

Then on the **Actions** menu at the right, click **Virtual Switch Manager**.



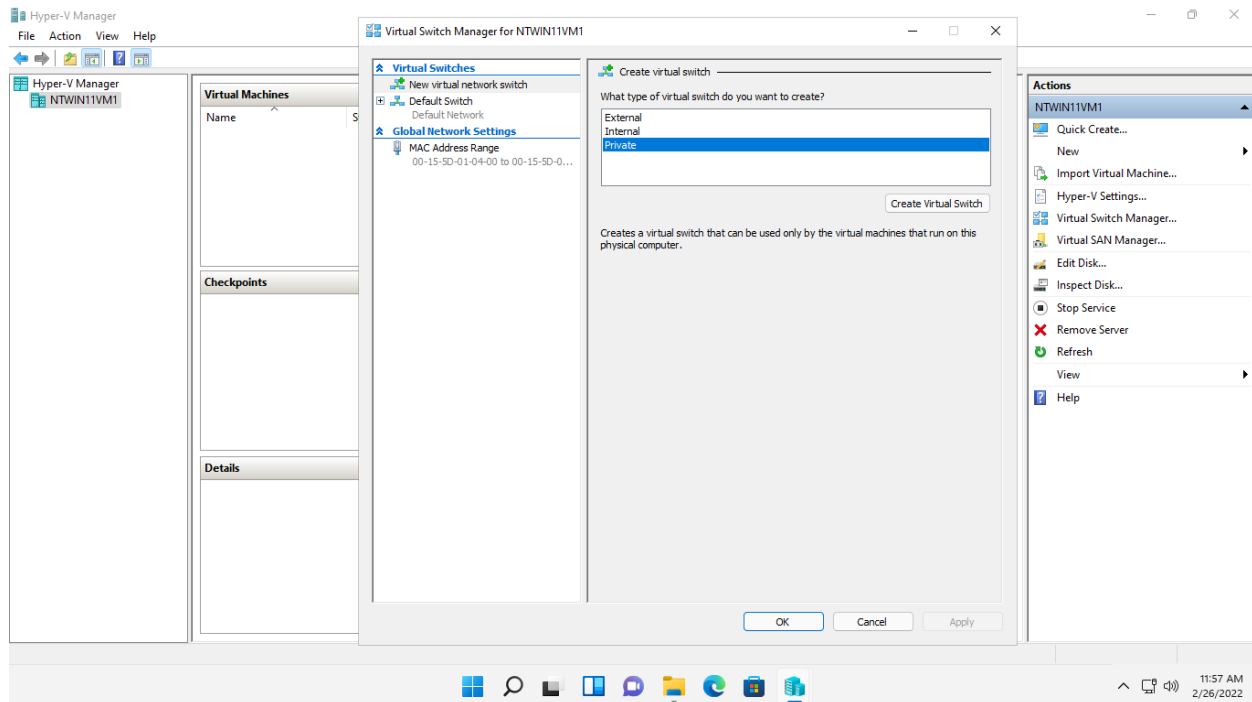
Step 2:

Please wait a few minutes while the page loads.

On the **Virtual Switch Manager** for **NTWIN11VM1** dialog box.

Locate the **What type of virtual switch do you want to create?** section, then select **Private**.

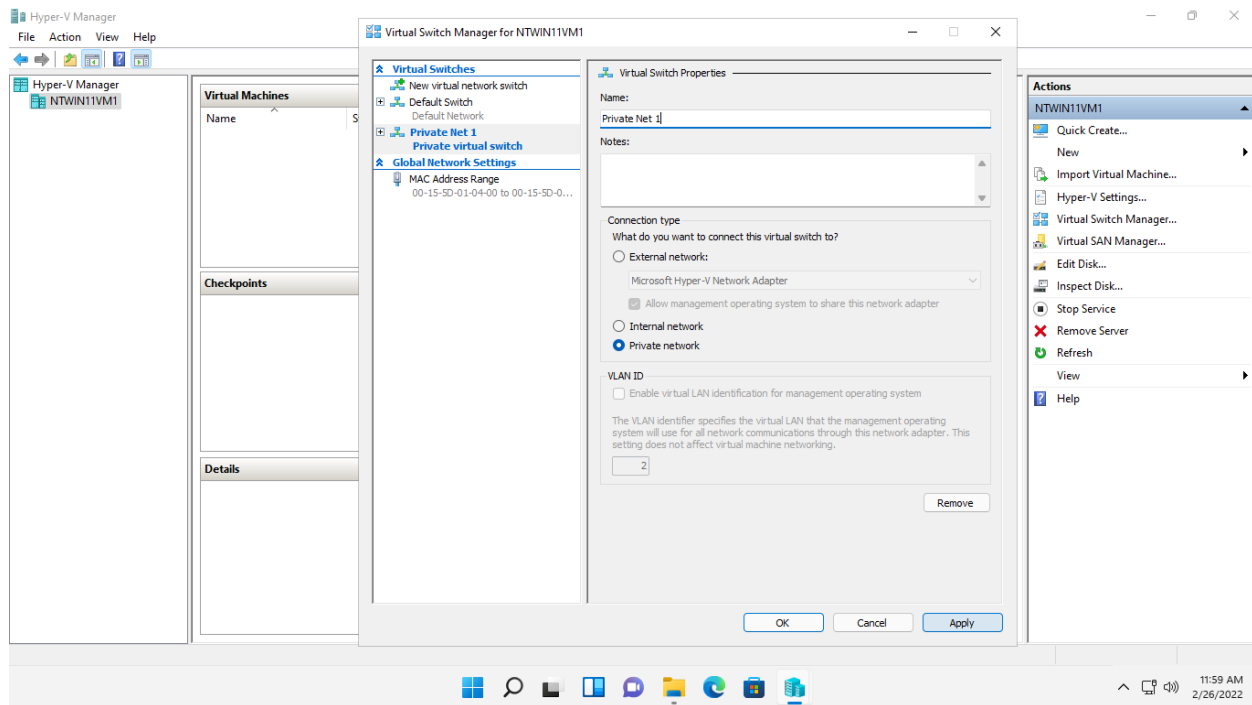
Click **Create Virtual Switch**.



Step 3:

On the **Virtual Switch Properties** section, click in the **Name** box and type over the suggested name, with the following: **Private Net 1**

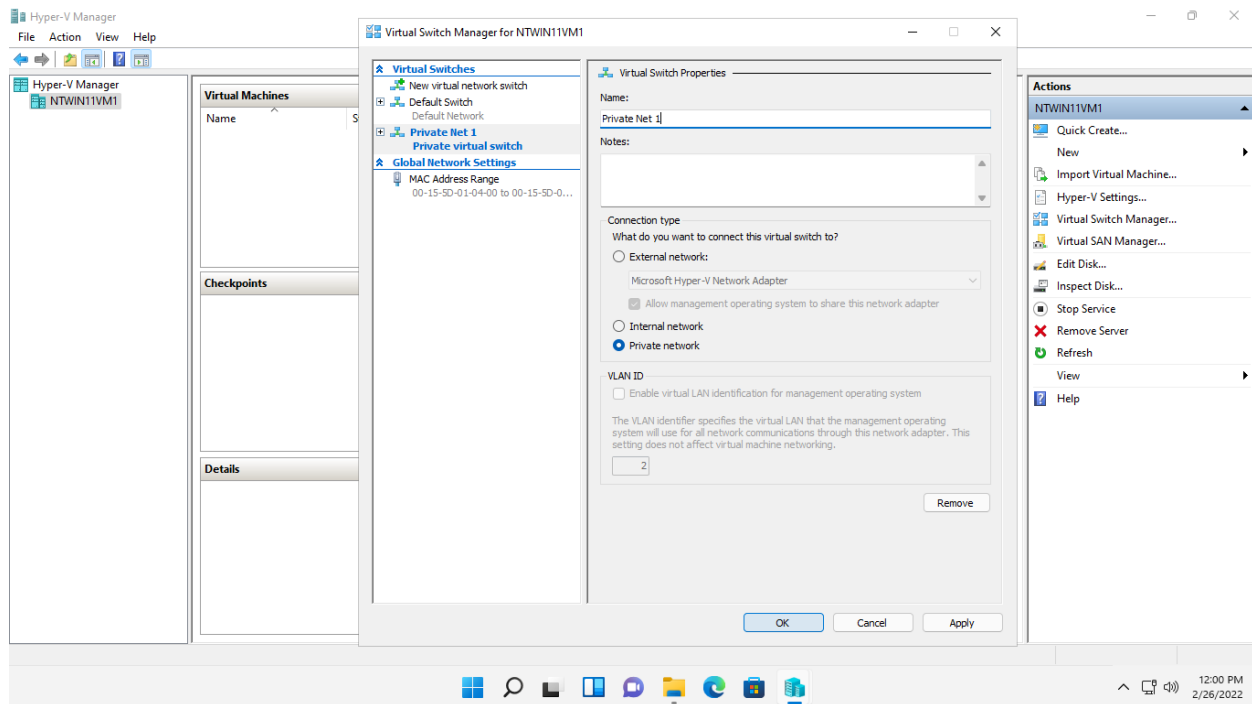
Verify **Connection type** is set to **Private network**.



Step 4:

Click **OK**.

You created a private network on the Hyper-V service on **NTWIN11VM1**.



Step 5:

Minimize the **Hyper-V Manager** window.

