Exercise 2 - Working with Virtual Hard Disks

Virtual Hard Disks (VHD) are virtual hard disks that, when mounted, behave like a *physical hard drive*. A virtual hard disk (VHD) is a storage device that can hold many files and folders and is portable to other computers. Windows devices can be shared across a network or via USB disk.

Virtual hard disks in Windows support two file formats: *vhd* and *vhdx*. The **vhd** format can hold up to 2040 GB of virtual hard disks, whereas the **vhdx** format can hold up to 64 TB and is resistant to power outages.

Virtual machines, which are self-contained computers that run on any operating system, are also related with VHDs. Hyper-V is a virtualization program or hypervisor that handles virtual computers.

In this exercise, we will learn to create virtual hard disks with **Disk Management**.

Prerequisite

- *Windows 11*
- *VMware Workstation 16 Pro*

Task 1: Create a VHD

Aside from managing volumes and partitions, Disk Management on Windows also allows you to create, format, and mount virtual hard disks.

In this task, we will create VHD using Disk Management.

The freshly formed VHD will be used to complete the following tasks.

- Create a simple volume.
- Format it.
- Mount as hard disk.
- Create a file and folder on the VHD.

Step 1:

Note: Ensure your *windows 11* is compatible with your devices.

Launch **Disk Management** window.

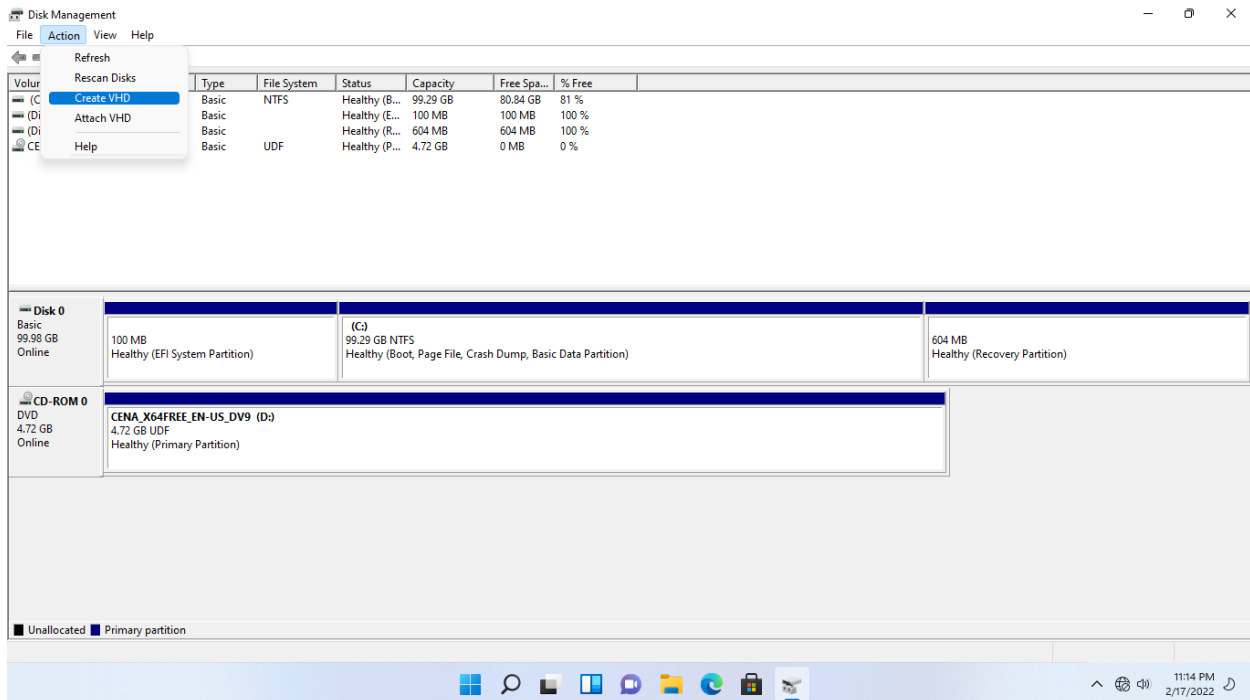Click the **Action** menu option, and select **Create VHD**.

Figure 1 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 1

Step 2:

On the **Create and Attach Virtual Hard Disk** dialog box, select the **VHDX** radio button.
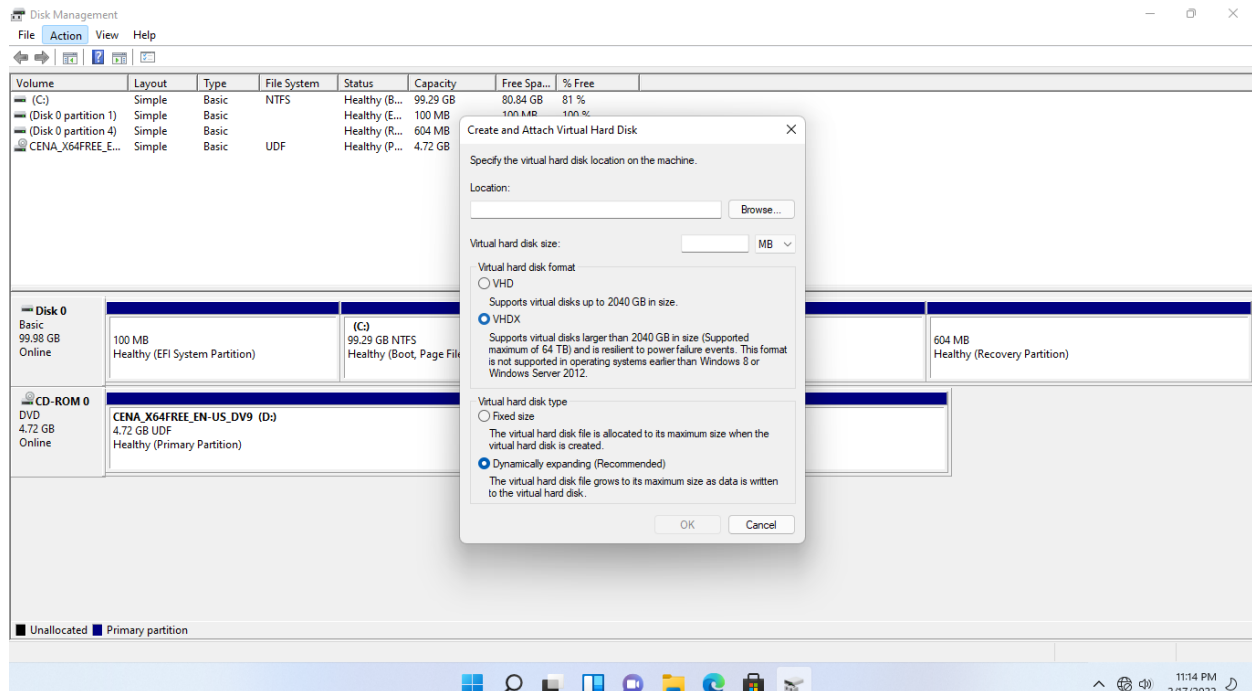
On the **Location** textbox, click **Browse**.

Figure 2 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 2

Step 3:

On the **Browse Virtual Disk files** dialog box, in the left pane, expand **This PC** and select **Local Disk (C:).**

Right-click where the folders appear and point to **New**.

Select **Folder**.

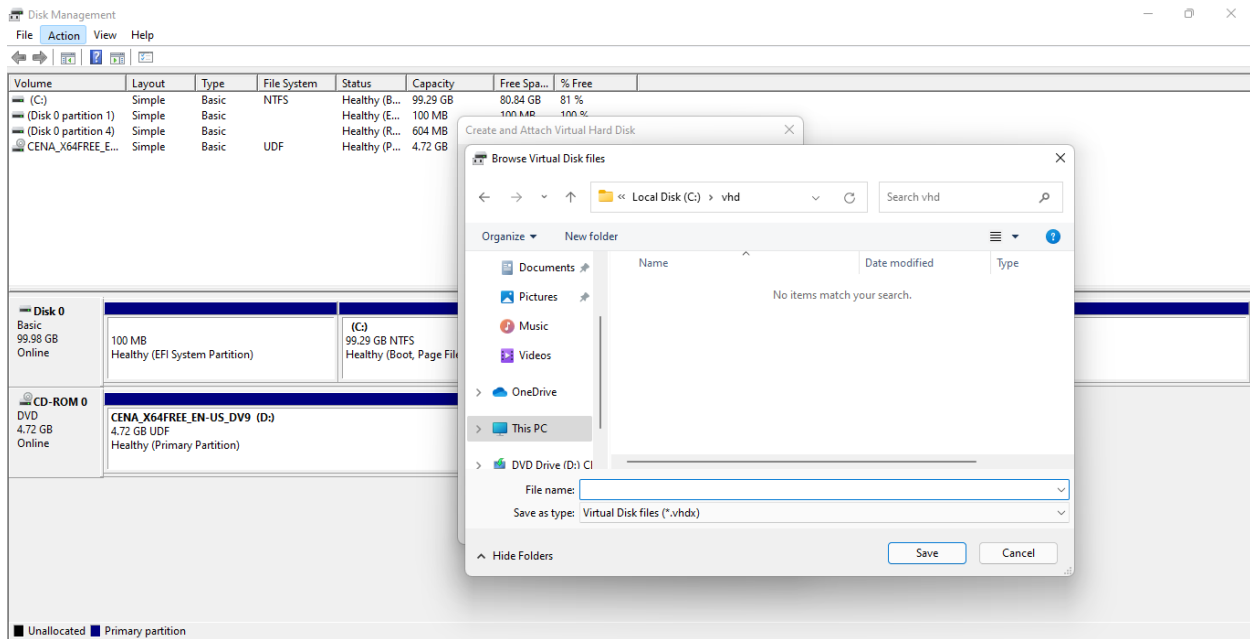Rename the folder to:

vhd

Then open the **vhd** folder.

Figure 3 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 3

Step 4:

Click in the **File name** box and type:

Disk 1

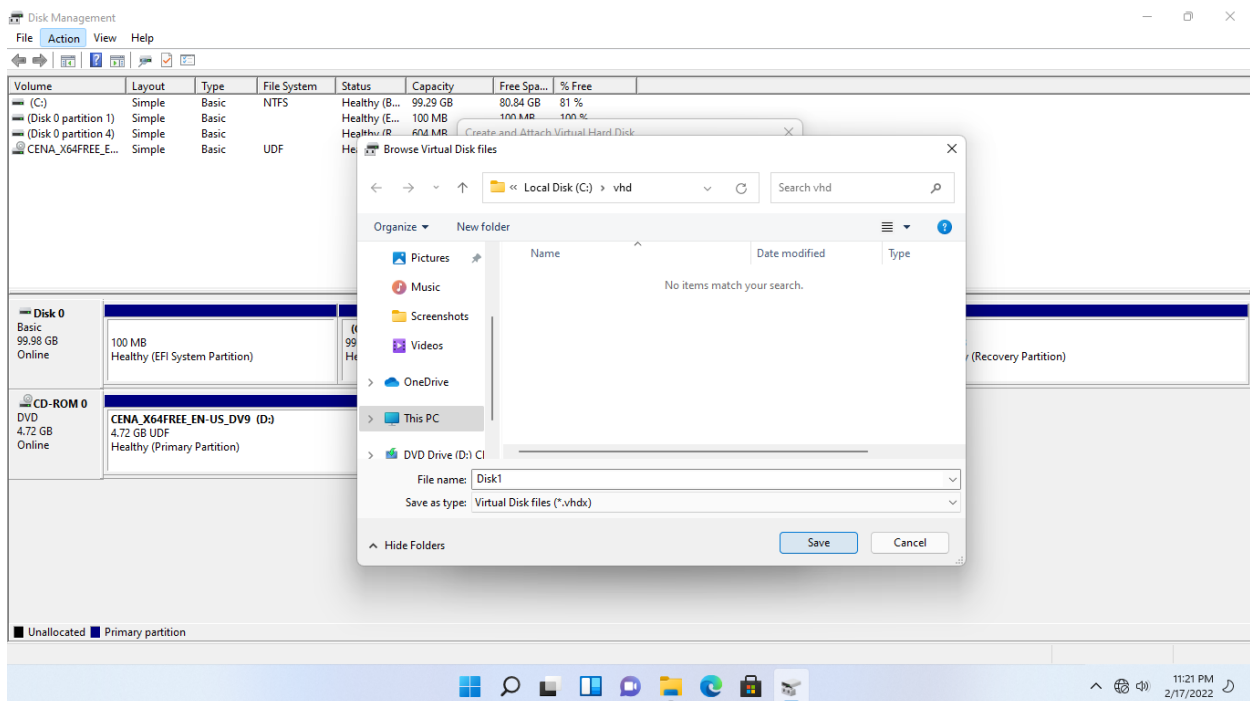Click **Save** to save the file.

Figure 4 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 4

Step 5:

On the **Create and Attach Virtual Hard Disk** dialog box, the folder path and file name appear.

To specify the virtual hard disk size, type the following value in the **Virtual hard disk size** box:

20

To specify the storage units in **GB**, click the size drop-down list, and select **GB**.

Verify that the **Virtual hard disk type** selected is **Dynamically expanding (Recommended).**
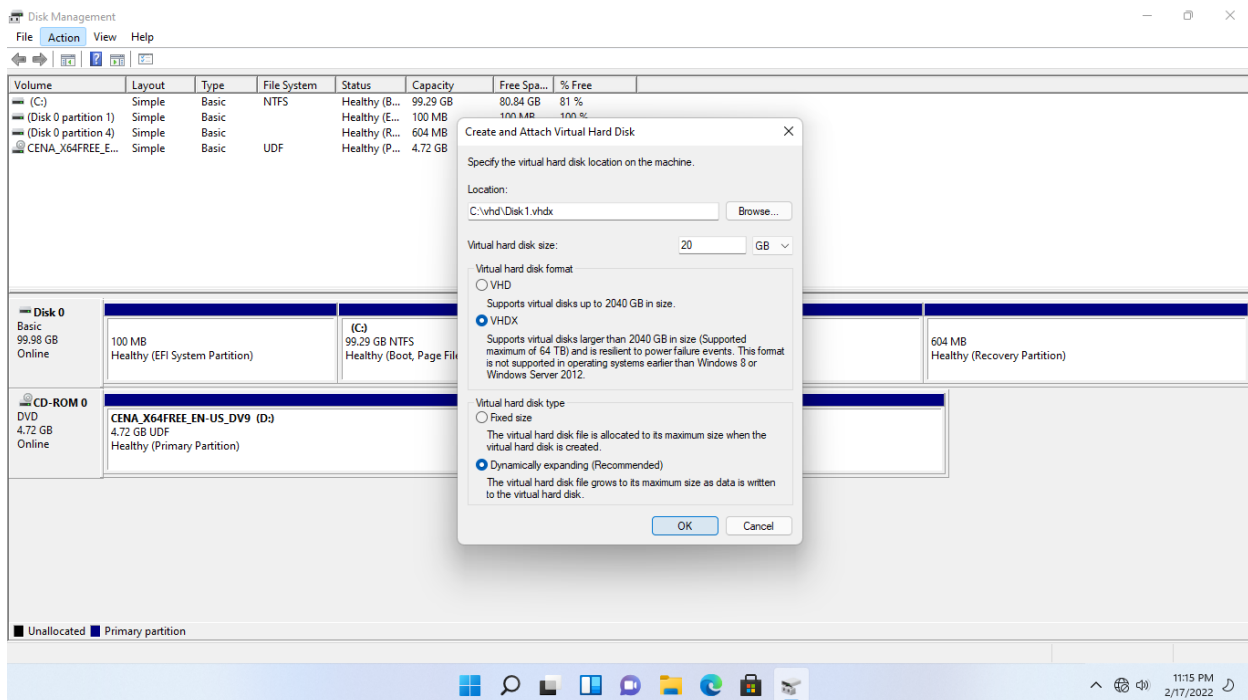
Click **OK** to save changes.

Figure 5 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 5

Step 6:

Disk Management now shows **Disk 1** with an unallocated capacity of **20.00 GB.**
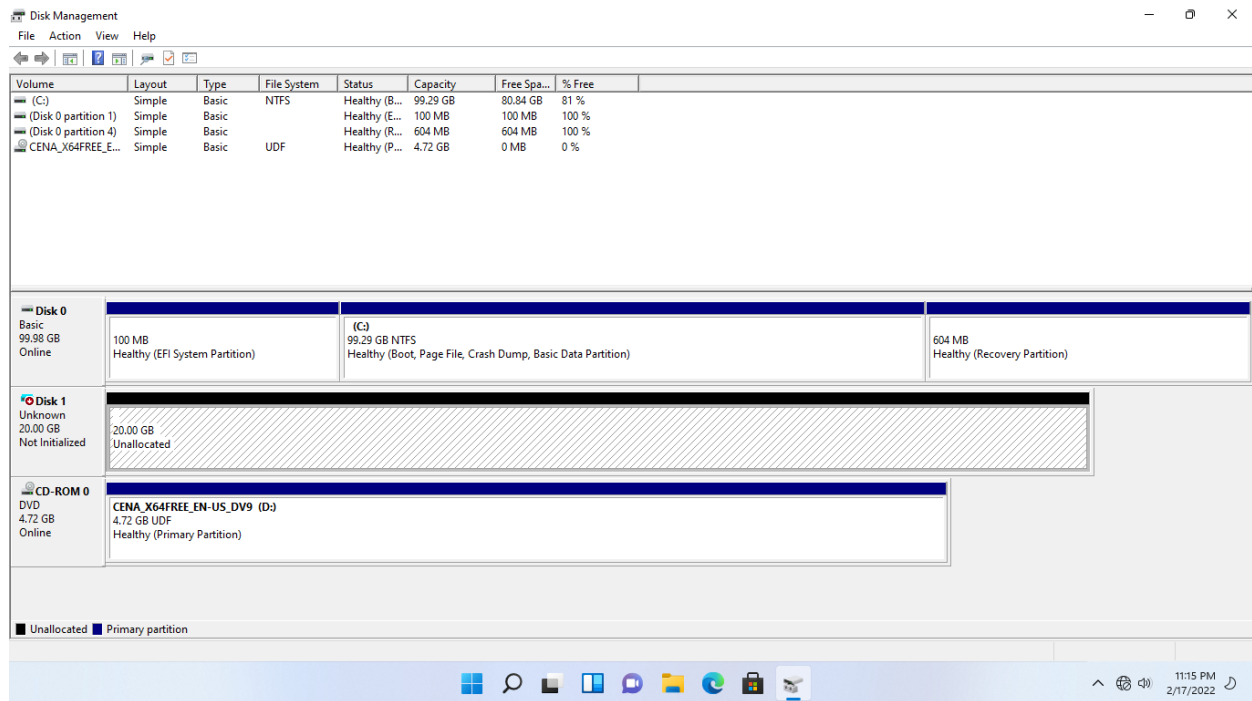
Figure 6 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 6

Step 7:

To initialize **Disk** 1, right-click the **Disk 1** panel. On the context menu.
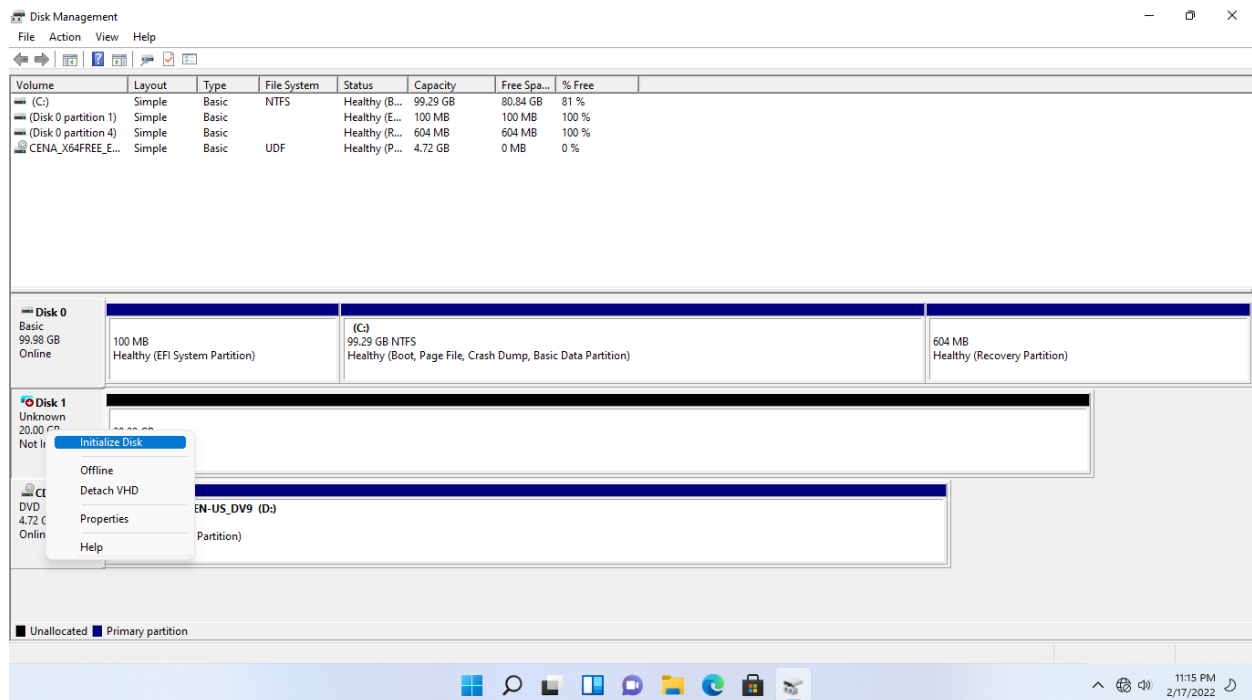
click **Initialize Disk**.

Figure 7 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 7

Step 8:

On the **Initialize Disk** dialog box, ensure the **Disk 1** checkbox is ticked and selected.
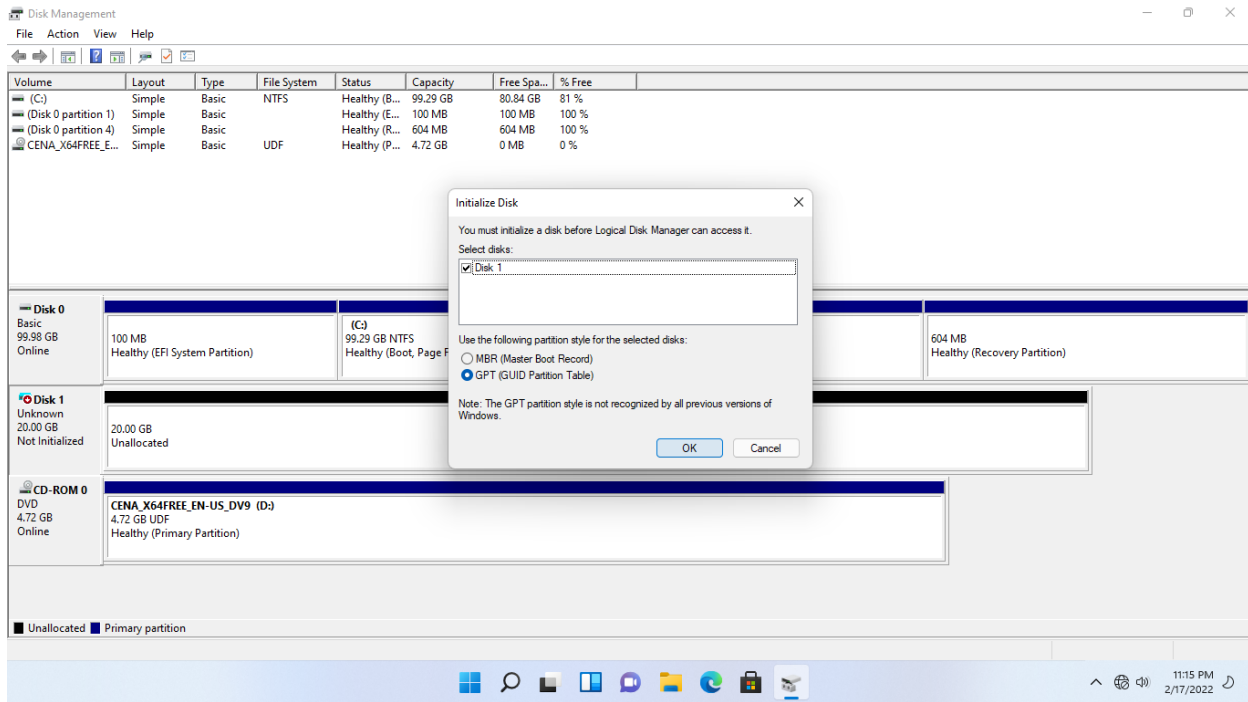
Click **OK**.

Figure 8 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 8

Step 9:

Disk 1 now indicates it has an **Online** status.

To create a new simple volume on **Disk 1**, right-click **the 19.98 GB Unallocated** section on **Disk 1**.
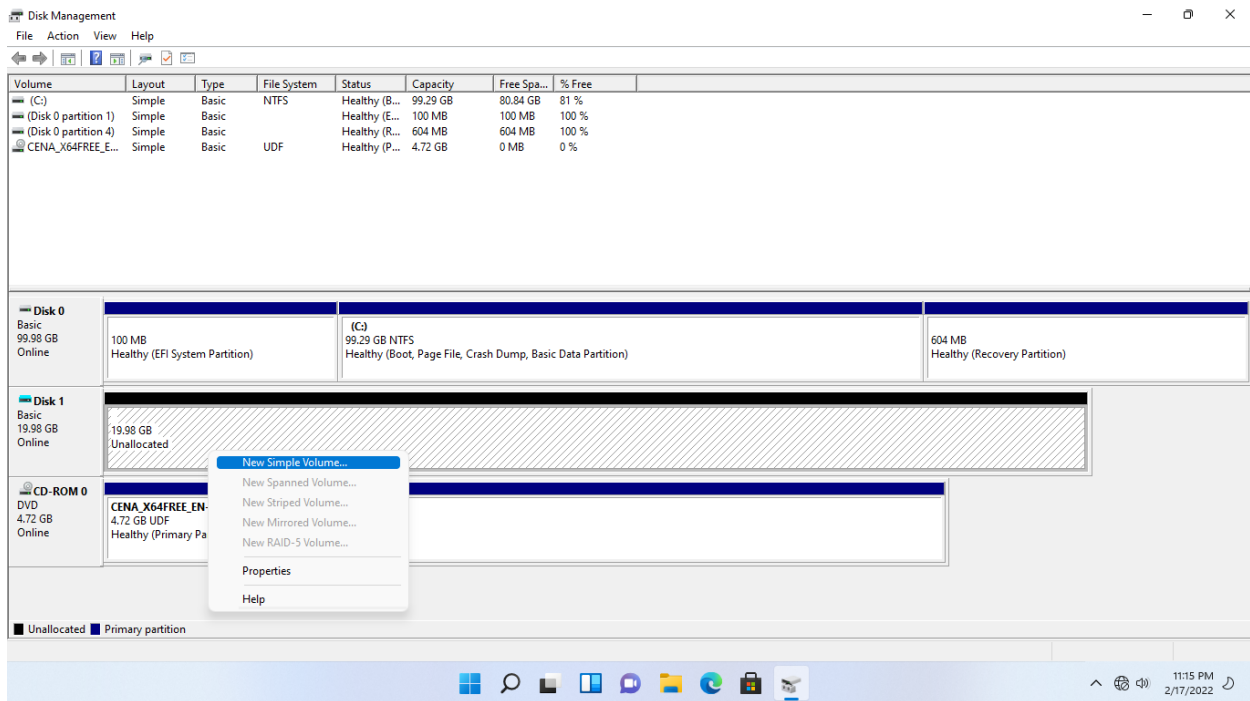
click **New Simple Volume**.

Figure 9 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 9

Step 10:

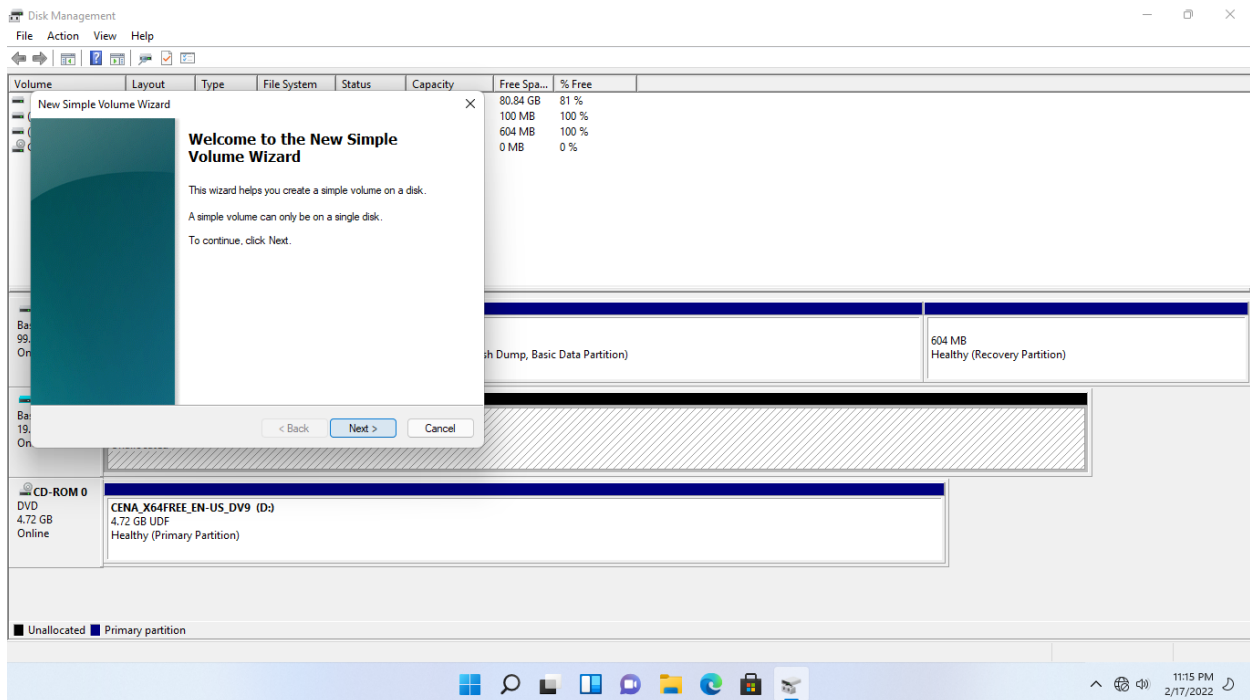On the **New Simple Volume Wizard - Welcome** page, click **Next**.

Figure 10 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 10

Step 11:

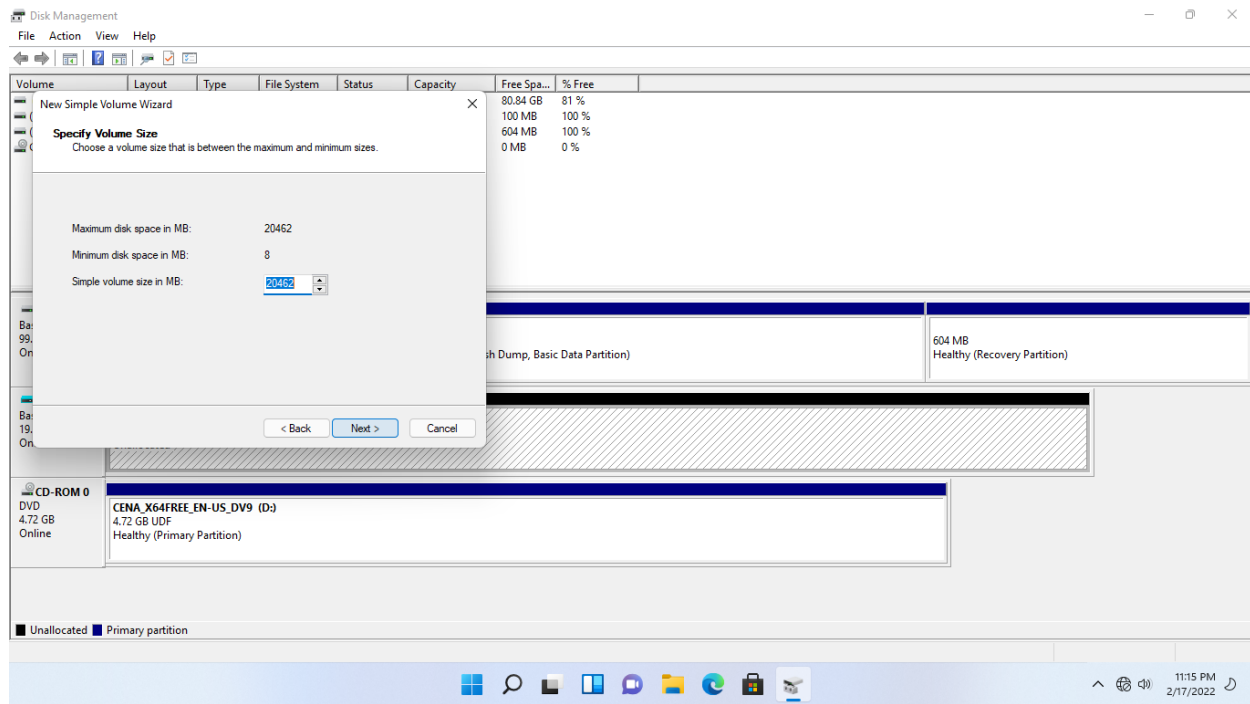On the **Specify Volume Size** page, keep the default settings

Click **Next**.

Figure 11 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 11

Step 12:

On the **Assign Drive Letter or Path** page, access the Assign the following drive letter drop-down list and change select **Z.**
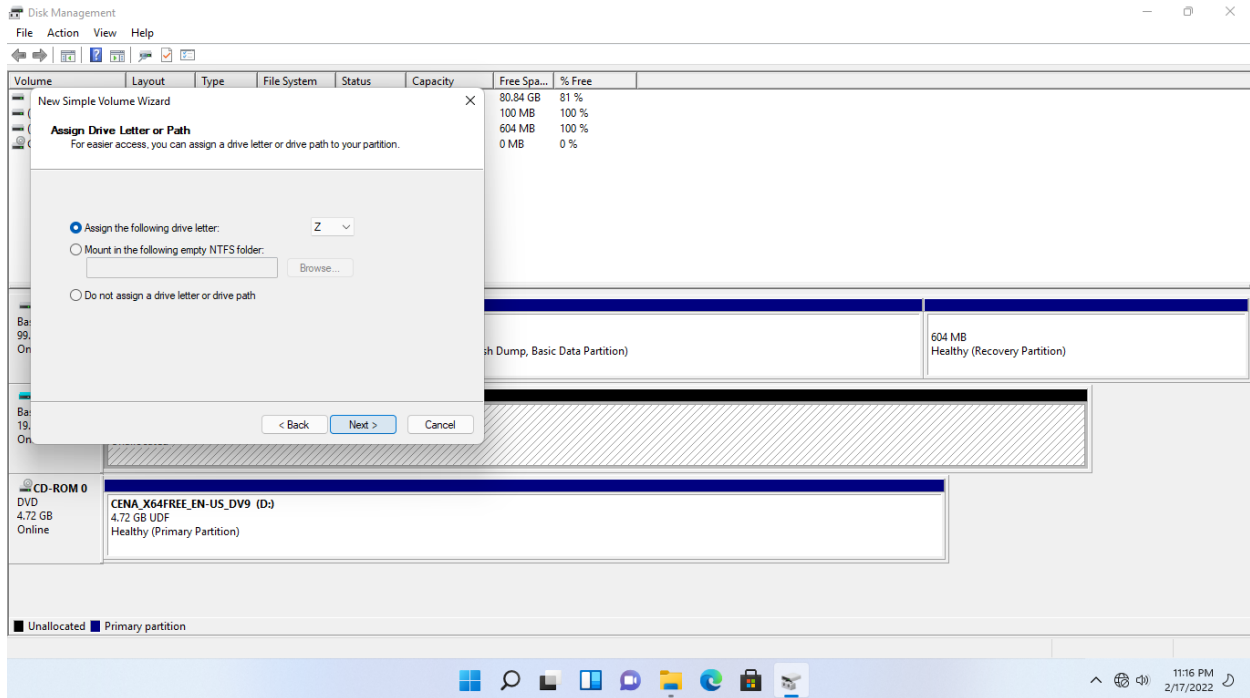
Click **Next**

Figure 12 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 12

Step 13:

On the **Format Partition** page, keep default settings.
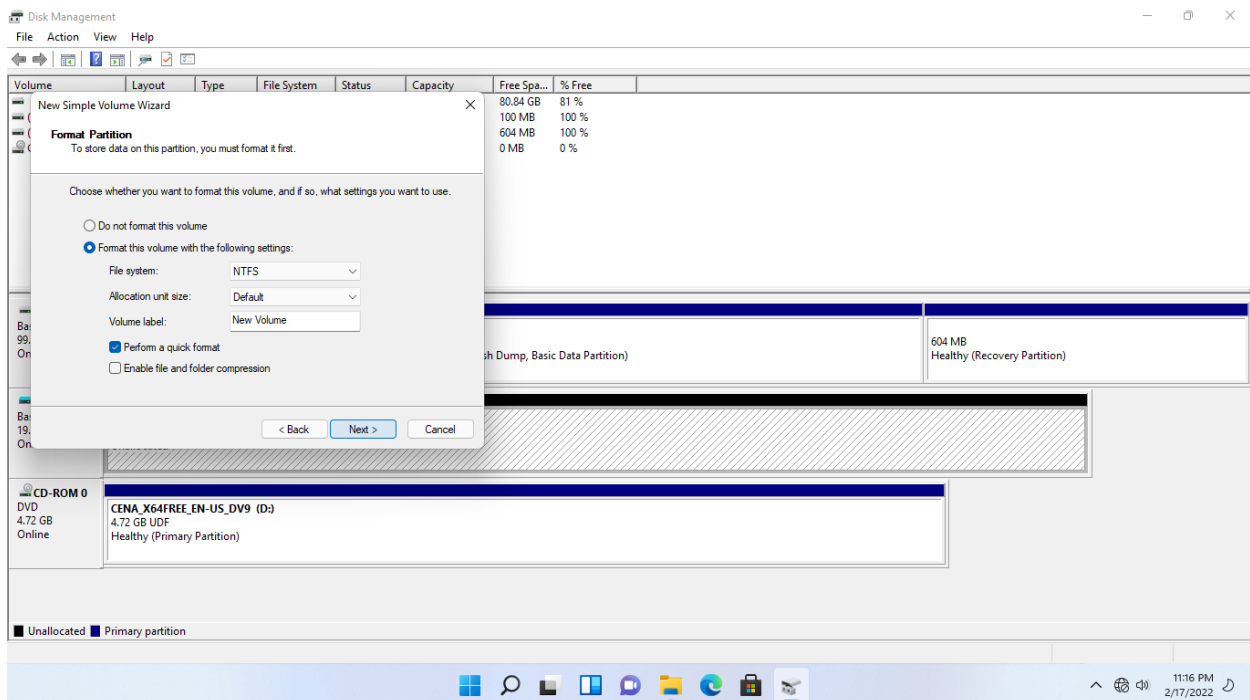
Click **Next**.

Figure 13 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 13

Step 14:

On the **New Simple Volume Wizard** page.
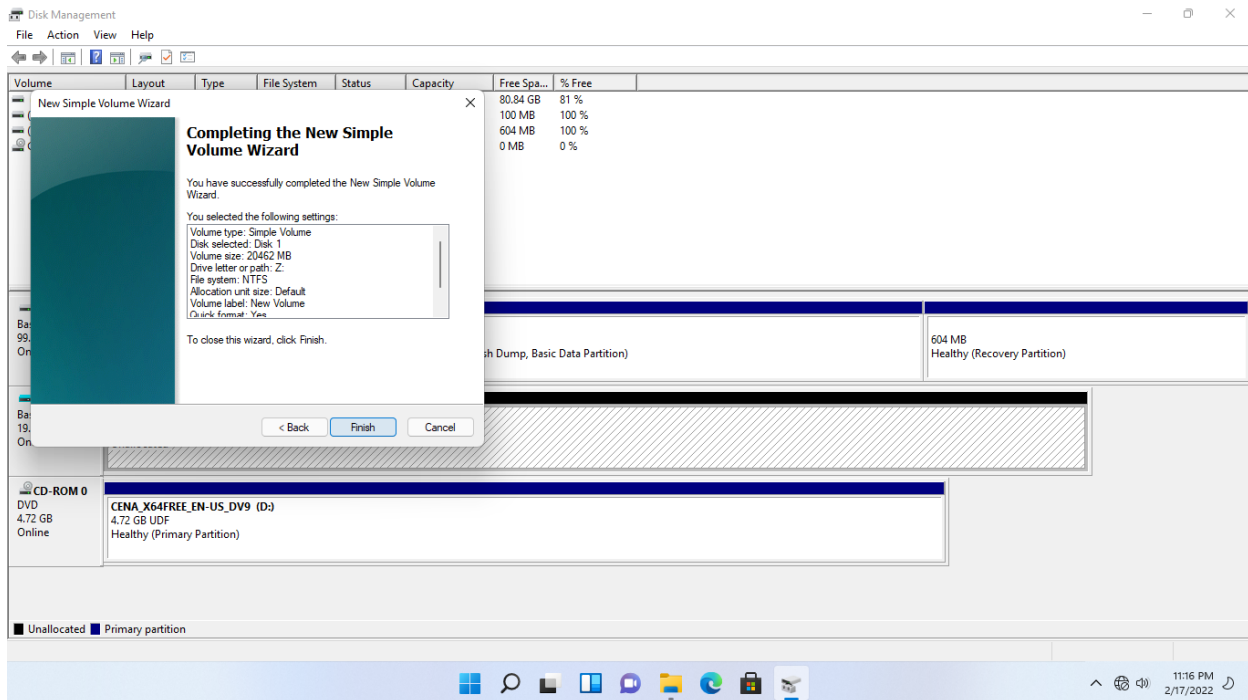
Click **Finish**.

Figure 14 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 14

Step 15:

A new **Volume (Z:)** appears in **Disk Management.**

To verify the new volume, click the **File Explorer** icon on the **Taskbar**.

From the **File Explorer** window, access the left pane, select the **This PC** node.

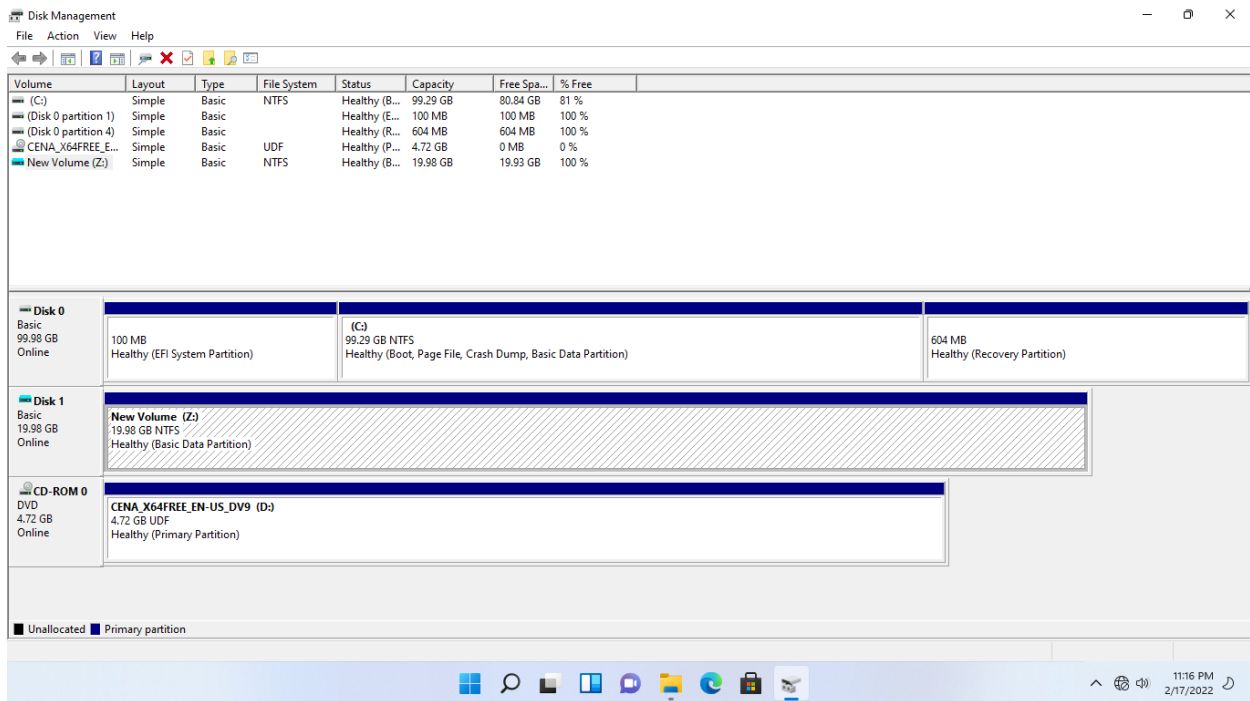Notice the new **Volume (Z:)** is a virtual hard disk

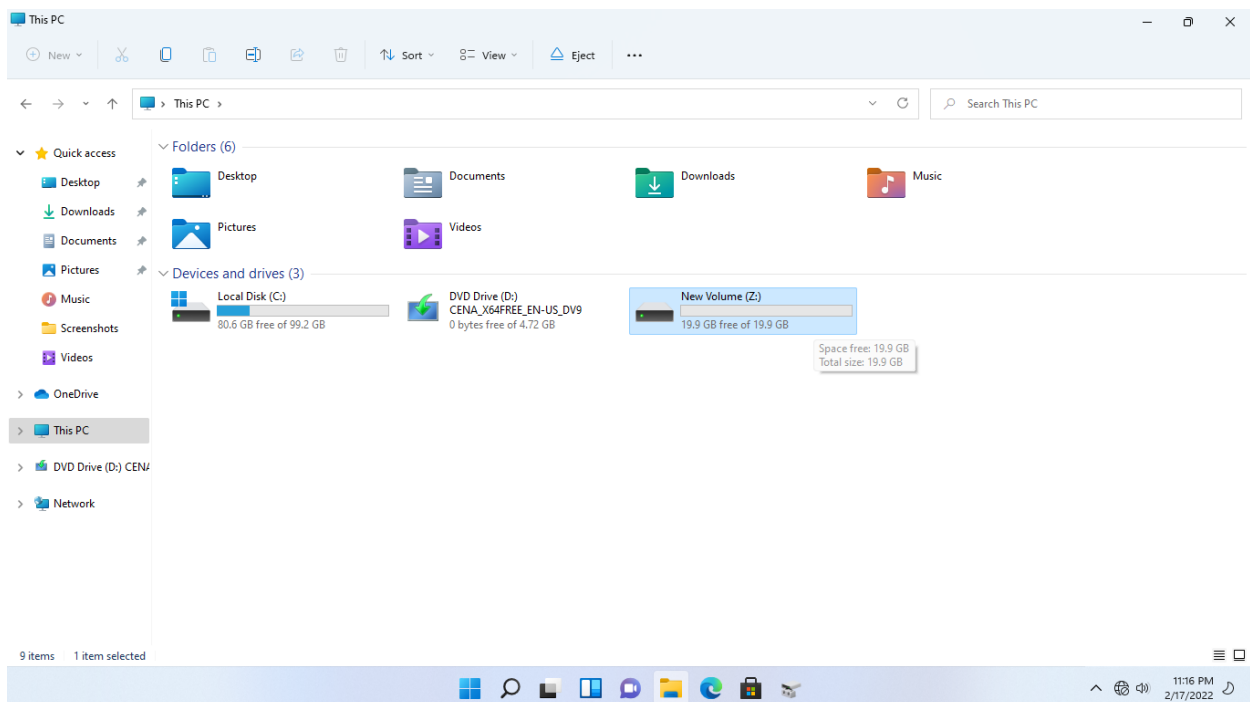*Figure 15 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 15*

Figure 16 Capture Screen of NETWORKTUTEWIN11PC. Task 1 - Step 15.1