Install Guide for Windows on UCS Servers

Contents

Introduction

This document describes the process to install Windows 2025 in a Cisco UCS Server with KVM Console.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Intersight Manage Mode.
- Boot Order Policy for Server Profiles.
- Usage of Cisco UCS Hardware Compatibility List to validate that everything is in compliance.

Components used

- Cisco UCS 6454 Fabric Interconnect
- Cisco UCSX 210 M7
- Windows 2025 ISO file

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a clear (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

A bare metal server is a physical server dedicated entirely to a single tenant or customer. Unlike virtual servers, which share resources on a physical machine through virtualization technologies, bare metal servers provide the user with full control over the hardware resources of a server, such as CPU, RAM, storage, and network connectivity.

This means there are no virtualization layers between the operating system and the hardware, allowing for maximum performance and resource utilization.

Bare metal servers provide high performance, security, and customization benefits, making them ideal for businesses with demanding workloads and specific compliance requirements. Running Windows on these servers can further optimize performance for Windows-based applications and enhance security and customization capabilities

Configure

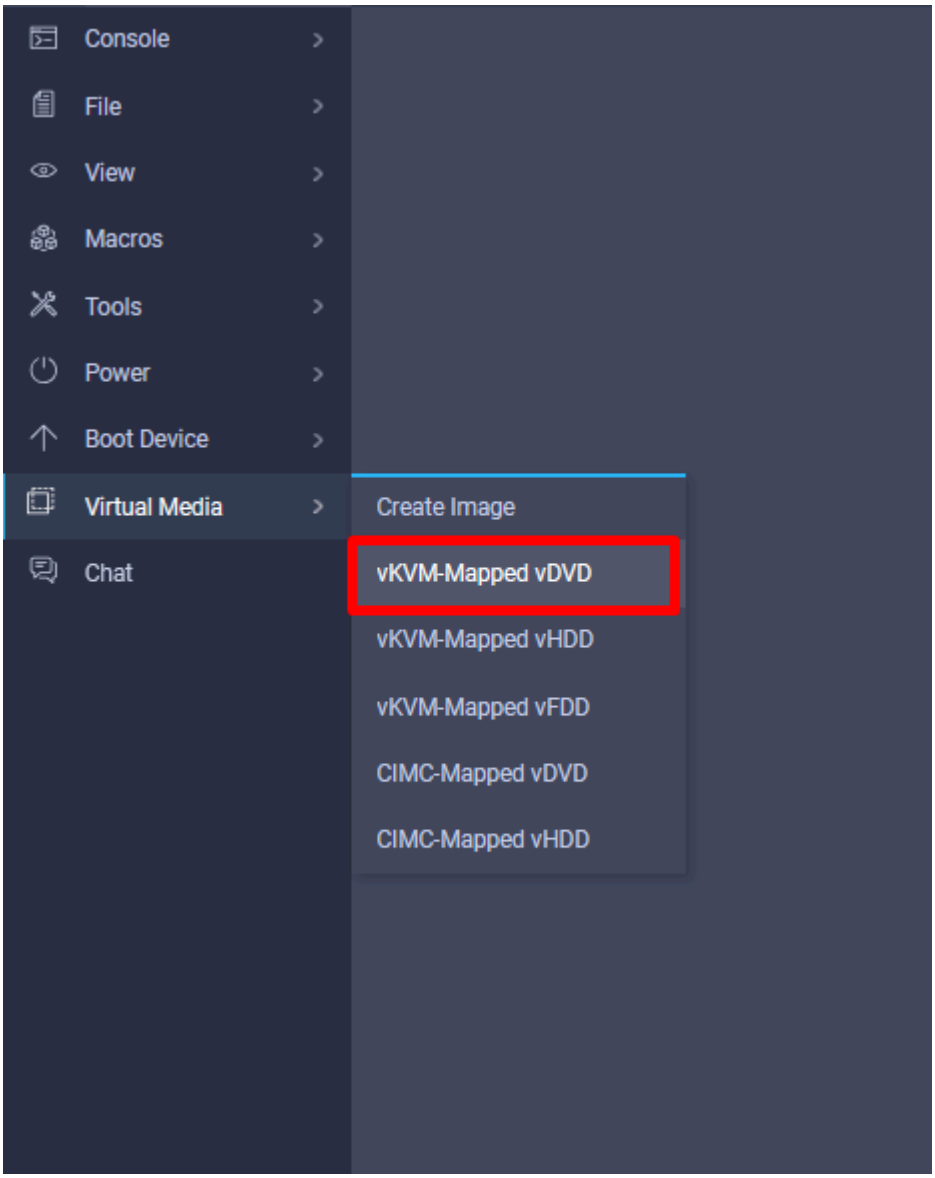
The server must be associated with a Server Profile which contains a Boot Order Policy. This policy specifies how the server boots: it could be local or remote such as Boot from SAN or iSCSI, for instance.

 **Note**: Consider to include the Virtual Media option in the boot order if you mount the ISO image for the installation..

Mount the Installation ISO Image

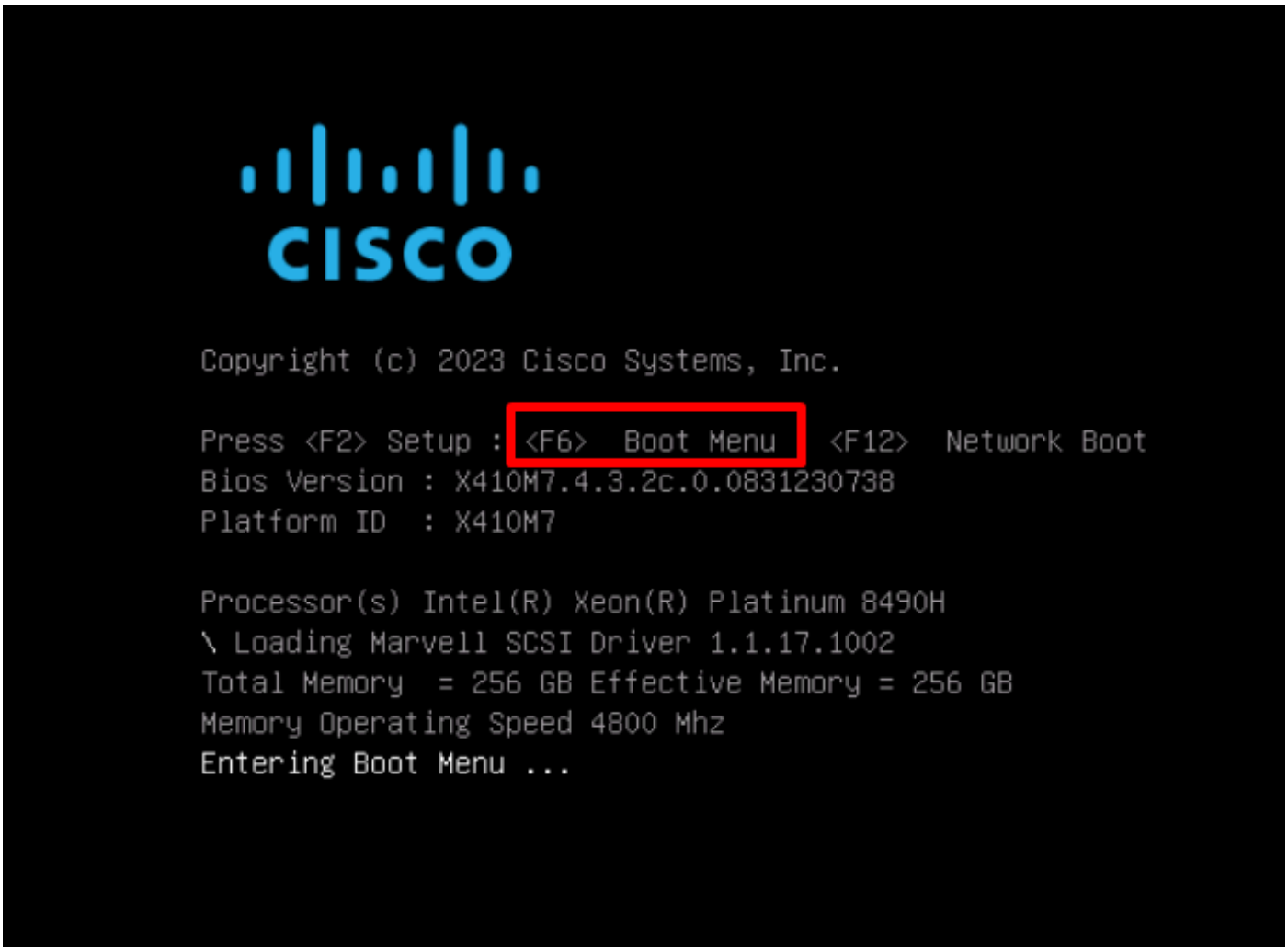
Step 1. Launch the KVM Console. Navigate to **Virtual Media** tab.

A menu with various options is displayed. Select **vKVM-Mapped vDVD**.

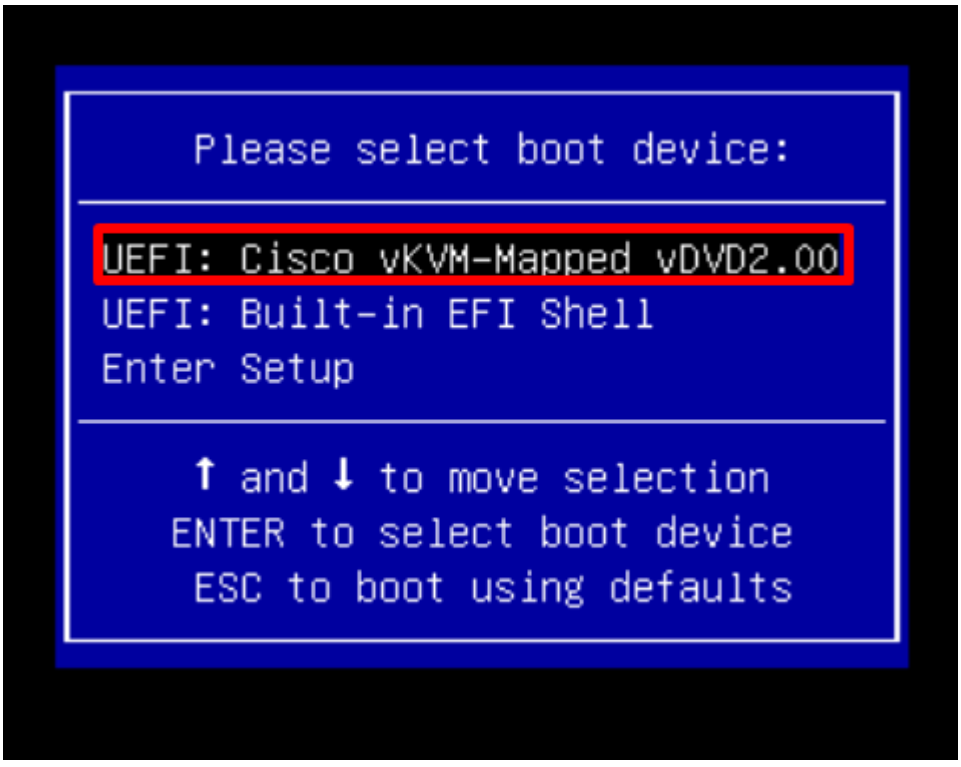


Step 2. Browse on your local device for the iso file. Once selected, click **Map Drive**.

Step 3. Reboot your server and interrupt the boot. Watch the boot messages and press F6 when prompted to enter the Boot Menu.



Step 4. Navigate to **Cisco vKVM-Mapped** option and press enter.



Windows Boot Manager screen appears if the process was successful.

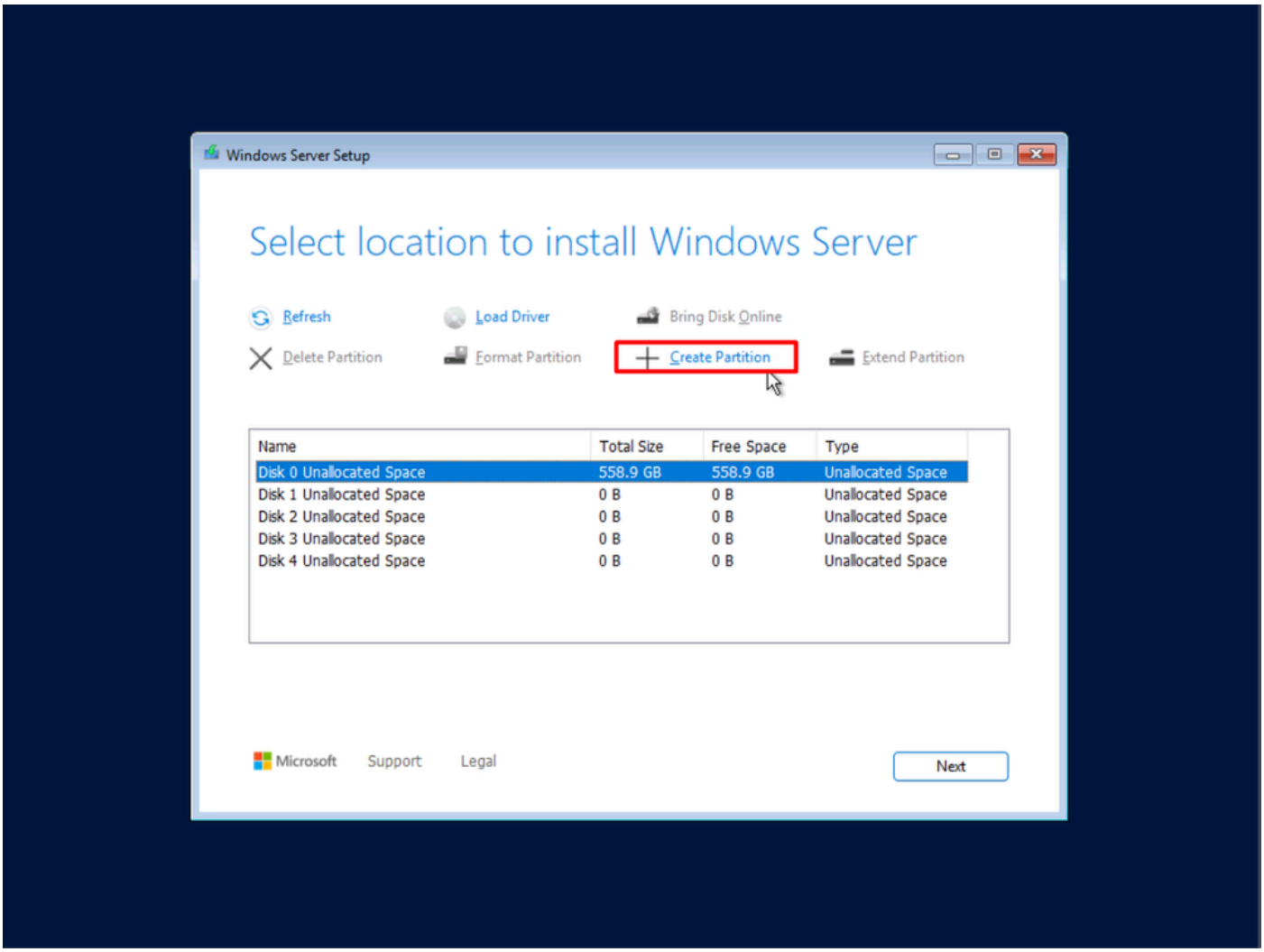
Windows OS Installation

Local

Continue with the installation process until you see the local disks available for installation.

Step 1. (Optional) Delete and extend partitions according to your needs.

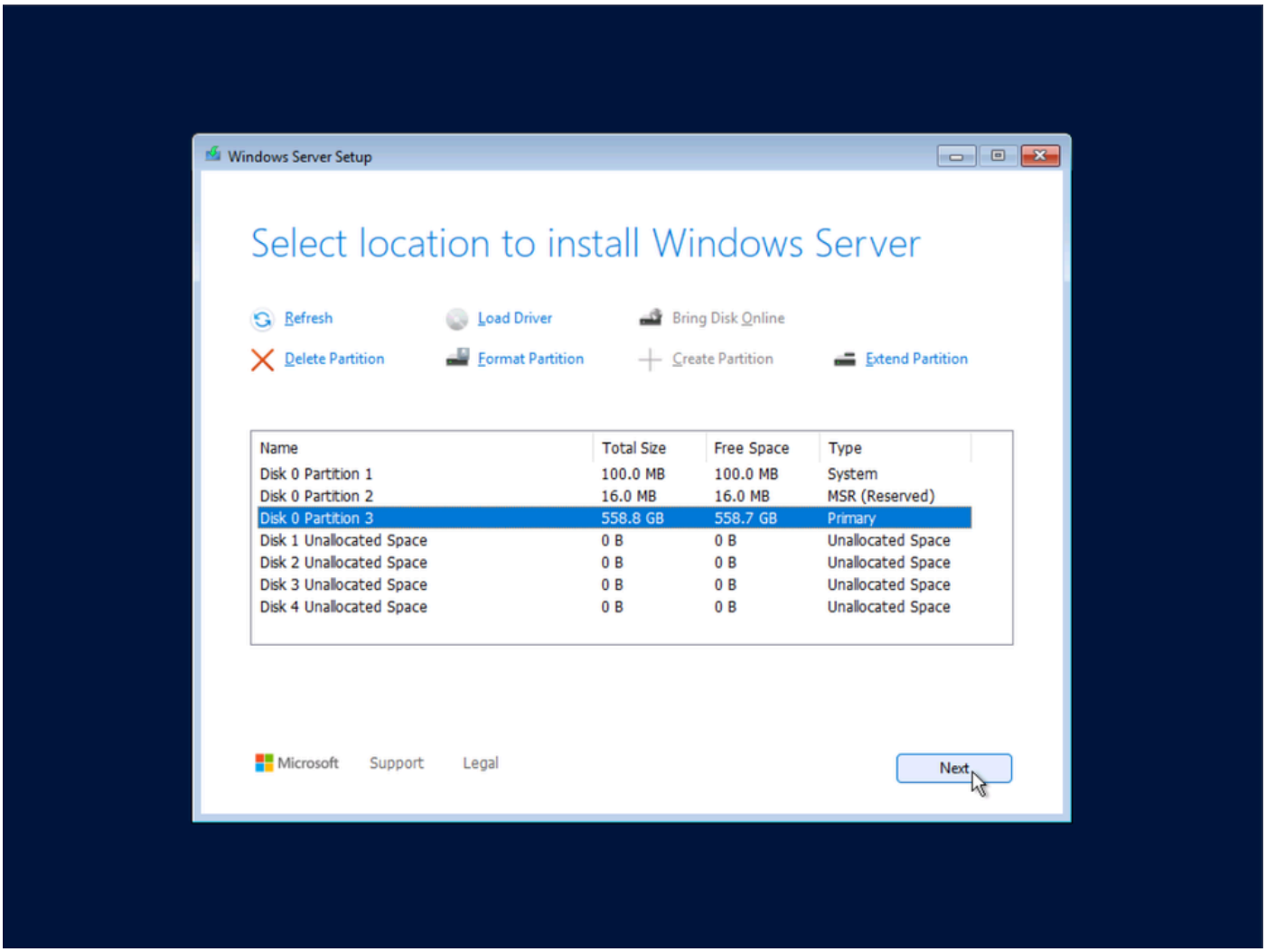
Step 2. Select the disk and create a new partition to make it viable for installation. Make sure to choose the right disk.



Two partitions that Windows requires for proper installation are displayed. They are Windows reserved, and you are not be able to modify or delete them.

Step 3. Select your primary partition.

Step 4. Click **Next** to continue. Complete the installation according to the requirements and standards of your company. Monitor the installation progress and answering prompts as required.



Remote (Boot from SAN)

Prerequisites for successful Boot From SAN:

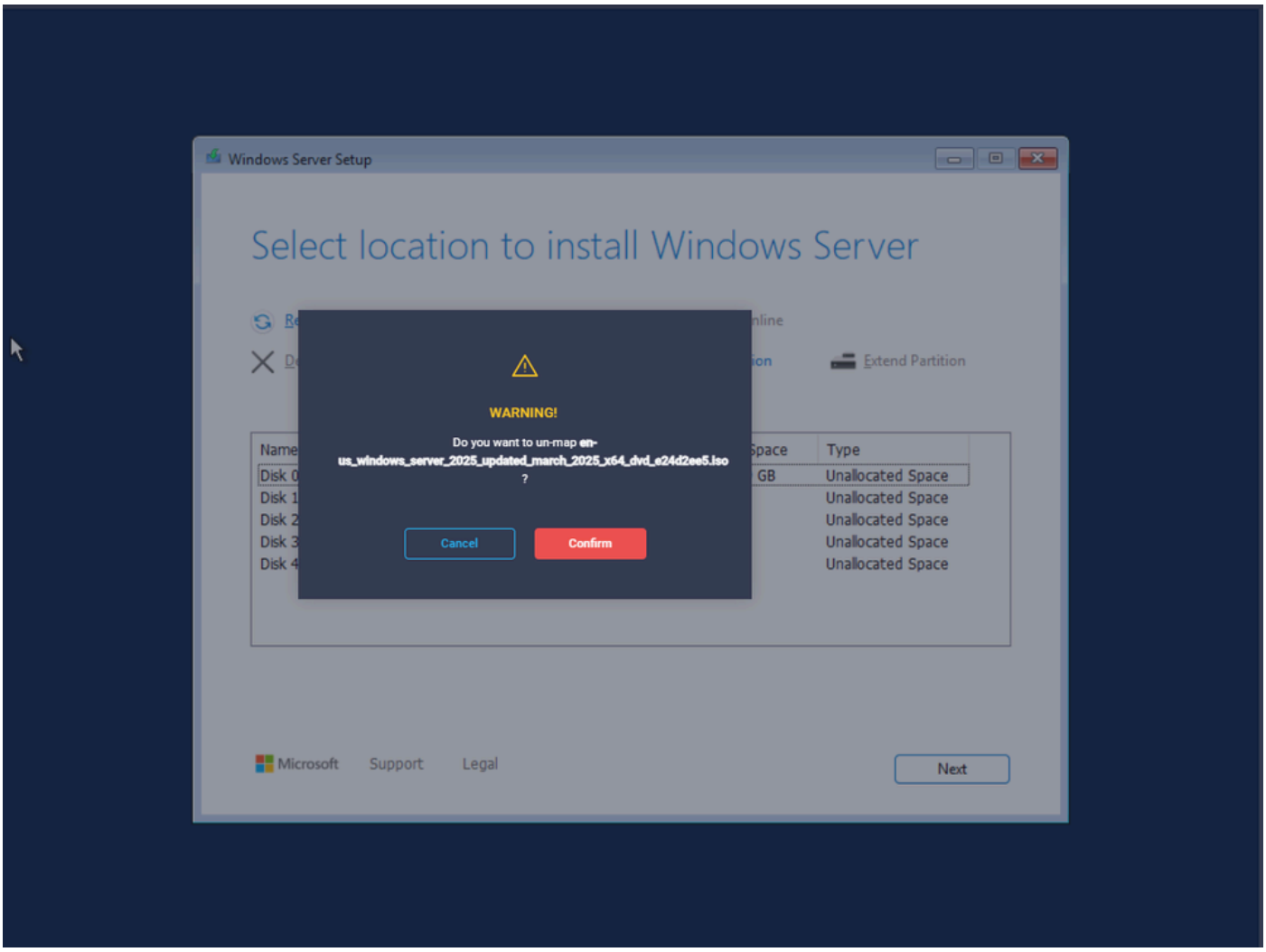
1. Boot policy configured in UCS Manager or Intersight Managed Mode. You can check Configure Boot from SAN in Intersight Managed Mode - Cisco or Configure Boot from SAN in UCS Manager - Cisco for more details.
2. Masking configured on SAN arrays.
3. Zoning configured (if applicable)

In this scenario, only local disks can be viewed for the installation of Windows. The corresponding drivers are added to be able to view the remote disks.

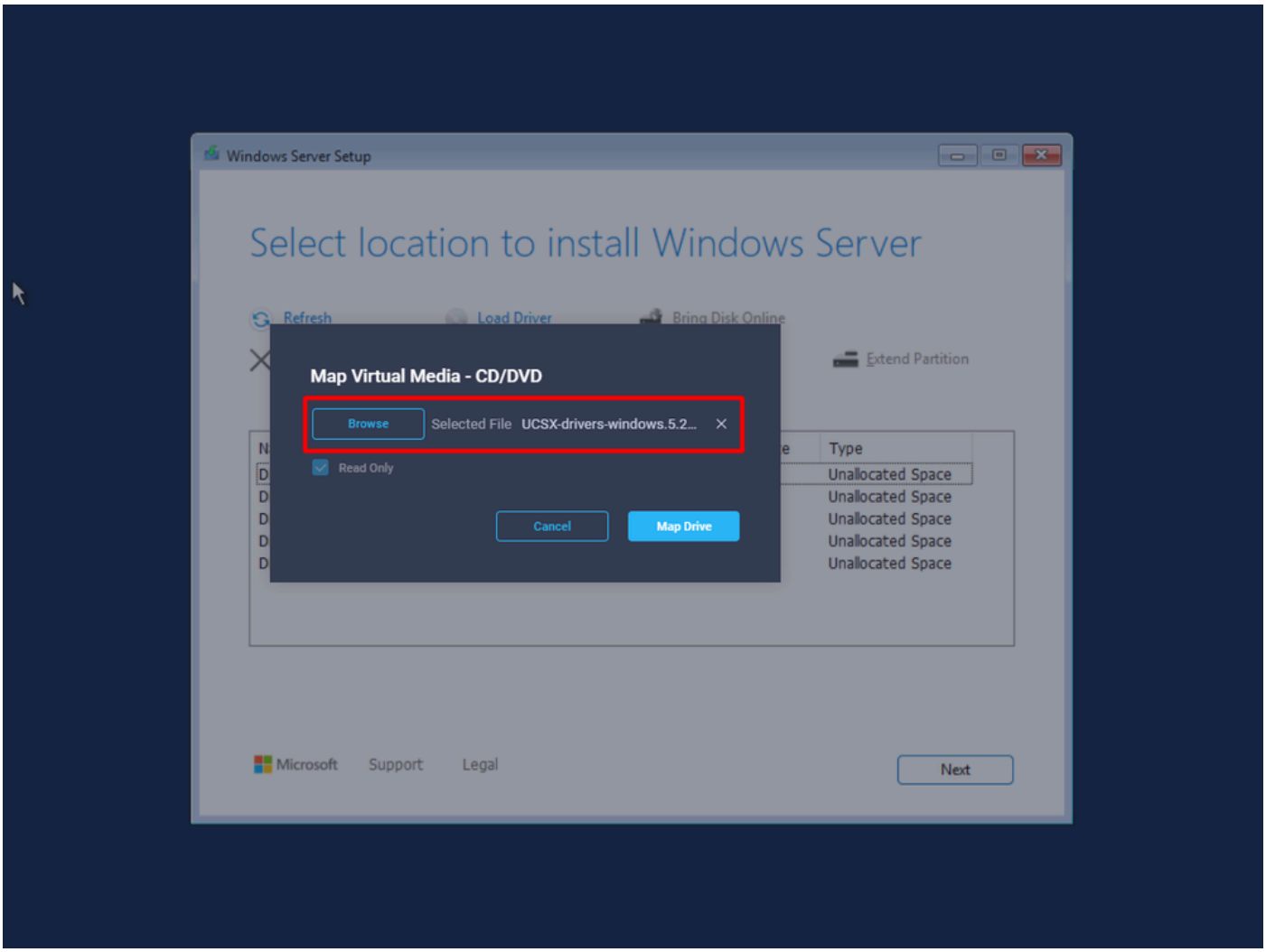
Step 1. Check the corresponding drivers according to your server model, version, and physical components in UCS Hardware and Software Compatibility

Download the proper ISO bundle at Software Download.

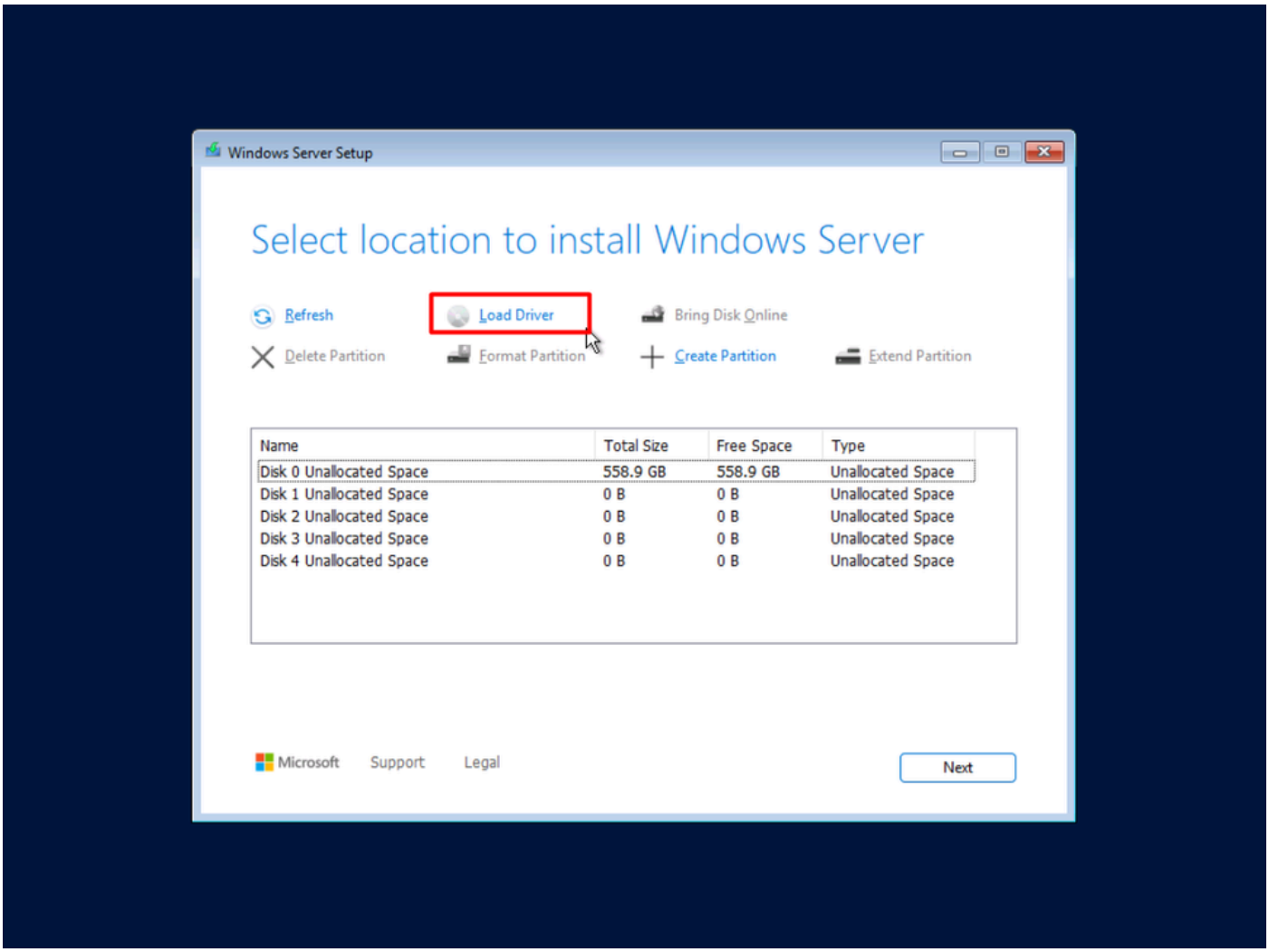
Step 2. Navigate to **Virtual Media** tab. Un-map the Windows Installation image from the **vKVM-Mapped vDVD**.



Step 3.Map the drivers bundle.

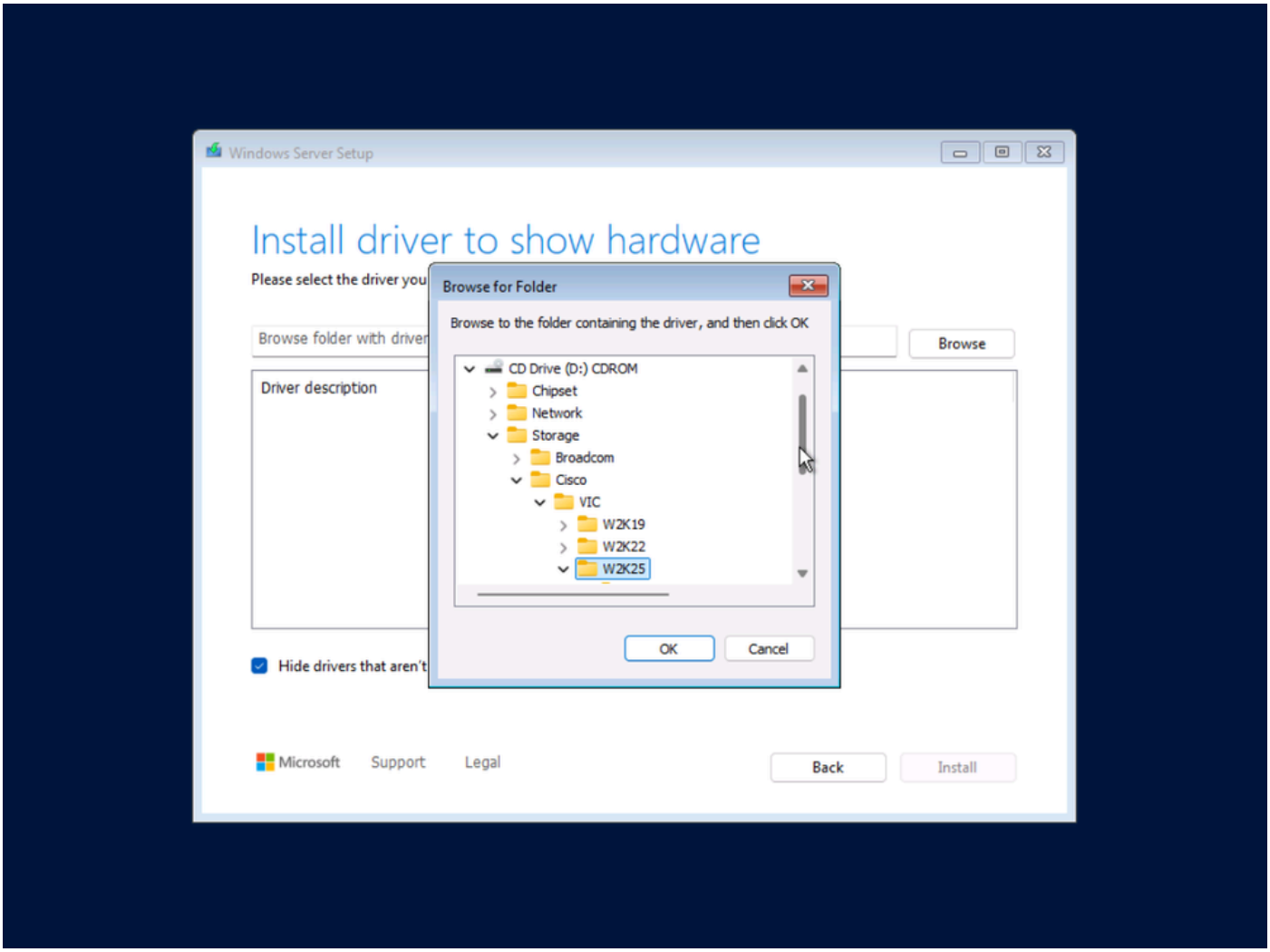


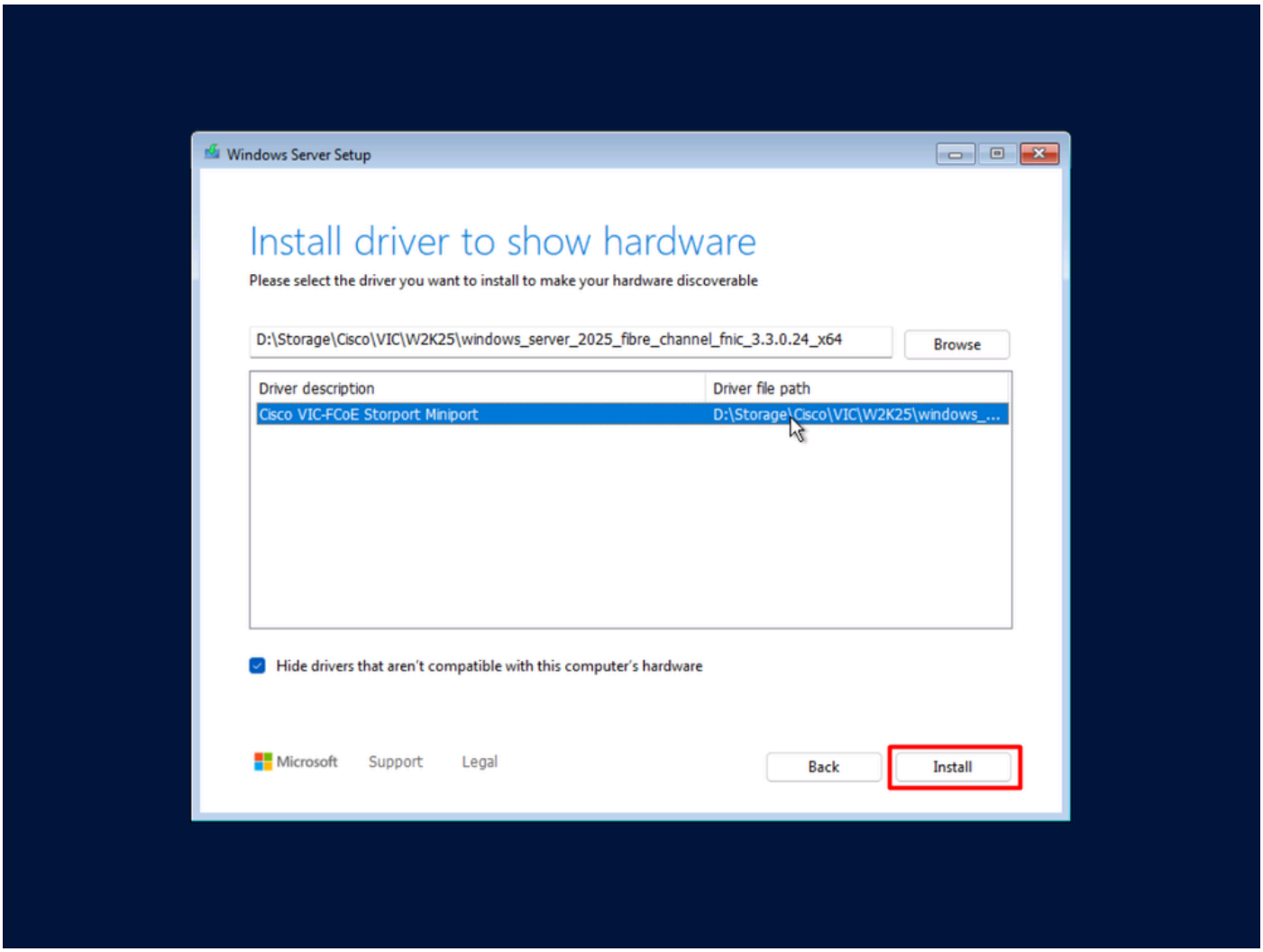
Step 4. Click **Load Drive** option at the Windows Server Setup.



Step 5. Navigate to **Storage** > **Cisco** > **VIC** > **WK25**. Select the driver file and click **OK**.

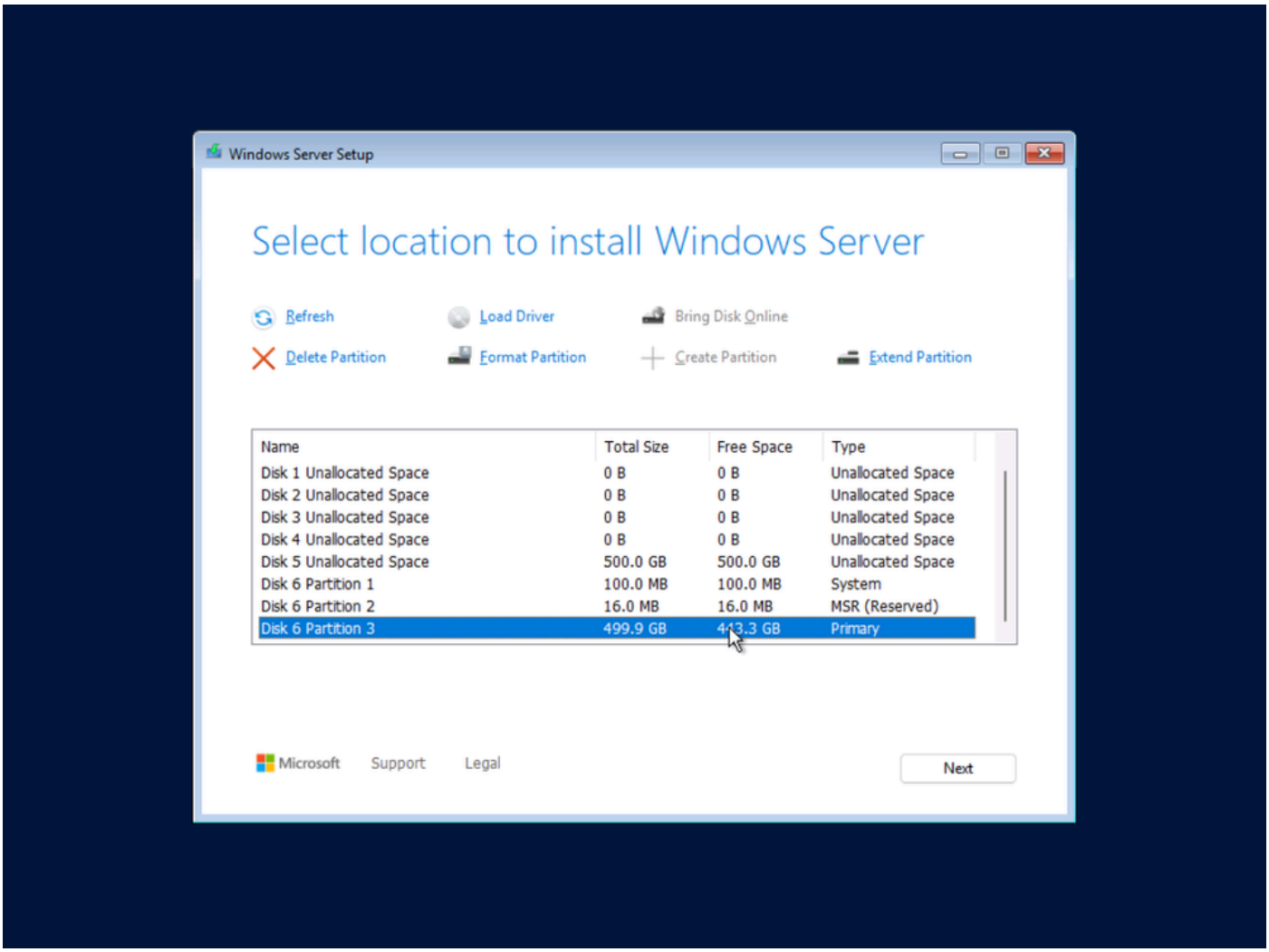
Verify the driver file path is correct and hit **Install**.


Windows Server Setup
Install driver to show hardware
Please select the driver you
Browse folder with driver
Browse
Driver description
Hide drivers that aren't
Microsoft
Support
Legal
Back
Install
Browse for Folder
Browse to the folder containing the driver, and then click OK
CD Drive (D:) CDROM
Chipset
Network
Storage
Broadcom
Cisco
VIC
W2K19
W2K22
W2K25
OK
Cancel



The program begins scanning the disks again. This time, the remote disks that could not be seen before, appear.

Step 6. Select the disk to use for the installation and click **Next**.



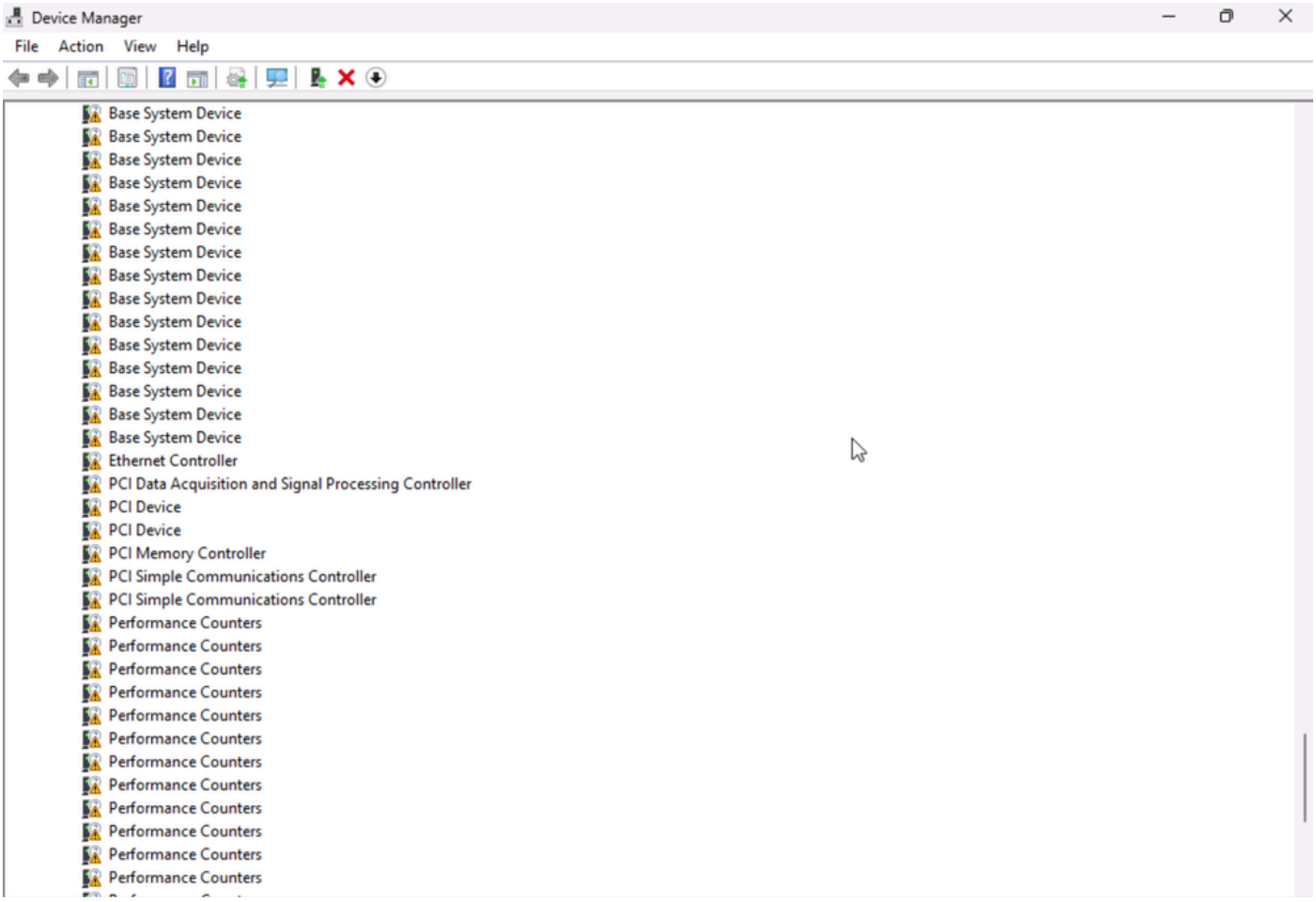
Step 7. Go through the wizard to finish the installation.

Drivers Installation

At this point, Windows still needs device drivers installed for devices such as the server chipset and adapter controllers.

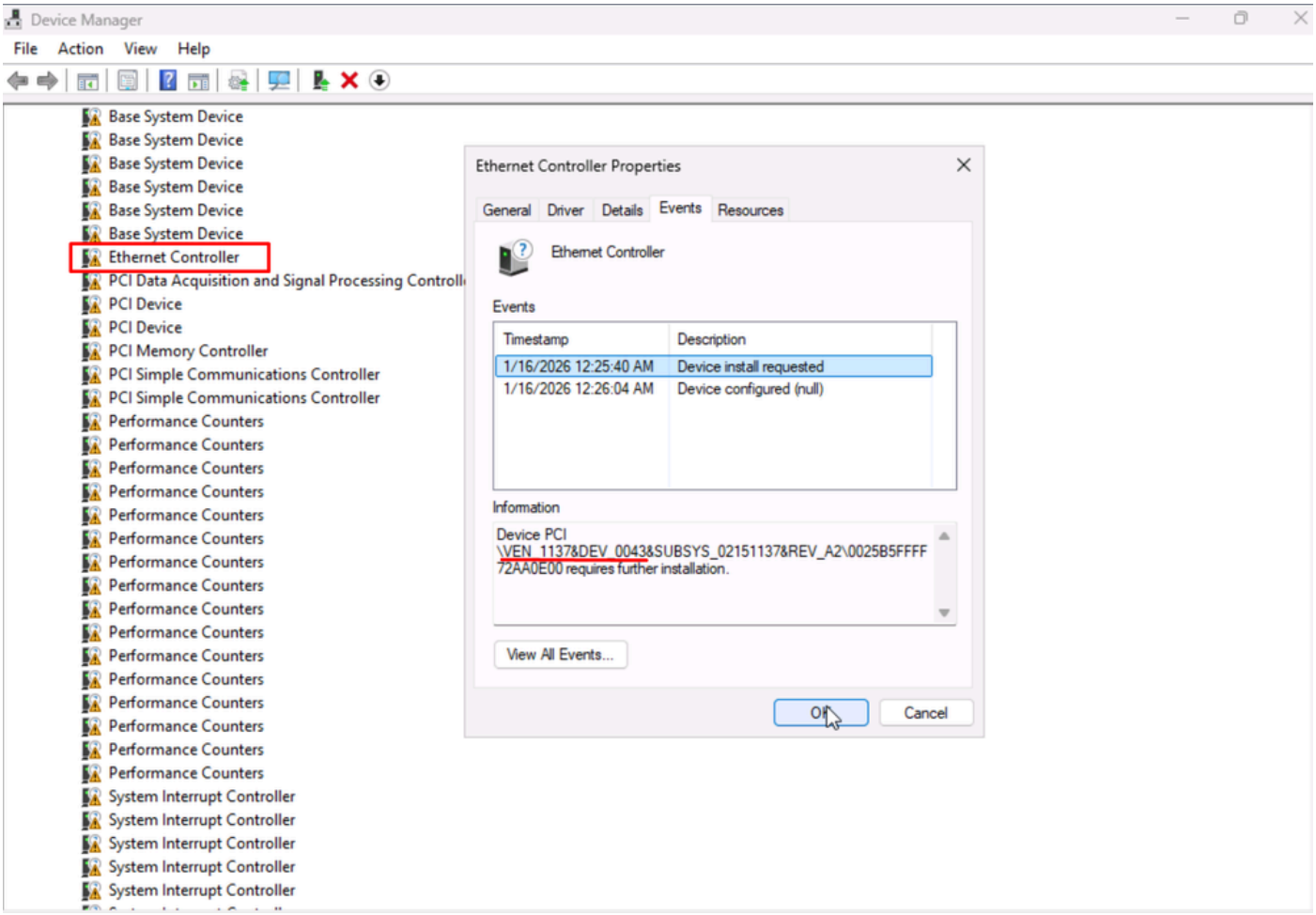
Install the drivers via Device Manager

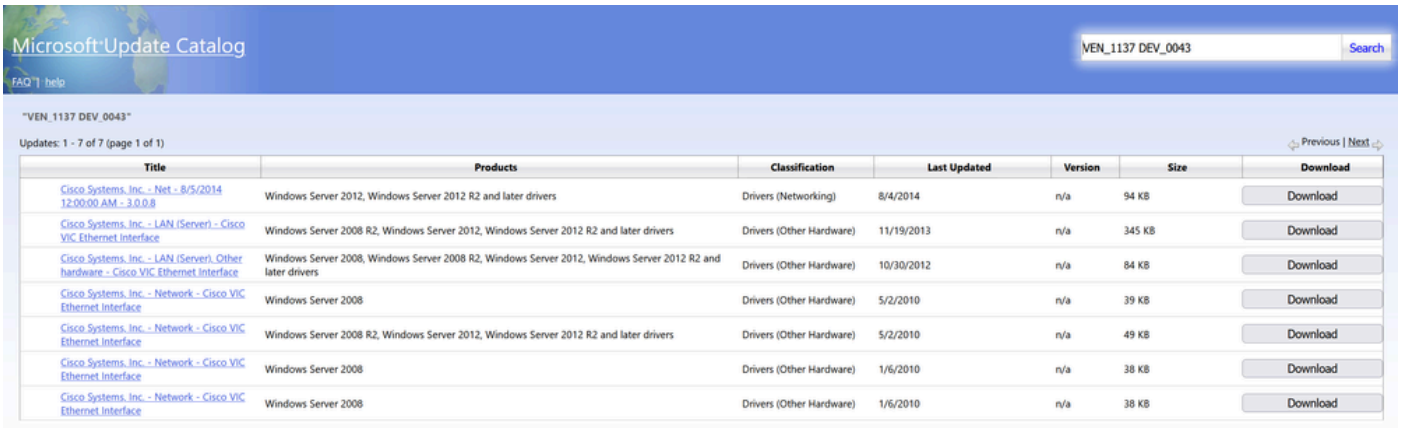
Step 1. Look for any devices that still require driver installation with **Device Manager**. These devices are marked with yellow warning flags.



Step 2. Check the Properties of an unknown Device. Navigate to **Events** tab and note the Device PCI information.

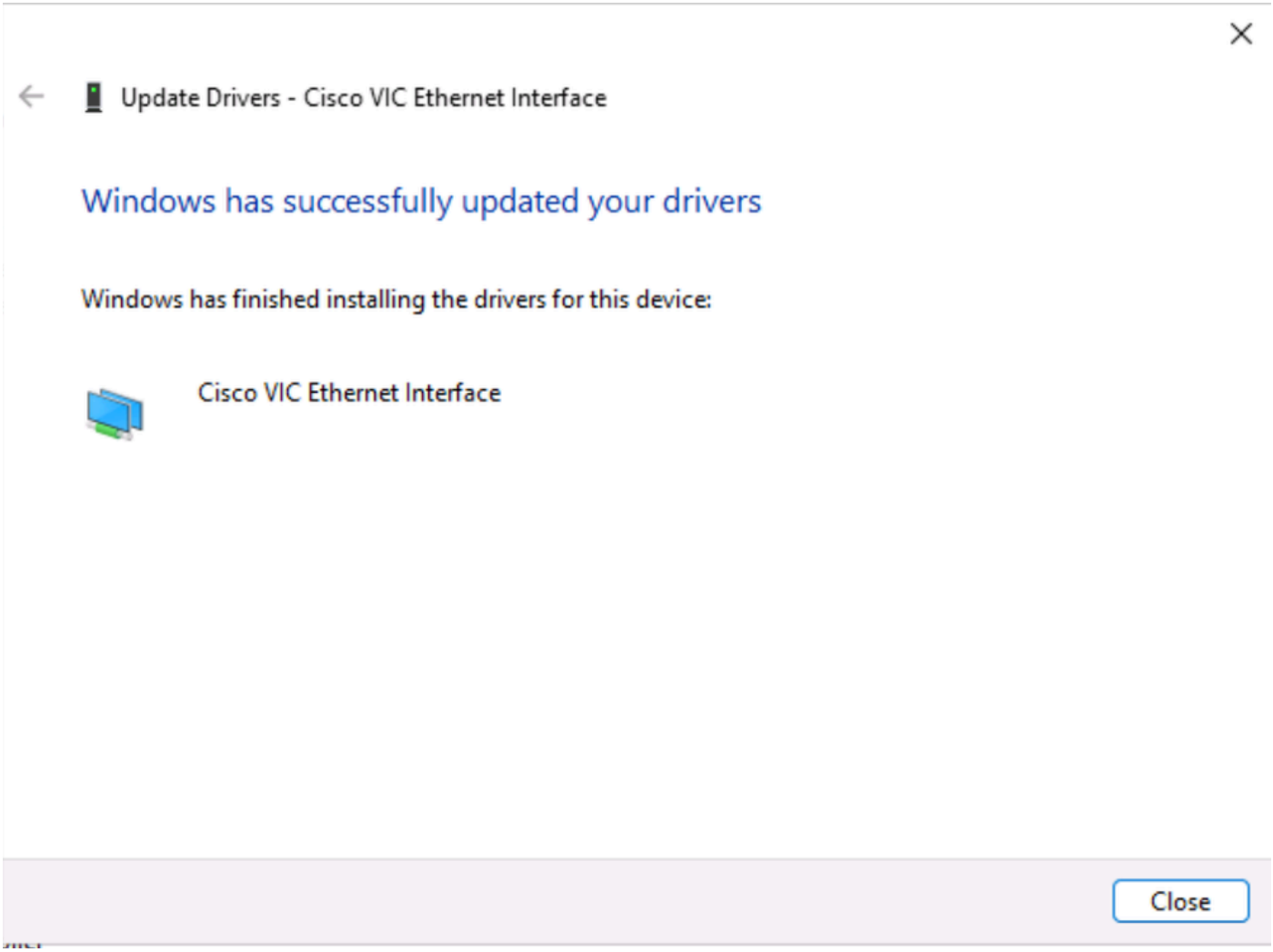
Step 3. Go to Microsoft Update Catalog and search for the Vendor and Device number to know what the device is about. This way you can know which driver needs to be installed.

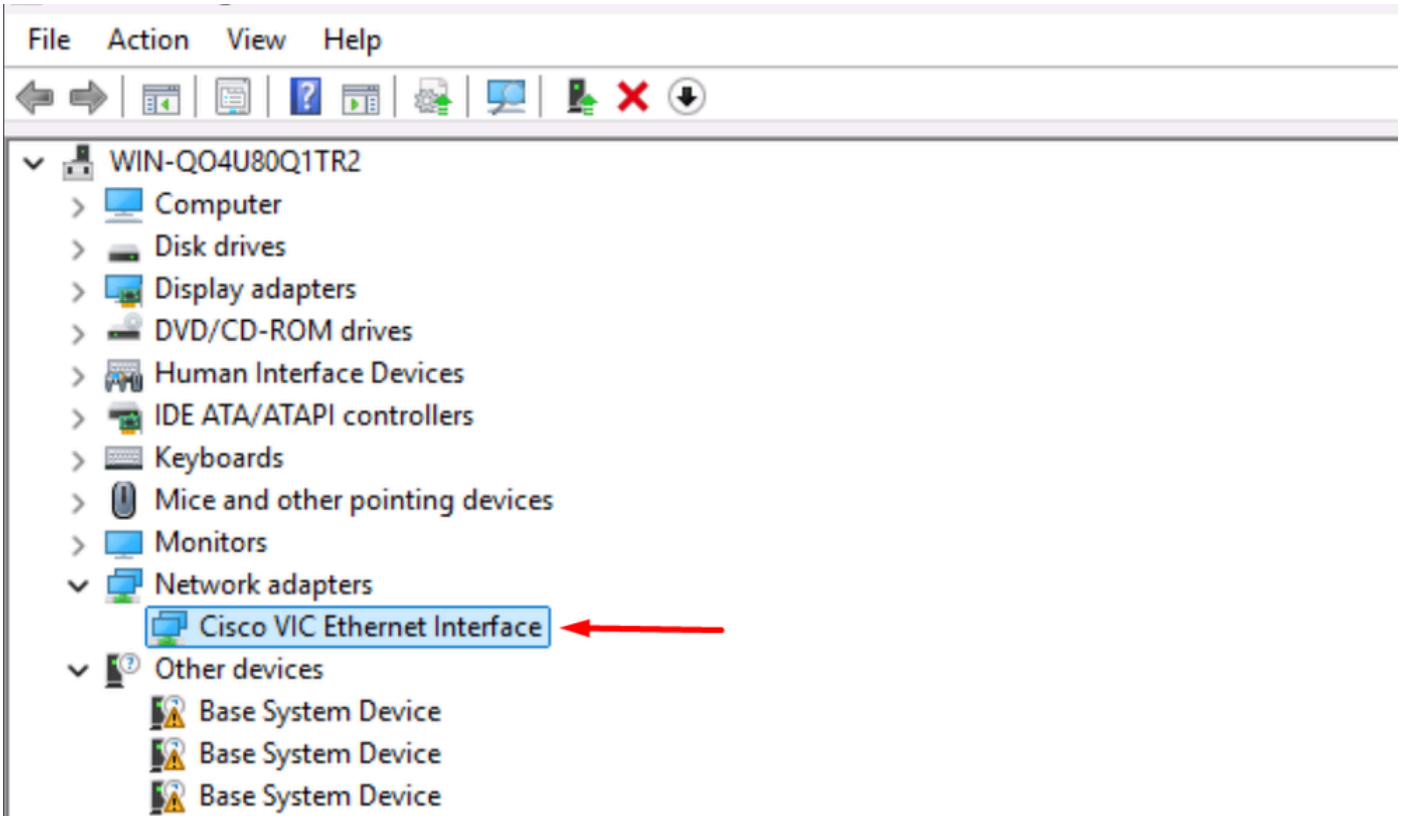




Step 4. Find the appropriate drivers at Software Download. Mount the ISO in your machine.

Step 5. Right click in the device. Click **Update Driver** and browse in your computer for the proper file drive. Install the drivers so devices are recognized and function properly.





Install the drivers via CLI

For the purposes of this document, only the network card drivers is installed.

Step 1. There are devices that the machine cannot detect, among them is the network card. Run the command to list unknown devices.

```
> Get-PnpDevice | Where-Object {$_.Status -eq "Error"}
```

Run the command **Get-PnPDevice -Class 'Net'** to check whether the network adapter is visible or not.

```
> Get-PnPDevice  -Class 'Net'
```

Step 2. Mount the ISO file. Navigate to **Virtual Media** > **vKVM-Mapped vDVD**. Browse for file of the drivers and map it.

Step 3. With the help of diskpart, locate where the disk with the drivers with **list volume** command as shown below:

```
PS C:\> diskpart

Microsoft DiskPart version 10.0.26100.1150

Copyright (C) Microsoft Corporation.
On computer: WIN-VBOQNMF5UKC

DISKPART> list volume

  Volume ###  Ltr  Label        Fs     Type        Size     Status     Info
  ----------  ---  -----------  -----  ----------  -------  ---------  --------
  Volume 0     G   CDROM        CDFS   CD-ROM      3321 MB  Healthy
  Volume 1     H                       CD-ROM         0 B  No Media
  Volume 2     C                NTFS   Partition    557 GB  Healthy    Boot
  Volume 3                      FAT32  Partition    100 MB  Healthy    System
  Volume 4                      NTFS   Partition    674 MB  Healthy    Hidden
  Volume 5     D                       Removable      0 B  No Media
  Volume 6     E                       Removable      0 B  No Media
  Volume 7     F                       Removable      0 B  No Media

DISKPART> exit

Leaving DiskPart...
PS C:\> cd G:
PS G:\> dir


    Directory: G:\


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         7/18/2025   5:15 AM                Chipset
d-----         7/18/2025   5:16 AM                Network
d-----         7/18/2025   5:13 AM                Storage
d-----         7/18/2025   5:16 AM                Utilities
d-----         7/18/2025   5:17 AM                Video
--r---         7/18/2025   5:25 AM             49 release.txt
--r---         7/18/2025   5:25 AM             13 tag.txt


PS G:\> _
```

Step 4. Navigate to the file that contains the drivers. In this example, the goal is to install the ethernet network driver known as nenic. Go to **Network** > **Cisco** > **VIC** > **W2k25** > **nenic**.

Step 5. Once you are in the proper path, use pnputil.exe command-line tool to install the drivers. Run the command **pnputil.exe -I -a .*inf** to install the drivers.

```
G:\Network\Cisco\VIC\W2k25\nenic> pnputil.exe -I -a .\*inf
```

```
PS G:\Network\Cisco\VIC\W2K25\nenic> pnputil.exe -I -a .\*inf
Microsoft PnP Utility

Processing inf :            nenic.inf
Successfully installed the driver.
Driver package added successfully.
Published name :            oem0.inf


Total attempted:              1
Number successfully imported: 1

PS G:\Network\Cisco\VIC\W2K25\nenic>
```

Step 6. Verify that the device is visible. On this occasion, the Cisco VIC Ethernet Interface is displayed.

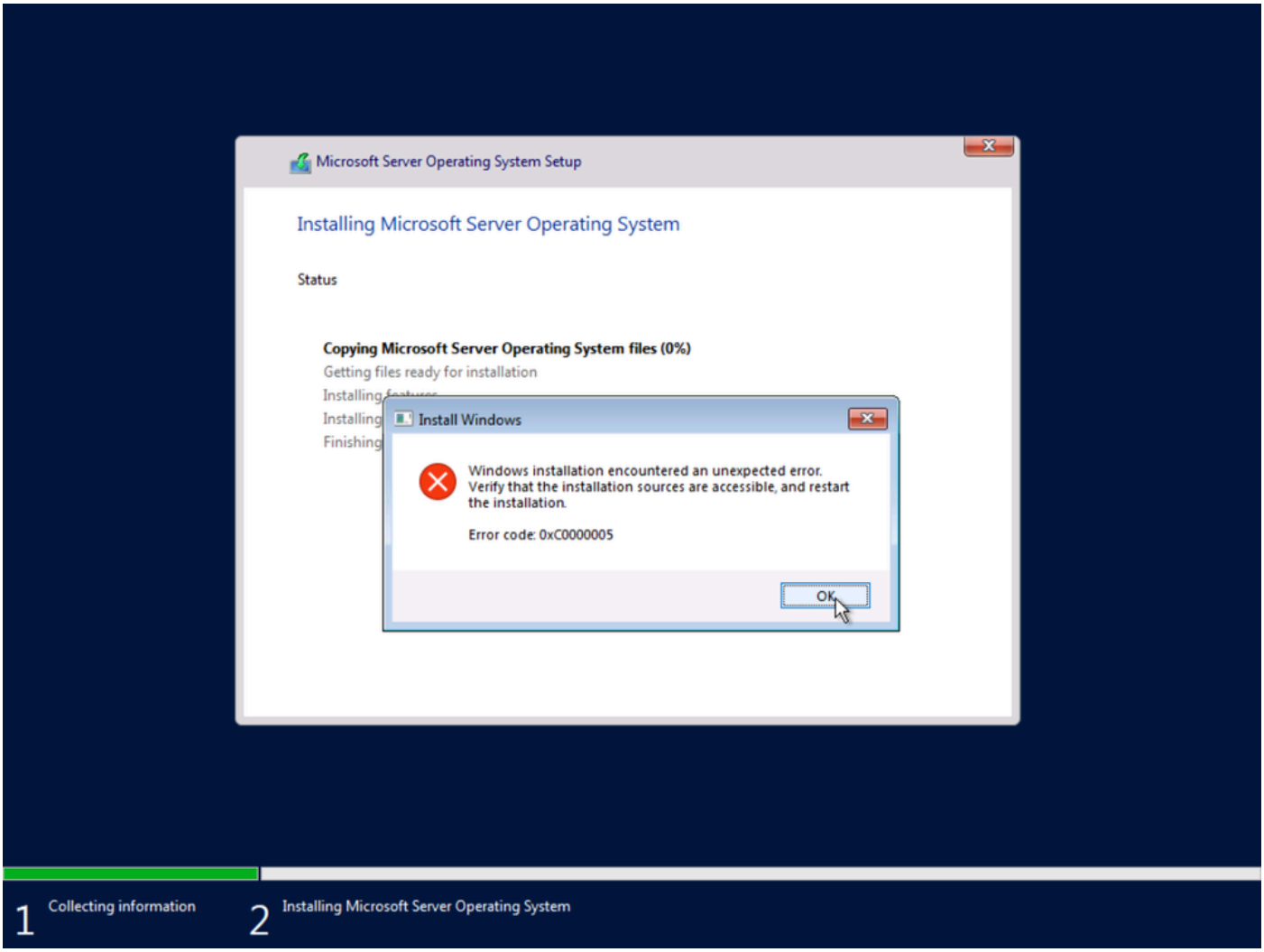
```
PS G:\Network\Cisco\VIC\W2K25\nenic> Get-PnPDevice -Class 'Net'

Status     Class          FriendlyName                                    InstanceId
------     -----          ------------                                    ----------
OK         Net            Microsoft Kernel Debug Network Adapter          ROOT\KDN...
OK         Net            Cisco VIC Ethernet Interface                    PCI\VEN_...


PS G:\Network\Cisco\VIC\W2K25\nenic>
```

Troubleshoot

Error while installing Windows in Remote Disks

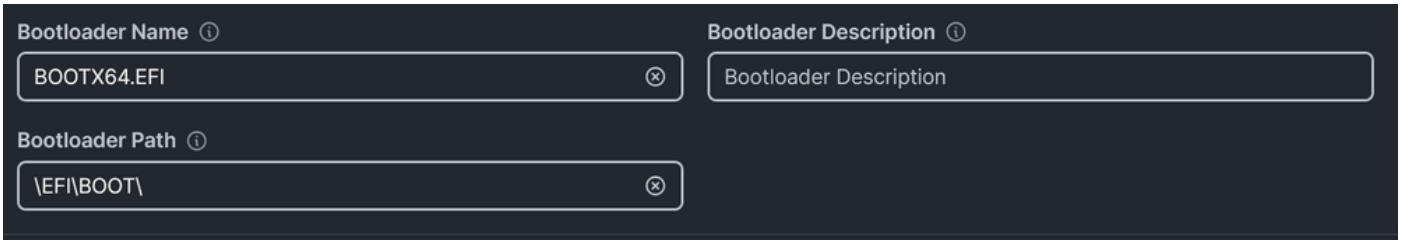


- Disable multipath in your server. Leave only one path to reach the remote storage.

Server goes to Shell after reboot

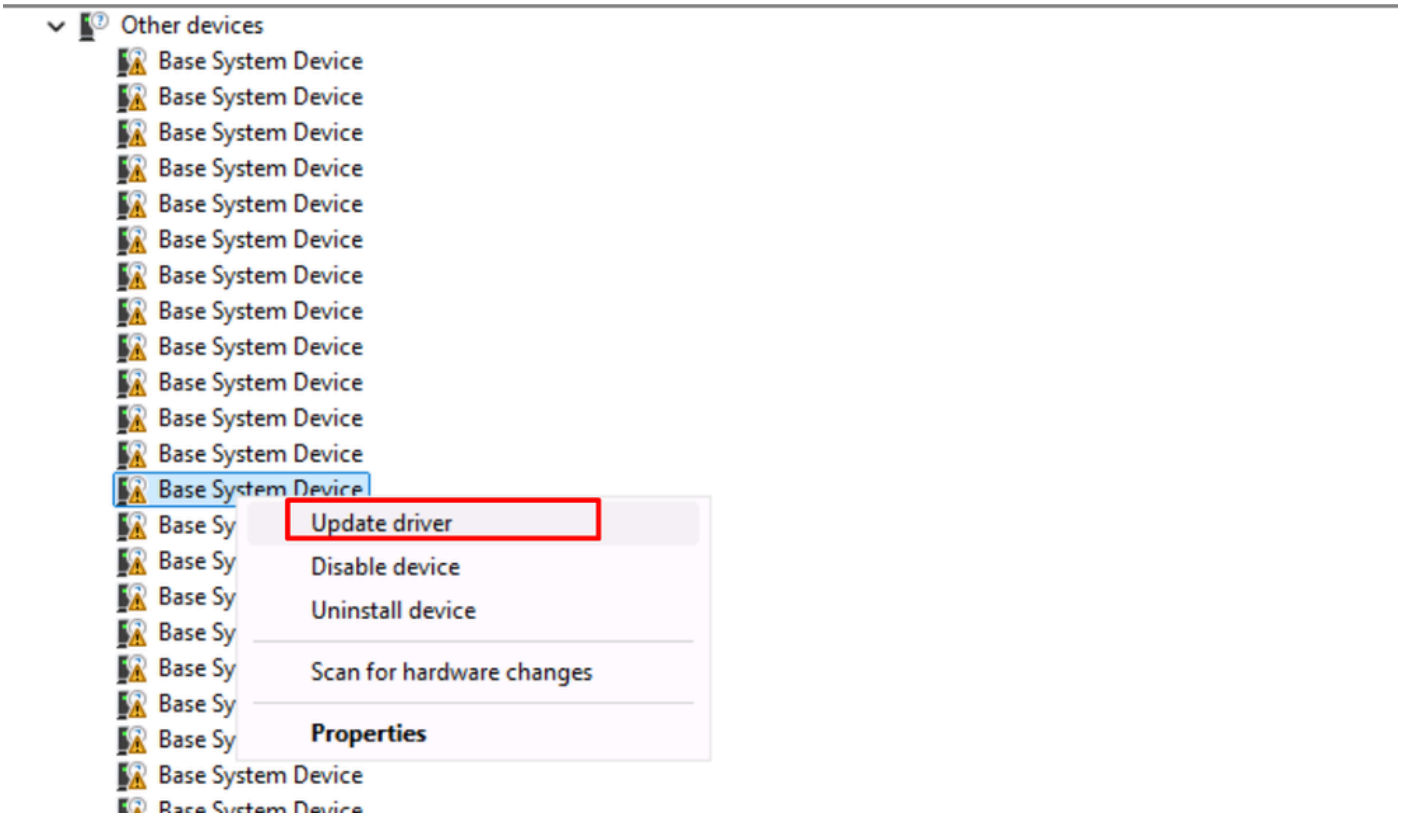
Specifiy the path and name of the bootable image in the Boot Order policy. For Windows:

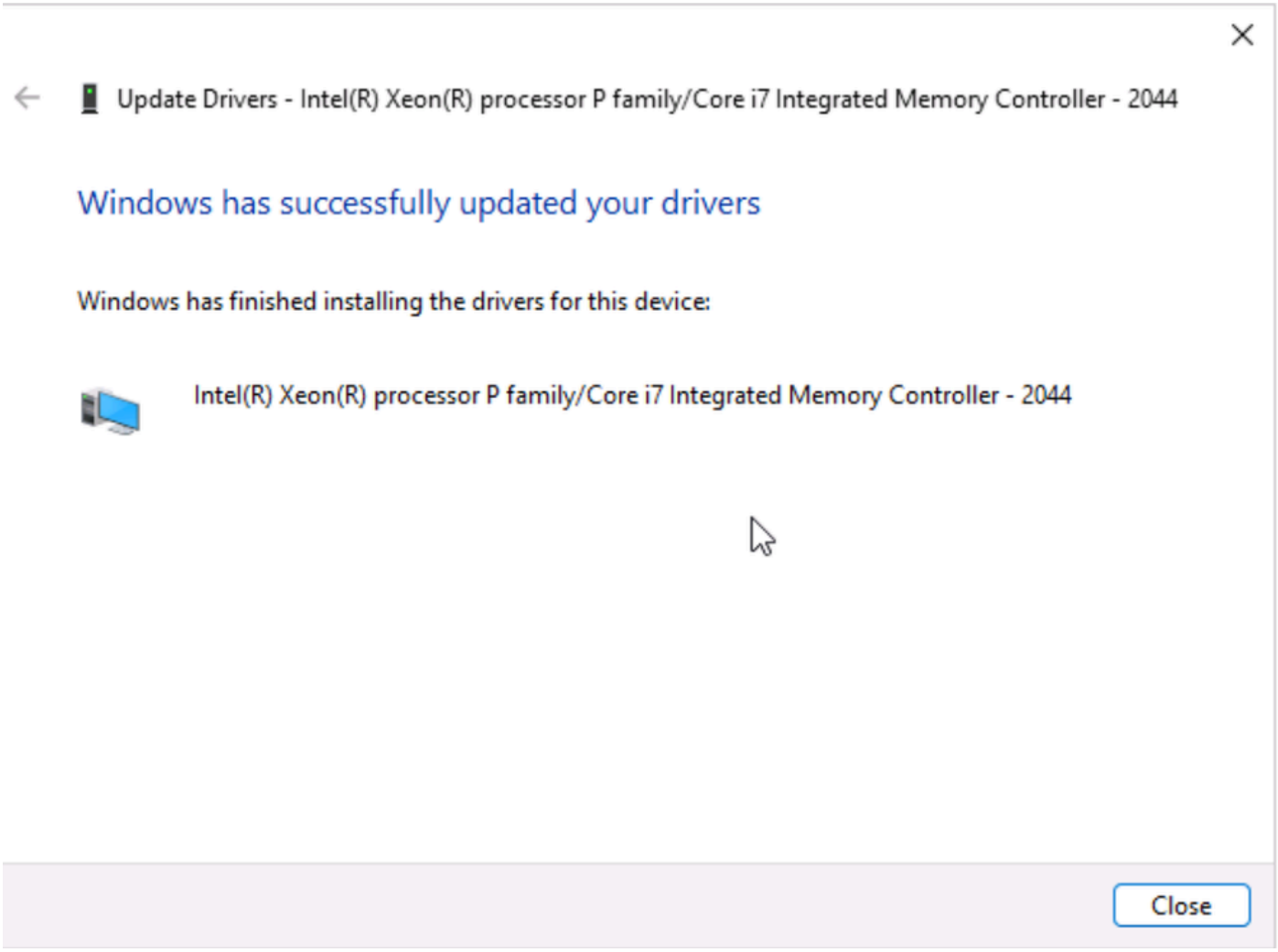
- Bootloader Name: **BOOTX64.EFI**
- Bootloader Path: **\EFI\BOOT**



Base System Device

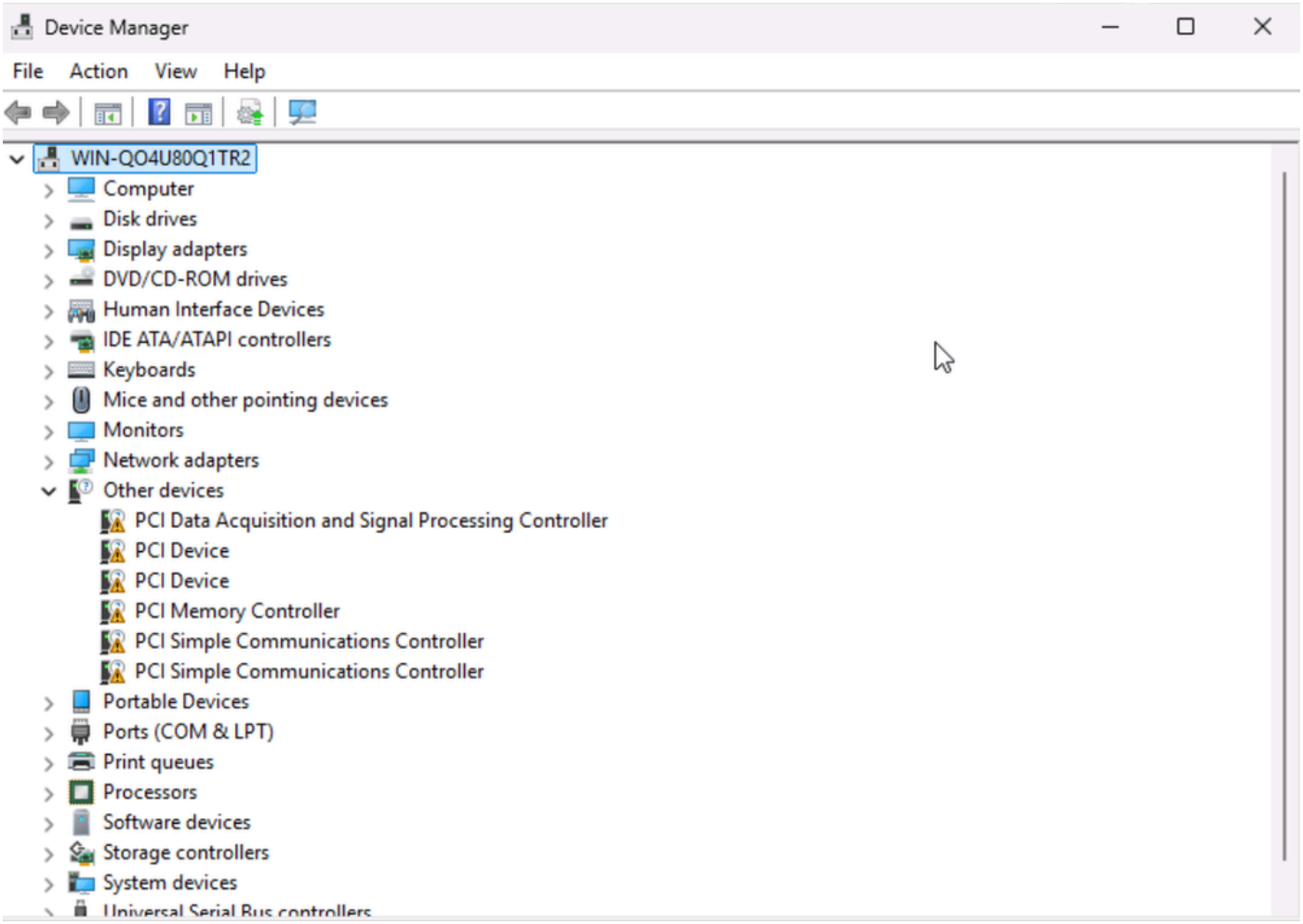
Step 1. Right click in the device, hit **Update driver**. Browse and install drivers of Chipset in your computer.





Step 2. Reboot the machine.

Step 3. Verify in **Device Manager** that the devices are recognized. Generic devices are listed now.



Related Information

[Server Profiles - Cisco Intersight Help Center]

[Installing the Server OS]

[Configure Boot from Local Storage in Intersight Manage Mode (IMM)]

[PnPUtil Command Line Tool for Driver Packages - Windows drivers | Microsoft Learn]

[Get-PnpDevice (PnpDevice) | Microsoft Learn]