



# Installing Cisco UCS VIC Drivers for Windows

---

- [Installing Windows Drivers During OS Install \(Windows 2012 and 2012 R2\), page 1](#)
- [Installing Windows Drivers During OS Install \(Windows 2008 SP2 and R2\), page 2](#)
- [Installing Windows Drivers After OS Installation \(Windows 2008-R2\), page 3](#)
- [Installing Windows Drivers After OS Installation \(Windows 2008 SP2\), page 4](#)
- [Updating Existing Windows Drivers \(Windows 2012 and 2012 R2\), page 5](#)
- [Updating Existing Windows Drivers \(Windows 2008 SP2 and R2\), page 6](#)
- [Upgrading Cisco UCS VIC Drivers on Windows, page 7](#)
- [Installing the iSCSI Crash Dump Driver, page 7](#)
- [The NIC Teaming Driver, page 8](#)

## Installing Windows Drivers During OS Install (Windows 2012 and 2012 R2)

If you are installing Windows on a SAN LUN, you must install Cisco VIC drivers for Windows during the OS installation. If you do not provide the drivers during the OS installation, the system is not able to detect the SAN LUN.

Except in Cisco UCS M-Series, if installing Windows on the local hard disk, it is not required to install the drivers during the OS installation. You can install the drivers after completing the OS installation.



---

**Important** Cisco UCS Manager Release 3.1(2) and later releases do not support Cisco UCS M-Series Servers.

---

In Cisco UCS M-Series, to install Windows on the local hard disk, you must install the VIC drivers during OS installation.



---

**Caution** The driver installation file modifies certain registry entries, such as the disk timeout value of the system disk driver. Removing the driver does not restore these values.

---

Ensure that you adhere to the following best practice for installing the Windows drivers during the OS installation of Windows 2012 and 2012 R2. You must upgrade the infrastructure in the following order before upgrading the drivers.

- Upgrade the infrastructure firmware which includes the UCS Manager, the fabric interconnects, and the chassis I/O modules.
- Upgrade the server and adapter firmware.
- Upgrade the OS VIC drivers.

**Caution**

Failure to adhere to the proper upgrade sequence can cause the server to crash.

**Procedure**

- Step 1** Start the Windows installation using the installation DVD or virtual media.
- Step 2** On the **Where do you want to install Windows** screen, click **Load Driver**.
- Step 3** **Browse** to the driver and click **OK**. The driver appears in the **Select the drive to be installed** window.
- Step 4** Confirm that the correct driver is displayed on the **Select the drive to be installed** screen and click **Next**.
- Step 5** Continue with your Windows installation on the LUN or select the LUN on the **Where do you want to install Windows?** screen.

## Installing Windows Drivers During OS Install (Windows 2008 SP2 and R2)

If you are installing Windows on a SAN LUN, you must install Cisco VIC drivers for Windows during the OS installation. If you do not provide the drivers during OS installation, the system cannot detect the SAN LUN.

If you are installing Windows on the local hard disk, it is not required to install the drivers during the OS installation. You can install the drivers after completing the OS installation.

**Caution**

The driver installation file modifies certain registry entries, such as the disk timeout value of the system disk driver. Removing the driver does not restore these values.

Ensure that you adhere to the following best practice for installing the Windows drivers during the OS installation of Windows 2008 and 2008 R2. You must upgrade the infrastructure in the following order before upgrading the drivers.

- Upgrade the infrastructure firmware which includes the UCS Manager, the fabric interconnects, and the chassis I/O modules.
- Upgrade the server and adapter firmware.
- Upgrade the OS VIC drivers.

**Caution**

Failure to adhere to the proper upgrade sequence can cause the server to crash.

**Note**

Do not reboot until all three hotfixes are installed.

If these hotfixes are not installed, the device drivers are not correctly registered as critical devices, and cause a crash when they are being upgraded.

**Procedure**

- Step 1** Start the Windows installation using the installation DVD or virtual media.
- Step 2** On the **Where do you want to install Windows** screen, click **Load Driver**.
- Step 3** **Browse** to the driver and click **OK**. The driver appears in the **Select the drive to be installed** window.
- Step 4** Confirm that the correct driver is displayed on the **Select the drive to be installed** screen and click **Next**.
- Step 5** Continue with your Windows installation on the SAN LUN or select SAN LUN on the **Where do you want to install Windows?** screen.

## Installing Windows Drivers After OS Installation (Windows 2008-R2)

**Caution**

The driver installation file modifies certain registry entries, such as the disk timeout value of the system disk driver. Removing the driver does not restore these values.

**Note**

Follow the same steps for Windows 2012 and Windows 2012 R2.

### Procedure

---

- Step 1** Windows detects the newly installed Fibre Channel or Ethernet device and displays a **Device driver software was not successfully installed** message.
  - Step 2** Right-click the Ethernet or Fibre Channel device and choose **Update driver software**.
  - Step 3** Click **Browse my computer for driver software**.
  - Step 4** Click **Let me pick from a list of device drivers on my computer**.
  - Step 5** On the **Select your drivers type from the list below** window, leave **Show All Devices** selected and click **Next**.
  - Step 6** On the **Select the device driver you want to install for this hardware** window, click **Have Disk**.
  - Step 7** On the **Install from Disk** window, **Browse** for the driver and click **OK**.
  - Step 8** Click **Next** on the **Select the device driver you want to install for this hardware** screen.
  - Step 9** Click **Close** to exit the wizard.
  - Step 10** If Windows displays the following message following SAN boot, click **Yes** to restart the computer immediately.  
`System Settings Change. Windows has finished installing a new device. The software that supports your device requires that you restart your computer. You must restart your computer before the new settings will take effect. Do you want to restart your computer now?`
- 

## Installing Windows Drivers After OS Installation (Windows 2008 SP2)



### Caution

The driver installation file modifies certain registry entries, such as the disk timeout value of the system disk driver. Removing the driver does not restore these values.

---

### Procedure

---

- Step 1** When Windows detects the newly installed Fibre Channel or Ethernet device and displays the **Found New Hardware** wizard, click **Locate and install driver software (recommended)**.
- Step 2** When asked to insert the disk, click **I don't have the disc. Show me other options**.
- Step 3** Click **Browse my computer for driver software (advanced)**.
- Step 4** Browse for the drivers and click **Next**.
- Step 5** On the **Would you like to install this device software?** window, click **Install**.
- Step 6** Click **Close** twice to complete the driver software installation.
- Step 7** If Windows displays the following message following SAN boot, click **Yes** to restart the computer immediately.  
`System Settings Change. Windows has finished installing a new device. The software that supports your device requires that you restart your computer. You must restart your computer before the new settings will take effect. Do you want to restart your computer now?`

# Updating Existing Windows Drivers (Windows 2012 and 2012 R2)

**Caution**

The driver installation file modifies certain registry entries, such as the disk timeout value of the system disk driver. Removing the driver does not restore these values.

Follow the steps in this section to update existing Windows drivers. You can alternately upgrade the drivers using the Cisco VIO installer. Download the respective driver ISO for the required release, and use the MSI installer from that file location. For example, here are the paths to the specific releases:

- Windows/Installers/Cisco/MLOM/W2K12/x64/
- Windows/Installers/Cisco/MLOM/W2K12R2/x64/

Use the Cisco VIO installer to install and upgrade the VIC drivers across different versions and editions of Windows 2012 and 2012 R2. Refer to the readme file for additional information on the Cisco VIO installer.

Ensure that you adhere to the following best practice for installing the Windows drivers during the OS installation of Windows 2012 and 2012 R2.

**Note**

You must upgrade the infrastructure in the following order before upgrading the drivers.

- Upgrade the infrastructure firmware which includes the UCS Manager, the fabric interconnects, and the chassis I/O modules.
- Upgrade the server and adapter firmware.
- Upgrade the OS VIC drivers.

**Caution**

Failure to adhere to the proper upgrade sequence can cause the server to crash.

## Procedure

**Step 1** Start the **Device Manager**.

- a) Right-click **My Computer**.
- b) choose **Manage**.
- c) choose **Device Manager**.

**Step 2** Expand the adapter.

- For the eNIC driver, expand **Network Adapters**.
- For the fNIC driver, expand **Storage Controllers**.

- Step 3** In the **Devices** list, right-click the adapter and choose **Update Driver Software**. The **Update Driver Software** window opens.
- Step 4** In the **How do you want to search for driver software?** area, choose **Browse my computer for driver software**.
- Step 5** Choose your adapter and click **Next**.
- Step 6** In the **Install from Disk** window, browse to the driver file and click **OK**.
- Step 7** Click **OK** in the restart pop up to reboot the server.
- 

## Updating Existing Windows Drivers (Windows 2008 SP2 and R2)



### Caution

The driver installation file modifies certain registry entries, such as the disk timeout value of the system disk driver. Removing the driver does not restore these values.

Follow the steps in this section to update existing Windows drivers. You can alternately upgrade the drivers using the Cisco VIO installer. Download the respective driver ISO for the required release, and use the MSI installer from that file location. For example, here is the path to the Windows 2008 R2 release:

- Windows/Installers/Cisco/MLOM/W2K8R2/x64/

Use the Cisco VIO installer to install and upgrade the VIC drivers across different versions and editions of Windows 2008 and 2008 R2. Refer to the readme file for additional information on the Cisco VIO installer.

Ensure that you adhere to the following best practice for installing the Windows drivers during the OS installation of Windows 2008 and 2008 R2.



### Note

You must upgrade the infrastructure in the following order before upgrading the drivers.

- Upgrade the infrastructure firmware which includes the UCS Manager, the Fabric Interconnects, and the chassis I/O Modules.
- Upgrade the server and adapter firmware.
- Upgrade the OS VIC drivers.



### Caution

Failure to adhere to the proper upgrade sequence can cause the server to crash.

## Procedure

---

- Step 1** Start the **Device Manager**.

- a) Right-click **My Computer**.
- b) choose **Manage**.
- c) choose **Device Manager**.

**Step 2** Expand the adapter.

- For the eNIC driver, expand **Network Adapters**.
- For the fNIC driver, expand **Storage Controllers**.

**Step 3** In the **Devices** list, right-click the adapter and choose **Update Driver Software**. The **Update Driver Software** window opens.

**Step 4** In the **How do you want to search for driver software?** area, choose **Browse my computer for driver software**.

**Step 5** Choose your adapter and click **Next**.

**Step 6** In the **Install from Disk** window, browse to the driver file and click **OK**.

**Step 7** Click **OK** in the restart pop up to reboot the server.

---

## Upgrading Cisco UCS VIC Drivers on Windows

You can use the Cisco VIO installer to install and upgrade the VIC drivers across different versions and editions of Windows 2008, 2008 R2, 2012, and 2012 R2. The Cisco VIO installer is available as part of the Cisco UCS Drivers ISO bundle.

## Installing the iSCSI Crash Dump Driver

### Before You Begin

Ensure that the Microsoft iSCSI service is running.

Run edumputil from the Administrator account.

Ensure that the iSCSI vNIC is defined in the service profile.

### Procedure

---

**Step 1** Open a command prompt with administrator privileges.

**Step 2** Enter the following command to install the iSCSI Crash Dump Driver using the iSCSI Crash Dump Driver utility:  
**edumputil -i "C:\sample\edumpw164.sys"**.

**Step 3** Reboot the host.

---

# The NIC Teaming Driver

## About the Cisco NIC Teaming Driver for Windows

The Cisco NIC Teaming Driver for Windows is supported by Windows Server 2008 and Windows Server 2008 R2 64 bit. The driver can be installed through either the Windows Control Panel or the Windows command prompt.

**Note**

- Hyper-V guest operating systems are not supported with the Cisco NIC Teaming Driver for Windows.
- The NIC teaming driver supports up to four teams.

After installing the driver, you can configure NIC teaming using the **enictool.exe** command line utility provided with the driver files. The driver supports the following teaming modes:

- Active-Backup (with or without failback)
- Active-Active (transmit load balancing)
- 802.3ad LACP

The driver supports the following transmit load balancing methods:

- TCP connection
- Source and destination MAC address
- MAC address and IP address

The driver supports the following hashing options for load balancing:

- XOR hash
- CRC hash

## Obtaining the NIC Teaming Driver for Windows

The Cisco NIC Teaming Driver is contained in the UCS-related Windows Utilities ISO.

### Procedure

- Step 1** In a web browser, navigate to <http://www.cisco.com>.
- Step 2** Under **Support**, click **All Downloads**.
- Step 3** In the product selector, click **Products**, then click **Unified Computing and Servers**.
- Step 4** If prompted, enter your Cisco.com username and password to log in.  
You must be signed in to download UCS drivers.



- Step 5** Depending on your platform, choose **Cisco UCS B-Series Blade Server Software**, **Cisco UCS C-Series Rack-Mount UCS-Managed Server Software**.
- Step 6** Click **Unified Computing System (UCS) Utilities** and select the **Windows** platform.
- Step 7** Click the link for the release that you want to download.  
The latest release version is selected by default.
- Step 8** Click the **Release Notes** link to view the latest version of the Release Notes.
- Step 9** Choose your download method and follow the prompts to complete your driver download.

#### Download

Downloads the software immediately.

#### Add to Cart

Adds the utilities ISO to your cart to be downloaded at a later time.

---

#### What to Do Next

Read the *Release Notes for Cisco UCS Virtual Interface Card Drivers* before installing the driver.

## Installing the NIC Teaming Driver from the Control Panel

#### Procedure

---

- Step 1** In Windows, click **Start > Control Panel**.
  - Step 2** Navigate to and click the **Network and Sharing Center**.  
For the specific location see the Windows server documentation.
  - Step 3** In the **Network and Sharing Center**, click **Manage Network Connections**.
  - Step 4** In the **Network Connections** folder, right-click on an Ethernet interface and choose **Properties**.
  - Step 5** Click **Install** and choose **Protocol > Add**.
  - Step 6** Browse to the drivers directory and click **OK**.  
The Cisco NIC Teaming Driver is installed and listed in the Ethernet interface properties.
- 

#### What to Do Next

In the command prompt, run the **enictool.exe** utility to create and delete teams.

## Installing the NIC Teaming Driver from the Command Prompt

### Procedure

---

- Step 1** In Windows, open a command prompt with administrator privileges.
- Step 2** At the command prompt, enter **enictool -p "drivers\_directory"**  
The Cisco NIC Teaming Driver is installed using the .inf files located in the specified directory.

#### Example:

This example installs the teaming driver using the .inf files located in the temp directory:

```
C:\> enictool -p "c:\temp"
```

---

### What to Do Next

Use the **enictool.exe** utility to create and delete teams.

## Configuring the NIC Teaming Driver Using enictool.exe

### Procedure

---

- Step 1** In Windows, open a command prompt with administrator privileges.
- Step 2** To create a team, enter **enictool -c "list of connections" -m mode**  
The mode options are as follows:

- 1—Active Backup
- 2—Active Backup with failback to active mode
- 3—Active Active (transmit load balancing)
- 4—802.3ad LACP

#### Example:

This example creates a team of two NICs in Active Backup mode:

```
C:\> enictool -c "Local Area Connection" "Local Area Connection 2" -m 1
```

- Step 3** To delete a team, enter **enictool -d "name of the NIC team"**

#### Example:

This example deletes a team called "Local Area Connection 3":

```
C:\> enictool -d "Local Area Connection 3"
```

**Note** Local Area Connection 3 is the name of the NIC team and not the name of the individual adapters.

- Step 4** To view additional options and usage information, enter **enictool /?**

Use the displayed command option information to configure load balancing method, load balancing hash method, and other options.

---

