NetEffect™ Network Adapter Installation

10 Gb CX4 Ethernet Server Cluster Adapter

Install the Adapter

1. Turn off the computer and unplug the power cord. If performing a "hot plug" install, see your server documentation first. Remove the computer cover.
2. Remove the adapter from its shipping package handling it by the edges and place it on an anti-static surface.
3. Check the ECA for visible damage. Never install a damaged ECA. Contact customer support if the ECA is damaged. See technical support for contact information.
4. Locate a PCI Express X8 slot and remove the slot cover.
5. Firmly place the adapter into the slot and secure the bracket.
6. Replace the system cover and power on the system.

Attach the Network Cable

1. Attach one end of the cable to the adapter.

   Cable type to use: Twinax
   Connector type: CX4
   Maximum cable length: 15 meters

2. Attach the other end of the cable to the compatible link partner.
3. Start your computer and follow the driver installation instructions for your operating system.

10 Gb SFP+ SR Ethernet Server Cluster Adapter

Install the Adapter

1. Turn off the computer and unplug the power cord. If performing a "hot plug" install, see your server documentation first. Remove the computer cover.
2. Remove the adapter from its shipping package handling it by the edges and place it on an anti-static surface.
3. Check the ECA for visible damage. Never install a damaged ECA. Contact customer support if the ECA is damaged. See technical support for contact information.
4. Locate a PCI Express X8 slot and remove the slot cover.
5. Firmly place the adapter into the slot and secure the bracket.
6. Replace the system cover and power on the system.

Attach the Network Cable

1. Remove and save the fiber optic connector cover.
2. Attach one end of the cable to the adapter.

   Cable type to use: 850 nm multi-mode fiber with 62.5 µm or 50 µm core diameter
   Connector type: LC
   Maximum cable length: 300 meters

3. Attach the other end of the cable to the compatible link partner.
4. Start your computer and follow the driver installation instructions for your operating system.

10 Gb SFP+ DA Ethernet Server Cluster Adapter

Install the Adapter

1. Turn off the computer and unplug the power cord. If performing a "hot plug" install, see your server documentation first. Remove the computer cover.
2. Remove the adapter from its shipping package handling it by the edges and place it on an anti-static surface.
3. Check the ECA for visible damage. Never install a damaged ECA. Contact customer support if the ECA is damaged. See technical support for contact information.
4. Locate a PCI Express X8 slot and remove the slot cover.
5. Firmly place the adapter into the slot and secure the bracket.
6. Replace the system cover and power on the system.

Attach the Network Cable

1. Attach one end of the cable to the adapter.

   Cable type to use: Twinax
   Connector type: SFP+ DA
   Maximum cable length: 10 meters

2. Attach the other end of the cable to the compatible link partner.
3. Start your computer and follow the driver installation instructions for your operating system.

10 Gb Ethernet Server Cluster Adapter for IBM BladeCenter H

Install the Adapter

1. Turn off the computer and unplug the power cord. If performing a "hot plug" install, see your server documentation first. Remove the computer cover.
2. Remove the adapter from its shipping package handling it by the edges and place it on an anti-static surface.
3. Check the ECA for visible damage. Never install a damaged ECA. Contact customer support if the ECA is damaged. See technical support for contact information.
4. Locate the CFFh mezzanine slot and place the adapter mounting holes over the mounting posts on the back edge of the blade server while holding the adapter at an angle.
5. Lower the adapter mezzanine connector into the PCIe mezzanine slot and firmly place the adapter into the slot by applying pressure at the "PRESS HERE" label.
6. Replace the system cover and power on the system.

NOTE: All network connections are made over the backplane when the server blade is installed and powered on.

10 Gb Ethernet Server Cluster Adapter for HP BladeSystem C-Class

Install the Adapter

1. Turn off the computer and unplug the power cord. If performing a "hot plug" install, see your server documentation first. Remove the computer cover.
2. Remove the adapter from its shipping package handling it by the edges and place it on an anti-static surface.
3. Check the ECA for visible damage. Never install a damaged ECA. Contact customer support if the ECA is damaged. See technical support for contact information.
4. Locate any Type-I or Type-II mezzanine slot and firmly place the adapter into the slot by applying pressure over the mezzanine connector.
5. Hand tighten all three retractable screws into the mounting posts. Do not over tighten.
6. Replace the system cover and power on the system.

NOTE: All network connections are made over the backplane when the server blade is installed and powered on.

Install the Device Drivers

Microsoft* Windows* Operating Systems

🖉 *NOTES:*

- Installing drivers requires administrator rights to the operating system.
- See the System Requirements page in nes_driver_window_user_guide_W2K8_ND.doc for Windows Server 2008 or nes_driver_window_user_guide_W2K3_NDIS-5.1.doc for Windows Server 2003 for more details.
- The instructions below are the same for all of the above listed Ethernet Server Cluster Adapters.

Installing NDIS 5.1 Drivers on Windows Server 2003 Operating Systems

The adapter is detected as new hardware when Windows starts. To install the correct driver:

1. The adapter is detected and Windows starts the **Found New Hardware** wizard for the NE020 card inserted.
2. Copy *ndis_5_1.ZIP* into local hard drive.
3. Extract *ndis_5_1.ZIP*. This will create *ndis_5_1* folder.
4. Select **Install from a list or specific location [Advanced]** on the Found New Hardware wizard window. Click Next.
5. Select **Don't Search. I will choose the driver to install**. Click Next.
6. Click **Have Disk**.
7. Click **Browse** on the "Install from Disk" pop-up window. Go to folder *ndis_5_1*.
8. In the Locate File dialog box select appropriate INF and click Open.
9. Click **OK** on the Install from Disk pop-up window.
10. Click **Next** on Found New Hardware Wizard.
11. Click **Finish**.
12. Go to the Control Panel and open the Network Connections.
13. Select appropriate connection (Local Area Connection).
14. Ensure **NE020 10 Gb Ethernet Adapter** connection is present.
15. Click **Properties** and double-click **Internet Protocol (TCP/IP)**.
16. Select **Use following IP address** and enter IP address Subnet mask.
17. Set IP address and netmask of Intel NE020 10 Gb Ethernet Adapter.
18. Reboot the machine.

Installing NDIS 6.0 Drivers on Windows Server 2008 Operating Systems

The adapter is detected as new hardware when Windows starts. To install the correct driver:

1. The adapter is detected and Windows starts the **Found New Hardware** wizard for the NE020 card inserted.
2. Copy *ndis_6_0.ZIP* into local hard drive.
3. Extract *ndis_6_0.ZIP*. This will create *ndis_6_0* folder.
4. Select **Locate and Install Driver Software (recommended)** on the Found New Hardware wizard window.
5. Select **Don't Search Online**.
6. If driver disk is not available, select **I don't have the disk. Show me the other options.**
7. Select **Browse my computer for driver software (advanced)**.
8. Click **Browse** on the "Browse for driver software on your computer" window. Go to extracted driver package *ndis_6_0* and click OK to start driver installation.
9. Click Close to finish the driver installation.
10. Go to the Control Panel and open the Network and Sharing Center.
11. Click on **Manage network connections** and ensure NE020 10 Gb Ethernet Adapter connection is present.
12. Right click on NE020 Adapter and select **Properties**. Double-click **Internet Protocol Version 4 (TCP/IPv4)**.
13. Select **Use following IP address** and enter IP address Subnet mask.
14. Set IP address and netmask for Intel NE020 10 Gb Ethernet Adapter.

Installing Network Direct on Windows Server 2008 Operating Systems

The adapter is detected as new hardware when Windows starts. To install the correct driver:

1. The adapter is detected and Windows starts the **Found New Hardware** wizard for the NE020 card inserted.
2. Copy *Network_Direct.ZIP* package into local hard drive.
3. Extract *Network_Direct.ZIP*. This will create *Network_Direct* folder.
4. Select Locate and Install Driver Software (recommended) on the **Found New Hardware** wizard window.
5. Select **Don't Search Online** option on the next window.
6. If driver disk is not available, select **I don't have the disk. Show me the other options**.
7. Select **Browse my computer for driver software (advanced)**.
8. Click **Browse** on the "Browse for driver software on your computer" window. Go to extracted driver package *Network_Direct* and click OK to start driver installation.
9. Click **Close** to finish the driver installation.
10. After successful installation, make sure that nesnic, nesproxy and nesndpmpservice are in the running state by querying the services on command prompt.
11. Native IP and NES IP addresses will be assigned to NetEffect Interface by the DHCP server. If DHCP server is not running, default IP (169.xxx.xxx.xxx) will be assigned to the NetEffect Interface.

Linux

📝 *NOTES*:

- For the build to work properly, the currently running kernel MUST match the version and configuration of the installed kernel sources. If you have just recompiled the kernel reboot the system now.
- The instructions below are the same for all of the above listed Ethernet Server Cluster Adapters.

1. Move the build tar file to the directory of your choice. For example, `copy OFED-<build version name>.tgz to /opt/`, where `<build version name>` is the version of the TAR ball.
2. Extract the TAR file.

   ```
   tar –xzf OFED-<build version name>.tgz
   ```

3. Go to the new OFED-<build version name> directory.
4. Run sh setup.sh to start installation procedure. Select the option you want to use. For example, option 3 will install the full package.
5. The binary iw_nes.ko will be installed in `/lib/modules/[kernel_version]/updates/kernel/drivers/infiniband/hw/nes/iw_nes.ko`.
6. Install the module by entering:

   ```
   modprobe iw_nes
   ```

7. Assign an IP address to the new interface by entering:

   ```
   ifconfig eth<x> <IP Address>
   ```

8. Verify that interface works. Enter the following, where <IP address> is the IP address for another machine on the same subnet as the interface that is being tested:

   ```
   ping <IP Address>
   ```

More Information

For more information, see the platform specific *User's Guide*.

Last modified on 04/06/09.