PXIe-8267 Getting Started

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Contents

Overview

This document explains how to install and configure the PXIe-8267. For more information about configuring, using, and maintaining the PXIe-8267, refer to ni.com.

Note The standard NI warranty does not apply to the PXIe-8267. To view warranty and services information for the PXIe-8267, go to ni.com/info and enter the Info Code `raidsupport`.

Note The PXIe-8267 requires a chassis with slot cooling capacity ≥ 58 W.

Installation and Configuration

This section explains how to unpack, install, and configure the PXIe-8267 hardware and software.

What You Need to Get Started

The PXIe-8267 kit contains the following items:

- PXIe-8267 module
- PXIe-8267 documentation

> **Note** The device kit does not include driver media. Refer to the Software/Driver Installation section for information about installing the drivers.

Unpacking

> **Note** To prevent electrostatic discharge (ESD) from damaging the device, ground yourself using a grounding strap or by holding a grounded object, such as your computer chassis.

1. Carefully inspect the shipping container and the PXIe-8267 for damage.
2. Check for visible damage to the metal work.

   > **Note** Never touch the exposed pins of connectors.

   > **Note** Do not install a device if it appears damaged in any way.

3. Check to make sure all hardware is undamaged.
   If damage appears to have been caused during shipment, file a claim with the

carrier. Retain the packing material for possible inspection and/or reshipment.
4. Unpack any other items and documentation from the kit.

Preparing the Environment

Ensure the environment in which you are using the PXIe-8267 meets the following specifications.

Temperature	
Operating	0 °C to 55 °C[1] (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2. Meets MIL-PRF-28800F Class 3 low temperature limit and MIL-PRF-28800F Class 2 high temperature limit.)
Storage[2]	-40 °C to 71 °C (Tested in accordance with IEC-60068-2-1 and IEC-60068-2-2; meets MIL-PRF-28800F Class 3 limits.)
Humidity	
Operating	10% to 90% noncondensing (Tested in accordance with IEC-60068-2-78.)
Storage	5% to 95% noncondensing (Tested in accordance with IEC-60068-2-78.)
Pollution Degree	2
Maximum altitude	2,000 m (800 mbar)

1. The PXIe-8267 requires a chassis with slot cooling capacity ≥58 W. Not all chassis with slot cooling capacity ≥58 W can achieve this ambient temperature range. Refer to the PXI Chassis Manual for specifications to determine the ambient temperature ranges your chassis can achieve.
2. Drive utilization and storage temperatures will have an impact on unpowered data retention. Visit ni.com/info and enter the Info Code ssdtemp for more information about the impact of temperature on drive endurance.

Indoor use only.	

Note For complete specifications, refer to the ***PXIe-8267 Specifications*** at ni.com/manuals.

Note For more information about thermal considerations, go to ni.com/info and enter the Info Code `raidsupport`.

Hardware Installation

Note Before you begin, install and configure your chassis and controller.

Caution To protect both yourself and the chassis from electrical hazards, leave the chassis off until you finish installing the PXIe-8267.

Attention Pour vous protéger, et protéger le châssis, contre les risques électriques, laissez le châssis éteint tant que vous n'avez pas terminé l'installation du PXIe-8267.

1. Power off your PXI Express chassis, but leave it plugged in while installing the PXIe-8267. The power cord grounds the chassis and protects it from electrical damage while you install the module.
2. Locate an available PXI Express slot in the chassis. Do not install the PXIe-8267 in the controller slot (slot 1 in a PXI Express chassis).
3. Remove or open any doors or covers blocking access to the slot in which you intend to install the PXIe-8267.
4. Touch the metal part of the case to discharge any static electricity that might be on your clothes or body.
5. Make sure the injector/ejector handle is in its downward position. Be sure to remove all connector packaging and protective caps from retaining screws on the module. Align the PXIe-8267 with the card guides on the top and bottom of the

selected slot.

> **Note** Do not raise the injector/ejector handle as you insert the PXIe-8267. It will not insert properly unless the handle is in its downward position so that it does not interfere with the injector/ejector rail on the chassis.

6. Hold the handle as you slowly slide the module into the chassis until the handle catches on the injector/ejector rail.
7. Raise the injector/ejector handle until the module firmly seats into the backplane receptacle connectors. The front panel of the PXIe-8267 should be even with the front panel of the chassis.
8. Tighten the bracket-retaining screws on the top and bottom of the front panel to secure the PXIe-8267 to the chassis.
9. Replace or close any doors or covers to the chassis.

LED Indicators

The following table describes the PXIe-8267 front panel LEDs.

LED	Color	Meaning
Pwr/Fault	Off	Power is off
	Blinking red	Power is out of spec
	Green	Power is on
Drive 1 through Drive 4	Off [3]	No drive activity
	Blinking green	Drive activity
	Green	No drive activity

Software/Driver Installation

The PXIe-8267 does not include interface software to configure the RAID. You must use

3. Drive manufacturers define the optional drive activity signal in different ways. Some manufacturers unassert the activity signal when there is no drive activity, with LEDs off, while others assert the signal, with LEDs on.

the Disk Management Utility in Windows to manage the software RAID.

Note The PXIe-8267 supports only Windows 10 (64-bit).

Note Refer to the drive manufacturer's website for information regarding monitoring drive temperatures.

No driver is necessary to configure the drives. The Standard Microsoft NVME driver is pre-installed in Windows 10.

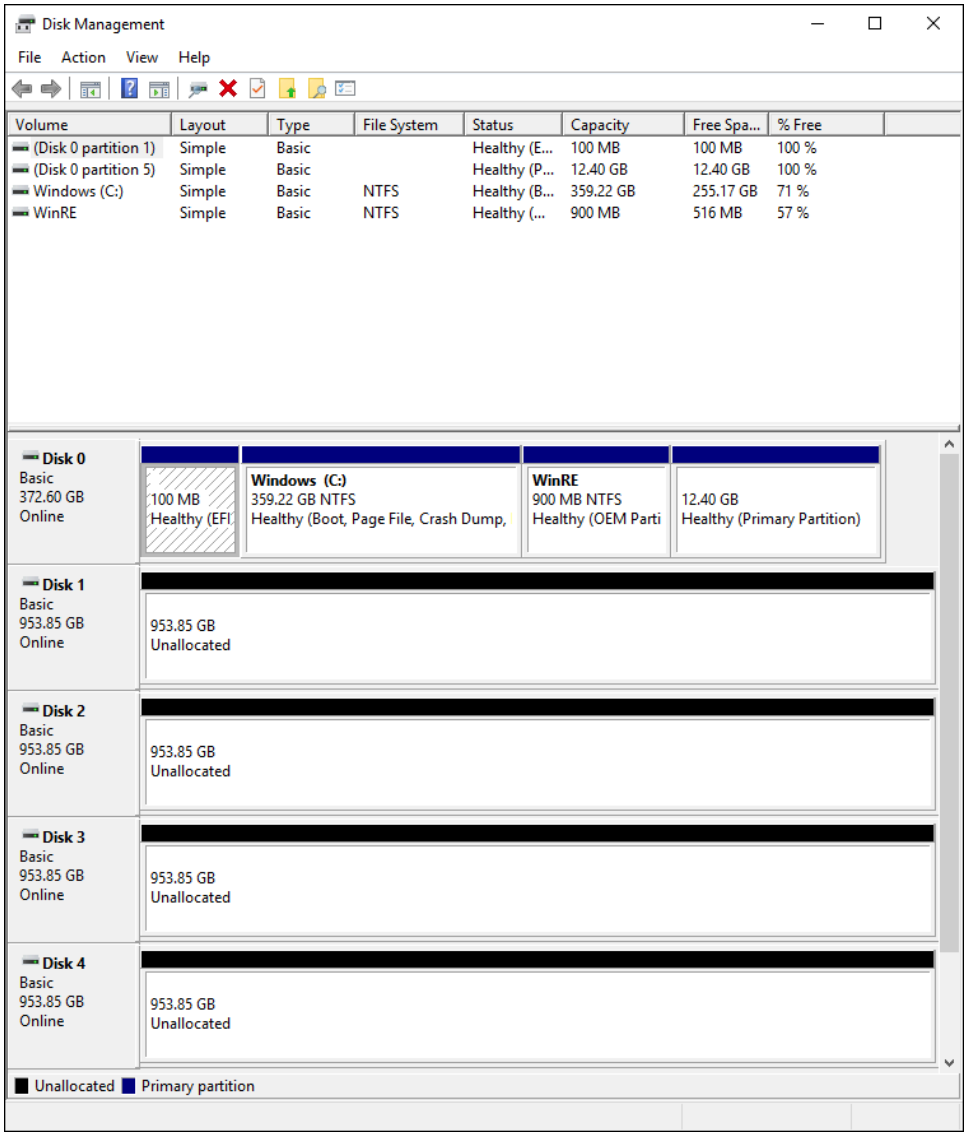
RAID Creation

To configure the software RAID on the PXIe-8267, complete the following steps.

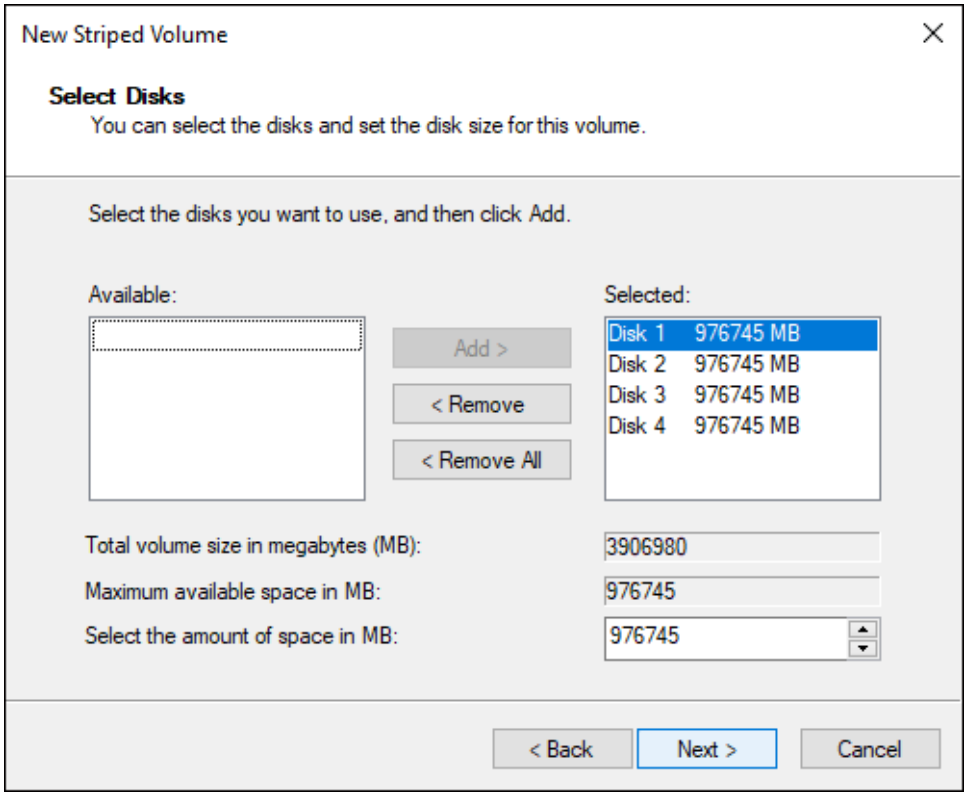
Note Back up your data before you configure the software RAID.

Note In the following steps, the disk drive capacities in the images are examples. You may see different capacities depending on your disk drives.

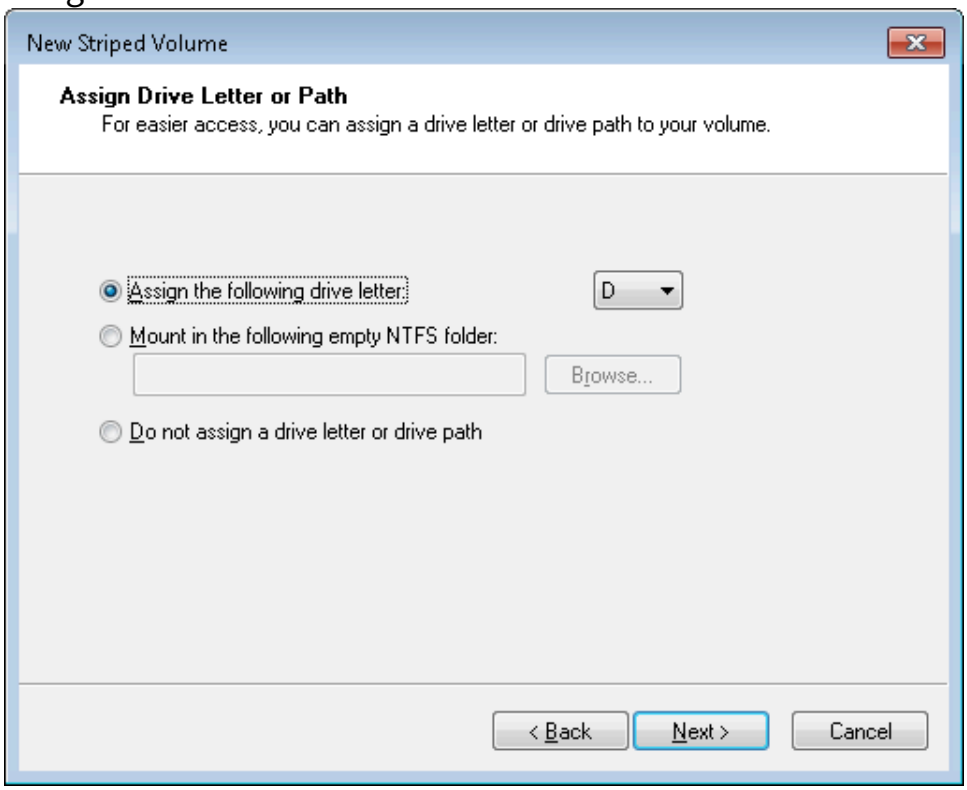
1. Right-click **My Computer** and click **Manage**.
2. Click **Disk Management** in the left window. You should see four disk drives of the same size in basic mode. If the disks do not have a status of **Unallocated**, right-click any disk and select **Delete Partition**.
3. Right-click any disk and select **New Striped Volume**, then click **Next**.



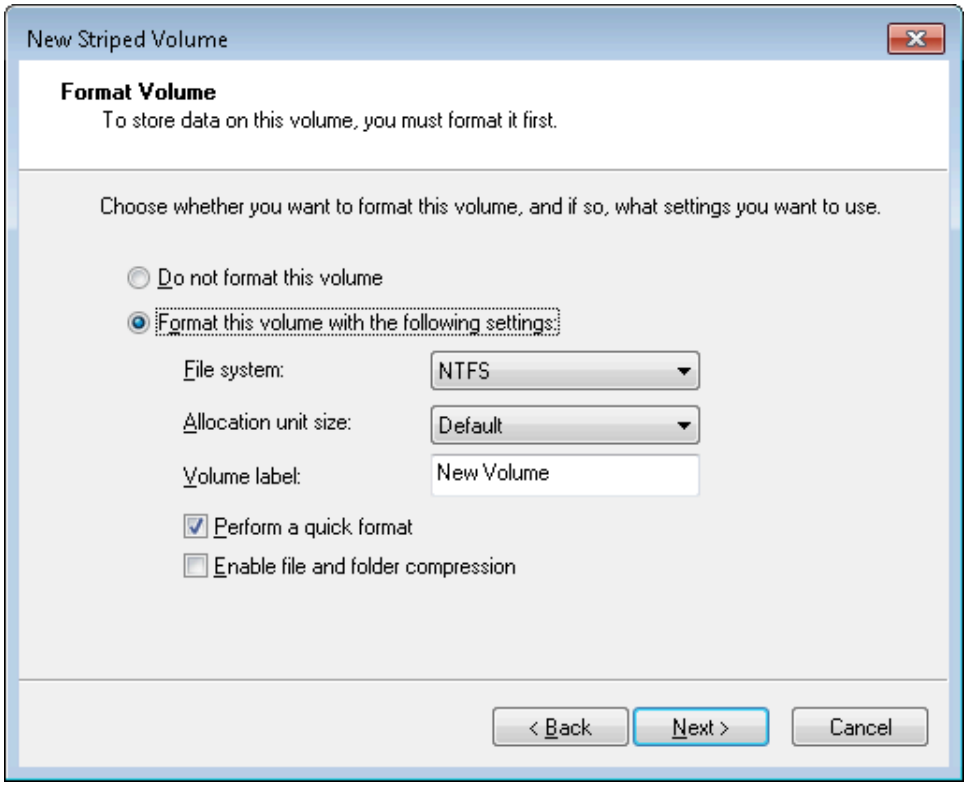
4. Click **Add** until all available disks are moved to the **Selected** window and click **Next**.



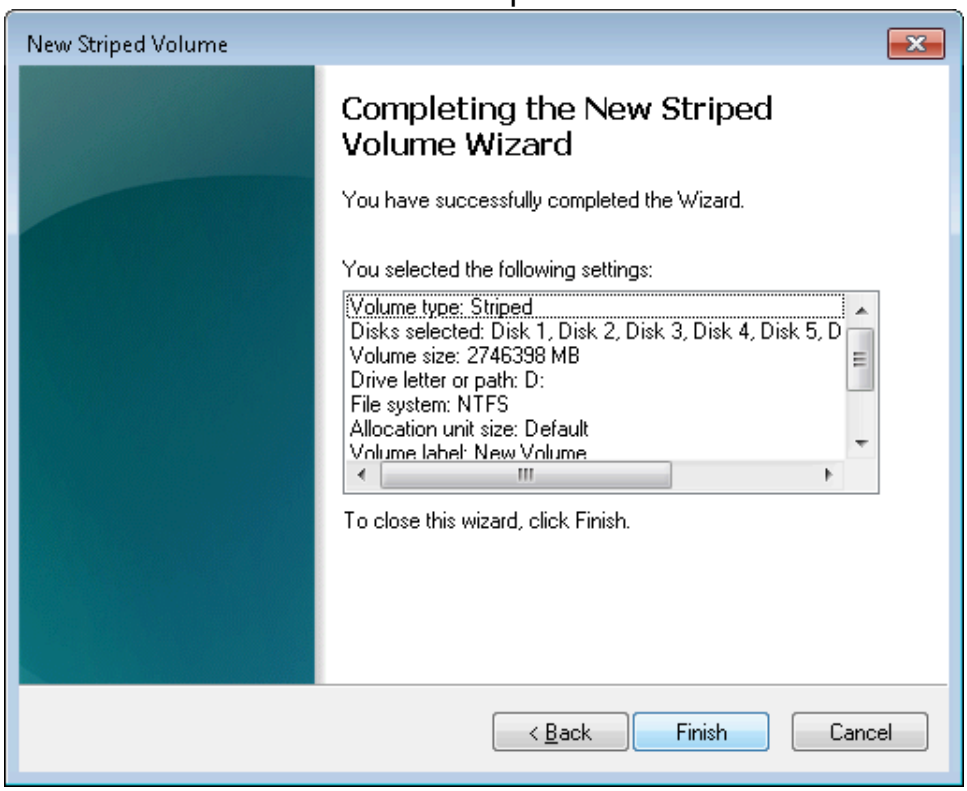
5. Assign a drive letter and click **Next**.



6. Configure the **Format Volume** page as shown in the following figure and click **Next**.



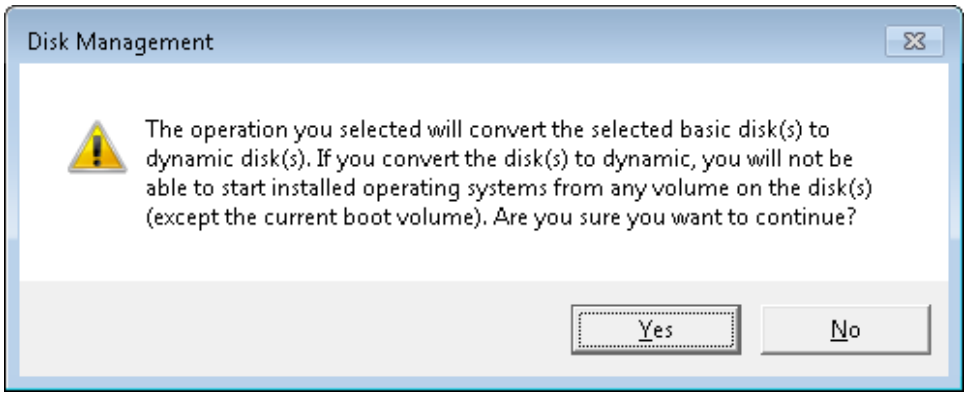
7. Click **Finish** to close the New Striped Volume Wizard.



8. If the disks were configured in basic mode, click **Yes** in the Disk Management dialog

box to convert them to dynamic mode.

Note You must convert all disks that you want to include in the RAID array to dynamic mode.



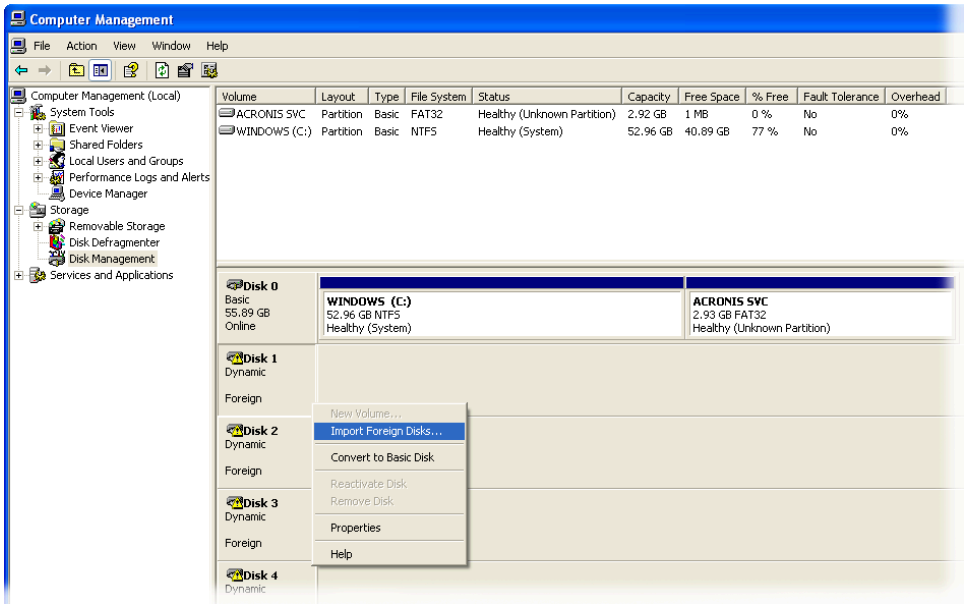
Moving the PXIe-8267 to a Different System

Complete the following steps to move your PXIe-8267 to a different system or chassis with a different controller.

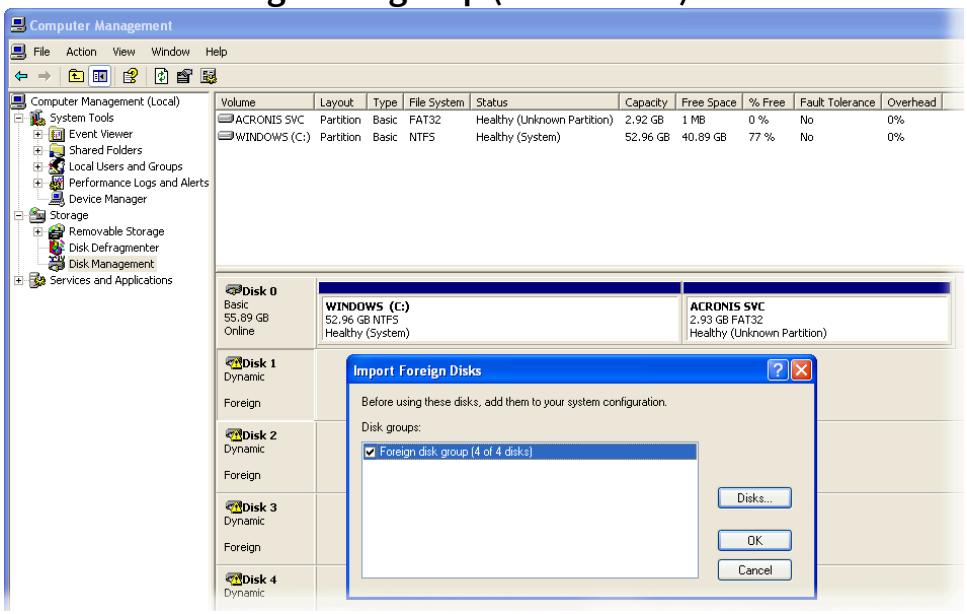
Note The following steps apply only if the PXIe-8267 you are moving to a different system is in software RAID mode.

Note To avoid data loss, do not move, swap, or replace the drives.

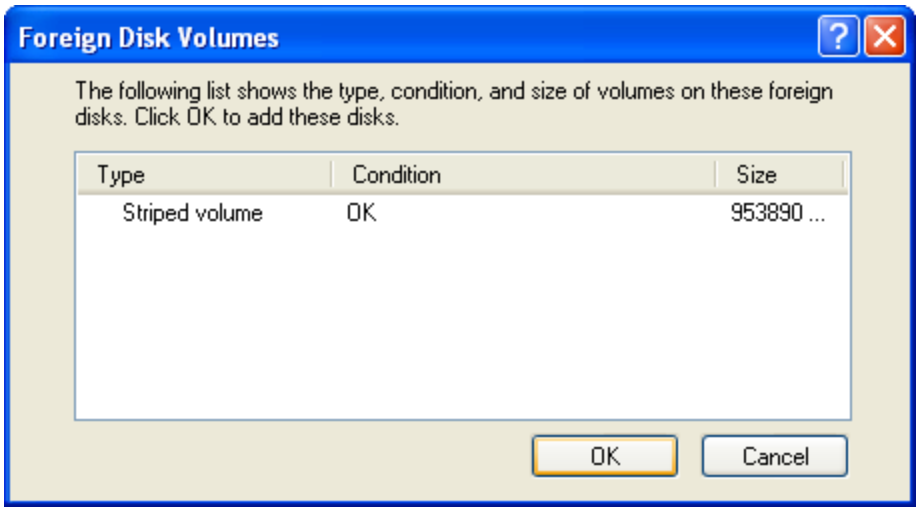
1. When the system boots, go into **Disk Management**. You will see four dynamic disks with yellow caution icons. Right-click any disk with a caution icon and select **Import Foreign Disks**.



2. Be sure the **Foreign disk group (4 of 4 disks)** checkbox is enabled and click **OK**.



3. You may see the following dialog box if a RAID volume was present on the PXIe-8267 before you moved it to the new system. Click **OK** to allow the new system to import the RAID volume. The initial data is preserved and will be readable in the new system.



4. Your RAID drive is now ready for use in the new system.

Optimizing Streaming Performance

Note NI recommends periodically checking drive life and using software to monitor the drive for errors, thermal events, TBW, and so on. For more information, go to ni.com/info and enter the Info Code `raidsupport`.

Note If the PXIe-8267 throughput is underperforming, complete the following steps to optimize the drives manually.

1. Back up your data before performing this operation.
2. Delete the striped array and individually partition, format, and assign a letter to the drives.
3. In the Windows taskbar, search for the Defragment and Optimize Drives tool and optimize the drives.
4. When the operation completes, recreate the striped array.

NI Services

Visit ni.com/support to find support resources including documentation, downloads,

and troubleshooting and application development self-help such as tutorials and examples.

Visit ni.com/services to learn about NI service offerings such as calibration options, repair, and replacement.

Visit ni.com/register to register your NI product. Product registration facilitates technical support and ensures that you receive important information updates from NI.

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