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How to use a Fibre Channel card in Windows



Overview

So connecting a LTO drive to a PC usually involves equipping the host computer with a suitable interface card.

Key Takeaways

To use a Fibre Channel card in Windows, install the HBA, configure drivers, connect to the SAN, and optionally use management tools or virtualized Fibre Channel adapters.

Hardware Installation

- **Install the Fibre Channel HBA:** Insert the HBA into an available PCIe slot on your Windows PC or server. Ensure the slot is activated in the BIOS/UEFI and follow the card manufacturer's instructions for proper installation .
- **Connect Fibre Optic Cables:** Use LC-to-LC duplex fiber optic cables to connect the HBA ports to your storage device or Fibre Channel switch. For dual-port HBAs, connect both ports if redundancy is desired .
- **Check Physical Addresses:** After installation, note the HBA's World Wide Name (WWN) and physical address, which are required for SAN zoning, host affinity, or troubleshooting .

Driver and Software Setup

- **Install HBA Drivers:** Download and install the latest drivers from the HBA manufacturer (e.g., QLogic, Emulex, LSI). Ensure compatibility with your Windows version .

- **Install Management Tools:** Tools like HBAnyware (for Emulex) allow configuration of topology, queue depth, and link speed. For QLogic cards, use the vendor-specific management software .

- **Optional SAN Drivers:** If connecting to specific storage systems (e.g., ETERNUS AF/DX), install any required storage drivers to enable full functionality .

Windows Configuration

- **Verify Device Recognition:** Open Device Manager to confirm the HBA is recognized and drivers are properly installed.

- **Assign Storage:** Use Disk Management or Storage Spaces to allocate storage from the SAN. For clustered environments, configure Cluster Shared Volumes (CSV) if needed .

- **Monitor and Test:** Use tools like Microsoft's fcinfo command-line utility to gather configuration information and verify connectivity to the SAN .

Virtualization (Optional)

- **Hyper-V Virtual Fibre Channel:** If using Hyper-V, you can assign virtual Fibre Channel adapters to VMs. Ensure the host has NPIV-enabled HBAs, and configure LUNs and multi-pathing to support virtualized workloads .

- **Limitations:** Virtual Fibre Channel LUNs cannot be used as boot media, but they allow direct SAN access for guest OS clustering and high-performance storage scenarios .

Best Practices

- Use the latest firmware and drivers for both the HBA and storage system.
- Ensure proper zoning and LUN masking on the SAN to prevent unauthorized access.
- For high availability, consider dual-port HBAs and redundant paths.
- Verify cable type and quality (OM3 or OM4 multimode fiber) to match the HBA and storage speed requirements . By following these steps, your Windows system can successfully utilize a Fibre Channel card for high-speed SAN connectivity, whether for direct-attached storage, clustered servers, or virtualized environments.

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Read this article to set up Hyper-V virtual Fibre Channel in the System Center Virtual Machine Manager (VMM) storage

[Get-VMFibreChannelHba \(Hyper-V\) | Microsoft Learn](#)

The Get-VMFibreChannelHba cmdlet lists all of the fibre channel objects for each virtual fibre channel controller that is connected to

[How to Assign Fiber Channel LUMs to a Hyper-V VM in VMM](#)

N_Port ID virtualization (NPIV) is a Fiber Channel technology that allows a hypervisor host to virtualize its Fiber

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Specifies one or more Hyper-V hosts on which a Fibre Channel host bus adapter is to be configured. NetBIOS names, IP addresses,

[How to share Fibre Channel between servers on Windows 2012 STD](#)

I'm new to Fibre Channel so please take that into consideration. We have 3 servers. 2 servers are running Hyper-V and 3rd server

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This chapter describes Installation, configuration, upgrade and uninstallation procedures for HP supported Emulex HBA drivers and

[How to Attach Windows Fibre Channel Host for Dell Storage SC Series](#)

This video will demonstrate the attachment procedure of a Windows Fibre Channel Host for Dell Storage SC Series.

[How should I set up my Fibre Channel \(FC\) network?](#)

Fibre Channel switches usually connect clients to storage. FC is a protocol that is designed explicitly to transport

[Implement Hyper-V Virtual Fibre Channel | Microsoft Learn](#)

In Windows Server 2012 R2 and Windows Server 2012, this issue has been resolved. Hyper-V provides virtual Fibre

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