

How to connect storage to a fiber optic switch



Overview

SFP transceiver modules are specific to the type of fiber being connected (either single mode or multimode).

Key Takeaways

To connect a storage fiber optic switch, use SFP or SFP+ modules with duplex fiber cables, ensuring transmit (TX) and receive (RX) ports are correctly aligned between servers, storage arrays, and switches. Identify Your Switch and Ports

First, determine the type of fiber switch you are using. Storage networks typically use Fibre Channel (FC) switches for SANs, while some Ethernet switches also support fiber ports. Check whether your switch supports SFP (1Gb), SFP+ (10Gb), or QSFP (higher bandwidth) modules, and whether the ports are combo ports (shared with RJ45) or dedicated fiber ports .

Select the Correct Fiber Modules and Cables

- Multimode fiber (MMF): Short distances (up to a few hundred meters), usually 850nm wavelength.
- Single-mode fiber (SMF): Long distances (kilometers), usually 1310nm or 1550nm wavelength.
- Ensure the SFP module matches the fiber type and the switch port bandwidth .

- Use duplex fiber cables with LC connectors, or pre-terminated cables for convenience .

Connect Servers to Switches

For redundancy and fault tolerance:

- Connect one fiber channel port on the server to the first switch (fault domain one).
- Connect the second fiber channel port on the same server to a second switch (fault domain two) to ensure high availability .

- Repeat for all servers in the SAN.

Connect Storage Arrays to Switches

- Connect port one on the top controller to the first switch (fault domain one).
- Connect port one on the bottom controller to the same switch for the same fault domain.
- Connect port two on the top controller to the second switch (fault domain two), and repeat for the bottom controller .
- Ensure TX on one device connects to RX on the other to maintain proper signal flow .

Management and Backend Connections

- Connect management ports on each storage controller to the network.
- Connect SAS or backend ports between controllers if required.
- Secure all cables with clips and verify connections before powering on .

Power On and Verify

- Plug in power cords for switches and storage controllers.
- Wait at least five minutes before attempting to discover the array or configure the SAN .
- Verify connectivity using switch management software or SAN management tools.

Best Practices

- Label all fiber cables clearly to avoid confusion between TX and RX.
- Use color-coded connectors if available.
- Maintain proper bend radius and avoid sharp kinks in fiber cables.
- Consider using patch panels or cassettes for high-density switch environments to simplify moves, adds, and changes . Following these steps ensures a reliable, high-performance connection between servers, storage arrays, and fiber optic switches in a SAN environment.

Article Content

Connecting Network Switches via Fiber

SFP transceiver modules are specific to the type of fiber being connected (either single mode or multimode). Choose an SFP module

Fiber channel direct attached : r/storage

Have done with Dell Unity 300/500/380F arrays - no issues. Just limits to how many hosts you can support using direct connection to

Connecting Network Switches via Fiber

Terminate your fiber optic cabling with two LC-style connectors or purchase a pre-terminated fiber optic cable with two LC-style

Application Of 8G SFP+ FC Optical Module In SAN Storage Network

The composition of a SAN network is mainly composed of servers, Fibre Channel switches, storage devices, and transmission

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Terminate your fiber optic cabling with two LC-style connectors or purchase a pre-terminated fiber optic cable with two LC-style

How do you connect a switch to fibre?

Connecting a switch to a fiber optic network involves several steps and requires specific equipment to ensure a successful and

Application Guide: Connecting Fiber-ready Network Switches

Terminate your fiber optic cabling with two LC-style connectors or purchase a pre-terminated fiber optic cable with two LC-style

How to Connect two PoE switch with fiber optical cable

Next connect fiber cable to the SFP module. Finally, use Ethernet patch cord to link the media convertor to PoE switch. While SFP

Deploying Fiber Cabling in the Data Center

In this configuration, a permanent link is installed between QuickNet™ Patch Panels in the switch/network cabinet and the server or

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