

How to connect a disk array to the core switch

Article Overview

Connecting a disk array to a core switch involves cabling, switch zoning, multipathing, and configuring the storage array and host servers for reliable SAN access.

Step 1: Determine the Storage Protocol

- o Fibre Channel (FC): High-speed, low-latency block storage, typically using optical fiber. Requires FC HBAs on servers and FC-capable switches .
- o iSCSI: Runs over Ethernet, easier to integrate with existing networks, may require dedicated VLANs for performance .
- o FCoE (Fibre Channel over Ethernet): Encapsulates FC frames over Ethernet, often using Converged Network Adapters (CNAs) and unified switches .

Step 2: Physical Cabling

- o Connect the disk array to the core or aggregation switch using the appropriate cables (optical fiber for FC, Cat6/7 for iSCSI or FCoE), .
- o For redundancy, use dual paths from the array to separate switches or switch ports to prevent single points of failure .

Step 3: Configure Switch Zoning

- o Zoning isolates traffic between hosts and storage arrays to maintain performance and security.
- o Use WWN (World Wide Name) port zoning for FC, which allows flexible cabling changes without reconfiguring zones .
- o For iSCSI, configure VLANs and access control to separate storage traffic from general network traffic .

Step 4: Configure the Storage Array

- o Install and configure the array management software (e.g., Dell MD Storage Manager) on host servers .
- o Create LUNs (Logical Unit Numbers) or virtual disks on the array.
- o Assign LUNs to the host servers through the SAN fabric.

Step 5: Configure Host Servers

- o Install the required HBA or CNA drivers and firmware.
- o Enable multipathing to allow multiple paths to the storage array for redundancy and load balancing .

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- o Map the LUNs to the operating system, ensuring the OS sees the storage as local disks.

Step 6: Test Connectivity and Redundancy

- o Verify that each host can access the storage through all configured paths.
- o Test failover by disabling one path and confirming uninterrupted access.
- o Monitor performance and adjust zoning or multipathing policies as needed.

Best Practices

- o Use consistent multipathing solutions across all hosts.
- o Keep firmware and drivers up to date for both switches and storage arrays.
- o Document all configurations, including zoning, LUN assignments, and cabling.
- o Consider a dedicated storage network for iSCSI to improve performance and simplify management . By following these steps, you can ensure a reliable, high-performance connection between your disk array and the core switch, supporting enterprise storage requirements.

Hi, A good design connect all access switches (2960S) to the Core/Distribution switch (6500)

Cisco DMM supports homogeneous SANs (all Cisco MDS switches), as well as heterogeneous SANs (a mixture of MDS switches

Each SAN switch then connects to redundant storage target ports or storage controllers on the storage arrays.
This

This Service includes the physical installation of the storage hardware such as storage array, FC host bus adapters ("HBAs") (into

If I have suppose 30 vlans terminating on a distribution switch, how do I advertise them to a core switch through a

Two people have died due to strong storms Sunday in southern Illinois that hit trailer

I want to get 2x Cisco Catalyst WS-C3750X-24T-S Switches (and stack them). ESX servers, other servers and routers

Abstract This white paper highlights best practices for optimizing and deploying PowerVault ME5 (ME5012/5024/5084) and should be

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Installation of Ethernet HBAs into any server. Installation of multiple arrays. Any activities involving Ethernet networks other than the

Introduction to your service agreement is Service Description (the "Service" or "Services"). This Service includes the physical

It has only 4 LFF drive bays. I understood from my googling that I could expand the storage adding a disk array. The main question

Learn how to setup a network switch with ease. Switches allow you to send and receive information efficiently and securely. Get

To discover your storage array, you must be connected to the Ethernet management port (either on the same subnet or through a

A disk array also called a storage array, is a data storage system used for block-based storage, file-based storage, or

HI TEAM, I have a 2 3850 core switch which is on HA and 2960x for my access switch, i requiried help on 2 things. 1)

Also it is not a supported configuration to directly connect UCS Fabric Interconnect switch to the SAN storage array.

Web: <https://bssoda.pl>

