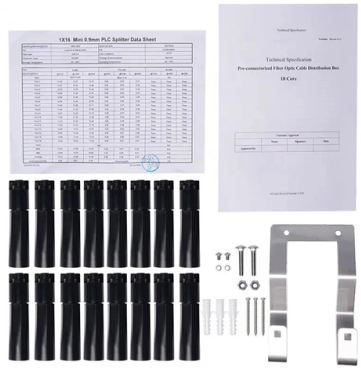
COETZER OPTICAL SYSTEMS (Pty) Ltd

Setting up a Fiber Optic Disk Array



Overview

Configuring Fibre Channel Storage Arrays These steps assume you are setting up a Fibre Channel storage for the first time. NOTE: If you are adding an addit.

Key Takeaways

Setting up a fiber optic disk array involves installing the array, connecting it to host servers via Fibre Channel, configuring host adapters, and provisioning storage volumes.1. Prepare the Hardware
• Rack and power the array according to the manufacturer's guidelines, ensuring proper ventilation and handling procedures (Dell PowerVault MD series or Sun StorEdge JBOD arrays) .

• Install host bus adapters (HBAs) in each server that will access the array. Place each HBA on separate I/O boards if possible to maximize redundancy .

• Update firmware on both the storage array controllers and HBAs to the latest supported versions .
2. Connect the Array
• Cable the array to the host servers using fiber optic cables. Follow the recommended topology (direct-attached or SAN fabric) and ensure proper zoning if using a SAN switch .

• Verify connectivity by checking that the host detects the HBA and that the ports are online, showing the World Wide Names (WWNs) .
3. Configure the Host
• Install HBA drivers and any required host software (e.g., MD Storage Manager for Dell arrays) .

• Set up multipathing to ensure redundancy and load balancing. Configure multipath settings such as user_friendly_names yes and find_multipaths yes on Linux systems .

• Map LUNs from the storage array to the host. Use Raw Device Mapping (RDM) or create virtual disks as needed for your environment .
4. Provision Storage
• Create storage volumes on the array using the management software. Assign LUNs to the appropriate hosts .

• Format volumes with the desired file system or VMFS if using VMware ESXi .

• Verify access by checking that the host can read/write to the new volumes and that multipathing is functioning correctly .
5. Optional: Virtualization Integration
• For VMware ESXi, ensure only one VMFS volume per LUN and configure queue depth for the HBA to handle delayed I/O .

• For Linux-based systems like Proxmox VE, use LVM, LVM-Thin, or ZFS on the FC-attached LUNs as local or shared storage pools .
6. Testing and Maintenance
• Test failover by disconnecting one path and verifying that I/O continues through alternate paths.

• Monitor firmware updates and periodically check the health of the array and HBAs.

• Document configuration including WWNs, LUN IDs, and multipath settings for future troubleshooting. By following these steps, you can successfully set up a fiber optic disk array with proper connectivity, redundancy, and storage provisioning for both physical and virtualized environments .

Article Content

Configuring Fibre Channel Storage Arrays

These steps assume you are setting up a Fibre Channel storage for the first time. NOTE: If you are adding an additional Fibre

Using ESXi with Fibre Channel SAN

To transfer traffic from host servers to shared storage, the SAN uses the Fibre Channel (FC) protocol that packages SCSI or NVMe

Build Your Own Fibre Channel SAN For Less Than $1000 – Part 2

We need to purchase the needed components, Fiber HBAs and the cable to connect them, then install the boards and configure

Chapter 1 Installing and Maintaining a Fibre Channel JBOD Storage ...

This chapter describes the procedures about how to install, configure, and maintain fibre channel (FC) JBOD storage devices in a

Be Your Own Technician: DIY Fiber Optic Installation Guide

In the spirit of self-reliance and technical mastery, we''ve crafted this detailed guide to empower you to take control of

What You Need to Install Fiber-Optic Internet

Let''s take a closer look at each one. Locate your fiber network terminal In order to install your own fiber internet, you

9 Steps to Set Up Your Home Fiber Optic Network

Remember, setting up a home fiber optic network is a significant step towards a superior internet experience. Take your time during

The FOA Reference For Fiber Optics

We''re focusing on the fiber part of the installation but the FTTH home tech will have to know how to connect fiber, set up the ONT

Using ESXi with Fibre Channel SAN

ESXi supports Fibre Channel (FC), a storage protocol that the SAN uses to transfer data traffic from hosts to shared storage. This

Optical Assemblies and Arrays

Phillips Medisize Fiberguide custom fiber optic assemblies provide a diverse range of products and capabilities for a wide array of

101 Guidelines for Fiber Optic Cable Installation

A fiber optic cable should be tested three separate times during an installation: on the reel, the splicing test, and the final acceptance

Hewlett-Packard Fiber Optic Link Disk Array

The Hewlett-Packard Fiber Optic Link (HP-FL) disk-array product could offer up to 27GB of data-protected storage per cabinet, an

9 Steps to Set Up Your Home Fiber Optic Network

Defining Fiber Optic Internet Fiber optic internet is a type of data cable filled with thin glass or plastic fibers. Rather

Fiber Optic Cable Installation Do''s and Don''ts

In this video, we''ll cover the essential guidelines for installing fiber optic cables, helping you avoid costly mistakes and

Build Your Own Fibre Channel SAN For Less Than $1000 – Part 1

The plan is to first build a disk array RAID NAS, then configure it as a SAN node and use fibre channel to connect it directly to a DAS

The FOA Reference For Fiber Optics

Appropriate personnel should set up and test the communications system that will operate over the fiber optic cable plant to ensure it

Fiber Arrays – 1D, 2D, packaging, fiber endfaces, cleaving, splicing ...

Fiber arrays are 1D or 2D arrays of optical fibers, used for coupling to photonic circuits, telecom signals, and laser beam combining.

Optimizing Fibre Channel SAN Storage Performance

Because each application has different requirements, you can meet these goals by selecting an appropriate RAID group on the

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.