Course Outline

Introducing Cisco MDS 9000 Series Switches (DCIMDS)

Course Summary

Description

The Introducing Cisco MDS 9000 Series Switches (DCIMDS) course gives you an overview of Cisco MDS 9000 Series Multilayer Switches, including platform architecture, software, and management capabilities. You will learn the key features that contribute to high performance and availability, flexibility, and operational simplicity and investment protection. During hands-on lab time, you'll configure: a Multilayer Director Switch (MDS) SAN fabric using Cisco Data Center Network Manager (DCNM) and Command Line Interface (CLI) commands; SAN analytics and SAN telemetry streaming; device aliases and zoning; and more. You'll gain a technical understanding of how to build highly available, scalable storage networks using the robust, flexible hardware architecture with network and storage management intelligence.

Objectives

By the end of the course, students will be able to:

- Describe Cisco MDS SAN features and advantages
- Describe fixed and modular platforms
- Describe Cisco MDS architecture and high-availability mechanisms
- Describe technologies used in modern SANs
- Describe SAN management with Cisco DCNM
- Describe key value-add features that distinguish Cisco MDS switches
- Configure basic Cisco MDS features and interfaces using DCNM

Topics

- Describing Cisco MDS Platform
- Describing Cisco MDS Architecture
- Describing Storage Technologies
- Managing Cisco MDS Switches
- Describing and Using Cisco MDS Key Features

Audience

Technical decision makers and professionals who architect, implement, or manage data center SAN environments, including:

- Solutions architects
- Data center architects
- Network architects
- Systems engineers
- Data center engineers
- Network engineers
- Technical decision makers
- Cisco integrators and partners

Prerequisite

To fully benefit from this course, you should have the following knowledge and skills:

- Experience managing data center deployments
- Knowledge of the fundamentals of SAN technologies
- Understanding of business and application requirements

Duration

Two Days

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I. Describing Cisco MDS Platform

A. Introduction and Advantages of Cisco MDS
B. Fixed Platforms
C. Modular Platforms

II. Describing Cisco MDS Architecture

A. Store-and-Forward Architecture
B. High Availability
C. Redundancy

III. Describing Storage Technologies

A. Fibre Channel
B. Non-Volatile Memory Express (NVMe) Over Fibre Channel
C. Fibre Channel Over IP
D. Fibre Channel Over Ethernet

IV. Managing Cisco MDS Switches

A. Cisco Data Center Network Manager
B. Cisco NX-OS CLI
C. Cisco NX-API

V. Describing and Using Cisco MDS Key Features

A. Virtual Storage Area Networks (VSANs)
B. Inter-VSAN Routing
C. Port Channels
D. Slow-Drain Device and Path Analysis Using Congestion Control Mechanisms
E. N Port Virtualization (NPV) and N-Port Identifier Virtualization (NPIV)
F. Zoning
G. Smart Zoning
H. SAN Analytics and Telemetry Streaming
I. Diagnostics Toolbox
J. SAN Extension
K. Other Differentiator Features

- Lab outline
  - Perform Initial MDS Configuration
  - Set Up DCNM
  - Configure VSANs and Interfaces in Cisco DCNM
  - Configure Port Channels in Cisco DCNM
  - Configure Device Aliases and Zoning
  - Configure SAN Analytics and SAN Telemetry Streaming
  - Use CLI for Basic Monitoring