

COURSE OVERVIEW:

The Configuring Cisco MDS 9000 Series Switches (DCMDS) v3.1 is a 4-day course shows you how to implement, manage, and troubleshoot Cisco® MDS 9000 Series Switches, to build highly available, scalable storage networks. Through expert instruction and extensive hands-on practice, you will learn how to deploy and use capabilities such as Virtual Storage Area Networks (VSANs), Role-Based Access Control (RBAC), N-Port Virtualization (NPV) fabric security, zoning, automation with NX-API, Slow Drain Analysis, SAN analytics, Fibre Channel over TCP/IP (FCIP) tunnels, and more. You will learn how to configure and implement platform features and learn troubleshooting techniques pertaining to Fibre Channel (FC) domains, firmware upgrades, zones, and zone mergers.

This course helps you prepare to take the exam, Implementing Cisco Storage Area Networking (300-625 DCSAN), which leads to CCNP Data Center® and the Certified Specialist - Data Center SAN Implementation certifications.

Succeed in today's demanding data center operations roles!

WHO SHOULD ATTEND:

The primary audience for this course is as follows:

- Data center systems engineers
- Data center field engineers
- Data center architects
- Technical decision makers
- Network architects
- Cisco integrators and partners

PREREQUISITES:

The knowledge and skills that a learner should have before attending this course are as follows:

- Basic understanding of data storage hardware components and protocols, including Small Computer System Interface (SCSI) and Fibre Channel
- Basic understanding of network protocols, including Ethernet and IP
- Basic routing and switching knowledge



COURSE OBJECTIVES

Upon completing this course, the learner will be able to meet these overall objectives:

- Discover and describe the Cisco Multilayer Director Switch (MDS) platform of multilayer switches and directors. Describe the MDS hardware, NX-OS operating system, Data Center Network Manager (DCNM) management software, and key architectures of the platform, such as FC and Fibre Channel over Ethernet (FCoE)
- Describe key product features of the MDS platform, including VSANs, RBAC, NPV, port channels, zoning, device aliases, inter-VSAN routing (IVR), and fabric security
- Describe and implement state-of-the-art product features, including NX-API, slow-drain analysis, SAN Analytics and 32-GB Fibre Channel interfaces
- Configure and implement the Cisco MDS switches and platform features, such as initial configuration, building a fabric, building a SAN extension, and configuring inter-VSAN routing for that purpose
- Configure FCIP tunnels
- Resolve issues and troubleshoot FC domains, zones and zone merges, and switch boot and firmware upgrades

COURSE OUTLINE:

Module 1: Describing Cisco MDS Platform

- Cisco MDS 9700/9300/9200/9100 Hardware
- Cisco NX-OS
- Cisco DCNM
- Fibre Channel Architecture
- FCoE Architecture

Module 2: Describing Key Product Features

- Cisco DCNM 11.x
- RBAC and Authentication, Authorization, and Accounting (AAA)
- Virtual SANs
- NPV and NPIV
- Port Channels and VSAN Trunking
- Zoning and Smart Zoning
- Device Aliases
- Inter-VSAN Routing



Configuring Cisco MDS 9000 Series Switches (DCMDS) 3.1

- Fibre Channel Fabric Security

Module 3: Describing New Product Features

- 32-Gb Fibre Channel
- Cisco MDS NX-API
- Power-On Auto-Provisioning
- Slow Drain Analysis
- SAN Analytics and Telemetry Streaming
- Cisco Secure Boot

Module 4: Deploying Cisco MDS Features

- Installation and Initial Setup
- Building a Fabric: FC Domains and FC Services
- Building SAN Extensions

Module 5: Troubleshooting Common Cisco MDS Issues

- Fibre Channel Domains
- Zones and Zone Merges
- Boot and Upgrade Issues

LAB OUTLINE

- Set Up DCNM
- Explore DCNM-SAN Client and DCNM Device Manager
- Configure and Use RBAC
- Configure and Use RBAC with DCNM-SAN Client and Device Manager
- Manage VSANs and Fibre Channel Domain
- Configure NPV and N-Port Identification Virtualization (NPIV)
- Configure Interfaces
- Configure Device Aliases and Zoning
- Explore and Automate with NX-API
- Perform Slow Drain Analysis with Cisco DCNM
- Configure SAN Analysis and SAN Telemetry Streaming
- Configure FCIP Tunnels and FCIP High Availability (HA)
- Configure IVR for SAN Extension
- Troubleshoot Zoning and Zone Merges

