

Configuring Cisco MDS 9000 Switches

Duration: 4 Days **Course Code: DCMDS** **Version: 3.1**

Overview:

The Configuring Cisco MDS 9000 Series Switches course shows you how to implement, manage and troubleshoot Cisco MDS 9000 Series Switches, to build highly available, scalable storage networks. 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, 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.

Target Audience:

Engineers involved in the implementation of a storage-networking solution incorporating the Cisco MDS 9000 Series Switch platform.

Objectives:

- **After completing this course you should be able to:**
- 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, Interactive Voice Response (IVR) and fabric security
- Describe and implement state-of-the-art product features
- 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, switch boot and firmware upgrades

Prerequisites:

Attendees should meet the following prerequisites:

- 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
- **DCICN** and **DCICT** recommended
- DCCOR - Implementing and Operating Cisco Data Center Core Technologies
- DCFNDU - Understanding Cisco Data Center Foundations
- DCICN - Introducing Cisco Data Center Networking
- DCICT - Introducing Cisco Data Center Technologies

Testing and Certification

Recommended as preparation for the following exams:

- There are no exams currently aligned to this course

Content:

Describing Cisco MDS Platform

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

Describing Key Product Features

- Cisco DCNM 10.x
- RBAC and AAA
- Virtual SANs
- NPV and NPIV
- Port Channels and VSAN Trunking
- Zoning and Smart Zoning
- Device Aliases
- Inter-VSAN Routing
- Fibre Channel Fabric Security

Describing New Product Features

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

Deploying Cisco MDS Features

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

Troubleshooting Common Cisco MDS Issues

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

Labs

- Lab 1: Set Up DCNM
- Lab 2: Explore DCNM-SAN Client and DCNM Device Manager
- Lab 3: Configure and Use RBAC
- Lab 4: Configure and Use RBAC with DCNM-SAN Client and Device Manager
- Lab 5: Manage VSANs and FC Domain
- Lab 6: Configure NPV and N-Port Identification Virtualization (NPIV)
- Lab 7: Configure Interfaces
- Lab 8: Configure Device Aliases and Zoning
- Lab 9: Explore and Automate with NX-API
- Lab 10: Perform Slow Drain Analysis with Cisco DCNM
- Lab 11: Configure FCIP Tunnels and FCIP High Availability (HA)
- Lab 12: Configure IVR for SAN Extension
- Lab 13: Troubleshoot Zoning and Zone Merges

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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