Configuring Cisco MDS 9000 Switches

Duration: 4 Days **Course Code: DCMDS** **Version: 3.6**

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.
This course will help you:
Learn how to deploy and troubleshoot the Cisco Nexus® 9000 Series Switches to support performance, resiliency, scalability, and enhanced operations for data centers
Gain knowledge and skills through Cisco's unique combination of lessons and hands-on practice using enterprise-grade Cisco learning technologies, data center equipment, and software
Succeed in today's demanding data center operations roles
Earn 40 CE credits toward recertification

This course prepares you for Cisco CCNP Data Center and Cisco Certified Specialist - Data Center SAN Implementation certifications.

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
- Provision Cisco MDS Switches
- Describe key product features of the MDS platform
- Describe and implement automation an Cisco MDS Switches
- Configure and implement the Cisco MDS switches and platform features
- Resolve issues and troubleshoot FC domains, zones and zone merges, and 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
- CCNA - Implementing and Administering Cisco Solutions
- DCFNDU - Understanding Cisco Data Center Foundations

Testing and Certification

Recommended as preparation for the following exams:

- **300-625 - DCSAN -** Implementing Cisco Storage Area Networking
This exam is one of the concentrations for the new Cisco CCNP Data Center Certification, passing the exam will also provide the Cisco Certified Specialist - Data Center SAN Implementation certification.

Content:

Describing Cisco MDS Platform

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

Provisioning Cisco MDS Switches

- Power-On Auto-Provisioning
- Cisco DCNM
- Using Cisco DCNM 11.x
- RBAC and Authentication, Authorization, and Accounting (AAA)

Building the Fibre Channel Fabric with Cisco MDS Switches

- Virtual SANs
- Port Channels and VSAN Trunking
- Zoning and Smart Zoning
- Device Aliases
- Inter-VSAN Routing
- Fibre Channel Fabric Security
- Building SAN Extensions
- Inter-VSAN Routing
- Slow Drain Analysis
- SAN Analytics and Telemetry Streaming
- Cisco Secure Boot
- NPV and NPIV

Automating Cisco MDS Fabric

- Cisco MDS NX_APIPython API
- Ansible

Monitoring and Reporting Cisco MDS Features

- Cisco DCNM SAN Reports and Alarms
- SAN Analytics and SAN Telemetry Streaming

Troubleshooting Common Cisco MDS Issues

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

Labs

- Perform Initial MDS Configuration
- Setup Cisco DCNM
- Explore DCNM-SAN Client and DCNM Cisco Device Manager
- Configure and Use RBAC
- Configure and Use RBAC with DCNM-SAN Client and Device Manager
- Manage VSANs and Fibre Channel Domain
- Configure Interfaces
- Configure Device Aliases and Zoning
- Configure FCIP Tunnels and FCIP High Availability
- Configure IVR for SAN Extension
- Configure NPV and NPIV
- Explore and Automate with NX-API
- Monitor SAN with Cisco DCNM
- Configure SAN Analytics and SAN Telemetry Streaming
- Troubleshoot Fibre Channel Domains, Zoning, and Zone Merges
- Perform Slow-Drain Analysis with Cisco DCNM

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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