Configuring Cisco MDS 9000 Switches

Course Code DCMDS
Duration 4 days

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.

Audience

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

Learning Objectives

By actively participating in this course, you will learn about the following:

- Discovering and describing the Cisco Multilayer Director Switch (MDS) platform of multilayer switches and directors. Describing 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).
- Describing key product features of the MDS platform, including VSANs, RBAC, NPV, port channels, zoning, device aliases, Interactive Voice Response (IVR) and fabric security.
- Describing and implementing state-of-the-art product features.
- Configuring and implementing 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.
- Configuring FCIP tunnels.
- Resolving issues and troubleshooting FC domains, zones and zone merges, switch boot and firmware upgrades.

Pre-Requisites

- 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

Recommended courses:

- CCNA - Implementing and Administering Cisco Solutions
- DCFNDU - Understanding Cisco Data Center Foundations

Course Contents

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

- 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
- Configure IVR for SAN Extension
- Troubleshoot Zoning and Zone Merges

Exam Details

This course leads to the 300-625 - Implementing Cisco Storage Area Networking (DCSAN) exam.

This exam is one of the concentrations for the new Cisco CCNP Data Center Certification; successful completion will earn you the Cisco Certified Specialist - Data Center SAN Implementation certification.

Further Information

For more information or to book this course, please contact our Course Enquiries Team on **01752 227330** (Option 2) or email us at **enquiries@skilltec.co.uk**.