

## Configuring Cisco MDS 9000 Switches

Duration: 5 Days Course Code: DCMDS Version: 1.0

### Overview:

This five-day course is designed to provide engineers with the knowledge and skills required to install, configure and manage the Cisco MDS 9000 Series switch platform including the 9100, 9200, 9500, and 9700 models. Fundamental topics include 8-Gbps Fibre Channel, 16-Gbps Fibre Channel, Fibre Channel over IP (FCIP), multihop FCoE, upgrading the Cisco NX-OS, and the common management tool Cisco Prime Data Center Network Manager (DCNM). The course provides comprehensive SAN configuration for features such as interface configuration, Cisco N-Port Virtualizer (NPV), N-Port ID Virtualization (NPIV), virtual SAN (VSAN) and domain setup, SAN zoning, and SAN extension using FCIP and Inter-VSAN Routing (IVR). Topics introduced also include centralized SAN services using the Cisco MDS 9222i Multiservice Modular Switch and Cisco MDS 9250i Multiservice Fabric Switch for Cisco I/O Acceleration (IOA) and Cisco Data Mobility Manager (DMM), management security and role-based access control (RBAC) topics. You should be able to improve availability, scalability, performance and manageability of the SAN by the end of the course.

### Target Audience:

This course is designed for: Any individual involved in the deployment of the Cisco MDS 9000 Series switch platform.

### Objectives:

- Upon completing this course, the learner will be able to meet these overall objectives:
- Describe the MDS 9000 Series switch platform, Cisco NX-OS, and the features of Cisco Prime DCNM.
- Explain the techniques and information that will enable you to perform the initial software configuration of a Cisco MDS 9000 Series switch, upgrade the system software, and enable licensing.
- Explain the configurations involved in building a Cisco Fibre Channel SAN fabric including interfaces, VSANs, domains, port channels, device aliases, NPV, NPIV, and zones.
- Describe and configure intelligent SAN fabric services on specific Cisco MDS 9000 Series switches and the software resources that are provided.
- Describe the FCoE protocol and the use of FCoE modules on the Cisco MDS 9500 Series Multilayer Director and Cisco MDS 9700 Series Multilayer Director as a Fibre Channel forwarder in a single-hop and multihop design.
- Describe the process of configuring security features on Cisco MDS 9000 Series switches to prevent unauthorized access, intrusion, and data theft, and to preserve data integrity in an enterprise SAN environment.
- Describe the steps for basic FCIP configuration, high availability implementation, and achieving a fault tolerant SAN extension using the IVR feature.

### Prerequisites:

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

- Basic understanding of data storage hardware components and protocols, including SCSI and Fibre Channel.
- Basic understanding of networking protocols, including Ethernet and IP **ICND1 and ICND2 or CCNABC** Recommended

## Content:

### Cisco MDS 9000 Series Switch Platforms

- Introducing Cisco MDS 9000 Series Switches
- Implementing Integrated Management

### System Installation and Initial Configuration

- Performing the Initial Switch Configuration
- Installing and Licensing Cisco NX-OS Software

### Building a SAN Fabric

- Using FLOGI and FCNS Databases
- Configuring Interfaces
- Configuring PortChannels
- Configuring Cisco NPV and NPIV
- Configuring VSANs
- Managing Domains
- Configuring Distributed Device Aliases
- Implementing Zoning

### Intelligent SAN Fabric Services

- Implementing Cisco MDS Data Mobility Manager
- Monitoring Traffic Flow

### FCoE Implementation

- Describing FCoE
- Configuring FCoE on Cisco MDS 9500 and 9700 Series Multilayer Directors

### Security Implementation

- Improving Management Security
- Configuring AAA Services
- Implementing Port Security and Fabric Binding
- Configuring FC-SP
- Implementing Link Encryption

### FCIP Implementation

- Creating an FCIP Tunnel
- Configuring FCIP High Availability
- Implementing IVR for SAN Extension
- Tuning FCIP Performance

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## Further Information:

For More information, or to book your course, please call us on +254 713 027 191

[training@clclearningafrica.com](mailto:training@clclearningafrica.com)

[www.clcafricalearning.com](http://www.clcafricalearning.com)

Computer Learning Centre 2nd Floor Museum Hill Centre, Muthithi Road, Westlands, Nairobi, Kenya