Cisco - DCMDS v2.0 - Configuring Cisco MDS 9000 Series Switches

In this course, you will learn how to install, configure, and manage the Cisco MDS 9000 Series switch platform in a scalable, highly available environment.

You will learn about the features on each of the MDS 9000 Series product family of switches including the 9100, 9200, 9500, and 9700 models and the Fibre Channel, Fibre Channel over Ethernet (FCoE), and service modules supported. You will learn about 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.

Suggested Audience

Skills Gained

- Components of the MDS 9000 Series switch platform, Cisco NX-OS, and the features of Cisco Prime DCNM
- Initial software configuration of a Cisco MDS 9000 Series switch, including upgrading the system software and enabling licensing
- Configurations involved in building a Cisco Fibre Channel SAN fabric including interfaces, VSANs, domains, port channels, device aliases, NPV, NPIV, and zones
- Configure intelligent SAN fabric services on specific Cisco MDS 9000 Series switches and the software resources that are provided
- 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
- 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
- Basic FCIP configuration, high availability implementation, and achieving a fault tolerant SAN extension using the IVR feature

Who Can Benefit

- Data center engineers, data center administrators, and system engineers
- Data center managers, network engineers, and consulting system engineers

**Prerequisites**

- Basic understanding of data storage hardware components and protocols, including SCSI and Fibre Channel
- Basic understanding of network protocols, including Ethernet and IP
- Cisco CCNA is recommended

**Course Details**

1. **Cisco MDS 9000 Series Switch Platform**
   - Introducing Cisco MDS 9000 Series Switches
   - Implementing Integrated Management

2. **System Installation and Initial Configuration**
   - Performing the Initial Switch Configuration
   - Installing and Licensing Cisco NX-OS Software

3. **Building a SAN Fabric**
   - Using FLOGI and FCNS Databases
   - Configuring Interfaces
   - Configuring Port Channels
   - Configuring Cisco NPV and NPIV
   - Configuring VSANs
   - Managing Domains
   - Configuring Distributed Device Aliases
   - Implementing Zoning

4. **Intelligent SAN Fabric Services**
   - Implementing Cisco MDS Data Mobility Manager
   - Monitoring Traffic Flow

5. **FCoE Implementation**
   - Describing FCoE
   - Configuring FCoE on Cisco MDS 9500 and 9700 Series Multilayer Directors

6. **Security Implementation**
   - Improving Management Security
7. FCIP Implementation

Lab 15: Tune FCIP Performance

Lab 1: Initial Switch Setup

Lab 2: Boot Process and Upgrading Switch Software

Lab 3: Configuring Interfaces

Lab 4: Creating VSANs

Lab 5: Configuring Port Channels, NPV, and NPIV

Lab 6: Configuring Device Alias and Zones

Lab 7: Configuring Cisco DMM

Lab 8: Using SPAN, RSPAN and the Analyzer

Lab 9: Configuring RBAC, AAA Services

Lab 10: Implementing Port and Fabric Security

Lab 11: FCIP and HA

Lab 12: Implementing Interop, IVR

Lab 13: Tuning FCIP Performance

Lab 14: IOA

Lab 15: Configure FCIP High Availability

Lab 16: Implement IVR for SAN Extension

Lab 17: Tune FCIP Performance