

# DCMDS (CONFIGURING CISCO MDS 9000 SERIES SWITCHES)

## Objetivo

After taking 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, inter-VSAN routing (IVR), and fabric security;
- 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, and switch boot and firmware upgrades.

## Público Alvo

Technical and professionals who implement, configure, support and manage data center SAN environments using Cisco MDS 9000 Switches. This course also helps prepare student to take the Implementing Cisco Storage Area Networking (300-625 DCSAN) exam, which is part of the new CCNP® Data Center.

## Pré-Requisitos

To fully benefit from this course, you should have the following knowledge and skills:

- 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. These are the recommended Cisco courses that may help you meet these prerequisites:
- DCFNDU - Understanding Cisco Data Center Foundations;
- DCMDSO - Cisco MDS 9000 Series Switches Overview;
- DCIMDS - Introducing Cisco MDS 9000 Series Switches.

## Carga Horária

32 horas (4 dias).

## Conteúdo Programático

### Course Introduction

Course Outline

Course Goals & Objectives

### 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 11.x  
RBAC and Authentication, Authorization, and Accounting (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 Merges  
Boot and Upgrade Issues

### **Lab outline**

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 Fibre Channel 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 SAN Analysis and SAN Telemetry Streaming  
Lab 12: Configure FCIP Tunnels and FCIP High Availability (HA)  
Lab 13: Configure IVR for SAN Extension  
Lab 14 Troubleshoot Zoning and Zone Merges

