

## DCUFI

# Implementing Cisco Data Center Unified Fabric

## MODULE 1: CISCO NEXUS PRODUCT OVERVIEW

### The Cisco Data Center Network Architecture

- ✓ Cisco Unified Fabric Overview
- ✓ Structured Layers – Core, Aggregation, Access
- ✓ Placement of Products
- ✓ Positioning of Product Families in the Architecture

### Identifying Cisco Nexus Products

- ✓ The Cisco Nexus Product Family
- ✓ Key Features of Cisco Nexus I/O Modules
- ✓ Key Features of Cisco NX-OS

## MODULE 2: CISCO NEXUS SWITCH FEATURE CONFIGURATION

### Understanding High Availability and Redundancy

- ✓ Network-Level High Availability
- ✓ System-Level High Availability
- ✓ In-Service Software Upgrade

### Configuring Virtual Device Contexts

- ✓ Using VDCs in Data Centers
- ✓ Virtual Device Contexts (VDCs)
- ✓ Resource Allocation
- ✓ New VDC Features in Cisco NX-OS 6.1
- ✓ Configuring VDCs
- ✓ Management Settings
- ✓ Storage VDCs

### Configuring Layer 2 Switching Features

- ✓ Basic Interface Parameters
- ✓ Cisco Nexus 7000 and Cisco Nexus 5000 Switch Feature Comparison
- ✓ VLAN Configuration
- ✓ Spanning Tree Protocol Extensions

### Configuring PortChannels

- ✓ Using PortChannels and Virtual PortChannels
- ✓ Configuring PortChannels
- ✓ vPC Architecture
- ✓ Configuring vPC
- ✓ Configuring the FEX
- ✓ Configuring Enhanced vPCs

### Implementing Cisco FabricPath

- ✓ Implement Cisco FabricPath

## DCUFI

# Implementing Cisco Data Center Unified Fabric

- ✓ Verify Cisco FabricPath

### Configuring Layer 3 Switching Features

- ✓ Routing Protocols
- ✓ First-Hop Redundancy Protocols
- ✓ Bidirectional Forwarding Detection
- ✓ Layer 3 Virtualization
- ✓ Unicast RIB and FIB
- ✓ Route Policy Manager
- ✓ Policy-Based Routing (PBR)
- ✓ IPv6

### Configuring IP Multicast

- ✓ IP Multicast
- ✓ Configuring IGMP and MLD
- ✓ Configuring PIM
- ✓ Configuring IGMP Snooping
- ✓ Configuring MSDP

## MODULE 3: CISCO NEXUS SWITCH ADVANCED FEATURE CONFIGURATION

### Understanding Overlay Transport Virtualization

- ✓ Overlay Transport Virtualization (OTV)
- ✓ Basic OTV
- ✓ Advanced OTV

### Configuring MPLS

- ✓ Multiprotocol Label Switching (MPLS)
- ✓ MPLS VPN

### Configuring LISP

- ✓ Location ID Separation Protocol (LISP)
- ✓ Configuring LISP

### Configuring Quality of Service (QoS)

- ✓ QoS on the Nexus Switches
- ✓ Modular QoS CLI (MQC)
- ✓ Marking
- ✓ Mutation Mapping
- ✓ Policing
- ✓ Queuing and Scheduling
- ✓ Monitoring QoS

### Configuring Security Features

- ✓ DHCP Snooping
- ✓ Dynamic ARP Inspection (DAI)
- ✓ IP Source Guard

# DCUFI

## Implementing Cisco Data Center Unified Fabric

- ✓ Unicast Reverse Path Forwarding (uRPF)
- ✓ Traffic Storm Control
- ✓ Port Security
- ✓ Control Plane Policing (CoPP)
- ✓ Cisco TrustSec

### MODULE 4: CISCO NEXUS STORAGE FEATURES

#### Understanding Fibre Channel Protocol

- ✓ SCSI Protocol
- ✓ Fibre Channel
- ✓ Fibre Channel Login and Communication
- ✓ Fibre Channel Addressing Schemes
- ✓ VSANs and IVR
- ✓ Fabric Shortest Path First (FSPF) Protocol
- ✓ Zoning
- ✓ N-Port ID Virtualization (NPIV)
- ✓ N-Port Virtualization (NPV)

#### Understanding FCoE Protocol

- ✓ FCoE Overview
- ✓ FCoE Architecture
- ✓ FCoE Initialization Protocol (FIP)
- ✓ Supported FCoE Topologies
- ✓ FCoE Hardware

#### Identifying Data Center Bridging Enhancements

- ✓ Data Center Bridging (DCB)
- ✓ Priority Flow Control (PFC)
- ✓ Enhanced Transmission Selection (ETS)
- ✓ DCBX Protocol

#### Configuring FCoE

- ✓ Configure FCoE
- ✓ FCoE VLANs and Virtual Interfaces
- ✓ FCoE with Enhanced vPC and Cisco Adapter Fabric Extender
- ✓ FCoE on MDS
- ✓ Fibre Channel Interfaces
- ✓ Domain Parameters
- ✓ Managing VSANs
- ✓ VSAN Trunking
- ✓ SAN Port Channels
- ✓ FLOGI and FCNS Databases
- ✓ Cisco Fabric Services on MDS

#### Configuring NPV Mode

- ✓ N-Port ID Virtualization (NPIV)
- ✓ Configuring NPIV

# DCUFI<sup>®</sup>

## Implementing Cisco Data Center Unified Fabric

- ✓ N-Port Virtualization (NPV)
- ✓ Configuring NPV
- ✓ FCoE NPV
- ✓ Configuring FCoE NPV

### Using SAN Management Tools

- ✓ Cisco DCNM for SAN
- ✓ Cisco Device Manager

## MODULE 5: CISCO NEXUS SERIES SWITCH MANAGEMENT

### Using the Connectivity Management Processor

- ✓ Connectivity Management Processor (CMP)
- ✓ Configuring the CMP
- ✓ Verifying the CMP
- ✓ Upgrading the CMP
- ✓ Using the CMP

### Configuring User Management

- ✓ User Management Features
- ✓ Authentication, Authorization, and Accounting (AAA)
- ✓ Secure Shell (SSH)
- ✓ User Accounts and Roles

### Understanding System Management

- ✓ System Management Features
- ✓ Cisco Fabric Services
- ✓ NTP and PTP
- ✓ Embedded Event Management (EEM)
- ✓ NetFlow
- ✓ Cisco Smart Call Home
- ✓ Scheduler
- ✓ SPAN and ERSPAN
- ✓ Simple Network Management Protocol (SNMP)
- ✓ XML Interface
- ✓ Cisco DCNM for LAN
- ✓ Integrating vCenter Manager
- ✓ Licensing
- ✓ Upgrading the Firmware and EPLDs

**Sono previste esercitazioni pratiche su tutti gli argomenti trattati.**