

# CISC-27 - DCFNDU - UNDERSTANDING CISCO DATA CENTER FOUNDATIONS

## V1.1

Categoria: Cisco

### INFORMAZIONI SUL CORSO



Durata:  
5 Giorni



Categoria:  
Cisco



Qualifica Istruttore:  
Cisco Certified  
Instructor



Dedicato a:  
Professionista IT



Produttore:  
Cisco

### OBIETTIVI

After completing this course, you should be able to:

- Describe the foundations of data center networking
- Describe Cisco Nexus products and explain the basic Cisco NX-OS functionalities and tools
- Describe Layer 3 first-hop redundancy
- Describe Cisco Fabric Extender (FEX) connectivity
- Describe Ethernet port channels and virtual port channel (VPCs)
- Introduce switch virtualization, machine virtualization, and network virtualization
- Compare storage connectivity options in the data center
- Describe Fibre Channel communication between the initiator server and the target storage
- Describe Fibre Channel zone types and their uses
- Describe N-Port Virtualization (NPV) and N-Port Identifier Virtualization (NPIV)
- Describe data center Ethernet enhancements that provide a lossless fabric
- Describe Fibre Channel over EthernetFCoE
- Describe data center server connectivity
- Describe Cisco UCS Manager
- Describe the purpose and advantages of APIs
- Describe Cisco ACI
- Describe the basic concepts of cloud computing

### PREREQUISITI

Attendees should meet the following prerequisites:

- Good understanding of networking protocols
- Good understanding of the VMware environment
- Basic knowledge of Microsoft Windows operating systems

Recommended prerequisites:

- CCNA - Implementing and Administering Cisco Solutions

### CONTENUTI

## **Describing the Data Center Network Architectures**

- Cisco Data Center Architecture Overview
- Three-Tier Network: Core, Aggregation, and Access
- Spine-and-Leaf Network
- Storage Area Network
- Hypoconverged Storage Systems

## **Describing the Cisco Nexus Family and Cisco NX-OS Software**

- Cisco Nexus Data Center Product Overview
- Cisco FEX Overview
- Cisco NX-OS Software Architecture
- Cisco NX-OS Software CLI Tools
- Cisco NX-OS Virtual Routing and Forwarding

## **Describing Layer 3 First-Hop Redundancy**

- Default Gateway Redundancy
- Hot Standby Router Protocol
- Virtual Router Redundancy Protocol
- Gateway Load Balancing Protocol

## **Describing Port Channels and vPCs**

- Ethernet Port Channels
- Virtual Port Channels

## **Describing Switch Virtualization**

- Cisco Nexus Switch Basic Components
- Virtual Routing and Forwarding
- Cisco Nexus 7000 Virtual Device Contexts (VDCs)
- VDC Types
- VDC Resource Allocation
- VDC Management

## **Describing Machine Virtualization**

- Virtual Machines
- Hypervisor
- VM Manager

## **Describing Network Virtualization**

- Overlay Network Protocols
- Virtual Extensible LAN (VXLAN) Overlay
- VXLAN Border Gateway Protocol (BGP) Ethernet VPN (EVPN) Control Plane
- VXLAN Data Plane
- Cisco Nexus 1000VE Series Virtual Switch
- VMware vSphere Virtual Switches

## **Introducing Basic Data Center Storage Concepts**

- Storage Connectivity Options in the Data Center
- Fibre Channel Storage Networking
- Virtual Storage Area Network (VSAN) Configuration and Verification

## **Describing Fibre Channel Communication Between the Initiator Server and the Target Storage**

- Fibre Channel Layered Model
- Fabric Login (FLOGI) Process
- Fibre Channel Flow Control

## **Describing Fibre Channel Zone Types and Their Uses**

- Fibre Channel Zoning
- Zoning Configuration
- Zoning Management

## **Describing Cisco NPV Mode and NPIV**

- Cisco NPV Mode
- NPIV Mode

## **Describing Data Center Ethernet Enhancements**

- Institute of Electrical and Electronic Engineers (IEEE) Data Center Bridging
- Priority Flow Control
- Enhanced Transmission Selection
- Data Center Bridging Exchange (DCBX) Protocol
- Congestion Notification

## **Describing FCoE**

- Cisco Unified Fabric
- FCoE Architecture
- FCoE Initialization Protocol
- FCoE Adapters

## **Describing Cisco UCS Components**

- Physical Cisco UCS Components
- Cisco HyperFlex Data Platform
- Cisco Fabric Interconnect Product Overview
- Cisco I/O Module (IOM) Product Overview
- Cisco UCS Mini
- Cisco Integrated Management Controller (IMC) Supervisor
- Cisco Intersight™

## **Describing Cisco UCS Manager**

- Cisco UCS Manager Overview
- Identity and Resource Pools for Hardware Abstraction
- Service Profiles and Service Profile Templates
- Cisco UCS Central Overview

## **Automating the Data Center**

- Automation Basics
- Choosing the Automation Toolset
- Management and Orchestration Systems

## **Describing Cisco ACI**

- Cisco ACI Overview
- Cisco ACI Topology and Hardware
- Cisco ACI Policy Model
- Cisco ACI External Connectivity Options
- Cisco ACI and VMM Integration
- Cisco ACI and Layer4-Layer 7 Integration
- Cisco ACI Management and Automation
- Cisco ACI Anywhere

### **Describing Cloud Computing**

- Cloud Computing Overview
- Cloud Deployment Models
- Cloud Computing Services

### **Labs**

- Explore the Cisco NX-OS CLI
- Explore Topology Discovery
- Configure Hot Standby Router Protocol (HSRP)
- Configure VPCs
- Configure Virtual Routing and Forwarding (VRF)
- Explore the Virtual Device Contexts (VDC) Elements
- Install VMware ESXi and vCenter
- Configure VSANs
- Validate FLOGI and FCNS
- Configure Zoning
- Configure Unified Ports on a Cisco Nexus Switch and Implement FCoE
- Explore the Cisco UCS Server Environment
- Configure a Cisco UCS Server Profile
- Configure Cisco NX-OS with APIs
- Explore the Cisco UCS Manager XML API Management Information Tree
- Explore Cisco ACI

## **INFO**

**Materiale didattico:** Materiale didattico ufficiale Cisco in formato digitale

**Costo materiale didattico:** incluso nel prezzo del corso a Calendario

**Natura del corso:** Operativo (previsti lab su PC)