

# CISC-11 - DCCOR - IMPLEMENTING AND OPERATING CISCO DATA CENTER CORE TECHNOLOGIES V1.3

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:

- Implement routing and switching protocols in Data Center environment
- Implement overlay networks in data center
- Introduce high-level Cisco Application Centric Infrastructure (Cisco ACI™) concepts and Cisco Virtual Machine manager (VMM) domain integration
- Describe Cisco Cloud Service and deployment models
- Implement Fibre Channel fabric
- Implement Fibre Channel over Ethernet (FCoE) unified fabric
- Implement security features in data center
- Implement software management and infrastructure monitoring
- Implement Cisco UCS Fabric Interconnect and Server abstraction
- Implement SAN connectivity for Cisco Unified Computing System™ (Cisco UCS®)
- Describe Cisco HyperFlex™ infrastructure concepts and benefits
- Implement Cisco automation and scripting tools in data center
- Evaluate automation and orchestration technologies

## PREREQUISITI

Attendees should meet the following prerequisites:

- Familiarity with Ethernet and TCP/IP networking
- Familiarity with SANs
- Familiarity with Fibre Channel protocol
- Identify products in the Cisco Data Center Nexus and Cisco MDS families
- Understanding of Cisco Enterprise Data Center architecture
- Understanding of server system design and architecture
- Familiarity with hypervisor technologies (such as VMware)

Recommended prerequisites:

- CCNA - Implementing and Administering Cisco Solutions
- DCFNDU - Understanding Cisco Data Center Foundations

**Implementing Data Center Switching Protocols\***

- Spanning Tree Protocol
- Port Channels Overview
- Virtual Port Channels Overview

**Implementing First-Hop Redundancy Protocols\***

- Hot Standby Router Protocol (HSRP) Overview
- Virtual Router Redundancy Protocol (VRRP) Overview

**Implementing Routing in Data Center\***

- Open Shortest Path First (OSPF) v2 and Open Shortest Path Protocol (OSPF) v3
- Border Gateway Protocol

**Implementing Multicast in Data Center\***

- IP Multicast in Data Center Networks
- Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD)
- Multicast Distribution Trees and Routing Protocols
- IP Multicast on Cisco Nexus Switches

**Implementing Data Center Overlay Protocols**

- Cisco Overlay Transport Virtualization
- Virtual Extensible LAN

**Implementing Network Infrastructure Security\***

- User Accounts and Role Based Access Control (RBAC)
- Authentication, Authorization, and Accounting (AAA) and SSH on Cisco NX-OS
- Keychain Authentication
- First Hop Security
- Media Access Control Security
- Control Plane Policing

**Describing Cisco Application-Centric Infrastructure**

- Cisco ACI Overview, Initialization, and Discovery
- Cisco CCloud ACI Overview
- Cisco ACI Management
- Cisco ACI Fabric Access Policies

**Describing Cisco ACI Building Blocks and VMM Domain Integration**

- Tenant-Based Components
- Cisco ACI Endpoints and Endpoint Groups (EPG)
- Controlling Traffic Flow with Contracts
- Virtual Switches and Cisco ACI VMM Domains
- VMM Domain EPG Association
- Cisco ACI Integration with Hypervisor Solutions

**Describing Packet Flow in Data Center Network\***

- Data Center Traffic Flows

- Packet Flow in Cisco Nexus Switches
- Packet Flow in Cisco ACI Fabric

### **Describing Cisco Cloud Service and Deployment Models\***

- Cloud Architectures
- Cloud Deployment Models

### **Describing Data Center Network Infrastructure Management, Maintenance, and Operations\***

- Time Synchronization
- Network Configuration Management
- Software Updates
- Network Infrastructure Monitoring

### **Explaining Cisco Network Assurance Concepts\***

- Need for Network Assurance
- Cisco Streaming Telemetry Overview

### **Implementing Fibre Channel Fabric**

- Fibre Channel Basics
- Virtual Storage Area Network (VSAN) Overview
- SAN Port Channels Overview
- Fibre Channel Domain Configuration Process

### **Implementing Storage Infrastructure Services**

- Distributed Device Aliases
- Zoning
- N-Port Identifier Virtualization (NPIV) and N-Port Virtualization (NPV)
- Fibre Channel over IP
- Network Access Server (NAS) Concepts
- Storage Area Network (SAN) Design Options

### **Implementing FCoE Unified Fabric**

- Fibre Channel over Ethernet
- Describing FCoE
- FCoE Topology Options
- FCoE Implementation

### **Implementing Storage Infrastructure Security\***

- User Accounts and RBAC
- Authentication, Authorization, and Accounting
- Fibre Channel Port Security and Fabric Binding

### **Describing Data Center Storage Infrastructure Maintenance and Operations\***

- Time Synchronization
- Software Installation and Upgrade
- Storage Infrastructure Monitoring

### **Describing Cisco UCS Server Form Factors\***

- Cisco UCS B-Series Blade Servers

- Cisco UCS C-Series Rack Servers

### **Implementing Cisco Unified Computing Network Connectivity**

- Cisco UCS Fabric Interconnect
- Cisco UCS B-Series Connectivity
- Cisco UCS C-Series Integration

### **Implementing Cisco Unified Computing Server Abstraction**

- Identity Abstraction
- Service Profile Templates

### **Implementing Cisco Unified Computing SAN Connectivity**

- iSCSI Overview
- Fibre Channel Overview
- Implement FCoE

### **Implementing Unified Computing Security**

- User Accounts and RBAC
- Options for Authentication
- Key Management

### **Introducing Cisco HyperFlex Systems\***

- Hyperconverged and Integrated Systems Overview
- Cisco HyperFlex Solution
- Cisco HyperFlex Scalability and Robustness

### **Describing Cisco Data Center Automation and Orchestration Technologies\***

- Power On Auto Provisioning
- Cisco Data Center Network Manager Overview
- Cisco UCS Director Fundamentals
- Cisco UCS PowerTool

### **Describing Data Center Unified Computing Management, Maintenance, and Operations\***

- Compute Configuration Management
- Software Updates
- Infrastructure Monitoring
- Cisco Intersight™

### **Describing Cisco Integration with Automation and Orchestration Software Platforms**

- Cisco and Ansible Integration Overview
- Cisco and Puppet Integration Overview
- Cisco and SaltStack Integration Overview
- Python in Cisco NX-OS and Cisco UCS
- Cisco Application-Centric Infrastructure Automation Options
- Cisco NSO Integration

### **Implementing Cisco Data Center Automation and Scripting Tools\***

- Cisco NX-OS Programmability
- Scheduler Overview
- Cisco Embedded Event Manager Overview

- Open NX-OS Linux Network Architecture
- Bash Shell and Guest Shell for Cisco NX-OS
- Cisco Nexus API
- Cisco NX-OS Model-Driven Programmability
- Cisco NX-SDK

## Labs

- Configure Virtual Extensible LAN (VXLAN)
- Explore the Cisco ACI Fabric
- Implement Cisco ACI Access Policies and Out-of-Band Management
- Implement Cisco ACI Tenant Policies
- Integrate Cisco ACI with VMware
- Configure Fibre Channel
- Configure Device Aliases
- Configure Zoning
- Configure NPV
- Provision Cisco UCS Fabric Interconnect
- Configure Server and Uplink Ports
- Configure VLANs
- Configure a Cisco UCS Server Profile Using Hardware Identities
- Configure Basic Identity Pools
- Configure a Cisco UCS Service Profile Using Pools
- Configure an Internet Small Computer Systems Interface (iSCSI) Service Profile
- Configure Cisco UCS Manager to Authenticate Users with Microsoft Active Directory
- Configure Cisco Nexus Switches with Ansible
- Program a Cisco Nexus Switch with Python
- Automate Cisco Application-Centric Infrastructure Configuration

\* These sections are self-study and can be done at your own pace after the instructor-led portion of the course.

## INFO

**Esame:** 350-601 - Implementing and Operating Cisco Data Center Core Technologies

**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)