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

Categoria: **Cisco**

## INFORMAZIONI SUL CORSO

| Durata: | Categoria: | Qualifica Istruttore: | Dedicato a: | Produttore: |
|---|---|---|---|---|
| 5 Giorni | Cisco | Cisco Certified Instructor | Professionista IT | 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

## CONTENUTI

**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 Settlement Protocol (OSP) 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 CLoud 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)