



# Implementing and Operating Cisco Data Center Core Technologies (DCCOR) v1.1

## Objetivos

After taking 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

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## Pre-requisitos

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

- 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)

These Cisco courses are recommended to help you meet these prerequisites:

- **Implementing and Administering Cisco Solutions (CCNA)**

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- Understanding Cisco Data Center Foundations (DCFNDU)

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## Contenido

- Implementing Data Center Switching Protocols\*
  - Spanning Tree Protocol
  - 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)
- 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
- Describing Cisco Application-Centric Infrastructure
  - Cisco ACI Overview, Initialization, and Discovery
  - Cisco ACI Management
- Describing Cisco ACI Building Blocks and VMM Domain Integration
  - Tenant-Based Components
  - Cisco ACI Endpoints and Endpoint Groups (EPG)
- Describing Packet Flow in Data Center Network\*
  - Data Center Traffic Flows
  - Packet Flow in Cisco Nexus Switches
- Describing Cisco Cloud Service and Deployment Models
  - Cloud Architectures

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- Cloud Deployment Models
- Describing Data Center Network Infrastructure Management, Maintenance, and Operations\*
  - Time Synchronization
  - Network Configuration Management
- 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
- Implementing Storage Infrastructure Services
  - Distributed Device Aliases
  - Zoning
- Implementing FCoE Unified Fabric
  - Fibre Channel over Ethernet
  - Describing FCoE
- Implementing Storage Infrastructure Security\*
  - User Accounts and RBAC
  - Authentication, Authorization, and Accounting
- Describing Data Center Storage Infrastructure Maintenance and Operations\*
  - Time Synchronization
  - Software Installation and Upgrade
- 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
- Implementing Cisco Unified Computing Server Abstraction
  - Identity Abstraction
  - Service Profile Templates
- Implementing Cisco Unified Computing SAN Connectivity
  - iSCSI Overview
  - Fibre Channel Overview



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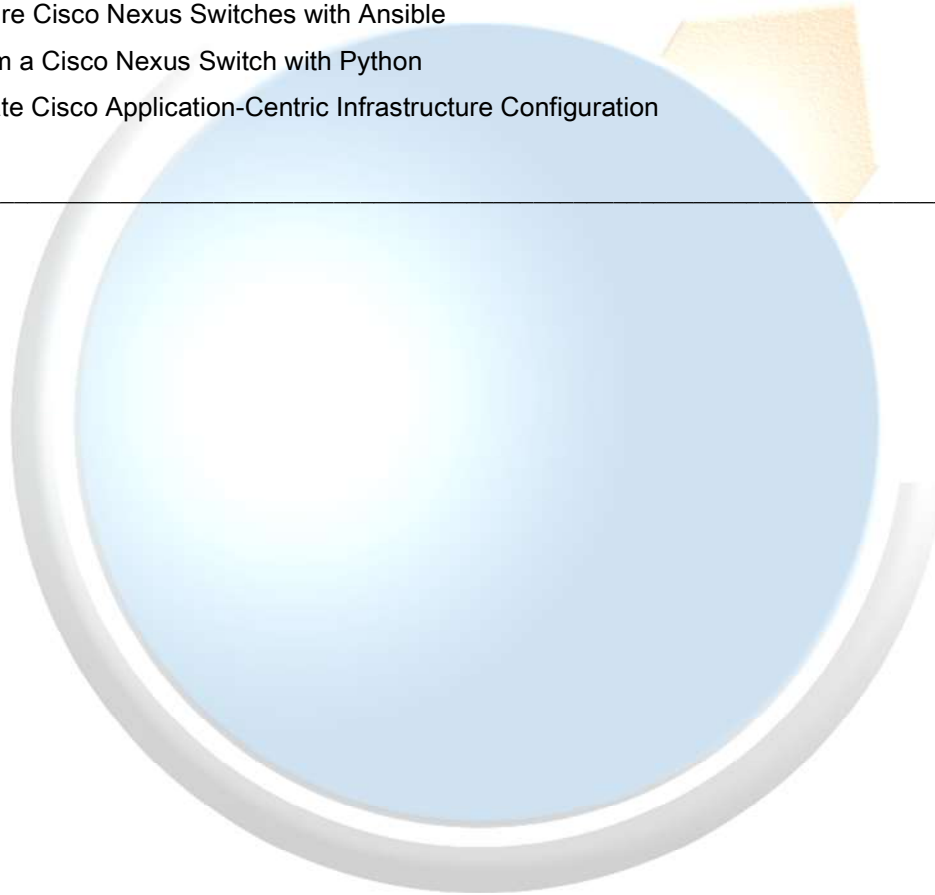
- Implementing Unified Computing Security
  - User Accounts and RBAC
  - Options for Authentication
- Introducing Cisco HyperFlex Systems\*
  - Hyperconverged and Integrated Systems Overview
  - Cisco HyperFlex Solution
- Describing Data Center Unified Computing Management, Maintenance, and Operations\*
  - Compute Configuration Management
  - Software Updates
- Implementing Cisco Data Center Automation and Scripting Tools\*
  - Cisco NX-OS Programmability
  - Scheduler Overview
- Describing Cisco Integration with Automation and Orchestration Software Platforms
  - Cisco and Ansible Integration Overview
  - Cisco and Puppet Integration Overview
- Describing Cisco Data Center Automation and Orchestration Technologies\*
  - Power On Auto Provisioning
  - Cisco Data Center Network Manager Overview

## Laboratorio

- 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 Cluster
- Configure Server and Uplink Ports
- Configure VLANs
- Configure a Cisco UCS Server Profile Using Hardware Identities

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- 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
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