# Implementing and Operating Cisco Data Center Core Technologies (DCCOR) V1.3

## Implementing and Operating Cisco Data Center Core Technologies (DCCOR) V1.3

The Implementing and Operating Cisco Data Center Core Technologies (DCCOR) training helps you prepare for the Cisco® CCNP® Data Center and CCIE® Data Center certifications for advanced-level data center roles. In this course, you will master the skills and technologies you need to implement data center compute, LAN and SAN infrastructure. You will also learn the essentials of automation and security in data centers. You will gain hands-on experience deploying, securing, operating, and maintaining Cisco data center infrastructure including: Cisco MDS Switches and Cisco Nexus Switches; Cisco Unified Computing System™ (Cisco UCS®) B-Series Blade Servers, and Cisco UCS C-Series Rack Servers. This course also earns you 64 Continuing Education (CE) credits towards recertification.

**How you'll benefit**

This class will help you:

- Gain experience implementing, securing and automating network, compute, and storage infrastructure
- Gain knowledge and skills through Cisco's unique combination of lessons and hands-on practice using enterprise-grade Cisco learning technologies, data center equipment, and software
- Qualify for professional and expert-level job roles in the high-demand area of enterprise-class data center environments
- Earn 64 CE credits toward recertification

**Why Attend with Current Technologies CLC**

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

**Who Should Attend**

The primary audience for this course is as follows:

- Network Designers
- Server Administrators
- Network Administrators
- Systems Engineers
- Technical Solutions Architects
- Cisco Integrators and Partners
- Network Engineers
- Data Center Engineers
- Consulting Systems Engineers
- Field Engineers
- Network Managers

**Course Duration**
5 days
**Course Price**
$4,595.00 or 46 CLCs
**Methods of Delivery**
- Instructor Led
- Virtual ILT
- On-Site

**OUTLINE**

**Module 1: Implementing Data Center Switching Protocols***
- Spanning Tree Protocol
- Port Channels Overview

**Module 2: Implementing First-Hop Redundancy Protocols***
- Hot Standby Router Protocol (HSRP) Overview
- Virtual Router Redundancy Protocol (VRRP) Overview

**Module 3: Implementing Routing in Data Center***
- Open Shortest Path First (OSPF) v2 and Open Settlement Protocol (OSP) v3
- Border Gateway Protocol

**Module 4: Implementing Multicast in Data Center***
- IP Multicast in Data Center Networks
- Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD)

**Module 5: Implementing Data Center Overlay Protocols**
- Cisco Overlay Transport Virtualization
- Virtual Extensible LAN

**Module 6: Implementing Network Infrastructure Security***
- User Accounts and Role Based Access Control (RBAC)
- Authentication, Authorization, and Accounting (AAA) and SSH on Cisco NX-OS

**Module 7: Describing Cisco Application-Centric Infrastructure**
- Cisco ACI Overview, Initialization, and Discovery
- Cisco ACI Management

**Module 8: Describing Cisco ACI Building Blocks and VMM Domain Integration**
- Tenant-Based Components
- Cisco ACI Endpoints and Endpoint Groups (EPG)

**Module 9: Describing Packet Flow in Data Center Network***
- Data Center Traffic Flows
- Packet Flow in Cisco Nexus Switches

**Module 10: Describing Cisco Cloud Service and Deployment Models**
- Cloud Architectures
- Cloud Deployment Models

**Module 11: Describing Data Center Network Infrastructure Management, Maintenance, and Operations***
- Time Synchronization
- Network Configuration Management

**Module 12: Explaining Cisco Network Assurance Concepts***
- Need for Network Assurance
- Cisco Streaming Telemetry Overview

**Module 13: Implementing Fibre Channel Fabric**

- Fibre Channel Basics
- Virtual Storage Area Network (VSAN) Overview

**Module 14: Implementing Storage Infrastructure Services**

- Distributed Device Aliases
- Zoning

**Module 15: Implementing FCoE Unified Fabric**

- Fibre Channel over Ethernet
- Describing FCoE

**Module 16: Implementing Storage Infrastructure Security***

- User Accounts and RBAC
- Authentication, Authorization, and Accounting

**Module 17: Describing Data Center Storage Infrastructure Maintenance and Operations***

- Time Synchronization
- Software Installation and Upgrade

**Module 18: Describing Cisco UCS Server Form Factors***

- Cisco UCS B-Series Blade Servers
- Cisco UCS C-Series Rack Servers

**Module 19: Implementing Cisco Unified Computing Network Connectivity**

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

**Module 20: Implementing Cisco Unified Computing Server Abstraction**

- Identity Abstraction
- Service Profile Templates

**Module 21: Implementing Cisco Unified Computing SAN Connectivity**

- iSCSI Overview
- Fibre Channel Overview

**Module 22: Implementing Unified Computing Security**

- User Accounts and RBAC
- Options for Authentication

**Module 23: Introducing Cisco HyperFlex Systems***

- Hyperconverged and Integrated Systems Overview
- Cisco HyperFlex Solution

**Module 24: Describing Data Center Unified Computing Management, Maintenance, and Operations***

- Compute Configuration Management
- Software Updates

**Module 25: Implementing Cisco Data Center Automation and Scripting Tools***

- Cisco NX-OS Programmability
- Scheduler Overview

**LAB OUTLINE**

- **Lab 1: Configure Virtual Extensible LAN (VXLAN)**
- **Lab 2: Explore the Cisco ACI Fabric**
- **Lab 3: Implement Cisco ACI Access Policies and Out-of-Band Management**
- **Lab 4: Implement Cisco ACI Tenant Policies**
- **Lab 5: Integrate Cisco ACI with VMware**
- **Lab 6: Configure Fibre Channel**
- **Lab 7: Configure Device Aliases**
- **Lab 8: Configure Zoning**
- **Lab 9: Configure NPV**
- **Lab 10: Provision Cisco UCS Fabric Interconnect Cluster**
- **Lab 11: Configure Server and Uplink Ports**
- **Lab 12: Configure VLANs**
- **Lab 13: Configure a Cisco UCS Server Profile Using Hardware Identities**
- **Lab 14: Configure Basic Identity Pools**
- **Lab 15: Configure a Cisco UCS Service Profile Using Pools**
- **Lab 16: Configure an Internet Small Computer Systems Interface (iSCSI) Service Profile**
- **Lab 17: Configure Cisco UCS Manager to Authenticate Users with Microsoft Active Directory**
- **Lab 18: Configure Cisco Nexus Switches with Ansible**
- **Lab 19: Program a Cisco Nexus Switch with Python**
- **Lab 20: Automate Cisco Application-Centric Infrastructure Configuration**