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DCCOR - IMPLEMENTING AND OPERATING CISCO DATA CENTER CORE TECHNOLOGIES V1.4

Course Code: 100482

The Implementing and Operating Cisco Data Center Core Technologies (DCCOR) training teaches you to implement data center local area networks (LANs) and storage area networks (SANs) and compute using Cisco Nexus Switches, Cisco MDS Switches, Cisco Unified Computing System (UCS) B-Series Blade Servers, and Cisco UCS C-Series Rack Servers. You will also learn the essentials of automation and security in data centers. The training provides rich, hands-on experience with deploying, securing, operating, and maintaining Cisco data center networking, storage, and computing.

This course 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
- Prepare for the 350-601 DCCOR v1.2 exam

This course is worth 64 Continuing Education (CE) credits towards recertification.

What You'll Learn

After taking this course, you should be able to:

- Implement spanning tree protocol, port channels, and virtual port channels in the data center
- Implement first-hop redundancy protocols in the data center using Hot Standby Router Protocol (HSRP), Virtual Router Redundancy Protocol (VRRP), and Gateway Load Balancing Protocol (GLBP)
- Implement routing in the data center by using Open Shortest Path First (OSPF)v2, OSPFv3, and Border Gateway Protocol (BGP)
- Implement multicast functionality in the data center on the Cisco Nexus switches
- Implement overlay networks in the data center by using Virtual Extensible LAN (VXLAN)

- Implement network infrastructure security features on the Cisco Nexus switches
- Understand the architecture and features of high-performance Ethernet fabrics
- Introduce high-level Cisco Application Centric Infrastructure (ACI) concepts and describe various fabric discovery parameters
- Describe Cisco ACI building blocks and Virtual Machine Manager (VMM) domain integration
- Describe packet flow for various traffic types (unicast, multicast, and broadcast) in the data center
- Describe Cisco Cloud Service and deployment models
- Describe Cisco ACI fabric setup
- Implement network configuration management, describe software updates and their impacts, and implement network infrastructure monitoring
- Describe Cisco network assurance concepts such as Cisco Streaming Telemetry
- Implement Fibre Channel fabric
- Implement storage infrastructure services in the data center such as distributed device aliases, zoning, N Port Virtualization (NPV), and Fibre Channel over IP (FCIP)
- Implement Fibre Channel over Ethernet (FCoE) unified fabric
- Implement storage infrastructure security features in the data center
- Describe storage infrastructure software updates and their impacts, and implement infrastructure monitoring
- Describe Cisco UCS Server form factors
- Implement Cisco UCS Fabric Interconnect and establish network connectivity for the Cisco UCS B-Series Blade Servers and Cisco UCS C-Series Rack Servers
- Implement Cisco Unified Computing Server abstraction
- Implement SAN connectivity for Cisco UCS
- Implement Cisco UCS security features in the data center
- Implement Cisco UCS configuration management, describe software updates and their impacts, and implement infrastructure monitoring
- Implement Cisco automation and scripting tools in the data center
- Describe and evaluate the Cisco integration with automation and orchestration software platforms, such as Ansible, Puppet, and Python
- Describe and evaluate Cisco data center automation and orchestration technologies

Who Needs to Attend

Individuals looking for the knowledge and skills required to implement, secure and automate network, compute and storage infrastructures.

Prerequisites

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)

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CLASSROOM LIVE	$4,595 USD	5 Day

Classroom Live Outline

Implementing Data Center Switching Protocols

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

Implementing First-Hop Redundancy Protocols

- HSRP Overview
- VRRP Overview

Implementing Routing in Data Center

- OSPFv2 and OSPFv3
- Border Gateway Protocol

Implementing Multicast in Data Center

- IP Multicast in Data Center Networks
- IGMP and MLD
- Multicast Distribution Trees and Routing Protocols
- IP Multicast on Cisco Nexus Switches

Implementing Data Center Overlay Protocols

- Virtual Extensible LAN
- VXLAN Control Plane Options
- VXLAN Gateways and Routing

Implementing Network Infrastructure Security

- User Accounts and RBAC
- AAA and SSH on Cisco NX-OS
- Keychain Authentication
- First Hop Security
- DHCP Snooping

- IP Source Guard
- Dynamic ARP Inspection
- Unicast Reverse Path Forwarding
- MAC Security
- Control Plane Policing

High-Throughput Converged Fabrics

- Infiniband-to-Ethernet Transition
- Cisco Nexus 9000 Series Switches Portfolio

Describing Cisco Application-Centric Infrastructure

- Cisco ACI Overview, Initialization, and Discovery
- Cisco Nexus Dashboard Overview
- 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

Cisco ACI Fabric Setup

- Cisco ACI Fabric Discovery

Describing Data Center Network Infrastructure Management

- 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
- VSAN Overview

- SAN Port Channels Overview
- Fibre Channel Domain Configuration Process

Implementing Storage Infrastructure Services

- Distributed Device Aliases
- Zoning
- NPIV and NPV
- Fibre Channel over IP
- NAS Concepts
- SAN Design Options

Implementing FCoE Unified Fabric

- Fibre Channel over Ethernet Overview
- 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
- Cisco UCS X-Series Hardware
- Cisco UCS X-Series Deployment
- Cisco Intersight Managed Mode Overview

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

- Cisco Unified Computing Storage Connectivity Options
- iSCSI Overview
- Fibre Channel Overview
- Implement FCoE

Implementing Unified Computing Security

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

Describing Data Center Unified Computing Management, Maintenance, and Operations

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

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
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- Cisco and Ansible Integration Overview
- Python in Cisco NX-OS and Cisco UCS
- HashiCorp Terraform Overview
- Cisco Application-Centric Infrastructure Automation Options

Describing Cisco Data Center Automation and Orchestration Technologies

- Power On Auto Provisioning
- Cisco Nexus Dashboard Overview
- Cisco Nexus Dashboard Fabric Controller Overview
- Cisco UCS PowerTool

Classroom Live Labs

- Discovery Lab 1: Configure VXLAN
- Discovery Lab 2: Explore the Cisco ACI Fabric
- Discovery Lab 3: Implement Cisco ACI Access Policies and Out-of-Band Management
- Discovery Lab 4: Implement Cisco ACI Tenant Policies
- Discovery Lab 5: Integrate Cisco ACI with VMware
- Discovery Lab 6: Validate Fabric Discovery
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- Discovery Lab 20: Program a Cisco Nexus Switch with Python

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- Cisco UCS X-Series Hardware
- Cisco UCS X-Series Deployment
- Cisco Intersight Managed Mode Overview

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Nov 30 - Dec 4, 2026 | 8:30 AM - 4:30 PM EST

Feb 1 - 5, 2027 | 8:30 AM - 4:30 PM EST

Apr 5 - 9, 2027 | 8:30 AM - 4:30 PM EDT

Jun 7 - 11, 2027 | 8:30 AM - 4:30 PM EDT

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ON-DEMAND	$1,500 USD

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PRIVATE GROUP TRAINING	5 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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