Implementing and Operating Cisco Data Center Core Technologies v1.2 (DCCOR)

Price	Duration	Delivery Methods
$3,595.00	5 Daytime Classes or 10 Evening Classes	Virtual, Private Group,

CAREER SKILLS+™

The Implementing and Operating Cisco Data Center Core Technologies (DCCOR) v1.2 course 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.

This course, including the self-paced material prepares you to take the exam: 350-601 Implementing Cisco Data Center Core Technologies (DCCOR)

Who Should Attend

Network designers

Network administrators
Network engineers
Systems engineers
Data center engineers
Consulting systems engineers
Technical solutions architects
Field engineers
Cisco integrators and partners
Server administrator
Network manager

Course Prerequisites

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)

Course Objectives

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

Agenda

1 - Implementing Data Center Switching Protocols*
Spanning Tree Protocol
Port Channels Overview
Virtual Port Channels Overview
(sections marked with * are self-study material that can be done at your own pace after the instructor-led portion of the course.)
2 - Implementing First-Hop Redundancy Protocols*
Hot Standby Router Protocol (HSRP) Overview
Virtual Router Redundancy Protocol (VRRP) Overview
First Hop Redundancy Protocol (FHRP) for IPv6
3 - Implementing Routing in Data Center*
Open Shortest Path First (OSPF) v2 and Open Settlement Protocol (OSP) v3
Border Gateway Protocol
4 - 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
5 - Implementing Data Center Overlay Protocols
Cisco Overlay Transport Virtualization
Virtual Extensible LAN
6 - 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
7 - Describing Cisco Application-Centric Infrastructure
Cisco ACI Overview, Initialization, and Discovery
Cisco ACI Management
Cisco ACI Fabric Access Policies
8 - 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
9 - Describing Packet Flow in Data Center Network*
Data Center Traffic Flows
Packet Flow in Cisco Nexus Switches
Packet Flow in Cisco ACI Fabric
10 - Describing Cisco Cloud Service and Deployment Models
Cloud Architectures

Cloud Deployment Models
11 - Describing Data Center Network Infrastructure Management, Maintenance, and Operations*
Time Synchronization
Network Configuration Management
Software Updates
Network Infrastructure Monitoring
12 - Explaining Cisco Network Assurance Concepts*
Need for Network Assurance
Cisco Streaming Telemetry Overview
13 - Implementing Fibre Channel Fabric
Fibre Channel Basics
Virtual Storage Area Network (VSAN) Overview
SAN Port Channels Overview
Fibre Channel Domain Configuration Process
14 - 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
15 - Implementing FCoE Unified Fabric
Fibre Channel over Ethernet
Describing FCoE
FCoE Topology Options
FCoE Implementation
16 - Implementing Storage Infrastructure Security*
User Accounts and RBAC
Authentication, Authorization, and Accounting
Fibre Channel Port Security and Fabric Binding
17 - Describing Data Center Storage Infrastructure Maintenance and Operations*
Time Synchronization
Software Installation and Upgrade
Storage Infrastructure Monitoring
18 - Describing Cisco UCS Server Form Factors*
Cisco UCS B-Series Blade Servers
Cisco UCS C-Series Rack Servers
19 - Implementing Cisco Unified Computing Network Connectivity
Cisco UCS Fabric Interconnect
Cisco UCS B-Series Connectivity
Cisco UCS C-Series Integration
20 - Implementing Cisco Unified Computing Server Abstraction
Identity Abstraction
Service Profile Templates

21 - Implementing Cisco Unified Computing SAN Connectivity
iSCSI Overview
Fibre Channel Overview
Implement FCoE
22 - Implementing Unified Computing Security
User Accounts and RBAC
Options for Authentication
Key Management
23 - Introducing Cisco HyperFlex Systems*
Hyperconverged and Integrated Systems Overview
Cisco HyperFlex Solution
Cisco HyperFlex Scalability and Robustness
24 - Describing Data Center Unified Computing Management, Maintenance, and Operations*
Compute Configuration Management
Software Updates
Infrastructure Monitoring
Cisco Intersight™
25 - Implementing Cisco Data Center Automation and Scripting Tools*
Cisco NX-OS Programmability
Scheduler Overview
Cisco Embedded Event Manager Overview
Bash Shell and Guest Shell for Cisco NX-OS
Cisco Nexus API
26 - Describing Cisco Integration with Automation and Orchestration Software Platforms
Cisco and Ansible Integration Overview
Cisco and Puppet Integration Overview
Python in Cisco NX-OS and Cisco UCS
27 - 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
(Sections marked with * are self-study material that can be done at your own pace after the instructor-led portion of the course.)