Course Training

Implementing and Operating Cisco Data Center Core Technologies (DCCOR) [350-601]

Course Content

The Implementing and Operating Cisco Data Center Core Technologies (DCCOR) 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 350-601 Implementing Cisco Data Center Core Technologies (DCCOR) exam.

Course Objectives

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 technologiesTroubleshooting Enterprise networks using services such as Network Time Protocol (NTP), Simple Network Management Protocol (SNMP), Cisco Internetwork Operating System (Cisco IOS®) IP Service Level Agreements (SLAs), NetFlow, and Cisco IOS Embedded Event Manager
- Explain the use of available network analysis and troubleshooting tools, which include show and debug commands, as well as best practices in troubleshooting
- Configure secure administrative access for Cisco IOS devices using the Command-Line Interface (CLI) access, Role-Based Access Control (RBAC), Access Control List (ACL), and Secure Shell (SSH), and explore device hardening concepts to secure devices from less secure applications, such as Telnet and HTTP

- Implement scalable administration using Authentication, Authorization, and Accounting (AAA) and the local database, while exploring the features and benefits
- Describe the enterprise network security architecture, including the purpose and function of VPNs, content security, logging, endpoint security, personal firewalls, and other security features
- Explain the purpose, function, features, and workflow of Cisco DNA Center™ Assurance for Intent-Based Networking, for network visibility, proactive monitoring, and application experience
- Describe the components and features of the Cisco SD-Access solution, including the nodes, fabric control plane, and data plane, while illustrating the purpose and function of the Virtual Extensible LAN (VXLAN) gateways
- Define the components and features of Cisco SD-WAN solutions, including the orchestration plane, management plane, control plane, and data plane
- Describe the concepts, purpose, and features of multicast protocols, including Internet Group Management Protocol (IGMP) v2/v3, Protocol-Independent Multicast (PIM) dense mode/sparse mode, and rendezvous points
- Describe the concepts and features of Quality of Service (QoS), and describe the need within the enterprise network
- Explain basic Python components and conditionals with script writing and analysis
- Describe network programmability protocols such as Network Configuration Protocol (NETCONF) and RESTCONF
- Describe APIs in Cisco DNA Center and vManage

Course Prerequisite

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)
- Understanding Cisco Data Center Foundations (DCFNDU)

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 Outline

- Implementing Data Center Switching Protocols*
- Implementing First-Hop Redundancy Protocols*
- Implementing Routing in Data Center*
- Implementing Multicast in Data Center*
- Implementing Data Center Overlay Protocols
- Implementing Network Infrastructure Security*
- Describing Cisco Application-Centric Infrastructure
- Describing Cisco ACI Building Blocks and VMM Domain Integration
- Describing Packet Flow in Data Center Network*
- Describing Cisco Cloud Service and Deployment Models
- Describing Data Center Network Infrastructure Management, Maintenance, and Operations*
- Explaining Cisco Network Assurance Concepts*
- Implementing Fibre Channel Fabric
- Implementing Storage Infrastructure Services
- Implementing FCoE Unified Fabric

- Implementing Storage Infrastructure Security*
- Describing Data Center Storage Infrastructure Maintenance and Operations*
- Describing Cisco UCS Server Form Factors*
- Implementing Cisco Unified Computing Network Connectivity
- Implementing Cisco Unified Computing Server Abstraction
- Implementing Cisco Unified Computing SAN Connectivity
- Implementing Unified Computing Security
- Introducing Cisco HyperFlex Systems*
- Describing Data Center Unified Computing Management, Maintenance, and Operations*
- Implementing Cisco Data Center Automation and Scripting Tools*
- Describing Cisco Integration with Automation and Orchestration Software Platforms
- Describing Cisco Data Center Automation and Orchestration Technologies*
- Power On Auto Provisioning
- Cisco Data Center Network Manager Overview