

Designing Cisco Data Center Infrastructure (DCID)

Duration 5 Days

COURSE CONTENT

The Designing Cisco Data Center Infrastructure (DCID) course focuses on data center design based on Cisco solutions and technologies. It includes information on designing data centers with Cisco components and technologies

Upon completion of this course, you will be able to:

- Describe the Layer 2 and Layer 3 forwarding options and protocols used in a data center.
- Describe Cisco OTV technology, rack design options, traffic patterns, and data center switching layer access, aggregation, and core .
- Design a solution that uses LISP for traffic forwarding, hardware redundancy options, virtualize the network, compute, and storage.
- Describe virtual networking, advanced security technologies, security threats, and solutions using fabric extenders.
- Describe virtual appliances, device management and orchestration in a data center network.
- Describe a data center storage network and different RAID levels from a HA and performance perspective.
- Describe Fibre Channel concepts, architecture, topologies, and industry terms.
- Describe security options, management, and automation options, for storage networking.
- Explain the connectivity options in the Fabric Interconnects for south- and northbound connections. Distinguish between the EHV and switching mode .
- Describe the hyper convergence solution and how it integrates systems based on different storage vendors.
- Describe the management options for Cisco UCS. Design the management solution in HA mode.

PREREQUISITES

To fully benefit from this course, students attending this training should have completed the following courses or obtained the equivalent level of knowledge:

- Introducing Cisco Data Center Networking (DCICN) v6.0 or higher
- Introducing Cisco Data Center Technologies (DCICT) v6.0 or higher
- Configuring Cisco Nexus 9000 Series Switches in ACI Mode (DCAC9K) v2.0 or higher

It is recommended that a learner has the following knowledge and skills before attending this course:

- Describe data center networking concepts
- Describe data center storage concepts
- Describe data center virtualization
- Describe Cisco UCS
- Describe data center automation and orchestration with a focus on Cisco ACI and Cisco UCS Director
- Identify products in the Cisco data center Nexus and Cisco MDS families
- Describe network fundamentals and build simple LANs, including switching and routing
- Good understanding of the VMware environment

WHO SHOULD ATTEND

- Network Designer
- Network Administrator
- Network Engineer
- System Engineer
- Technical Solutions Architect

COURSE OUTLINE

Module 1: Data Center Network Connectivity Design

- Lesson 1: Describing High Availability on Layer 2
- Lesson 2: Designing Layer 3 Connectivity
- Lesson 3: Designing Data Center Topologies
- Lesson 4: Designing Data Center Interconnects with Cisco OTV
- Lesson 5: Designing a LISP Solution

Module 2: Data Center Infrastructure Design

- Lesson 1: Describing Hardware and Device Virtualization
- Lesson 2: Describing FEX Options
- Lesson 3: Describing Virtual Networking
- Lesson 4: Describing Basic Data Center Security
- Lesson 5: Describing Advanced Data Center Security
- Lesson 6: Describing Virtual Appliances
- Lesson 7: Describing Management and Orchestration

Module 3: Data Center Storage Network Design

- Lesson 1: Describing Storage and RAID Options
- Lesson 2: Describing Fibre Channel Concepts
- Lesson 3: Describing Fibre Channel Topologies
- Lesson 4: Describing FCoE
- Lesson 5: Describing Storage Security
- Lesson 6: Describing SAN Management and Orchestration

Module 4: Data Center Compute Connectivity Design

- Lesson 1: Describing Cisco UCS Servers and Use Cases
- Lesson 2: Describing Fabric Interconnect Connectivity
- Lesson 3: Describing Hyperconverged and Integrated Systems
- Lesson 4: Describing Management Systems
- Lesson 5: Describing Hadoop, SAP Hana, and IoT on Cisco UCS

Module 5: Data Center Compute Resource Parameters Design

- Lesson 1: Describing Cisco UCS Manager System-Wide Parameters
- Lesson 2: Describing Cisco UCS RBAC
- Lesson 3: Describing Pools for Service Profiles
- Lesson 4: Describing Policies for Service Profiles
- Lesson 5: Describing Network-Specific Adapters and Policies
- Lesson 6: Describing Templates in Cisco UCS Manager