

# Designing Cisco Data Center Infrastructure (DCID)

## Description

The course includes information on designing data centers with Cisco components and technologies. It covers network designs with virtualization, Layer 2 and Layer 3 technologies and routing protocols, and data center interconnect design options. Also covered are device virtualization technologies, including virtual switches, virtual routers, and virtual firewalls. Storage and SAN design is covered. Design practices for the Cisco Unified Computing System (UCS) solution based on Cisco UCS B-Series and C-Series servers and Cisco UCS Manager are covered. Network management technologies.

## Course Content

### 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

## **Lab / Exercises**

- Cisco official lab and exercises

## **Documentation**

- Digital courseware included

## **Exam**

- This course prepares you to the 300-160 DCID Designing Cisco Data Center Infrastructure exam. If you wish to take this exam, please contact our secretariat who will let you know the cost of the exam and will take care of all the necessary administrative procedures for you.

## **Participant profiles**

- Individuals involved in the implementation of public, private and hybrid clouds based on Cisco Infrastructure

## **Prerequisites**

- Implement data center networking (LAN and SAN)
- Describe data center storage
- Implement data center virtualization
- Implement Cisco Unified Computing System
- Implement data center automation and orchestration with the focus on Cisco ACI and UCS Director

## **Objectives**

- Describe Layer 2 switching and Layer 3 forwarding in a data center
- Design vPC, Cisco FabricPath, OTV, and LISP in customer scenarios and describe management options in the LAN
- Describe hardware virtualization and FEX technologies, compare the Cisco Nexus 1000v with VM-FEX designs, discuss data center security threats and Cisco Virtual Application Container Services for IaaS
- Describe storage and RAID options, describe the Fibre Channel concept and architecture, and design Fibre Channel and FCoE networks
- Describe the UCS C-Series, M-Series, and B-Series servers, with connectivity and adapter options. Compare the EHV and NPV network operations modes
- Design the resource parameters for a UCS domain, starting with the setup and IP concepts, RBAC, and integration with authentication servers
- Design the resource pools and policies used in UCS service profiles and templates

## **Niveau**

Intermédiaire

## **Virtual Classroom Registration Price (CHF)**

4350

## **Duration (in Days)**

5

## **Reference**

CIS-DCID