Designing Cisco Data Center Infrastructure (DCID)

What you'll learn

The Designing Cisco Data Center Infrastructure (DCID) training helps you master design and deployment options focused on Cisco® data center solutions and technologies across network, compute, virtualization, storage area networks, automation, and security. You will learn design practices for the Cisco Unified Computing System™ (Cisco UCS®) solution based on Cisco UCS B-Series and C-Series servers, Cisco UCS Manager, and Cisco Unified Fabric. You will also gain design experience with network management technologies including Cisco UCS Manager, Cisco Data Center Network Manager (DCNM), and Cisco UCS Director. You can expect theoretical content as well as design-oriented case studies in the form of activities. This training earns you 40 Continuing Education (CE) credits towards recertification.

This training helps you prepare to take the exam:

300-610 Designing Cisco Data Center Infrastructure (DCID)

How you'll benefit

This training will help you:

Make design choices for optimal data center infrastructure performance, virtualization, security, and automation

Master the practical and theoretical knowledge necessary to design a scalable, reliable, and intelligent data center based on Cisco technologies

Qualify for professional-level job roles in the high-demand area of enterprise-class data center environments

What to expect in the exam

This exam certifies your knowledge of data center infrastructure design including network, compute, storage network, and automation.

After you pass 300-610 DCID:

You earn the Cisco Certified Specialist - Data Center Design certification and you will have satisfied the concentration exam requirement for the CCNP Data Center certification.

Who should enroll

IT professionals with five to eight years of experience in these roles:

Data center engineers

Network designers

Network administrators

Network engineers

Systems engineers

Consulting systems engineers

Technical solutions architects

Server administrators

Network managers

Cisco integrators or partners

Technology areas

Data center

Training overview

Objectives

After taking this training, you should be able to:

Describe the Layer 2 and Layer 3 forwarding options and protocols used in a data center

Describe the rack design options, traffic patterns, and data center switching layer access, aggregation, and core

Describe the Cisco Overlay Transport Virtualization (OTV) technology that is used to interconnect data centers

Describe Locator/ID separation protocol

Design a solution that uses Virtual Extensible LAN (VXLAN) for traffic forwarding

Describe hardware redundancy options; how to virtualize the network, compute, and storage functions; and virtual networking in the data center

Describe solutions that use fabric extenders and compare Cisco Adapter Fabric Extender (FEX) with single root input/output virtualization (SR-IOV)

Describe security threats and solutions in the data center

Describe advanced data center security technologies and best practices

Describe device management and orchestration in the data center

Describe the storage options for compute function and different Redundant Array of Independent Disks (RAID) levels from a high-availability and performance perspective

Describe Fibre Channel concepts, topologies, architecture, and industry terms

Describe Fibre Channel over Ethernet (FCoE)

Describe security options in the storage network

Describe management and automation options for storage networking infrastructure

Describe Cisco UCS servers and use cases for various Cisco UCS platforms

Explain the connectivity options for fabric interconnects for southbound and northbound connections

Describe the hyper converged solution and integrated systems

Describe the system wide parameters for setting up a Cisco UCS domain

Describe role-based access control (RBAC) and integration with directory servers to control access rights on Cisco UCS Manager

Describe the pools that may be used in service profiles or service profile templates on Cisco UCS Manager

Describe the different policies in the service profile

Describe the Ethernet and Fibre Channel interface policies and additional network technologies

Describe the advantages of templates and the difference between initial and updated templates

Describe data center automation tools

Prerequisites

Before taking this training, you should be able to:

Implement data center networking [Local Area Network (LAN) and Storage Area Network (SAN)]

Describe data center storage

Implement data center virtualization

Implement Cisco Unified Computing System (Cisco UCS)

Implement data center automation and orchestration with the focus on Cisco Application Centric Infrastructure (ACI) and Cisco UCS Director

Describe products in the Cisco Data Center Nexus and Multilayer Director Switch (MDS) families

To fully benefit from this training, you should have completed the following trainings or obtained the equivalent level of knowledge:

Understanding Cisco Data Center Foundations (DCFNDU)

Implementing and Administering Cisco Networking Technologies (CCNA®)

Implementing Cisco Data Center Core Technologies (DCCOR)