

Designing Cisco Data Center Infrastructure (DCID) v7.1

Duration: 40 Hours (5 Days)

Overview

The Designing Cisco Data Center Infrastructure (DCID) v7.1 course is a comprehensive training program that equips learners with the knowledge and skills necessary to design a scalable, reliable, and intelligent data center infrastructure. The course covers key topics such as High availability mechanisms, Virtual port channels, Cisco FabricPath, and overlays such as VXLAN. It also delves into Compute design, Automation, Security, Storage networking, and Cisco Unified Computing System (UCS) configurations. Learners will benefit from a deep dive into designing Layer 2 and Layer 3 connectivity, Data center topologies, interconnects with Cisco Overlay Transport Virtualization (OTV), and Network virtualization techniques. The course addresses current industry standards and practices, ensuring that participants are prepared to design data center solutions that can effectively support business operations and objectives. By completing the DCID course, professionals will gain the expertise needed to design and implement robust data center infrastructures using Cisco technologies, thereby enhancing their career prospects and contributing value to their organizations.

Audience Profile

The Designing Cisco Data Center Infrastructure (DCID) v7.1 course is ideal for IT professionals responsible for designing and implementing data center solutions.

- Network Designers and Administrators
- Data Center Engineers and Managers
- Solutions Architects
- Systems Engineers
- Cisco Integrators/Partners
- Network Consultants
- Technical Decision Makers
- Infrastructure Architects
- Server Administrators with a focus on data center infrastructure
- Storage Administrators interested in Cisco data center technologies
- Network and Server Virtualization Engineers

Course Syllabus

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)