Designing Cisco Data Center Infrastructure (DCID)

ID DCID   **Price** 3,595.— €(excl. tax)   **Duration** 5 days

Course Overview

The Designing Cisco Data Center Infrastructure (DCID) provides training on designing data centers using Cisco data centers solutions and technologies. Topics covered include network designs with virtualization technologies, Layer 2 and Layer 3 technologies and routing protocols, and data center interconnect design options. You'll 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, while gaining experience with network management technologies including Cisco UCS Manager, Cisco Data Center Network Manager (DCNM), and Cisco UCS Director. This training also 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

Who should attend

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

This course is part of the following Certifications

Cisco Certified Network Professional Data Center (CCNP DATA CENTER)

Prerequisites

Before taking this offering, 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 MDS families

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

- Understanding Cisco Data Center Foundations (DCFNDU) or and
- Implementing and Operating Cisco Data Center Core Technologies (DCCOR)

It is recommended, but not required, to have the following skills and knowledge 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

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- Identify products in the Cisco data center Nexus and Cisco MDS families
- Describe network fundamentals and build simple LANs, including switching and routing

Course Objectives

- 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 Locator/ID separation protocol
- Design a solution that uses Virtual Extensible LAN (VXLAN) for traffic forwarding
- Describe the 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 the compute function and the different Redundant Array of Independent Disks (RAID) levels from a high-availability and performance perspective
- Describe Fibre Channel concepts and architecture
- Describe Fibre Channel topologies and industry terms
- Describe Fibre Channel over Ethernet (FCoE)
- Describe security options in the storage network
- Describe the management and automation options for the 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 hyperconverged solution and integrated systems
- Describe the systemwide 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

Detailed Course Outline

- Section 1: Describing High Availability on Layer 2
- Section 2: Designing Layer 3 Connectivity
- Section 3: Designing Data Center Topologies
- Section 4: Designing Data Center Interconnects with Cisco OTV
- Section 5: Describing Locator/ID Separation Protocol
- Section 6: Describing VXLAN Overlay Networks
- Section 7: Describing Hardware and Device Virtualization
- Section 8: Describing Cisco FEX Options
- Section 9: Describing Basic Data Center Security
- Section 10: Describing Advanced Data Center Security
- Section 11: Describing Management and Orchestration
- Section 12: Describing Storage and RAID Options
- Section 13: Describing Fibre Channel Concepts
- Section 14: Describing Fibre Channel Topologies
- Section 15: Describing FCoE
- Section 16: Describing Storage Security
- Section 17: Describing SAN Management and Orchestration
- Section 18: Describing Cisco UCS Servers and Use Cases
- Section 19: Describing Fabric Interconnect Connectivity
- Section 20: Describing Hyperconverged and Integrated Systems
- Section 21: Describing Cisco UCS Manager Systemwide Parameters
- Section 22: Describing Cisco UCS RBAC
- Section 23: Describing Pools for Service Profiles
- Section 24: Describing Policies for Service Profiles
- Section 25: Describing Network-Specific Adapters and Policies
- Section 26: Describing Templates in Cisco UCS Manager
- Section 27: Designing Data Center Automation

About Fast Lane

Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

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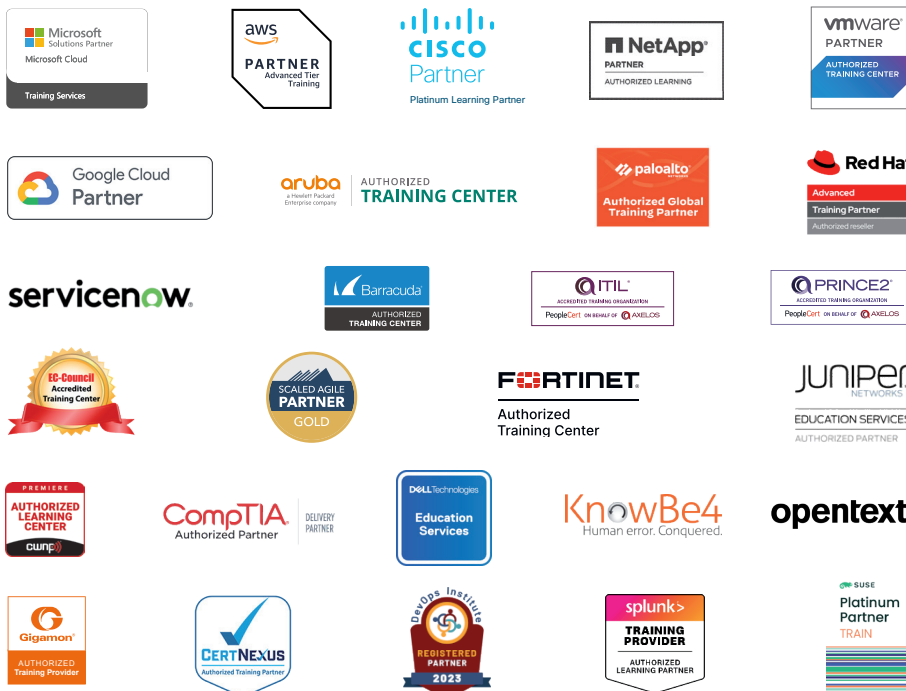
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