

# Designing Cisco Data Center Unified Fabric (DCUFD)

Duration 5 Days

This course is aimed at providing data center architects with the knowledge and skills needed to design scalable, reliable, and intelligent data center unified fabrics, and virtualization solutions based on the Fabric Extenders (FEXs), Fibre Channel over Ethernet (FCoE), FabricPath, and equipment and link virtualization technologies.

The course describes the Cisco data center Unified Fabric solutions, and explains how to evaluate existing data center infrastructure, determine the requirements, and design the Cisco Data Center Unified Fabric solution based on Cisco products and technologies.

## COURSE OBJECTIVES

Upon completing this course, you will be able to meet these overall objectives:

- Evaluate data center solution design and design process in regards to the contemporary data center challenges, Cisco Data Center Architecture solution, and components
- Provide a comprehensive and detailed overview of technologies used in data centers, and describe scalability implications and their possible use in cloud environments
- Design data center connections and topologies in the core layer
- Present and design data center storage designs, solutions, and limitations of various storage technologies
- Design secure data centers to be protected from application-based threats, network security threats, and physical security threats
- Design data center infrastructure that is required to implement network-based application services
- Design data center management to facilitate monitoring, managing, and provisioning data center equipment and applications

## WHO SHOULD ATTEND

The primary audience for this course is as follows:

- Data center designers, data center administrators, and system engineers.

The secondary audience for this course is as follows:

- Data center engineers and managers.

## PREREQUISITES

The knowledge and skills that a learner must have before attending this course are as follows:

- Cisco Certified Network Associate Data Center (CCNA Data Center) certification
- Knowledge that is covered in the Cisco Nexus product family courses
- Knowledge that is covered in the Designing for Cisco Internetwork Solutions (DESGN) course
- Knowledge that is covered in the Designing Cisco Storage Networking Solutions (DCSNS) course

## COURSE OUTLINE

### Cisco Data Center Solutions

- Identifying Data Center
- Identifying Cisco Data Center Solution
- Defining Cisco Data Center Solution Design

### Data Center Technologies

- Designing Layer 2 and Layer 3 Switching
- Virtualizing Data Center Components
- Designing Layer 2 Multi-Pathing Technologies

### Data Center Topologies

- Designing Data Center Core Layer Network
- Designing Data Center Aggregation Layer
- Designing Data Center Access Layer
- Designing Data Center Virtualized Access Layer
- Designing High Availability
- Designing Data Center Interconnects

### Data Center Storage

- Introducing Storage Area Networking
- Designing SAN
- Designing Unified Fabric
- Designing SAN Services

### Data Center Security

- Designing Data Center Application Security
- Designing Link Security Technologies and Device Hardening
- Designing Storage Security

### Data Center Application Services

- Designing Data Center Application Architecture
- Designing Application Services
- Designing Global Load Balancing

### Data Center Management

- Designing Data Center Management Solutions

### Course labs and case studies

- Case Study 1-1: Design a Migration to vPC
- Lab 1-2: Familiarize with the Lab Equipment
- Lab 3-1: Explore VDCs
- Lab 3-2: Examine vPC
- Lab 3-3: Explore FabricPath
- Lab 3-4: Connect FEXs
- Lab 3-5: Interconnect Data Centers with OTV
- Case Study 3-6: Design VLAN Extension
- Case Study 4-1: Design Unified Fabric