Training Partners

# DCII

Cisco Network Certification

Cisco Learning Specialized Partner

## Implementing Cisco Data Center Infrastructure v6.0

### Duration

5 days

### Prerequisites

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

- Describe data center networking concepts
- Describe data center storage concepts
- Describe data center virtualization
- Describe Cisco Unified Computing System
- Describe data center automation and orchestration with the focus on Cisco ACI and UCS Director
- Identify products in the Cisco Data Center Nexus and MDS families
- Describe network fundamentals and build simple LANs, including switching and routing

### Who Should Attend

This course is targeted for:

- Learners who are preparing for Cisco CCNP Data Center certification and those in professional-level data center roles.

### Benefits Realized

Upon completing this course, the learner will be able to:

- Configure RSTP, MST, and port channels and implement Cisco FabricPath, OTV, VXLAN, and LISP
- Configure first-hop redundancy, routing, and multicast in the data center
- Configure user management and implement system security features on Nexus switches
- Perform basic Fibre Channel configuration, manage Fibre Channel domains, and implement Fibre Channel port security and binding
- Configure FCoE
- Configure distributed device aliases, zoning, NPV, and FCIP
- Configure system management and infrastructure monitoring

### Course Content

This instructor-led course is designed to help learners prepare for the Cisco CCNP® Data Center certification and for professional-level data center roles. The focus of this skills-building course is implementation of LAN, SAN, and Data Center Unified Fabric using Cisco MDS switches, Cisco Nexus switches, and Cisco Nexus 2000 Series Fabric Extenders (FEXs). The course provides rich, hands-on experience of implementing Cisco data center infrastructure.

## Course Outline

- **Module 1**: **Data Center Protocols**
  - Configuring Spanning Tree Protocol
  - Configuring Port Channels
  - Configuring Fabric Extenders
  - Implementing Cisco FabricPath
  - Understanding Cisco Overlay Transport Virtualization
  - Implementing VXLAN
  - Implementing LISP

- **Module 2: Layer 3 Switching Features in the Data Center**
  - Configuring First-Hop Redundancy
  - Configuring Routing
  - Configuring IP Multicast

- **Module 3: Data Center Infrastructure Security**
  - Configuring User Management
  - Configuring System Security Features

- **Module 4: Data Center Infrastructure Storage Fabric**
  - Basic Fibre Channel Configuration
  - Managing Domains
  - Implementing Port Security and Fabric Binding

- **Module 5: FCoE Unified Fabric**
  - Describing FCoE
  - Implementing FCoE

- **Module 6: Data Center Infrastructure Storage Services**
  - Configuring Distributed Device Aliases
  - Implementing Zoning
  - Configuring NPIV and NPV
  - Configuring Fibre Channel Over IP

- **Module 7: Data Center Infrastructure Maintenance, Management, and Operations**
  - Configuring System Management
  - Configuring Infrastructure Monitoring

- **Labs**
  - Lab 1-1: Configure Layer 2 Switching
  - Lab 1-2: Configure Port Channels
  - Lab 1-3: Configure FEX
  - Lab 1-4: Configure Cisco FabricPath
  - Lab 1-5: Configure OTV
  - Lab 1-6: Configure VXLAN

  - Lab 2-1: Configure VRRP
  - Lab 2-2: Configure OSPF

  - Lab 3-1: Configure User Management Security Features
  - Lab 3-2: Configure System Security Features

  - Lab 4-1: Configure Fibre Channel
  - Lab 4-2: Manage Domains and Configure Persistent FCIDs
  - Lab 4-3: Configure Fabric Binding and Port Security

  - Lab 5-1: Configure FCoE

  - Lab 6-1: Configure Device Aliases
  - Lab 6-2: Configure Zoning
  - Lab 6-3: Configure NPV

  - Lab 7-1: Configure System Management
  - Lab 7-2: Implement Infrastructure Monitoring