



Implementing Cisco Data Center Infrastructure

DURATION: 5 DAYS

COURSE CODE: DCII

FORMAT: LECTURE/LAB

COURSE DESCRIPTION

The Implementing Cisco Data Center Infrastructure (DCII) course is designed to help students 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 LANs, SANs, and data center unified fabric using Cisco MDS switches, Cisco Nexus switches, and Cisco Nexus 2000 Series Fabric Extenders (FEX). The course provides rich hands-on experience with implementing Cisco data center infrastructure. Those preparing for professional-level data center-oriented jobs, or who wish to certify on the in-demand Cisco CCNP Data Center level, can now take the official training in self-paced format. The e-learning format of this course offers an immersive, practice-based learning experience at your own pace. Using enterprise-grade Cisco data center equipment, this hands-on training format is designed to be as effective as classroom training, with easily consumable segments of video, text, discovery labs, review questions, and graded challenges.

WHO SHOULD ATTEND

Network designers, Network administrators, Network engineers, Systems engineers, Consulting systems engineers, Technical solutions architects, Cisco integrators/partners.

PREREQUISITES

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

LEARNING OBJECTIVES

Configure Rapid PVST+ (Rapid Per VLAN Spanning Tree Plus), MST (Multiple Spanning Tree) and available STP (Spanning Tree Protocol) options
Configure FEX in static, dynamic, and enhanced vPC (virtual port channel) setup
Configure port channels and virtual port channels
Implement FabricPath and describe DFA (Dynamic Fabric Automation)
Configure OTV (Overlay Transport Virtualization)
Configure VXLAN
Describe LISP (Locator ID Separation Protocol)
Configure first hop redundancy protocols
Configure routing on a Cisco Nexus switch
Implement multicast functionality in a Cisco Data Center network architecture
Manage user accounts, SSH (Secure Shell), and AAA (authentication, authorization, and accounting) on Cisco

Nexus Operating System (Cisco NX-OS)
Describe and configure system security features
Perform basic Fibre Channel configuration
Manage Fibre Channel domains
Configure port security and fabric binding
Describe Fibre Channel over Ethernet (FCoE)
Configure FCoE
Describe and configure distributed device aliases
Describe and configure zoning
Configure N-Port ID Virtualization (NPIV) and Cisco N-Port Virtualizer (Cisco NPV)
Describe and configure Fibre Channel over IP (FCIP)
Configure system management and infrastructure monitoring
Configure infrastructure monitoring and programmability.

COURSE OUTLINE

1. Data Center Protocols

- Configuring Spanning Tree Protocol
- Configuring Port Channel
- Configuring Fabric Extenders
- Implementing Cisco FabricPath
- Understanding Overlay Transport Virtualization
- Implementing VXLAN
- Implementing LISP

2. Layer 3 Switching Features in the Data Center

- Configuring First-Hop Redundancy
- Configuring Routing
- Configuring IP Multicast

3. Data Center Infrastructure Security

- Configuring User Management
- Configuring System Security Features

4. Data Center Infrastructure Storage Fabric

- Basic Fibre Channel Configuration
- Managing Domains
- Implementing Port Security and Fabric Binding

5. FCoE Unified Fabric

- Describing FCoE
- Implementing FCoE

6. Data Center Infrastructure Storage Services

- Configuring Distributed Device Aliases
- Implementing Zoning
- Configuring NPIV and NPV
- Configuring Fibre Channel Over IP
- Data Center Infrastructure Maintenance, Management, and Operations
- Configuring System Management
- Configuring Infrastructure Monitoring

DISCOVERY LABS

- 1: Configure Layer 2 Switching
- 2: Configure Port Channels
- 3: Configure FEX
- 4: Configure Cisco FabricPath
- 5: Configure OTV
- 6: Configure VXLAN
- 7: Configure VRRP
- 8: Configure OSPF
- 9: Configure User Management Security Features
- 10: Configure System Security Features
- 11: Configure Fibre Channel
- 12: Manage Domains and Configure Persistent FCIDs
- 13: Configure Fabric Binding and Port Security
- 14: Configure FCoE
- 15: Configure Device Aliases
- 16: Configure Zoning
- 17: Configure NPV
- 18: Configure System Management
- 19: Implement Infrastructure Monitoring