

# Cisco® Introducing Cisco Data Center Networking DCICN v6.2

## Course Overview

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This is a 5-day class

Introducing Cisco Data Center Networking (DCICN) v6.1 is a five-day instructor-led course designed to help students prepare for the Cisco CCNA Data Center certification and for associate-level data center roles. The course covers foundational knowledge, skills, and technologies including network protocols and host-to-host communication, data center networking concepts and technologies, data center storage networking, and Cisco UCS architecture.

## Who Should Attend

The primary audience for this course is as follows: Network Designer Network Administrator Network Engineer Systems Engineer Consulting Systems Engineer Technical Solutions Architect Cisco Integrators/Partners The secondary audience for this course is as follows: Server Administrator Network Manager The tertiary audience for this course is as follows: Storage Administrator Program Manager Project Manager

## Course Objectives

Upon completing this course, the learner will be able to meet these overall objectives: Describe and identify data center network protocols and host-to-host communication Describe basic data center networking concepts and use the Cisco NX-OS command line interface and implement VLANs, trunks, and port channels Describe advanced data center networking concepts, implement multilayer switching, and perform basic configuration: protocols (OSPF, EIGRP, HSRP); AAA on Cisco NX-OS devices and secure remote administration; and access control lists Describe and compare basic data center storage connectivity options and configure VSANs Describe advanced data center storage and configure zoning, NPV mode, and NPIV on Cisco Nexus and Cisco MDS Switches Identify the components of Cisco UCS architecture and use the Cisco UCS Manager GUI

## Course Outline

### 1 Network Protocols and Host-to-Host Communication

Lesson 1-1: Describing Ethernet Functions and Standards

Lesson 1-2: Describing Ethernet Hardware and Switching

Lesson 1-3: Describing OSI and TCP/IP Models

Lesson 1-4: Describing IPv4 and IPv6 Network Layer Addressing

Lesson 1-5: Describing Packet Delivery on a Hierarchical Network

Lesson 1-6: Describing the TCP/IP Transport Layer

### 2 Basic Data Center Networking Concepts

Lesson 2-1: Describing Data Center Network Architectures

Lesson 2-2: Describing the Cisco Nexus Family and NX-OS

Lesson 2-3: Implementing VLANs and Trunks

Lesson 2-4: Describing Redundant Switched Topologies



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## 3 Advanced Data Center Networking Concepts

Lesson 3-1: Describing the Routing Process on Nexus Switches

Lesson 3-2: Describing Routing Protocols on Nexus Switches

Lesson 3-3: Describing Layer 3 First Hop Redundancy

Lesson 3-4: Describing AAA on Nexus Switches

Lesson 3-5: Describing ACLs on Nexus Switches

## 4 Basic Data Center Storage

Lesson 4-1: Describing Storage Connectivity Options in the Data Center

Lesson 4-2: Describing Fibre Channel Storage Networking

Lesson 4-3: Describing VSANs

## 5 Advanced Data Center Storage

Lesson 5-1: Describing Communication Between Initiator and Target

Lesson 5-2: Describing Fibre Channel Zone Types and Their Uses

Lesson 5-3: Describing Cisco NPV Mode and NPIV

Lesson 5-4: Describing Data Center Ethernet Enhancements

Lesson 5-5: Describing Fibre Channel over Ethernet

## 6 Cisco UCS Architecture

Lesson 6-1: Describing Cisco UCS Server Hardware Components

Lesson 6-2: Cisco UCS Physical Connectivity for a Fabric Interconnect Cluster

Lesson 6-3: Describing the Cisco UCS Manager Interfaces