

# DCICN

Cisco Network Certification



## Introducing Cisco Data Center Networking v6.0

### Duration

5 days

### Prerequisites

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

- Good understanding of networking protocols
- Good understanding of the VMware environment
- Basic computer literacy
- Basic knowledge of Microsoft Windows operating systems
- Basic Internet usage skills

### Who Should Attend

This course is targeted for:

- Learners who will perform only the more basic configuration tasks.

### Benefits Realized

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

- Describe Ethernet communication functions and standards
- Describe the OSI and TCP/IP models
- Describe the routing process on Nexus switches
- Compare storage connectivity options in the data center
- Describe the Fibre Channel name server and fabric login (FLOGI) process

### Course Content

This instructor-led course is to introduce learners to the primary technologies that are used in the Cisco Data Center. The course lab exercises focus on viewing configurations, with some configuration changes made by the learner.

## Course Outline

- **Module 1: Network Protocols and Host-to-Host Communication**
  - Describing Ethernet Functions and Standards
  - Describing Ethernet Hardware and Switching
  - Describing OSI and TCP/IP Models
  - Describing IPv4 and IPv6 Network Layer Addressing
  - Describing Packet Delivery on a Hierarchical Network
  - Describing the TCP/IP Transport Layer
- **Module 2: Basic Data Center Networking Concepts**
  - Describing Data Center Network Architectures
  - Describing the Cisco Nexus Family and NX-OS
  - Implementing VLANs and Trunks
  - Describing Redundant Switched Topologies
- **Module 3: Advanced Data Centre Networking Concepts**
  - Describing the Routing Process on Nexus Switches
  - Describing Routing Protocols on Nexus Switches
  - Describing Layer 3 First Hop Redundancy
  - Describing ACLs on Nexus Switches
  - Describing AAA on Nexus Switches
- **Module 4: Basic Data Center Storage**
  - Describing Storage Connectivity Options in the Data Center
  - Describing Fibre Channel Storage Networking
  - Describing VSANs
- **Module 5: Advanced Data Centre Storage**
  - Describing Communication Between Initiator and Target
  - Describing Fibre Channel Zone Types and Their Uses
  - Describing Cisco NPV Mode and NPIV
  - Describing Data Center Ethernet Enhancements
  - Describing Fibre Channel over Ethernet
- **Module 6: Cisco UCS Architecture**
  - Describing Cisco UCS Server Hardware Components
  - Cisco UCS Physical Connectivity for a Fabric Interconnect Cluster
  - Describing the Cisco UCS Manager Interfaces
- **Labs**
  - Lab 1-1: Use the DCICN Lab System
  - Lab 1-2: Explore LAN Communication
  - Lab 1-3: Explore Protocol Analysis
  - Lab 1-4: Explore TCP and UDP Communication
  - Lab 2-1: Explore the Cisco NX-OS Command Line Interface
  - Lab 2-2: Explore Topology Discovery and Documentation
  - Lab 2-3: Implement VLANs and Trunks
  - Lab 2-4: Map a Spanning Tree and Configure Port Channels
  - Lab 3-1: Implement Multilayer Switching
  - Lab 3-2: Configure OSPF
  - Lab 3-3: Configure EIGRP
  - Lab 3-4: Configure HSRP
  - Lab 3-5: Configure AAA and Secure Remote Administration
  - Lab 3-6: Configure ACLs
  - Lab 4-1: Configure VSANs
  - Lab 5-1: Validate FLOGI and FCNS
  - Lab 5-2: Configure Zoning
  - Lab 6-1: Explore the Cisco UCS Manager GUI
  - Lab 6-2: Calculate Decimal, Binary, and Subnet (Written - Optional)

