

## COURSE OVERVIEW:

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Introducing Cisco Data Center Networking (DCICN) v6.2 is a 5-day course that teaches about the primary technologies that are used in the Cisco Data Center. The introductory level of knowledge that is taught in this course is targeted for individuals that will perform only the more basic configuration tasks. While there are no formal prerequisites for this course, we recommend students have a background as IT professionals. Network administrators, engineers, designers, managers, and technical solutions architects are all strong candidates for this Cisco Data Center Networking training course.

## WHO SHOULD ATTEND:

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- Network administrators, engineers, designers, and managers
- Cisco integrators/partners
- Systems engineers
- Consulting systems engineers
- Technical solutions architects

## PREREQUISITES:

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- 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
- ICND1: Interconnecting Cisco Networking Devices, Part 1 v3.0
- DCICT: Introducing Cisco Data Center Technologies v6.2



## COURSE OBJECTIVES:

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

## COURSE OUTLINE:

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### **Module 1: Network Protocols and Host-to-Host Communication**

- Ethernet Functions and Standards
- Ethernet Hardware and Switching
- OSI and TCP/IP Models
- IPv4 and IPv6 Network Layer Addressing
- Packet Delivery on a Hierarchical Network
- TCP/IP Transport Layer

### **Module 2: Basic Data Center Networking Concepts**

- Data Center Network Architectures
- the Cisco Nexus Family and NX-OS
- Implementing VLANs and Trunks

### **Module 3: Advanced Data Center Networking Concepts**

- Routing Process on Nexus Switches
- Routing Protocols on Nexus Switches
- Layer 3 First Hop Redundancy
- AAA on Nexus Switches
- ACLs on Nexus Switches

### **Module 4: Basic Data Center Storage**

- Storage Connectivity Options in the Data Center
- Fibre Channel Storage Networking
- VSANs

## Module 5: Advanced Data Center Storage

- Communication Between Initiator and Target
- Fibre Channel Zone Types and Their Uses
- Cisco NPV Mode and NPIV
- Data Center Ethernet Enhancements
- Fibre Channel over Ethernet

## Module 6: Cisco UCS Architecture

- Cisco UCS Server Hardware Components
- Cisco UCS Physical Connectivity for a Fabric Interconnect Cluster
- Cisco UCS Manager Interfaces

## LAB OUTLINE:

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- Lab 1: Use the DCICN Lab System
- Lab 2: Explore LAN Communication
- Lab 3: Explore Protocol Analysis
- Lab 4: Explore TCP and UDP Communication
- Lab 5: Explore the Cisco NX-OS Command Line Interface
- Lab 6: Explore Topology Discovery and Documentation
- Lab 7: Implement VLANs and Trunks
- Lab 8: Map a Spanning Tree and Configure Port Channels
- Lab 9: Implement Multilayer Switching
- Lab 10: Configure OSPF
- Lab 11: Configure EIGRP
- Lab 12: Configure HSRP
- Lab 13: Configure AAA and Secure Remote Administration
- Lab 14: Configure ACLs
- Lab 15: Configure VSANs
- Lab 16: Validate FLOGI and FCNS
- Lab 17: Configure Zoning
- Lab 18: Explore the Cisco UCS Manager GUI
- Lab 19: Calculate Decimal, Binary, and Subnet