

## DCICN - Introducing Cisco Data Center Networking v1.0

Duration: 4 days

### Overview:

This course introduces you to the Cisco technologies that are deployed in the Data Center. The introductory level of content is focused on basic concepts like Ethernet, the OSI Layer Model, and TCP/IP. It then takes you through basic configuration tasks, including VLANs, network addressing, and subnet masks. Together with Introducing Cisco Data Center Technologies (DCICT), this course prepares you for the CCNA Data Center certification.

### Pre-requisites:

There are no prerequisites for this course.

### At Course Completion:

After completing this course, students will be able to:

- Understand how a network works
- Configure, verify, and troubleshoot a switch with VLANs and interswitch communications
- Implement an IP addressing scheme and IP services to meet network requirements
- Configure, verify, and troubleshoot routing operations on Cisco Nexus switches

### 1. Building a Simple Network

- Functions of Networking
- Host-to-Host Communications Model
- Ethernet Connections
- Ethernet Communications Standards
- OSI Network Layer Addressing
- TCP/IP Transport Layer
- Packet Delivery Process

### 2. Switched Network Implementation

- Switching
- Packet Delivery Process
- Cisco NX-OS Software
- Operating Cisco NX-OS Software
- Implementing VLANs and Trunks
- Building a Redundant Switched Topology

### 3. IP Addressing

- IP Addressing Scheme
- Transitioning to IPv6

### 4. Routing on the Cisco Nexus Switch

- Packet Delivery Process
- Routing Process on Cisco Nexus Switches
- Routing Protocols on Cisco Nexus Switches
- Access Control Lists on Cisco Nexus Switches

### Labs

- Lab 1-1: Use Windows Applications as Network Tools
- Lab 1-2: Observe the TCP Three-Way Handshake
- Lab 1-3: Observe Extended PC Network Information
- Lab 2-1: Connect to Cisco Nexus Switches
- Lab 2-2: Configure the Cisco Nexus Switches
- Lab 2-3: Configure VLANs and Trunks
- Lab 2-4: Verify and Configure Spanning Tree
- Lab 2-5: Configure EtherChannel
- Lab 3-1: Convert Decimal to Binary and Binary to Decimal
- Lab 3-2: Classify Network Addressing
- Lab 3-3: Compute Usable Subnetworks and Hosts
- Lab 3-4: Calculate Subnet Masks
- Lab 4-1: Configure Multilayer Switching