Introducing Cisco Data Center Networking (CS-DCICN v6.0)

Modality: Virtual Classroom

Duration: 2.5 Days

SATV Value:

CLC: 27 Units

NATU:

SUBSCRIPTION: No

About this course:

Spanning 2.5 days, the Introducing Cisco Data Center Networking course has been developed to introduce students to the various data center configuration options that are available. Students will be introduced to the various technologies that data centers work on for increased understanding of configurations and the unique set of features of each one of them.

Covering various aspects of data center networking from routing to standards and functions for communications within networks, the course serves is ideal for IT ops training.

Course objectives:

This course has been designed to:

- Introduce students to standards and functions for Ethernet communications
- Explain the TCP/IP and Open System Interconnection models to students
- Help students understand the different data center storage connectivity options to help them make informed decisions
- Introduce students to Nexus switch routing, fabric login (FLOGI) and the Fiber Channel name server processes

Audience:

This course is intended for:

- System, consulting system, and network engineers
- Administrators, managers, and designers of networks
- Cisco partners and integrators

- Architects responsible for developing technical solutions

Prerequisites:

- Understanding of and experience working with various networking protocols
- VMware environment understanding and knowing how it works
- Understanding of and experience working with the Microsoft Windows operating system
- Basic internet navigability skills
- Completion or understanding of the concepts covered in the ICND1: Interconnecting Cisco Networking Devices Part 1 and DCICT: Introducing Cisco Data Center Technologies

Course Outline:

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

Labs

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