DCFNDU - UNDERSTANDING CISCO DATA CENTER FOUNDATIONS V2.0

Course Code: 100607

Gain the foundational knowledge and skills needed to configure Cisco data center technologies including: networking, virtualization, storage area networking, and unified computing.

The Understanding Cisco Data Center Foundations (DCFNDU) course helps you prepare for entry-level data center roles. In this course, you will learn the foundational knowledge and skills you need to configure Cisco® data center technologies, including networking, virtualization, storage area networking, and unified computing. You will get an introduction to Cisco Application Centric Infrastructure (Cisco ACI), automation and cloud computing. You will also get hands-on experience with configuring features on Cisco Nexus Operating System (Cisco NX-OS) and Cisco Unified Computing System (Cisco UCS).

This course does not lead directly to a certification exam, but it does cover foundational knowledge that can help you prepare for several Cisco Certified Network Professional (CCNP) and other professional-level data center courses and exams.

This course will help you:

- Prepare for entry-level job roles in the high-demand area of Data Center environments.
- Gain knowledge and hands-on skills through Cisco's unique combination of lessons and hands-on practice using enterprise-grade Cisco learning technologies, Data Center equipment, and software.

This course is eligible for 25 Continuing Education (CE) credits toward recertification (ILT & ELT modalities).

What You'll Learn

After taking this course, you should be able to:

- Describe the foundations of Data Center networking
- Describe Cisco Nexus products and explain the basic Cisco NX-OS functionalities and tools
- Describe Layer 3 first-hop redundancy
- Describe Ethernet port channels and vPCs

- Introduce switch virtualization
- Introduce machine virtualization
- Describe network virtualization
- Compare storage connectivity options in the Data Center
- Describe Fibre Channel communication between the initiator server and the target storage
- Describe Fibre Channel zone types and their uses
- Describe NPV and NPIV
- Describe Data Center Ethernet enhancements that provide a lossless fabric
- Describe FCoE
- Describe Data Center server connectivity
- Describe Cisco UCS Manager
- Describe the purpose and advantages of APIs
- Describe Cisco ACI
- Describe Nexus Dashboard
- Describe the basic concepts of cloud computing

Who Needs to Attend

- Data Center Designers
- Data Administrators
- Data Center Engineers
- Systems Engineers
- Technical Solutions Architects
- Network Architects
- Cisco Integrators and Partners
- Server Administrators
- Network Managers
- Storage Administrators
- Program Managers
- Project Managers

Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Good foundation of networking protocols
- Basic knowledge of computer virtualization
- Basic computer literacy
- Basic knowledge of computer operating systems
- Basic internet usage skills

In addition, CCNA-level knowledge is recommended as a prerequisite for success in this certification:

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CLASSROOM LIVE	$4,395 USD	5 Day

Classroom Live Outline

Describing the Data Center Network Architectures

- Cisco Data Center Architecture Overview
- Three-Tier Network: Core, Aggregation, and Access
- Spine-and-Leaf Network
- Storage Area Networks
- Hyperconverged Storage Systems

Describing the Cisco Nexus Family and Cisco NX-OS Software

- Cisco Nexus Data Center Product Overview
- Cisco NX-OS Software Architecture
- Cisco NX-OS Software CLI Tools
- Cisco NX-OS Virtual Routing and Forwarding

Describing Layer 3 First-Hop Redundancy

- Default Gateway Redundancy
- Hot Standby Router Protocol
- Virtual Router Redundancy Protocol
- Gateway Load Balancing Protocol

Describing Port Channels and vPCs

- Ethernet Port Channels
- Virtual Port Channels

Describing Switch Virtualization

- Cisco Nexus Switch Basic Components
- Virtual Routing and Forwarding

Describing Machine Virtualization

- Virtual Machines

- Hypervisor
- Virtual Machine Manager

Describing Network Virtualization

- Overlay Network Protocols
- VXLAN Overlay
- VXLAN BCP EVPN Control Plane
- VXLAN Data Plane
- VMware vSphere Virtual Switches

Introducing Basic Data Center Storage Concepts

- Storage Connectivity Options in the Data Center
- Fibre Channel Storage Networking
- VSAN Configuration and Verification

Describing the Cisco MDS Family

- Cisco MDS Overview

Describing Fibre Channel Communication Between the Interior Server and the Target Storage

- Fibre Channel Layered Model
- FLOGI Process
- Fibre Channel Flow Control

Describing Fibre Channel Zone Types and Their Uses

- Fibre Channel Zoning
- Zoning Configuration
- Zoning Management

Describing Cisco NPV Mode and NPIV

- Cisco Switch Mode
- NPIV Mode

Describing FCoE

- FCoE Architecture

Describing Cisco UCS and UCS-X Components

- Cisco UCS Server Hardware
- Cisco Intersight
- Cisco Compute Hyperconverged with Nutanix

Describing Cisco UCS Manager and Cisco Intersight

- Cisco UCS Manager Overview
- Identity Resource Pools for Hardware Abstraction
- Service Profiles and Service Profile Templates
- Cisco Intersight Overview

Automating the Data Center

- Cisco NX-OS Programmability
- Cisco NX-OS Model-Driven Programmability

- Cisco Nexus API
- Python
- Ansible
- HashiCorp Terraform

Describing Cisco Nexus Dashboard

- Cisco Nexus Dashboard Overview
- Cisco Nexus Dashboard Fabric Controller Overview

Describing Cisco ACI

- Cisco ACI Overview
- Cisco ACI Topology and Hardware
- Cisco ACI Policy Model
- Cisco ACI External Connectivity Options
- Cisco ACI and Virtual Machine Manager Integration
- Cisco ACI and Layer 4-Layer 7 Integration
- Cisco ACI Management and Automation
- Cisco ACI Anywhere

Describing Cloud Computing

- Cloud Computing Overview
- Cloud Deployment Models
- Cloud Computing Services

Classroom Live Labs

- Explore the Cisco NX-OS CLI
- Explore Topology Discovery
- Configure HSRP
- Configure vPCs
- Configure VRF
- Explore CoPP and Spanning Tree on Cisco Nexus Switches
- Install VMware ESXi and vCenter
- Configure VSANs
- Validate FLOGI and FCNS
- Configure Zoning
- Review Unified Ports on a Cisco Nexus Switch and Implement FCoE
- Explore the Cisco UCS Server Environment
- Configure a Cisco UCS Service Profile
- Configure Cisco NX-OS with APIs
- Explore the Cisco UCS Manager XML API Management Information Tree
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VIRTUAL CLASSROOM LIVE	$4,395 USD	5 Day

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Jul 13 - 17, 2026 | 8:30 AM - 4:30 PM EDT

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ON-DEMAND	$1,500 USD

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PRIVATE GROUP TRAINING	5 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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