DCFNDU

The **Understanding Cisco Data Center Foundations (DCFNDU)** training helps you prepare for entry-level data center roles. In this training, 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 get hands-on experience with configuring features on Cisco Nexus Operating System (Cisco NX-OS) and Cisco Unified Computing System (Cisco UCS).

This training 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 trainings and exams. This training also earns you 25 Continuing Education (CE) credits toward recertification

How You'll Benefit

This training will help you:

- Prepare for entry-level job roles in the high-demand area of data center environments
- Prepare for trainings that support the CCNP Data Center certification exams
- 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
- Earn 25 CE credits toward recertification

Who Should Enroll

- 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

Course Objectives

- 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

Course 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:

- Implementing and Administering Cisco Solutions (CCNA)

Course Outline

- Describing the Data Center Network Architectures
- Describing the Cisco Nexus Family and Cisco NX-OS Software
- Describing Layer 3 First-Hop Redundancy
- Describing Port Channels and vPCs
- Describing Switch Virtualization
- Describing Machine Virtualization
- Describing Network Virtualization
- Introducing Basic Data Center Storage Concepts
- Describing the Cisco MDS Family
- Describing Fibre Channel Communication Between the Initiator Server and the Target Storage
- Describing Fibre Channel Zone Types and Their Uses
- Describing Cisco NPV Mode and NPIV

- Describing FCoE
- Describing Cisco UCS and UCS-X Components
- Describing Cisco UCS Manager and Cisco Intersight
- Automating the Data Center
- Describing Cisco Nexus Dashboard
- Describing Cisco ACI
- Describing Cloud Computing

Lab Outline

- 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
- Explore Cisco ACI