

Understanding Cisco Data Center Foundations (DCFNDU)

Description

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 30 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 30 CE credits toward recertification

Who should enroll

- Data Center Administrators
- Data Center Engineers
- Systems Engineers
- Server Administrators
- Network Managers
- Cisco Integrators and Partners

Technology areas

- Data Center

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 Cisco FEX connectivity
- Describe Ethernet port channels and vPCs
- Introduce switch virtualization, machine virtualization, and 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 the basic concepts of cloud computing

Prerequisites

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

- Good understanding of networking protocols
- Good understanding of the VMware environment
- Basic knowledge of Microsoft Windows operating systems

These skills can be found in the following Cisco Learning Offering:

- [Implementing and Administering Cisco Solutions \(CCNA\)](#)

Outline

- Describing the Data Center Network Architectures
- Describing the Cisco Nexus Family and Cisco NX-OS Software
- Describing Layer 3 First-Hop Redundancy
- Describing Cisco FEX
- Describing Port Channels and vPCs
- Describing Switch Virtualization
- Describing Machine Virtualization
- Describing Network Virtualization
- Introducing Basic Data Center Storage Concepts
- 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

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- Describing Data Center Ethernet Enhancements
 - Describing FCoE
 - Describing Cisco UCS Components
 - Describing Cisco UCS Manager
 - Using APIs
 - Describing Cisco ACI
 - Describing Cloud Computing

Lab Outline

- Explore the Cisco NX-OS CLI
- Explore Topology Discovery
- Configure HSRP
- Configure the Cisco Nexus 2000 FEX
- Configure vPCs
- Configure vPCs with Cisco FEX
- Configure VRF
- Explore the VDC Elements
- Install VMware ESXi and vCenter
- Configure VSANs
- Validate FLOGI and FCNS
- Configure Zoning
- Configure Unified Ports on a Cisco Nexus Switch and Implement FCoE
- Explore the Cisco UCS Server Environment
- Configure a Cisco UCS Server Profile
- Configure Cisco NX-OS with APIs
- Explore the Cisco UCS Manager XML API Management Information Tree

Links

- [Cisco U. Learning Path](#)
- [Cisco Learning Network Store](#)
- [Cisco Learning Locator](#)