

Understanding Cisco Data Center Foundations (DCFNDU)

- **Formato do curso:** Presencial e Live Training
- **Preço:** 3695€
- **Duração:** 35 horas

The Understanding Cisco Data Center Foundations (DCFNDU) v1.0 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 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 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
- Prepare for courses that support the Cisco Certified Network Professional 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

Destinatários

- Data center administrators
- Data center engineers
- Systems engineers
- Server administrators
- Network managers
- Cisco integrators and partners

Pré-requisitos

To fully benefit from this course, you should have the following knowledge and skills:

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

These are the recommended Cisco courses that may help you meet these prerequisites:

- [Implementing and Administering Cisco Solutions \(CCNA\)](#)
 - Introducing Cisco Data Center Networking (DCICN)
 - Introducing Cisco Data Center Technologies (DCICT)
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Objetivos

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 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
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Programa

- **Describing the Data Center Network Architectures**
 - Cisco Data Center Architecture Overview
 - Three-Tier Network: Core, Aggregation, and Access
 - Spine-and-Leaf Network
 - Two-Tier Storage Network

- **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 Cisco FEX**

- Server Deployment Models
- Cisco FEX Technology
- Cisco FEX Traffic Forwarding
- Cisco Adapter FEX

- **Describing Port Channels and vPCs**

- Ethernet Port Channels
- Virtual Port Channels
- Supported vPC Topologies

- **Describing Switch Virtualization**

- Cisco Nexus Switch Basic Components
- Virtual Routing and Forwarding
- Cisco Nexus 7000 VDCs
- VDC Types
- VDC Resource Allocation
- VDC Management

- **Describing Machine Virtualization**

- Virtual Machines
- Hypervisor
- VM Manager

- **Describing Network Virtualization**

- Overlay Network Protocols
- VXLAN Overlay
- VXLAN BGP EVPN Control Plane
- VXLAN Data Plane
- Cisco Nexus 1000VE Series Virtual Switch
- 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 Fibre Channel Communication Between the Initiator 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 NPV Mode
 - NPIV Mode
- **Describing Data Center Ethernet Enhancements**
 - IEEE Data Center Bridging
 - Priority Flow Control
 - Enhanced Transmission Selection
 - DCBX Protocol
 - Congestion Notification
- **Describing FCoE**
 - Cisco Unified Fabric
 - FCoE Architecture
 - FCoE Initialization Protocol
 - FCoE Adapters
- **Describing Cisco UCS Components**
 - Physical Cisco UCS Components
 - Cisco Fabric Interconnect Product Overview
 - Cisco IOM Product Overview
 - Cisco UCS Mini
 - Cisco IMC Supervisor
 - Cisco Intersight
- **Describing Cisco UCS Manager**
 - Cisco UCS Manager Overview
 - Identity and Resource Pools for Hardware Abstraction
 - Service Profiles and Service Profile Templates
 - Cisco UCS Central Overview
 - Cisco HyperFlex Overview
- **Using APIs**
 - Common Programmability Protocols and Methods
 - How to Choose Models and Processes
- **Describing Cisco ACI**
 - Cisco ACI Overview
 - Multitier Applications in Cisco ACI
 - Cisco ACI Features
 - VXLAN in Cisco ACI
 - Unicast Traffic in Cisco ACI
 - Multicast Traffic in Cisco ACI
 - Cisco ACI Programmability
 - Common Programming Tools and Orchestration Options

- **Describing Cloud Computing**

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

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