

Cisco® Cisco Data Center Associate Level Accelerated - v1.0 (DCAA)

Course Overview

This is a 5-day class

DCAA v1.0 is an extended hours bootcamp class designed to convey the knowledge necessary to understand and work with Cisco data center technologies. Covering the architecture, components and features of the Nexus, UCS and MDS product lines. You will gain practical experience in the configuration and operation of virtual Port Channels (vPCs), FabricPath, Overlay Transport Virtualization (OTV), and Fabric Extension (FEX). A current CCNA-RS, or commensurate knowledge, is a prerequisite for attendance. While the accelerated track is focused on a more hands on implementation based approach, the standard DCICN and DCICT is geared for a more introductory level of knowledge targeted for individuals who can perform only the more basic configuration tasks.

Who Should Attend

"The primary audience for this course is as follows:

- Network administrators
- Network engineers
- Systems engineers
- Cisco Integrators and Partners
- Consulting Systems Engineer
- Network Designer
- Technical Solutions Architect

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Course Objectives

"After completing this course the student should be able to:

- Describe how a network works
- Configure, verify, and troubleshoot a switch with VLANs and interswitch communications
- Implement an IP addressing scheme and IP services to meet network requirements
- Configure, verify, and troubleshoot routing operations on Cisco Nexus switches
- Describe and verify Cisco data center fundamentals
- Describe Cisco data center virtualization
- Describe Cisco data center storage networking
- Describe Cisco data center unified fabric
- Describe and verify Cisco UCS

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Course Outline

1 Examining Functional Layers of the Data Center

Traditional Isolated LAN and SAN Networks
LAN Core, Aggregation, and Access Layers
Core and Access Layers in a LAN Collapsed Core Design
Core and Edge Layers in a Data Center SAN Design
Collapsed-Core SAN Design

2 Describing Cisco NX-OS Software

Cisco NX-OS Software Architecture
Cisco NX-OS Process Recovery

3 Operating Cisco NX-OS Software

Describing the Features of the CLI
Identifying the Help Functions of the CLI
Describing the Startup Characteristics of the Switch
Describing Configuration Management

4 The Cisco NX-OS Software Architecture

The Cisco NX-OS Software Architecture
The Cisco NX-OS Software CLI
Licensing Cisco Nexus 5000 Series Switches

5 Cisco Nexus 2000 Series Fabric Extender Product Overview

Cisco Nexus 2000 Series Fabric Extenders

6 Describing Enhanced FCoE Scalability with Cisco Nexus 2232 10GE Fabric Extenders

Scaling the Data Center Virtualized Access Layer with the Cisco Nexus 2232 10GE Fabric Extenders
Cisco Nexus 2232 10GE Fabric Extender-to-Cisco Nexus 5500 Switch Connectivity
Adapter FEX on the Cisco Nexus 2232 10GE Fabric Extender
Verifying Adapter FEX on the Cisco Nexus 2232 10GE Fabric Extender

7 Configuring the Cisco Nexus 2000 Series Fabric Extender

Configuring the Cisco Nexus 2000 Series Fabric Extender
Configuring Static Pinning
Configuring Dynamic Pinning

8 Describing vPCs and Cisco FabricPath in the Data Center

Virtual Port Channels
Verifying vPCs
Cisco FabricPath
Verifying Cisco FabricPath

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9 Configuring Virtual Port Channels and Enhanced vPC

Configuring Ethernet Port Channels
Understanding Virtual Port Channels
Configuring Virtual Port Channels

10 Configuring Cisco FP

Understanding Cisco FP
Configuring Cisco FP

11 Virtualizing Network Devices

Describing VDCs on the Cisco Nexus 7000 Series Switch
Verifying VDCs on the Cisco Nexus 7000 Series Switch
Navigating Between VDCs on the Cisco Nexus 7000 Series Switch
Describing NIV on Cisco Nexus 7000 and 5000 Series Switches

12 Using OTV on Cisco Nexus 7000 Series Switches

Describing VDCs on the Cisco Nexus 7000 Series Switch
Verifying VDCs on the Cisco Nexus 7000 Series Switch
Navigating Between VDCs on the Cisco Nexus 7000 Series Switch
Describing NIV on Cisco Nexus 7000 and 5000 Series Switches

13 Exploring ACLs on Cisco Nexus Switches

Understanding ACLs
ACL Processing
Configuring ACLs
Understanding Object Groups

14 Comparing Storage-Connectivity Options in the Data Center

Comparing Block- and File-Based Network Storage
NFS, Fibre Channel, iSCSI, and SCSI
SCSI Evolution from DAS to SAN

15 Describing Fibre Channel Storage Networking

Fibre Channel SAN Topologies
Fibre Channel Port Types
Fibre Channel Addressing
Fibre Channel Layered Model
FCNS and the FLOGI process
Fibre Channel Zoning and LUN Masking

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16 Verifying Fibre Channel Communications on Cisco MDS 9000 Series Multilayer Switches

Configure a Cisco MDS 9000 Series Multilayer Switch from the CLI Setup Script
Update the Cisco NX-OS on a Cisco MDS 9000 Series Multilayer Switch
Update Licensed Features on the Cisco MDS 9000 Series Multilayer Switch
Verify Initiator and Target Fabric Login
Verify Fibre Channel Zoning on a Cisco MDS 9000 Series Multilayer Switch
Collect Technical Support Data on a Cisco MDS 9000 Series Multilayer Switch

17 Describing DCB

Unified Fabric Benefits
IEEE Standards That Enable FCoE
Priority Flow Control
Enhanced Transmission Selection
DCB Exchange

18 Describing the Cisco UCS B-Series Product Family

Cisco UCS 6100 and 6200 Series Fabric Interconnects
Cisco UCS 5108 Blade Server Chassis
Cisco UCS B200 M3 Blade Server
Cisco UCS B230 M2 Blade Server
Cisco UCS B250 M2 Extended Memory Blade Server
Cisco UCS B440 M2 High-Performance Blade Server
Mezzanine Card Options for Cisco UCS B-Series Blade Servers
Memory Population Guidelines for Cisco UCS B-Series Blade Servers

19 Describing the Cisco UCS C-Series Product Family

Cisco UCS C-Series Product Family
Cisco UCS C200 M2 High-Density Rack Server
Cisco UCS C210 M2 General-Purpose Rack Server
Cisco UCS C220 M3 Rack Server
Cisco UCS C240 M3 Rack Server
Cisco UCS C250 M2 Extended-Memory Rack Server
Cisco UCS C260 M2 Rack Server
Cisco UCS C460 M2 High-Performance Rack Server
PCIe Adapter Options for Cisco UCS C-Series Rack Servers
RAID Adapter Options for Cisco UCS C-Series Rack Servers
Memory Population Guidelines for Cisco UCS C-Series Rack Servers

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20 Connecting Cisco UCS B-Series Blade Servers

- Chassis-to-Fabric Interconnect Physical Connectivity
- I/O Module Architectures
- Cisco Integrated Management Controller Chip on Cisco UCS B-Series Blade Servers
- Three Basic Port Personalities in the Fabric Interconnect
- Discovery Process

21 Setting up an Initial Cisco UCS B-Series Cluster

- Cabling a Cisco UCS Fabric Interconnect Cluster
- Initial Setup Script for the Primary Peer
- Initial Setup Script for the Secondary Peer
- Verifying a Fabric Interconnect Cluster

22 Describing Cisco UCS Manager Operations

- Cisco UCS Manager
- Layout of the Cisco UCS Manager GUI
- Navigation Window Tabs
- Device Discovery in Cisco UCS Manager
- Verifying Device Discovery in UCS Manager

23 Describing Cisco UCS Manager Pools, Policies, Templates, and Service Profiles

- Benefits of Stateless Computing
- Using Identity Pools in Service Profiles
- Using Service Profile Templates to Enable Rapid Provisioning and Consistent Application of Policy
- Creation of Policies for Service Profiles and Service Profile Templates
- Chassis and Blade Power Capping