



Cisco Data Center Networking Infrastructure DCNI-1 BootCamp

Length
3 days

Format
Lecture/lab

Track
DCNI Support
Specialist

Version
2.0

Course Description

The Firefly DCNI-1 BootCamp is a 3-day intensive hands-on training. It is an accelerated version of the 5-day Cisco DCNI-1 course. The DCNI-1 BootCamp is focused on help you prepare for the Cisco DCNI-1 Channel Partner Specialization exam (642-973) with minimal time investment.

This course covers a wide range of advanced features, focusing on the Catalyst 6500 platform. Topics covered include Virtual Switch Services (VSS), IOS Software Modularity, advanced QoS, the Embedded Event Manager (EEM) and other automated diagnostics tools. You will also learn how to deploy integrated security and network management services with the Catalyst 6500 Series Firewall Services Module (FWSM) and Network Analysis Module (NAM). Lastly, you will learn how to configure the Catalyst 6500 and 4900 for high availability.

Who Should Attend

This course is designed for Network Field Engineers who are:

- Preparing to take the DCNI-1 exam
- Already capable of implementing and optimizing basic Layer 2 and Layer 3 services using Cisco IOS and the Cisco Catalyst switching platform.

Recommended Prerequisites

- CCNP, CCIE Routing & Switching, or CCIE Service Provider certifications, or equivalent knowledge and experience

DCNI-1

Learning Objectives

After completing this course, you will be able to:

- Identify the Catalyst 6500, 4900, and Blade Switch hardware options
- Describe Data Center network architecture
- Configure Catalyst 6500 advanced features, including Virtual Switch Services (VSS)
- Implement firewall services using the Catalyst 6500 Firewall Services Module (FWSM)
- Configure and use the Catalyst 6500 Network Analysis Module (NAM) to monitor network traffic
- Deploy Catalyst 6500 high availability features, including supervisor redundancy

Related Training

- Implementing a Cisco Data Center Networking Infrastructure with the Cisco Nexus Platform (DCNI-2)
- Cisco Data Center Networking Infrastructure Design BootCamp (DCNI-D-BC)





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Course Outline

Module 1: Implementing the Cisco Catalyst 6500, 4900, and Blade Switches

Lesson 1: Describing the Cisco Catalyst 6500 and 4900 Series Switches Data Center Architecture

Data Center Evolution
The Enterprise Composite Network Model
The Data Center Network Architecture

Lesson 2: Describing and Positioning the Cisco Catalyst Switches

Introduction to Cisco Catalyst 4900 Family Switches
Cisco Catalyst 4900 Family Switch Architecture
Introduction to Cisco Catalyst 6500 Family Switches
Catalyst 4900 and 6500 Family Switches in a Data Center 3.0 Network
Cisco Blade Switches

Lesson 3: Describing the Cisco Catalyst 6500 Series Switch Supervisors

Supervisor Architecture
Supervisor 720 with PFC3A/B/BXL
Supervisor 720-10G-3C/CXL
Supervisor 32
Supervisor Operating System

Lesson 4: Describing the Cisco Catalyst 6500 Series Switch Module and Power Supply Options

Line Cards Overview
Line Cards Architecture
Line Cards Design Considerations
Deploying Line Cards
Service Modules Overview
Power Supplies

Lesson 5: Implementing VSS

VSS 1440 Overview
VSS 1440 Architecture
VSS 1440 Operation
Deploying VSS 1440
Configuring VSS 1440

Lab: Deploying the VSS 1440 System

Lesson 6: Implementing QoS

QoS Overview
Ingress QoS Processing
Ingress QoS Policing
Egress QoS Policing
Port- vs. VLAN-Based QoS
Modular QoS CLI
VSS 1440 and QoS
Configuring QoS
Control Plane Policing and CPU Rate Limiting

Lesson 7: Advanced Diagnostics and Monitoring in the Catalyst 6500

EEM Overview
Configuring EEM
Automated Diagnostics
Configuring SPAN
RSPAN
ERSPAN

Lab: Deploying QoS

Module 2: Implementing FWSM for a Data Center Network Infrastructure

Lesson 1: Implementing Traffic Flows

Firewall Overview
FWSM Architecture
FWSM Initial Configuration
Firewall Modes
Configuring the Translation

Lesson 2: Implementing Management Access

Configuring Management Access
Configuring AAA Services

Lesson 3: Implementing ACLs

Configuring Layer 2 Filtering
Configuring ACLs

Lesson 4: Implementing Contexts

FWSM Virtualization
Configuring FWSM Contexts
Managing Context Resources



Learning Solutions



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Course Outline

Module 2 (continued)

Lesson 5: Implementing Routing

Configuring Static Routing
Configuring Dynamic Routing

Lesson 6: Implementing Failover

Failover Overview
Failover Operation
Configuring Failover

Lesson 7: Implementing Deep Packet Inspection

Deep Packet Inspection
URL Filtering

Lab: Using Virtualization on the FWSM

Lab: Deploying the FWSM in Transparent Mode

Lab: Deploying the FWSM in Routing Mode

Lab: Using Multiple Contexts on the FWSM

Module 3: Implementing Network Analysis with NAM

Lesson 1: Implementing NetFlow

NetFlow and NDE
Configuring NetFlow and NDE

Lesson 2: Introducing the NAM

Network Traffic Monitoring
NAM Service Module
NAM Data Sources
Plan for NAM Deployment

Lesson 3: Implementing Initial Configuration

NAM Installation
NAM Initial Configuration

Lesson 4: Monitoring, Viewing, and Saving Data

Scenario 1: Live Network Monitoring and Analysis

Action 1: Port Monitoring

Action 2: Detailed Port Monitoring

Action 3: Using NDE with NAM

Scenario 2: Response Time Monitoring

Scenario 3: URL Monitoring

Scenario 4: Troubleshooting

Action 1: Thresholds and Alarms

Action 2: Trigger Packet Captures

Lesson 5: NAM Maintenance

NAM Software Upgrade

NAM Troubleshooting

Module 4: Implementing High Availability Data Center Features

Lesson 1: Implementing High Availability Features in the Cisco Catalyst 6500 Series Switch

First-Hop High Availability

HSRP

VRRP

GLBP

Lesson 2: Implementing Stateful Switchover

Catalyst 6500 Supervisor Redundancy

RPR and RPR+

SSO

Lesson 3: Implementing Non-Stop Forwarding

SSO with NSF

Configuring SSO with NSF

Appendix A: Implementing Call Home

Appendix B: Upgrading IOS on Cisco Catalyst 6500 and 4900 Series Switches



Learning Solutions