

Implementing Cisco NX-OS Switches and Fabrics in the Data Center

Duration: 5 Days **Course Code: DCNX** **Version: 1.0**

Overview:

The Implementing Cisco NX-OS Switches and Fabrics in the Data Center (DCNX) course gives you a detailed understanding of the Cisco® Nexus switch platform and teaches you how to install, configure, and manage Cisco Nexus® switch platforms in a scalable, highly available environment. Through a combination of lectures and hands-on labs, you will learn how to describe various aspects of the Cisco Nexus product families and platforms, including implementation, management, security, programmability and storage. Additionally, you will learn how to configure device aliases and zoning, Fibre Channel over Ethernet (FCoE), and N-Port Identifier Virtualization (NPIV), and N-Port Virtualization (NPV) modes.

Target Audience:

Engineers using the Cisco Nexus Series Switch Platforms.

Objectives:

- **After completing this course you should be able to:**
- Describe the platforms that make the Cisco Nexus 9000, 7000, 3000, and 2000 product families
- Describe Cisco Nexus platform implementations
- Explain Cisco Nexus platform management
- Describe Port Channels and Virtual Port Channels
- Configure First Hop Redundancy protocols
- Configure security features of Cisco Nexus devices
- Describe the Cisco Nexus devices routing and forwarding
- Describe Virtual Extensible LAN (VXLAN)
- Describe Quality of Service (QoS) on Cisco Nexus Devices
- Explain system management and monitoring processes
- Describe Cisco NX-OS programmability
- Describe Cisco Nexus storage services
- Configure device aliases and zoning
- Configure FCoE
- Configure NPIV and NPV modes

Prerequisites:

Attendees should meet the following prerequisites:

- Be familiar with Cisco data center technologies
- Understand networking protocols, routing, and switching
- CCNA - Implementing and Administering Cisco Solutions
- DCFNDU - Understanding Cisco Data Center Foundations

Testing and Certification

Recommended as preparation for the following exams:

- There are no exams currently aligned to this course

Content:

Describing Cisco Nexus Series Switches

- Describe Cisco Nexus 9000 Series Switches
- Describe Cisco Nexus 7000 Series Switches
- Describe Cisco Nexus 3000 Series Switches
- Describe Cisco Nexus 2000 Series Fabric Extenders

Describing Cisco Nexus Platforms Implementation

- Describe Cisco Nexus in the Data Center Architecture
- Describe Cisco NX-OS Software
- Describe the Licensing Model

Describing Cisco Nexus Platforms Management

- Describe Cisco Nexus CLI and GUI Management Interfaces
- Describe Cisco NX-OS Setup Utility
- Describe Virtual Device Context on Cisco Nexus 7000 Series
- Describe PowerOn Auto Provisioning
- Describe Cisco NX-OS User Management
- Describe Cisco NX-OS AAA Services

Describing Port Channels and Virtual Port Channels

- Describe Port Channel Operation
- Describe vPC Concepts and Benefits
- Describe vPC Architecture
- Describe vPC Control and Data Plane

Configuring First Hop Redundancy Protocols

- Describe HSRP
- Describe VRRP

Configuring Cisco Nexus Security Features

- Configure Access Control Lists
- Configure Port Security
- Configure DHCP Snooping
- Configure Dynamic ARP Inspection
- Configure IP Source Guard
- Configure Unicast RPF
- Configure Keychain Management
- Configure Control Plane Policing
- Configure MACsec

Describing Cisco NX-OS Routing and Forwarding

- Describe Routing in Cisco NX-OS
- Describe Multicast Routing in Cisco NX-OS
- Describe Unicast and Multicast RIB and FIB in NX-OS
- Describe Layer 3 Best Practices for vPC

Describing Virtual Extensible LAN

- Describe VXLAN Benefits over VLAN
- Describe VXLAN Overlay
- Describe VXLAN MP-BGP EVPN Control Plane
- Describe VXLAN Data Plane

Describing QoS on Cisco Nexus Devices

- Describe QoS on Cisco Nexus Devices
- Configure QoS on Cisco Nexus Devices
- Describe Monitoring of QoS Statistics

Configuring System Management and Monitoring

- Configure System Management
- Configure System Monitoring and Troubleshooting Tools

Describing Cisco NX-OS Programmability

- Describe On-Box Programmability on Cisco NX-OS
- Describe Ansible for Cisco NX-OS

Describing Cisco Nexus Storage Services

- Describe IP Storage on Cisco Nexus Switches
- Describe Fibre Channel
- Describe Fibre Channel Flow Control
- Describe Fibre Channel Domain Initialization
- Describe Fibre Channel Addressing

Configuring Fibre Channel Over Ethernet

- Describe Fibre Channel over Ethernet
- Describe FCoE Requirements
- Describe Data Center Bridging
- Describe FCoE Addressing Scheme
- Describe FCoE Initialization Protocol
- Describe FCoE Port Types

Describing Device Aliases and Zoning

- Describe Distributed Device Alias Services
- Describe Zoning
- Describe Zone Merging
- Describe Recovering from Zone Merge Failures
- Describe Enhanced Zoning

Configuring NPIV and NPV Modes

- Describe N-Port ID Virtualization
- Describe Fibre Channel NPV Mode
- Describe FCoE NPV Mode

Labs

- Test Cisco Nexus Platforms
- Configure User Management
- Configure vPC
- Configure First Hop Redundancy Protocol (FHRP) Protocols
- Configure Cisco Nexus Security Features
- Configure Open Shortest Path First (OSPF)
- Configure VXLAN
- Configure QoS
- Configure System Management
- Configure Cisco NX-OS On-Box Programmability
- Configure Containers on Cisco NX-OS
- Configure Cisco NX-OS Using Ansible
- Configure Basic Fibre Channel Features
- Configure FCoE
- Configure Fiber Channel Device Aliases and Zoning
- Configure NPV

Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

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