Cisco NX-OS for IOS Administrators v2.0 (DCNXA)

Modality: Virtual Classroom

Duration: 5 Days

SATV Value:

CLC: 43 Units

NATU:

SUBSCRIPTION: No

About this course:

The Cisco NX-OS for IOS Administrators (DCNXA) v2.0 is a five-day instructor-led course designed for network administrators who are migrating from a traditional Cisco IOS environment to routing and switching platforms that use the Nexus Operating System (NX-OS). This course covers the key components and procedures you need to know to install and manage Cisco Nexus 9000, 7000, 5000, 2000 and 1000v series switches. This course will also cover important troubleshooting procedures for these platforms as well.

Course Objective:

Upon completing this course, the learner will be able to meet these overall objectives:

- Describe the differences between the Cisco IOS and NX-OS operating systems.
- Describe the features and functionality of the Cisco NX-OS.
- Describe how the Cisco NX-OS is used for functionality specific to different Cisco Nexus switching platforms, such as the 9000, 7000-series, 5000-series, 2000 series and 1000-series switches.
- Understand basic and advanced configurations of the Cisco Nexus 9000, 7000-series, 5000-series, 2000 series and 1000-series switches using the NX-OS.
- Understand troubleshooting techniques using the NX-OS.

Audience:

The primary audience for this course is as follows:

- Network, systems, and consulting systems engineers
- Network designers, administrators, and managers
- Data Center administrators, designers and system engineers

Prerequisite:

The knowledge and skills the learner should have before attending this course is as follows:

- CCNA Switching and Routing knowledge level. CCNP level preferred.

Course Outline:

Module 1: The Cisco Nexus platform and NX-OS

- Identifying Cisco Nexus Products
- Nexus 7000 and 7700 Features at a high level
- Nexus 5000 and 2000 Fex at a high level
- Nexus 9000 Features at a high level
- The NX-OS Software Architecture
    - NX-OS features and functionality
    - Command syntax
- Describing Cisco NX-OS Architecture, Key Features, and Capabilities
    - Modularity
    - Features
    - Licensing
    - Context-sensitive help
    - RBAC
    - Navigation between configuration modes
    - ISSU

Module 2: Configuring Layer 2 Features using the NX-OS

- Virtual Device Contexts (VDCs) in the Nexus 7000 Switches
- Configuring Layer 2 Switching Features
    - Spanning Tree Protocol (STP)
    - Unidirectional Link Detection (UDLD)
    - Link Layer Discovery Protocol (LLDP)
    - Port Profiles
    - Maximum Transmission Unit (MTU)
    - Multiple Spanning Tree
    - Traffic Storm Control
- Configuring Nexus Fabric Extenders (FEX)
- Port Channels and Virtual Port Channels (VPCs)
- FabricPath

Module 3: Fiber Channel and FCoE

- Understanding the Fiber Channel protocol
- Configuring FCoE
- Configuring SAN Switching Features

Module 4: Layer 3 Features using the NX-OS

- Virtual Routing and Forwarding (VRF) Contexts
- Static Routing
- EIGRP
- OSPF

- BGP
- IS-IS
- Unicast RIB and FIB
- Route Policy Manager
- Policy-Based Routing (PBR)
- First Hop Redundancy Protocols (HSRP/VRRP/GLBP)
- Overlay Transport Virtualization (OTV)

Module 5: VXLAN on Cisco Nexus 9000 Series Switches

- VXLAN Overview
- Use of VTEPs
- VXLAN Routing

Appendix A: Cisco NX-OS on the Nexus 1000v Virtual Switch

- Fundamentals of the Nexus 1000v Virtual Switch within VMware

Lab Outline

- Lab 0: Accessing the NterOne Lab Devices – Nexus **5000** Series Devices
- Lab 1: Initial Switch Configuration
- Lab 2: Connecting the Cisco Nexus 2000 Series Fabric Extender
- Lab 3: Configuring Layer 2 Switching Features
- Lab 4: Configuring FEX Active-Active VPC and EVPC
- Lab 5: Configuring Cisco NPV Mode and NPIV
- Lab 6: Configuring FCoE
- Lab 0: Accessing the NterOne Lab Devices – Nexus **7000** Series Devices
- Lab 1: Cisco Nexus 7000 Platform Discovery
- Lab 2: Configuring Cisco FabricPath
- Lab 3: Configuring Layer 3 Switching
- Lab 4: Configuring Cisco OTV
- Lab 0: Accessing the NterOne Lab Devices – Nexus **9000** Series Devices
- Lab 1: Preparing the Cisco Nexus 9300 Series Switch Configuration Baseline
- Lab 2: Implementing VXLAN Bridging