Cisco Nexus Overview

This DCINX9K v2.1 course will help aspirants to provide them knowledge and skills how to manage, implement and troubleshoot Cisco Nexus® 9000 Series Switches in Cisco® NX-OS mode. In Introducing Cisco Nexus 9000 Switches in NX-OS Mode course candidates will learn how to deploy capabilities including high availability features Virtual Extensible LAN (VXLAN), NX-OS programmability features, troubleshooting tools and techniques, Multiprotocol Label Switching (MPLS), Intelligent Traffic Director, and open interface technologies.

About the training

- **Study Material:-** Live lectures, Streaming Recorded Videos, Online Lab Workbook, and Remote Virtual Lab access.
- **Duration:-** 1 Month

Requirements

Candidates are recommended to have Good understanding of networking protocols, routing, and switching, Cisco data center architecture and Experience configuring advanced routing and switching technologies like Open Shortest Path First (OSPF) and Border Gateway Protocol (BGP)

What you will learn

- Understanding how to troubleshoot the Cisco Nexus 9000 Series Switches in NX-OS mode to support enhanced operations, resiliency, scalability and performance for data centers
- Exploring Use of programmability features to configure and manage the Cisco Nexus 9000 Series Switches, helping your IT organization meet high-priority business needs, save time, and reduce errors due to manual processes
- Execute skills and knowledge using enterprise-grade software, Cisco learning technologies, and data center equipment.

About Instructor

The trainer of this course has 9+ years of industrial experience and is expert in technology. The trainer is also verified by UniNets itself. He has delivered vast and complex project on the same around the world.

Course Content

- Cisco Data Center Architecture
    - Describe and define the Cisco data center architecture
    - Detailed Description of the products that are used in the Cisco data center architecture
    - Describe the Cisco unified I/O solution in access layer
    - Define the platform which is used to select for use in the different data center layers
- Cisco Data Center Infrastructure—Cisco NX-OS
    - Describe and verify Cisco NX-OS features
    - Describe and verify architecture of Cisco NX-OS
    - Describe and verify NX-OS process recovery
    - Define and Cisco NX-OS supervisor redundancy
    - Conceptual overview of Cisco NX-OS systems file management
    - Conceptual overview of Virtual Output Queuing (VOQ)
    - Define and implement virtual device contexts (VDCs)
    - Configure and troubleshoot VDCs
    - Describe fabric extension via the Cisco Nexus family
- Design and implement Cisco NX-OS Layer 2 and Layer 3 functionality
    - Configuration and implementation of VLANs
    - Configuration and implementation of PVLANs
    - Describe and implement Spanning Tree protocols
    - Define and verify port channels and virtual port channels
    - Compare and contrast vPC options
    - Basic features of routing protocols in a data center environment
    - Implement and Verify jumbo frames end-to-end in a data center
    - Learn the concepts of Cisco FabricPath
    - Configuration and implementation of VRF-Lite in a data center environment
    - Validate configurations and troubleshoot problems and failures using commandline, show, and debug commands.
- Describe multicast
    - Configuration and implementation of multicast operation in a data center environment
    - Describe and implement basic PIM configuration
    - Define and verify IGMP operation and configuration on the Cisco Nexus platform
    - Implement and Verify configurations and troubleshoot problems and failures using commandline, show, and debug commands
- learn, configure and implement Cisco NX-OS high-availability features
    - Configuration and implementation of first-hop routing protocols
    - Define and verify graceful restart and nonstop forwarding
    - Describe OTV
    - Implement and Verify ISSU process
    - Configuration validation and troubleshoot problems and failures using commandline, show, and debug commands
- Application Centric Infrastructure / VXLAN
    - Design, Implement and Troubleshoot policy and non-policy driven Internal Fabric Connectivity
    - Design, Implement and Troubleshoot policy and non-policy driven Internal Fabric connectivity for example ECMP, ISIS, inband mgmt, VXLAN
    - Design, Implement and Troubleshoot Infrastructure policies and elements

    - Design, Implement and Troubleshoot policy driven Infrastructure for example interface policies, MGMT policies
    - Configure and Troubleshoot physical infrastructure components for example controllers, switches
    - Analyze and Troubleshoot logical infrastructure elements using health indicators
- Automation and Scripting via Python
    - Implement and Troubleshoot Data Center Automation
    - Implement and Troubleshoot Data Center Automation using methods such as REST API implemented by scripting languages including Python
    - Implement and Troubleshoot Data Center Orchestration Tools

Nexus Lab Outline:

- Configuring Device Administration and Management Features
    - Lab 1: NX-OS Licensing
    - Lab 2: Management Interfaces
    - Lab 3: Telnet and SSH
    - Lab 4: SNMP
    - Lab 5: Checkpoint and Rollback
    - Lab 6: logging
    - Lab 7: CPU health check
- Configuring classic Ethernet Layer 2 Switching
    - Lab 8: Core Nexus LAN Switching
    - Lab 9: VLANs and VTP
    - Lab 10: Port Channels
    - Lab 11: Rapid PVST
    - Lab 12: MSTP
    - Lab 13: STP Bridge Assurance
    - Lab 14: STP Edge Ports
- Configuring Virtual Port Channels (vPC)
    - Lab 15: Nexus 7k vPC
    - Lab 16: vPC and HSRP
    - Lab 17: Back to Back vPC
    - Lab 18: vPC peer Switch
    - Lab 19: vPC Customization
- Configuring Layer 3 Switching Features
    - Lab 20: EIGRP
    - Lab 21: OSPF
    - Lab 22: BGP
    - Lab 23: HSRP
    - Lab 24: MPLS
    - Lab 25: Multicast
- Configuring Overlay Transport Virtualization (OTV)
    - Lab 26: OTV
    - Lab 27: OTV Authentication
- Configuring FabricPath
    - Lab 28: FabricPath
    - Lab 29: FabricPath with Port Channel
    - Lab 30: FabricPath Hello Authentication

- Configuring Advance Features
    - Lab 31: Configure VDCs and setting Management
    - Lab 32: Configuring FEX with Nexus 5k switches
    - Lab 33: Describing QoS on 5k
    - Lab 34: Describing FCoE on 7k

Note: ***Most of the course topics are covered with hands-on lab exercises and others are theoretical

THANK YOU

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