

# DCNX7K - Configuring Cisco Nexus 7000 Switches v3.0

## Configure, manage, and troubleshoot the Cisco Nexus 7000 Series Switch.

In this course, you will cover the key components and procedures needed to install, configure, manage, and troubleshoot the Cisco Nexus 7000 Switch. Through hands-on labs using NX-OS version 6.2(6b) code, you will gain an understanding of the day-to-day operation of the switches, including key features and functions.

Additionally, we have enhanced the standard Cisco labs to include more in-depth exploration of sought-after technologies including FabricPath, OTV, LISP, vPC, FCOE, QoS, and troubleshooting. All configurations are performed on the Nexus 7000, with the latest version of the NX-OS code, 6.2(6b).

## What You'll Learn

- Chassis and components of the Cisco Nexus 7000 Switch
- Management tools available for the Cisco Nexus 7000 Switch
- Nexus switch management tools
- Configure Cisco Nexus 7000 Switch functions and features, including Nexus-oriented features like vPC, FCoE, FabricPath, OTV, LISP, MPLS, and security
- Configure Cisco Nexus 7000 Switch security and Quality of Service (QoS) features
- Troubleshoot key features of the Cisco Nexus 7000 Switch

## Who Needs to Attend

Network engineers, designers, administrators, managers, system engineers, channel partners/resellers, customers, and employees Anyone who installs and implements the Cisco Nexus 7000 Switch

## Prerequisites

- CCNA certification or equivalent knowledge
- Recommended:
  - [ROUTE - Implementing Cisco IP Routing v2.0](#)
  - [ROUTE - Implementing Cisco IP Routing v2.0](#)
  - [SWITCH - Implementing Cisco IP Switched Networks v2.0](#)

## Follow-On Courses

- [DCNX5K - Implementing the Cisco Nexus 5000 and 2000 v2.0](#)

## **Course Outline**

### **1. Cisco Nexus Product Family Overview**

- Cisco Unified Fabric
- Cisco Nexus Product Family
- Data Center Requirements Addressed by the Cisco Nexus 7000 Switch

### **2. Cisco Nexus 7000 Series Switch**

- NXOS Overview
- Deployment Models
- 7000 and 7700 Series Switch Chassis
- Supervisor Modules, I/O Modules, and Fabric Modules
- Switch Forwarding and Packet Flow

### **3. Cisco Nexus 2000 Series Fabric Extender**

- Hardware
- Support on Nexus 7000 Series Switch

### **4. Cisco Nexus 7000 Series Switch Hardware**

- Hardware Installation
- Hardware Installation Verification

### **5. Cisco NX-OS Architecture, Key Features, and Capabilities**

### **6. Cisco Nexus 7000 Series Switch Management**

- Management Interfaces and Setup Utilities
- User Management
- System Management Features

### **7. Troubleshooting Nexus 7000 Series**

- Processes and Tools
- Memory Issues
- Packet Flow Issues
- Series Network Analysis Module

## **8. Remote Integrated Service Engine**

## **9. Cisco Prime DCNM Overview**

## **10. Cisco Dynamic Fabric Automation Overview**

## **11. Virtual Device Contexts**

- Overviews
- Management Settings

## **12. Layer 2 Switching Features on Cisco Nexus 7000 Series Switches**

- Interface Configuration
- Configuration of Cisco Nexus 2000 Series Fabric Extender on Nexus 7000 Series Switch
- VLANs and Advanced VLAN Features Configuration
- STP and STP Extensions Configuration
- Q-in-Q Configuration
- Troubleshooting Layer 2

## **13. Port Channels and Virtual Port Channels on the Cisco Nexus 7000 Series Switches**

- Port Channel Overview
- Virtual Port Channel Overview
- VPC Configuration
- vPC Troubleshooting

## **14. FabricPath on Cisco Nexus 7000 Series Switches**

- Cisco FabricPath Architecture
- Cisco FabricPath Configuration
- Troubleshooting Cisco FabricPath

## **15. Layer 3 Switching Features on Cisco Nexus 7000 Series Switches**

- Cisco NX-OS Forwarding Architecture
- Routing Protocols Configuration
- Route Policy Manager and Policy Based Routing
- Layer 3 Virtualization Configuration
- FHRP Protocols Configuration
- Bidirectional Forwarding Detection
- Multicast Configuration
- Layer 3 Troubleshooting

- BFD Configuration

## **16. MPLS on Cisco Nexus 7000 Series Switches**

- MPLS Overview
- MPLS Configuration on the Cisco Nexus 7000 Switch
- MPLS Layer 3 VPNs Configuration
- MPLS Layer 2 VPNs Configuration
- MPLS TE Configuration

## **17. OTV on Cisco Nexus 7000 Series Switches**

- Cisco OTV Overview
- Basic OTV Configuration

## **18. LISP on Cisco Nexus 7000 Series Switches**

- LISP
- LISP Configuration on Cisco Nexus 7000 Series Switch

## **19. FCoE on Cisco Nexus 7000 Series Switches**

- FCoE Overview
- FCoE Support on Cisco Nexus 7000 Series Switches
- Configuring FCoE on Cisco Nexus 7000 Series Switches

## **20. Security Features on Cisco Nexus 7000 Series Switches**

- Security Features Overview and Configuration
- Cisco TrustSec on Cisco Nexus 7000 Series Switch

## **21. QOS on Cisco Nexus 7000 Series Switches**

- QOS in the Data Center
- QOS Configuration on the Cisco Nexus 7000 Switch

## **22. Intelligent Traffic Director Overview on Nexus 7000 Series Switches**

- Intelligent Traffic Director Overview
- ITD Configuration

## **Labs**

**Lab 1: Cisco Nexus 7000 Platform Discovery**

**Lab 2: Configure User Management**

**Lab 3: Configure System Management**

**Lab 4: Configure Layer 2 Advanced Switching**

**Lab 5: Configure Basic and Advanced vPCs**

**Lab 6: Configure Basic and Advanced Cisco FabricPath**

**Lab 7: Configure Layer 3 Switching**

**Lab 8: Configure FHRP**

**Lab 9: Configure MPLS**

**Lab 10: Configure Basic and Advanced OTV**

**Lab 11: Configure LISP**

**Lab 12: Configure FCoE**

**Lab 13: Configure Security Features**

**Lab 14: Configure QoS**

**Lab 15: Configure Troubleshooting Features**

**Lab 16: Troubleshooting**