

Managing Cisco Network Operating Systems (CNIOS)

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The Managing Cisco Network Operating Systems (CNIOS) training introduces the fundamental concepts of Cisco networking operating systems, including IOS XE, NX-OS, and IOS XR. This training is designed for individuals who are new to Cisco or networking professionals who want to deepen their understanding of Cisco operating systems used across various network devices. Upon completion of this training, you will be able to navigate the command-line interface (CLI), configure basic settings as well as advanced protocols, and understand the unique features and architectures of Cisco network operating systems.

This training includes five free additional modules through Cisco U. This training also earns you 37 Continuing Education (CE) credits toward recertification.

This class will help you:

- Get familiar with Cisco IOS XE, NX-OS, and IOS XR operating systems
- Navigate CLIs of individual systems, perform initial setup, upgrade, and troubleshooting
- Navigate Cisco documentation, interact with Cisco Technical Assistance Center (TAC), and automate different platforms
- Configure important features, such as Virtual Port Channel (vPC), Fibre Channel, virtual extensible LAN (VXLAN), and router clustering
- Earn 37 CE credits toward recertification

Why Attend with Current Technologies CLC

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The primary audience for this course is as follows:

- Junior Network Engineers
- NOC Engineers
- IT Operations Engineers
- Network Administrators

Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Familiarity and basic understanding of core networking concepts
- Fundamental knowledge and understanding of Cisco network devices, such as routers and switches
- Basic understanding of network security concepts, including common threats, firewalls, and how to harden a network

Course Duration

5 days

Course Price

\$4,195.00 or 42 CLCs

Methods of Delivery

- Instructor Led
- Virtual ILT
- On-Site

OUTLINE

Module 1: Overview of Cisco Network Operating Systems

Module 2: Evolution of Cisco Network Operating Systems

Module 3: Comparison of Cisco IOS, IOS XE, NX-OS, and IOS XR

Module 4: Introduction to Cisco Modeling Labs

Module 5: Introduction to Cisco IOS XE

Module 6: Use of Cisco IOS XE CLI and Configuration Management

Module 7: Unique Features of Cisco IOS XE

Module 8: IOS XE Software Management and Upgrade Process

Module 9: Introduction to Cisco NX-OS

Module 10: Use of Cisco NX-OS CLI and Configuration Management

Module 11: Unique Features of Cisco NX-OS

Module 12: Cisco NX-OS Software Management and Upgrade Process

Module 13: Introduction to Cisco IOS XR

Module 14: Use of Cisco IOS XR CLI and Configuration Management

Module 15: Unique Features of Cisco IOS XR

Module 16: Cisco IOS XR Software Management and Upgrade Process

Module 17: Common Protocols and Configurations

Module 18: Automation and Programmability

Module 19: Cisco Network Automation Platforms

Module 20: Monitoring Tools

Module 21: Troubleshooting and Best Practices

Module 22: Cisco Documentation Navigation

Module 23: Cisco Operating Systems Licensing

Module 24: Security and Device Hardening

Module 25: Cisco Network Security Tools and Sites

LAB OUTLINE

- Lab 1: Create the First Lab Topology
- Lab 2: Perform Basic Configuration on Cisco IOS XE Router
- Lab 3: Configure Static Routing on Cisco IOS XE Router
- Lab 4: Configure OSPF Routing Protocol on IOS XE Platform
- Lab 5: Configure Network Address Translation on Cisco IOS XE Systems
- Lab 6: Perform an Upgrade of a Cisco IOS XE Router
- Lab 7: Deploy a Containerized Application on a Cisco IOS XE Device
- Lab 8: Perform Initial Cisco NX-OS Switch Configuration
- Lab 9: Configure Virtual Port Channel
- Lab 10: Configure Fibre Channel on Cisco MDS Switches
- Lab 11: Configure VXLAN
- Lab 12: Upgrade Cisco Nexus Switches in vPC
- Lab 13: Install Third-Party Tool on Cisco Nexus Switch
- Lab 14: Perform Initial Configuration on Cisco IOS XR Router
- Lab 15: Perform Basic Configuration of Cisco IOS XR Router
- Lab 16: Configure a Layer 3 Virtual Private Network
- Lab 17: Create a Routing Policy
- Lab 18: Perform Upgrade of a Cisco IOS XR Router
- Lab 19: Deploy a Containerized Application on Cisco IOS XR Device
- Lab 20: Enable Remote Access
- Lab 21: Configure Layer 2 Interfaces and VLANs
- Lab 22: Configure Layer 3 Interfaces and Routing
- Lab 23: Manage a Cisco Nexus Switch with NETCONF
- Lab 24: Manage Cisco Catalyst Router with RESTCONF
- Lab 25: Automate Cisco IOS XR Router with Ansible
- Lab 26: Automate Cisco Catalyst Switch with Terraform
- Lab 27: Configure SNMP, Logging, and Telemetry on Cisco Catalyst Router
- Lab 28: Troubleshoot Common Network Issues
- Lab 29: Capture Network Traffic and Identify the Issue
- Lab 30: License Cisco IOS XRv Router with Cisco Smart Licensing Manager
- Lab 31: Secure Console and Remote Access on Cisco Devices
- Lab 32: Implement Port Security
- Lab 33: Implement Access Lists on Cisco Devices
- Lab 34: Explore Configuration of Cisco Network Devices Using CLI Analyzer