



## **Managing Cisco Network Operating Systems (CNIOS)**

**Duration:** 40 HRS

### **Description**

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.

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.

### **How You'll Benefit**

This training 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

### **Who Should Enroll**

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

### **Course 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 Outline**

- Overview of Cisco Network Operating Systems
- Evolution of Cisco Network Operating Systems
- Comparison of Cisco IOS, IOS XE, NX-OS, and IOS XR
- Introduction to Cisco Modeling Labs
- Introduction to Cisco IOS XE
- Use of Cisco IOS XE CLI and Configuration Management
- Unique Features of Cisco IOS XE
- IOS XE Software Management and Upgrade Process
- Introduction to Cisco NX-OS
- Use of Cisco NX-OS CLI and Configuration Management
- Unique Features of Cisco NX-OS
- Cisco NX-OS Software Management and Upgrade Process
- Introduction to Cisco IOS XR
- Use of Cisco IOS XR CLI and Configuration Management
- Unique Features of Cisco IOS XR
- Cisco IOS XR Software Management and Upgrade Process
- Common Protocols and Configurations
- Automation and Programmability
- Cisco Network Automation Platforms
- Monitoring Tools
- Troubleshooting and Best Practices
- Cisco Documentation Navigation

- Cisco Operating Systems Licensing
- Security and Device Hardening
- Cisco Network Security Tools and Sites