
Cisco NSO Administration and DevOps (NSO303)

***WHERE GREAT TRAINING
HAPPENS EVERYDAY!***

Cisco NSO Administration and DevOps (NSO303)

Course Duration

4 days

Course Price

\$3,595.00

36 CLCs

Methods of Delivery

In-Person ILT

Virtual ILT

Onsite ILT

About this Class

In this Cisco Network Services Orchestrator (NSO) Administration and DevOps course provides a comprehensive operational and architectural view of Cisco Network Services Orchestrator, focusing on how network automation integrates with modern IT practices. It is designed for network engineers, automation engineers, and operations teams who are responsible for running Cisco NSO in production environments and need to manage scale, reliability, change control, and service lifecycle operations. The course emphasizes the convergence of networking and IT, highlighting how DevOps concepts apply directly to network orchestration. Students begin by exploring network and IT convergence, Cisco NSO architecture, Linux fundamentals, and NSO setup, establishing a strong foundation for understanding how NSO operates as a platform. The curriculum then expands into access control, integration options, version control with Git, CI/CD pipelines, and software development methodologies, showing how NSO fits into modern automation ecosystems. Scalability, high availability, and system management topics prepare students to operate NSO reliably in large, distributed environments.

The course also focuses heavily on service lifecycle operations, including configuration management, change management, service maintenance, monitoring, compliance reporting, inventory management, and NED lifecycle management. Hands-on labs reinforce these concepts through real-world scenarios such as deploying NSO in Docker, configuring high availability, migrating services to LSA, performing backups and restores, building NETCONF NEDs, troubleshooting alarms, and generating compliance reports. By the end of the course, students are prepared to operate, scale, and govern Cisco NSO as a critical automation platform in enterprise and service provider networks.

Cisco NSO Administration and DevOps (NSO303)

How you will benefit

This class will help you:

- Install, configure, and maintain a Cisco Network Services Orchestrator solution
- Apply DevOps best practices for Cisco NSO development, operations, and administrative tasks
- Implement Layered Service Architecture (LSA) within a Cisco NSO solution
- Gain knowledge for protocols, solutions, and designs to acquire professional-level and expert-level networking roles
- Earn 32 CE credits toward recertification

Why Attend with Current Technologies CLC

- Our Instructors are 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 job roles best suited to the material in this course are:

- DevOps Engineers
- Integration Engineers
- Network and Software architects
- Network Engineers
- Software Engineers
- System Administrators

Cisco NSO Administration and DevOps (NSO303)

Objectives

After taking this course, you should be able to:

- Describe network and IT convergence
- Describe Cisco NSO architecture
- Describe Linux
- Configure Cisco NSO
- Set up access control to Cisco NSO system
- Describe Cisco NSO Integration Options
- Explain version control systems and basic git concepts
- Describe the purpose of continuous integration and continuous delivery
- Implement Cisco NSO high availability
- Describe scalable system management
- Describe software development methodologies
- Describe service maintenance
- Perform NED upgrades
- Use Cisco NSO for managing services and their associated device configurations
- Describe Cisco NSO change management
- Explain service problem management
- Use Cisco NSO for service monitoring and compliance reporting
- Describe Cisco NSO inventory management
- Describe Cisco NSO use cases

Prerequisites

The knowledge and skills you are expected to have before attending this training are:

- Basic knowledge of the Cisco CLI
- Basic knowledge of the CLI of UNIX-like operating systems
- Basic knowledge of Yet Another Next Generation (YANG) data modelling
- Basic knowledge of Python software development

Cisco NSO Administration and DevOps (NSO303)

Course Outline

Module 1: Introducing Network and IT Convergence

Module 2: Introducing Cisco NSO Architecture

Module 3: Introducing Linux

Module 4: Explaining Cisco NSO Setup

Module 5: Exploring Access Control

Module 6: Describing Integration Options

Module 7: Explaining Version Control System

Module 8: Describing Continuous Integration and Continuous Delivery

Module 9: Introducing Scalability and High Availability

Module 10: Describing Scalable System Management

Module 11: Describing Software Development Methodologies

Module 12: Introducing Service Maintenance

Module 13: Performing NED Upgrades

Module 14: Introducing Configuration Management

Module 15: Describing Change Management

Module 16: Explaining Service Problem Management

Module 17: Explaining Service Monitoring and Compliance Reporting

Module 18: Introducing Inventory Management

Module 19: Describing Cisco NSO Use Cases

Cisco NSO Administration and DevOps (NSO303)

Lab Outline

- Lab 1: Perform NSO System Install
- Lab 2: Implement Role-Based Access and PAM
- Lab 3: Using Cisco NSO APIs
- Lab 4: Learn to work with Git
- Lab 5: Use NSO in Docker
- Lab 6: Configure High Availability
- Lab 7: Migrating a Monolithic Service to LSA
- Lab 8: Deploying the LSA Services
- Lab 9: Use the Network Connectivity Tool (NCT)
- Lab 10: Perform Service Backup and Restore
- Lab 11: Migrate a CDM Device
- Lab 12: Build a NETCONF NED
- Lab 13: Replacing a Device
- Lab 14: Troubleshoot NSO Alarms and Services
- Lab 15: Creating a Compliance Report