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## Cisco NSO Administration and DevOps (NSO303) V5.0

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

## Cisco NSO Administration and DevOps (NSO303) V5.0

### Course Duration

4 days

### Course Price

\$3,595.00

36 CLCs

### Methods of Delivery

In-Person ILT

Virtual ILT

Onsite ILT

### About this Class

The Cisco Network Services Orchestrator (NSO) Administration and DevOps training continues the learning journey of the NSO Essentials for Programmers and Network Architects and NSO Advanced for Python Programmers trainings by introducing you to the system administration and DevOps focusing on NSO. This includes the robust bridge linking network automation and orchestration tools, examining the development, operation and administration task functions. You will learn how to set up, configure, deploy, and maintain a Cisco NSO solution, and learn best practices for using DevOps. The examples shown in this training demonstrate real-world scenarios to prepare you for deployment and management of new or existing NSO instances.

The training guides you through the setup of production-ready NSO instances using system installation with access control settings, the deployment of NSO in Docker containers, and introduces modern DevOps concepts and tools such as Git and Continuous Delivery/Continuous Deployment (CI/CD). You will learn how to migrate Continuous Diagnostics and Mitigation (CDM) devices, how to build Network Configuration Protocol (NETCONF) Network Element Drivers (NEDs) from the NSO Command-Line Interface (CLI), how to handle NSO Alarms, and many more features that benefit you in your journey with Cisco NSO. This training also earns you 32 Continuing Education (CE) credits toward recertification.

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### 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) V5.0

### 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



## Cisco NSO Administration and DevOps (NSO303) V5.0

### 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 Network Element Driver (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) V5.0

### 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