

Cisco NSO Administration and DevOps

Duration: 4 Days **Course Code: NSO303** **Version: 4.0**

Overview:

The Cisco Network Services Orchestrator (NSO) Administration and DevOps (NSO303) course continues the learning journey of the NSO Essentials for Programmers and Network Architects (NSO201) and Cisco NSO Advanced for Python Programmers (NSO300) courses by introducing you to the system administration and DevOps focusing on NSO; 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 course demonstrate real-world scenarios to prepare you for deployment and management of new or existing NSO instances. The course 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 Integration/Continuous Delivery (CI/CD). You will learn how to migrate CDM devices, how to build NETCONF NEDs from the NSO CLI, how to handle NSO Alarms, and many more features that benefit you in your journey with Cisco NSO.

Target Audience:

System and Network administrators who need to be able to install, configure and maintain a Cisco Network Services Orchestrator solution

Objectives:

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| <ul style="list-style-type: none">■ After completing 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/Continuous Delivery■ Implement Cisco NSO high availability | <ul style="list-style-type: none">■ 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 |
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Prerequisites:

Attendees should meet the following prerequisites:

- Basic knowledge of the command line of UNIX-like operating systems
- Basic knowledge of Network Configuration Protocol (NETCONF)
- Basic knowledge of Yet Another Next Generation (YANG) data modelling
- Basic knowledge of Python software development
- NSO201 - NSO Essentials for Programmers and Network Architects

Testing and Certification

Recommended as preparation for the following exams:

- There are no exams currently aligned to this course.

Content:

Cisco NSO Administration

- Introducing Network and IT Convergence
- Introducing Cisco NSO Architecture
- Introducing Linux
- Explaining Setup
- Explaining Access Control
- Describing Integration Options

DevOps Fundamentals

- Describing Software Development Methodologies
- Explaining Version Control System
- Describing Continuous Integration and Continuous Delivery

Scalability

- Introducing Scalability and High Availability
- Describing Scalable System Management

Cisco NSO Operations

- Introducing Service Maintenance
- Performing Network Element Driver (NED) Upgrades
- Introducing Configuration Management
- Describing Change Management
- Explaining Service Problem Management
- Explaining Service Monitoring and Compliance Reporting
- Cisco NSO and DevOps
- Introducing Inventory Management
- Describing Cisco NSO Use Cases

Labs

- Perform NSO System Install
- Implement Role-Based Access and PAM
- Using Cisco NSO APIs
- Learn to work with Git
- Use NSO in Docker
- Configure High Availability
- Migrating a Monolithic Service to LSA
- Deploying the LSA Services
- Use the Network Connectivity Tool (NCT)
- Perform Service Backup and Restore
- Migrate a CDM Device
- Build a NETCONF NED
- Replacing a Device
- Troubleshoot NSO Alarms and Services
- Creating a Compliance Report

Further Information:

For More information, or to book your course, please call us on 353-1-814 8200

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