Cisco NSO Administration and DevOps Training

Duration: **4 Day**

BILGINC IT Academy
info@bilginc.com
bilginc.com

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. **How You'll Benefit**

This training 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

Prerequisites

Before you take this course, we recommend that you have the knowledge and skills obtainable by attending the Cisco Network Service Orchestrator (NSO) Essentials for Programmers and Network Architects (v4.0) (NSO201) class, including:

- Basic knowledge of the Cisco Command-Line Interface (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

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What You Will Learn

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 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

Training Outline

- Introducing Network and IT Convergence
- Introducing Cisco NSO Architecture
- Introducing Linux
- Explaining Cisco NSO Setup
- Exploring Access Control
- Describing Integration Options
- Explaining Version Control System
- Describing Continuous Integration and Continuous Delivery
- Introducing Scalability and High Availability
- Describing Scalable System Management
- Describing Software Development Methodologies
- Introducing Service Maintenance
- Performing NED Upgrades
- Introducing Configuration Management
- Describing Change Management
- Explaining Service Problem Management
- Explaining Service Monitoring and Compliance Reporting
- Introducing Inventory Management
- Describing Cisco NSO Use Cases