FIREFLY

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Cisco NSO Administration and DevOps

DURATION: 4 DAYS COURSE CODE: NSO303 FORMAT: LECTURE/LAB

COURSE DESCRIPTION

The Cisco Network Services Orchestrator (NSO) Administration and DevOps (NSO303) v3.0 course focuses on Cisco® NSO development, operation, and administration tasks. You will learn how to set up, configure, deploy, and maintain a Cisco Network Services Orchestrator solution, and you will learn best practices for using DevOps.

WHO SHOULD ATTEND

System installers

System integrators

System administrators

Network administrators

Solutions designers

PREREQUISITES

Before you take this course, we recommend that you have the knowledge and skills obtainable by attending the Cisco Network Services Orchestrator Foundation (NSO201) class, including:

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 modeling

Basic knowledge of Python software development

LEARNING OBJECTIVES

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

Configure Cisco NSO and access control to Cisco NSO

Implement Cisco NSO high availability

Describe and implement Layered Service Architecture

Use DevOps practices for Cisco NSO development and operations

Describe the purpose of Continuous Integration and Continuous Deployment (CI/CD)

Implement and manage services and their associated device configurations

Use Cisco NSO for service monitoring and compliance reporting

COURSE OUTLINE

1. Cisco NSO Administration
   - Introducing Network and IT Convergence
   - Introducing Cisco NSO Architecture
   - Introducing Linux
   - Explaining Setup
   - Explaining Access Control
   - Describing Integration Options
2. Scalability
   - Introducing Scalability and High Availability
   - Describing Scalable System Management
3. DevOps Fundamentals
   - Describing Software Development Methodologies
   - Explaining Version Control System
   - Describing Continuous Integration and Continuous Delivery
4. 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

DISCOVERY LABS

1: Connecting to the Lab
2: Learning to Use a Command-Line Text Editor
3: Installing the Cisco NSO Software
4: Role-Based Access and Cisco Physical Access Manager (Cisco PAM)
5: Using Cisco NSO APIs
6: High Availability
7: Deploying the LSA l3vpn Service
8: Network Connectivity Tool (NCT)
9: Using Git
10: Service Backup and Restore
11: Perform a NED Upgrade
12: Replacing a Device
13: Creating a Compliance Report
14: Migrating a Monolithic Service to LSA