

# Cisco Network Service Orchestrator (NSO) Essentials for Programmers and Network Architects (v4.0) (NSO201)

ID NSO201 Price on request Duration 4 days

## Who should attend

- System installers
- System integrators
- System administrators
- Network administrators
- Solutions designers

## Prerequisites

Cisco require students to have the following knowledge and skills:

- Basic knowledge of the Cisco Command-Line Interface (CLI) or the CLI of UNIX-like operating systems
- Working knowledge of UNIX-based operating systems and basic tasks
- Basic knowledge of programming constructs
- Basic knowledge of YANG data modeling
- Basic knowledge of the NETCONF communication protocol
- Knowledge of XML data structures and schemas
- Basic management of network components (routers, switches, etc.)

The following Cisco courses can help you gain the necessary background

- [Programming for Network Engineers \(PRNE\)](#)
- [Introducing Automation for Cisco Solutions \(CSAU\)](#)

## Course Objectives

- Explain the transactional service activation and how it relates to business requirements
- Explain how Cisco NSO communicates with network devices
- Understand the NETCONF protocol and be able to read and write simple YANG models
- Understand the difference between devices that are fully NETCONF capable and those that are less or not NETCONF capable
- Understand the support for candidate configuration and confirmed commit support

- Use logs to troubleshoot the Cisco NSO deployment and check NSO communication with network devices
- Explain the YANG service model structure
- Design a real-world usable service
- Explain the mapping logic of service parameters to device models and consequently to device configurations
- Describe the use of different integration options and APIs
- Explain how to implement action with use of config-templates in NSO package
- Explain the use of Reactive FASTMAP in for manipulating and implementing advanced NFV components
- Describe the use of feature components and function packs
- Define and explain the ETSI MANO principles and solution
- Work with the alarm console, and understand the NSO alarm structure and how it conforms to modern network operations procedures
- Describe Cisco NSO 5.3 new features and changes in NSO

Training Centres worldwide



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