

NSO300

NSO Advanced for Python Programmers

The Cisco Network Services Orchestrator (NSO) Advance Python Programmers (NSO300) v4.0 course continues the learning journey of the NSO Essentials for Programmers and Network Architects (NSO201) v4.0 course with NSO to include customizing templates with Python programming, Docker deployment, and Nano services. You will learn to create advanced services using the NSO application framework and Python scripting with both new and existing Layer 3 Multiprotocol Label Switching (MPLS) VPN services. You will also learn how to manage and scale these services to reduce operation consumption, and increase both security and available physical space, since virtualized network functions (VNFs) replace physical hardware. You will use Network Functions Virtualization (NFV) orchestration features, and Cisco Elastic Services Controller (ESC) to manage virtualized network functions.

This course will help you:

- Tailor a Cisco Network Services Orchestrator solution for your organization
- Manage virtualized network functions (VNFs) automated, efficient, and dynamic network functioning

Course Contents

- Discovering the NSO Application Framework
- Deploying NSO in Docker Containers
- Developing Python and Template-Based Service
- Integrating Service Lifecycle
- Developing a Layer 3 MPLS VPN Service for New Service Deployment
- Developing Nano Services
- Developing Layer 3 MPLS VPN Service for Existing Deployment
- Introducing Managed Services
- Implementing Stacked Services
- Scaling Service Orchestration
- Discovering the ETSI MANO Framework
- Managing VNF Lifecycle with Cisco ESC
- Orchestrating NFV

E-Book You will receive the original course documentation from Cisco in English language as a Cisco E-Book. In the Cisco Digital Learning Version, the content of the courseware is integrated into the learning interface instead.

Target Group

- System engineers
- System integrators
- System programmers
- 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 NSO Essentials for Programmers and Network Architects (NSO201) class, plus have knowledge in the following areas:

- 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

Processing time

approx. 30 hours

This Course in the Web



You can find the up-to-date information and options for ordering under the following link:

www.expertech-training.com/go/NS300

Reservation

On our Website, you can reserve a course seat for 7 days free of charge and in a non-committal manner. This can also be done by phone under +49 6074/4868-0.

Guaranteed Course Dates

To ensure reliable planning, we are continuously offering a wide range of guaranteed course dates.

Your Tailor-Made Course!

We can precisely customize this course to your project and the corresponding requirements.

Cisco Digital Learning

This course is available in the Cisco Digital Learning Library. These recently developed, multi-modal training events include HD videos moderated by lecturers with stored searchable text and subtitles, as well as exercises, labs, and explanatory text and graphics. We provide this offer to you via our myExpertech learning portal. Effective of the activation of the account, access to the courses will be granted for a duration of 6 months. In the case of packet solutions (Cisco Digital Learning Subscriptions), this time period will amount to 12 months.

Cisco Digital Learning	Prices, excl. of V.A.T.
6 months activation	€ 750

Training	Prices, excl. of V.A.T.
Classes in Germany	5 Days € 4,595
Online Training	5 Days € 4,595
Date/course venue	Course language English 
28/07-01/08/25 	22/09-26/09/25 
11/08-15/08/25 	13/10-17/10/25 
18/08-22/08/25 	13/10-17/10/25 
08/09-12/09/25 	

Status 07/03/2025

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Table of Contents

NSO300 – NSO Advanced for Python Programmers

Course outline

Module 1: Service Provider VPN Service Design with NSO Overview

Service Applications

Layer 3 MPLS VPN Service Design

Point-to-Point Layer 2 VPN Service Design

Module 2: Cloud VPN Service Design

Cloud VPN

Simple Cloud VPN Service Design

Cisco Elastic Services Controller (ESC)

Service Chaining Design

Service Chaining Implementation

Lab outline

Lab 1: Layer 3 MPLS VPN Service

Lab 2: L2VPN Service Enhancements

Lab 3: Create a Simple CloudVPN Service Bundle



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