NSO300 - CISCO NSO ADVANCED FOR PYTHON PROGRAMMERS V4.0

Course Code: 5394

Introduces learners to developing advanced services using Cisco Network Services Orchestrator (NSO) programmability with Python scripting.

This course explores how 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. Students will also learn how to manage and scale these services, and how to use NSO Network Functions Virtualization (NFV) orchestration features and Cisco Elastic Services Controller (ESC) to manage Virtualized Network Functions (VNFs).

This course is eligible for 50 Continuing Education Credits (ILT & ELT Modality).

What You'll Learn

After completing this course, you should be able to:

- Describe the NSO's transactional application framework and mapping model options
- Describe the Reactive Fastmap design pattern and the NSO Configuration Database (CDB) subscriber in the NSO Transaction model
- Simplify packages to remove the need for subscriber applications, scale orchestration solutions, and integrate NSO with external systems (east-west integration)
- Describe the Cisco ESC architecture and integration with NSO, and how the NSO VNF Orchestration (VNFO) Release 2 bundle interacts with ESC for orchestration

Who Needs to Attend

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

Prerequisites

- Basic knowledge of the Cisco Command -Line Interface (CLI)

- Basic knowledge of the CLI of UNIX-like operating systems
- Basic knowledge of YANG data modeling
- Basic knowledge of Java or Python software development

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CLASSROOM LIVE	$4,295 USD	4 Day

Classroom Live Outline

Module 1: Cisco NSO Programmability

- NSO Application Framework
- NSO Python Scripting
- NSO Python and Template-Based Services Resources

Module 2: Augmenting Cisco NSO Service

- Service Lifecycle and Integration Options Overview
- Greenfield Layer 3 MPLS VPN Service
- Brownfield Layer 3 MPLS VPN Service

Module 3: Managed Services

- Managed Services Overview
- Stacked Service Design Overview
- Design-Managed Network Services
- Scaling Service Orchestration

Module 4: Cisco NSO Network Functions Virtualization (NFV) Orchestration

- ETSI MANO
- Cisco ESC
- Cisco NSO Orchestration

Classroom Live Labs

- Lab 1: Device Setup Using Python Script
- Lab 2: Create an SVI Service Using pre_modification Service Callback
- Lab 3: Create a L3VPN Service Using Dynamic ID Allocation
- Lab 4: L3VPN Service Upgrade
- Lab 5: Stacked Services

- Lab 6: Service Action
- Lab 7: ESC Integration
- Lab 8: NFV for the DMZ Service

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VIRTUAL CLASSROOM LIVE	$4,295 USD	4 Day

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Mar 16 - 20, 2026 | 9:00 AM - 5:00 PM EDT

Apr 13 - 17, 2026 | 9:00 AM - 5:00 PM EDT

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ON-DEMAND	$750 USD

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PRIVATE GROUP TRAINING	4 Day

Visit us at www.globalknowledge.com or call us at 1-866-716-6688.

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