

Cisco NSO Advanced for Python Programmers v3.0

Course#:NSO300

Duration:4 Day

Price:0.00

Course Description

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).

Objectives

Describe the NSOs 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

Audience

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

Content

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

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