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CISCO NSO ADVANCE PYTHON PROGRAMMERS (NSO300) V4.0

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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) 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.

How you'll benefit

This class will help you:

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

Why Attend with Current Technologies CLC

- Our Instructors are in the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

The primary audience for this course is as follows:

- System Engineers
- System Integrators
- System Programmers
- System Administrators
- Network Administrators
- Solutions Designers

Course Duration

5 days

Course Price

$4,295.00 or 43 CLCs

Methods of Delivery

- Instructor Led
- Virtual ILT
- On-Site

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

OUTLINE

Module 1: Discovering the NSO Application Framework
- NSO Transaction Model and Mapping Options
- NSO Python API Overview

Module 2: Deploying NSO in Docker Containers
- Comparing NSO Deployments
- NSO in Docker Overview

Module 3: Developing Python and Template-Based Service
- Service Strategy
- Service Design—Service Model

Module 4: Integrating Service Lifecycle
- Service Lifecycle Overview
- Integration Options Overview

Module 5: Developing a Layer 3 MPLS VPN Service for New Service Deployment
- Service Strategy
- Service Design—Service Model

Module 6: Developing Nano Services
- Nano Services
- Service Design Manual Resource Allocation

Module 7: Developing Layer 3 MPLS VPN Service for Existing Deployment
- Existing Service Deployment Strategy
- Existing Service Deployment Design

Module 8: Introducing Managed Services
- Managed Services Overview
- Resource Allocation

Module 9: Implementing Stacked Services
- Stacked Services Strategy
- Implementing Resource-Facing Services

Module 10: Scaling Service Orchestration
- Optimization Options
- Layered Services Architecture Design

Module 11: Discovering the ETSI MANO Framework
- Network Functions Virtualization Initiative
- ETSI MANO

Module 12: Managing VNF Lifecycle with Cisco ESC
- Introduction to Cisco ESC
- VNF Lifecycle Management

Module 13: Orchestrating NFV
- NFV Orchestration (NFVO) Bundle Introduction
- VNF Descriptor

LAB OUTLINE

Lab 1: Create NSO Docker Environments

Lab 2: Create Switch Virtual Interface (SVI) Service Using Premodification Service Callback

Lab 3: Implement Nano Services

Lab 4: Create an L3VPN Service Using Dynamic ID Allocation

Lab 5: Perform an L3VPN Service Upgrade

Lab 6: Implement Stacked Services

Lab 7: Deploy Link State Advertisement (LSA) Service

Lab 8: Integrate Cisco ESC and OpenStack

Lab 9: Deploy NFV for Demilitarized Zone (DMZ) Service

Lab 10: Implement Self-Test Action

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