



CISCO TRAINING

NSO Advanced for Python Programmers

*Automate complex network services using Cisco NSO with advanced Python programming.
Master orchestration to deploy scalable network solutions.*

DURATION

2 hours

LEVEL

Advanced

FORMAT

Instructor-Led

-
- Globally Recognized Certification
 - Expert-Led Hands-On Training
 - Flexible Scheduling

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COURSE OVERVIEW

This advanced course, "NSO Advanced for Python Programmers," is meticulously designed for network engineers and developers aiming to master the intricacies of Cisco Network Services Orchestrator (NSO) through powerful Python scripting. It delves beyond basic NSO operations, equipping participants with the expertise to develop sophisticated, scalable, and resilient network automation solutions. You will explore advanced NSO concepts such as custom service creation, transaction management, error handling, and integrating NSO with external systems, all leveraged by Python's versatility and the NSO API.

Participants will gain hands-on experience in building advanced NSO services, manipulating network configurations programmatically, and implementing robust error recovery mechanisms using Python. The course emphasizes practical application, covering topics like NETCONF/YANG model manipulation, custom action development, and advanced API interactions. By the end of this intensive program, you will be proficient in designing, deploying, and maintaining complex network services, significantly enhancing operational efficiency and agility within modern network infrastructures. This specialized skill set is crucial for organizations transitioning towards fully automated, intent-based networking.

Duration	2 hours
Level	Advanced
Vendor	Cisco

COURSE CURRICULUM

01 Module 1: Advanced NSO Architecture and Data Models

- NSO Core Architecture Deep Dive
- YANG Model Extensions and Best Practices
- Advanced NETCONF Operations with NSO
- Service Model Design Patterns for Scalability

02 Module 2: Python for NSO Service Development

- Advanced NSO Python API (ncs.maapi, ncs.dp, ncs.application)
- Developing Custom NSO Services with Python
- Transaction Management and Rollbacks
- Error Handling and Exception Management in NSO Services

03 Module 3: NSO Service Chaining and Integration

- Service-to-Service Interaction within NSO
- Integrating NSO with External Systems (APIs, Message Buses)
- Using Python for NSO Northbound and Southbound Integrations
- Advanced Data Transformation Techniques (XSLT, JINJA2 with Python)

04 Module 4: NSO Operational Enhancements and Best Practices

- Custom NSO Actions and Callbacks with Python
- Implementing NSO Security Best Practices
- Performance Tuning and Scaling NSO Deployments
- Testing and Debugging NSO Services and Python Scripts

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Senior Network Automation Engineer**
- > **DevNet Specialist (Cisco NSO Focus)**
- > **Network DevOps Lead Architect**

FREQUENTLY ASKED QUESTIONS

Q: What advanced NSO capabilities will I be able to implement using Python after completing this course?

Upon completion, you will be proficient in developing custom NSO services, managing complex network transactions with robust error handling, implementing service chaining, and integrating NSO with various external systems using advanced Python API calls. This includes manipulating YANG models, creating custom actions, and ensuring high availability for your automated network services within complex, multi-vendor environments.

Q: What specific prerequisites are recommended for success in this "NSO Advanced for Python Programmers" course?

This course is designed for those with a solid foundational understanding of Cisco NSO concepts and operations, along with intermediate to advanced proficiency in Python programming, including familiarity with network programming libraries. Experience with NETCONF/YANG and basic network automation principles is also highly recommended to maximize your learning experience.

Q: How does this advanced course prepare me for a Senior Network Automation Engineer role focused on Cisco NSO?

This course directly addresses the critical skills required for senior-level roles by focusing on designing, deploying, and maintaining complex, scalable NSO automation solutions. You will learn to tackle challenging scenarios like multi-domain orchestration, advanced fault management, and performance optimization, enabling you to architect and lead significant network automation initiatives using Python and Cisco NSO to drive operational excellence.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

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