

# SPAUI

## Implementing Automation for Cisco Service Provider Solutions

The Implementing Automation for Cisco Service Provider Solutions (SPAUI) v1.0 course prepares you to implement and support automation solutions in a Service Provider network infrastructure, using network programmability principles, protocols, tools, and mechanisms. Through a combination of lessons and hands-on labs, you will learn to deploy, configure, monitor, and operate Service Provider network environments using modern data models. These models allow you to represent operational data and new network management protocols in order to administer hundreds or thousands of devices in a single operation, replacing traditional, time-consuming, error prone, device-by-device Command Line Interface (CLI) management. The course also introduces powerful automation solutions that can streamline network operations.

This course covers Yet Another Next Generation (YANG) data models and validation tools, Representational State Transfer Configuration Protocol RESTCONF and Network Configuration Protocol (NETCONF) management protocols, model-driven telemetry with Google Remote Procedure Call (gRPC) and Google Network Management Interface (gNMI), traffic automation with XR Transport Control (XTC), Secure Shell (SSH)-based automation tools like NetMiko and Ansible, orchestration provided by Network Services Orchestration (NSO), Network Function Virtualization (NFV) lifecycle management with Elastic Services Controller (ESC), and network operations automation with WAN Automation Engine (WAE).

### Course Contents

- Implementing Network Device Programmability Interfaces
- Implement NETCONF Protocol
- Implement RESTCONF Protocol
- Implementing Model-Driven Programmability
- YANG Data Models
- YANG Tools
- YANG Development Kit
- Implementing Model-Driven Telemetry
- Implementing Model-Driven Telemetry with gRPC
- Implementing Model-Driven Telemetry with gNMI
- Automating Service Provider Network Traffic with Cisco XTC
- Cisco XTC Fundamentals
- Configure Cisco XTC
- Automating Networks with Tools That Utilize SSH
- Implement Device Configurations with Python Netmiko Library
- Implement Device Configurations with Ansible Playbooks
- Orchestrating Network Services with Cisco NSO
- Cisco NSO Fundamentals
- Cisco NSO Device Manager
- Cisco NSO Services
- Implement Device Configurations with Python
- Automating Virtualized Resources with Cisco Elastic Services Controller
- Cisco ESC Architecture
- Cisco ESC Resource Management
- Automating the WAN with Cisco WAE
- Describe the Cisco WAE Components

**E-Book** You will receive the original course documentation from Cisco in English language as a Cisco E-Book.

### Target Group

This course is designed for Service Provider networking professionals in job roles such as:

- Network administrators
- Network architects
- Network designers
- Network engineers
- Network managers
- Network Operations Center (NOC) personnel
- Network supervisors

### Prerequisites

Before taking this course, you should have the following knowledge and skills:

- Knowledge equivalent to CCNP Enterprise certification
- Experience working with Cisco Internetwork Operating System (Cisco IOS®) XE and Cisco IOS XR
- Service Provider operations experience with routing, Multiprotocol Label Switching (MPLS), and VPN solutions
- Hands-on experience with a programming language (specifically Python)
- Network programmability basics: APIs and protocols, network model-driven APIs and protocols, configuration management with Ansible, and Service Provider network automation workflows

### 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/SPAUI](http://www.expertech-training.com/go/SPAUI)

### 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!

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