IT-SPAUI - Implementing Automation for Cisco Service Provider Solutions

Cisco - CCNP Service Provider - Networking

Durata:	Lingue:	Certificazione:
3 Giorni	**Italiano**	**Cisco Certified Network Professional Service Provider**

Descrizione del corso

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). This course helps you prepare to take the 300-535 SPAUTO exam, one of the four concentration exams that you can choose after 350-501 SPCOR exam to achieve the CCNP Service Provider certification. The 300-535 SPAUTO exam will be available on February 24, 2020.

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Programma

Implementing Network Device Programmability Interfaces with NETCONF and RESTCONF
• Implement NETCONF Protocol
• Implement RESTCONF Protocol
Implementing Model-Driven Programmability with YANG
• 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
Lab outline
• Explore NETCONF Protocol in Cisco Devices
• Configure Cisco IOS XE Devices with RESTCONF
• Explore Cisco and OpenConfig YANG Data Models with YANG Tools
• Use ncclient and Python to Configure Cisco Devices
• Use YANG Development Kit (YDK) to Configure Cisco Devices
• Configure Model-Driven Telemetry with gRPC
• Configure Model-Driven Telemetry with gNMI

- Configure Path Disjointness with Cisco XTC
- Use Python Netmiko Library to Configure Cisco Devices
- Use Ansible to Configure Cisco Devices
- Use Cisco NSO Device Manager
- Create a Loopback Service Template
- Use Cisco NSO REST API with Postman
- Explore and Use Cisco WAE Features

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