SPAUI (IMPLEMENTING AUTOMATION FOR CISCO SERVICE PROVIDER SOLUTIONS) 1.0

Objetivo

After taking this course, you should be able to: â¢ Use NETCONF and RESTCONF programmability protocols on Cisco devices; â¢ Describe and use tools to validate YANG data models on Cisco devices; â¢ Describe and configure model-driven telemetry on Cisco devices; â¢ Describe and configure network traffic automation with Cisco XTC; â¢ Describe and use network automation tools that utilize SSH; â¢ Automate service provider network configuration with Cisco NSO; â¢ Describe how to automate virtualized resources with Cisco ESC; â¢ Describe how to automate service provider WAN with Cisco WAE.

PÃºblico Alvo

This course is designed for Service Provider networking professionals in job roles such as: â¢ Network administrators â¢ Network architects â¢ Network designers â¢ Network engineers â¢ Network managers â¢ Network Operations Center (NOC) personnel â¢ Network supervisors

PrÃ©-Requisitos

Before taking this course, you should have the following knowledge and skills: â¢ CCNP equivalent level of knowledge for Routing and Switching (R and S); â¢ Cisco Internetworking Operating System (IOS XE) and Cisco IOS XR working experience; â¢ SP Operations experience with routing, Multi-Protocol Label Switching (MPLS) and Virtual Private Network (VPN) Solutions; â¢ Network Programmability Basics (Network Programming Foundations, APIs and Protocols, Network Model Driven APIs and Protocols, Configuration Management with Ansible, Service Provider Network Automation workflows). The following Cisco courses can help you gain the knowledge you need to prepare for this course: â¢ Introducing Automation for Cisco Solutions (CSAU); â¢ Implementing and Operating Cisco Service Provider Network Core Technologies (SPCOR); â¢ Implementing Cisco Service Provider Advanced Routing Solutions (SPRI); â¢ Implementing Cisco Service Provider VPN Services (SPVI).

Carga HorÃ¡ria

24 horas (3 dias).

ConteÃºdo ProgramÃ¡tico

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