Cisco Implementing Automation for Cisco Enterprise Solutions v1.2 (ENAUI)

Register Online

Schedule

Class Length: 3 Days

G2R = "Guaranteed to Run" | OLL = "Online LIVE" ILT = "Instructor-Led-Training"				
09/12/22	5:00PM - 1:00AM	Tallinn	OLL	€ 3000.00
10/24/22	3:00PM - 11:00PM	Tallinn	OLL	£ 3000.00
01/16/23	3:00PM - 11:00PM	Tallinn	OLL	€ 3000.00

Overview

Implementing Automation for Cisco Enterprise Solutions (ENAUI) v.1.2 teaches you how to implement Cisco Enterprise automated solutions, including programming concepts, orchestration, telemetry, and automation tools.This course highlights the tools and the benefits of leveraging programmability and automation in the Cisco-powered Enterprise Campus and WAN. You will also examine platforms including IOS XE software for device-centric automation, Cisco DNA Center for the intent-based enterprise network, Cisco Software-Defined WAN, and Cisco Meraki. Their current ecosystem of APIs, software development toolkits, and relevant workflows are studied in detail together with open industry standards, tools, and APIs, such as Python, Ansible, Git, JSON/YAML, NETCONF/RESTCONF, and YANG. This course also earns you 24 Continuing Education (CE) credits towards recertification.

Prerequisite Comments

Before taking this course, you should have the following knowledge and skills:
Basic programming language concepts
Basic understanding of virtualization
Ability to use Linux and CLI tools, such as Secure Shell (SSH) and bash
Networking knowledge equivalent to the CCNP level
Foundational understanding of Cisco DNA, Meraki, and Cisco SD-WAN

Target Audience

This course is designed primarily for network and software engineers who are interested in learning about automation and programmability and hold the following job roles:

Network engineer

Systems engineer

Wireless engineer

Consulting systems engineer

Technical solutions architect

Network administrator

Wireless design engineer

Network manager

Sales engineer

Account manager

Course Objectives

After taking this course, you should be able to:

Get familiar with different API styles (REST, RPC) and synchronous and asynchronous API requests

Learn how to use Postman software development tool in order to test the API calls

Learn how to automate repetitive tasks using Ansible automation engine

Explore a Python programming language, Python libraries and Python virtual environments and learn how can they be used for automation of network configuration tasks

Get introduced to GIT version control system and its common operations

Learn how to leverage the various models and APIs of the Cisco IOS XE platform to perform day-zero operations, improve troubleshooting methodologies with custom tools, augment the CLI using scripts, and integrate various workflows using Ansible and Python

Learn about the paradigm shift of model-driven telemetry and the building blocks of a working solution

Learn how to leverage the tools and APIs to automate Cisco DNA infrastructure managed by Cisco DNA Center™

Demonstrate workflows (configuration, verification, health checking, and monitoring) using Python, Ansible, and Postman

Understand Cisco SD-WAN solution components, implement a Python library that works with the Cisco SD-WAN APIs to perform configuration, inventory management, and monitoring tasks, and implement reusable Ansible roles to automate provisioning new branch sites on an existing Cisco SD-WAN infrastructure

Learn how to leverage the tools and APIs to automate Cisco Meraki managed infrastructure and demonstrate workflows (configuration, verification, health checking, monitoring) using Python, Ansible, and Postman

Course Outline

1 - Course Outline

Network Programmability Foundation
Automating APIs and Protocols
Managing Configuration with Python and Ansible
Implementing On-Box Programmability and Automation with Cisco IOS XE Software
Implementing Model-Driven Telemetry
Day 0 Provisioning with Cisco IOS-XE Software
Implementing Automation in Enterprise Networks
Building Cisco DNA Center Automation with Python
Automating Operations using Cisco DNA Center
Introducing Cisco SD-WAN Programmability
Building Cisco SD-WAN Automation with Python
Building Cisco SD-WAN Automation with Ansible
Automating Cisco Meraki
Implementing Meraki Integration APIs

Related Courses, Certifications, Exams

- Cisco® Implementing and Administering Cisco® Solutions v1.0 (CCNA)
- Cisco® Introducing Automation for Cisco® Solutions v1.1 (CSAU)
- Cisco® Implementing and Operating Cisco® Enterprise Network Core Technologies v1.2 (ENCOR)