# ENAUI (IMPLEMENTING AUTOMATION FOR CISCO ENTERPRISE SOLUTIONS (ENAUI) V1.2) 1.2

## Objetivo

After taking this training, you should be able to: â¢ Get familiar with different API styles (REST, RPC) and synchronous and asynchronous API requests â¢ Learn how to use Postman software development tool in order to test the API calls â¢ Learn how to automate repetitive tasks using Ansible automation engine â¢ Explore a Python programming language, Python libraries and Python virtual environments and learn how can they be used for automation of network configuration tasks â¢ Get introduced to GIT version control system and its common operations â¢ 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 â¢ Learn about the paradigm shift of model-driven telemetry and the building blocks of a working solution â¢ Learn how to leverage the tools and APIs to automate Cisco DNA infrastructure managed by Cisco DNA Centerâ¢ â¢ Demonstrate workflows (configuration, verification, health checking, and monitoring) using Python, Ansible, and Postman â¢ 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 â¢ 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

## PÃºblico Alvo

This training is designed primarily for network and software engineers who are interested in learning about automation and programmability and hold the following job roles: â¢ Network engineer â¢ Systems engineer â¢ Wireless engineer â¢ Consulting systems engineer â¢ Technical solutions architect â¢ Network administrator â¢ Wireless design engineer â¢ Network manager â¢ Sales engineer â¢ Account manager

## PrÃ©-Requisitos

Before taking this training, you should have the following knowledge and skills: â¢ Basic programming language concepts â¢ Basic understanding of virtualization â¢ Ability to use Linux and CLI tools, such as Secure Shell (SSH) and bash â¢ CCNP level core networking knowledge â¢ Foundational understanding of Cisco DNA, Meraki, and Cisco SD-WAN The following Cisco trainings can help you gain the knowledge you need to prepare for this training: â¢ Introducing Automation for Cisco Solutions (CSAU) â¢ Implementing and Administering Cisco Solutions (CCNAÂ®) â¢ Implementing Cisco Enterprise Network Core Technologies (ENCOR)

## Carga HorÃ¡ria

24 horas (3 dias).

## ConteÃºdo ProgramÃitico

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

Lab outline

- Automate Networks with Netmiko
- Use Postman for REST API Consumption
- Use Ansible to Configure and Verify Device Configuration
- Implement On-Box Programmability and Automation with Cisco IOS XE Software
- Use Python on Cisco IOS XE Software
- Implement Streaming Telemetry with Cisco IOS XE
- Explore Cisco DNA Center APIs
- Build Python Scripts to Interact with Cisco DNA Center Intent APIs
- Build Python Scripts with Cisco DNA Center Assurance APIs
- Troubleshoot End-to-End Connectivity and Health-Check the Network via the Cisco DNA Center API
- Perform Administrative Tasks Using the Cisco SD-WAN API
- Build, Manage, and Operate Cisco SD-WAN Programmatically
- Consume SD-WAN APIs Using the Uniform Resource Identifier (URI) Module
- Manage Policies with Ansible
- Build Reports Using Ansible-Cisco SD_WAN Role
- Implement Cisco Meraki API Automation
- Explore Cisco Meraki Integration APIs
- Explore Cisco Meraki Webhook Alerts