ENAUTO

Automating and Programming Cisco Enterprise Solutions

40 horas | Profissional | Cisco

Cisco Continuing Education Credits

34 CE Credits

INTRODUÇÃO

The Automating and Programming Cisco Enterprise Solutions (ENAUTO) training teaches you how to implement Cisco Enterprise automated solutions, including programming, orchestration, telemetry, and automation tools across IOS XE, Catalyst Center, SD-WAN, and Meraki.

OBJETIVO DO CURSO

Explain data models for network automation

Explain Ansible and YANG Suite tools

Describe Python and Netmiko for CLI automation

Introduce NETCONF and RESTCONF as model-driven protocols

Monitor configuration and operational data with NETCONF/RESTCONF

Introduce Ansible for Cisco configuration management

Describe Cisco IOS EEM, Guest Shell, and ZTP

Explore Day-0 operations with PnP in Cisco Catalyst Center

Explore configuration management with Cisco Catalyst Center

Explore advanced configuration templates with Jinja

Learn security automation and API troubleshooting

Learn testing and validation of automation

Learn to use APIs for Software Image Management

Monitor network health with Controller APIs

Use streaming telemetry and webhooks for monitoring

Explain AI capabilities in Catalyst Center, SD-WAN, and Meraki

Explain AI-assisted code development for network automation

Explain MCP servers and AI agent deployment

PÚBLICO-ALVO

Network Engineers, Systems Engineers, Consulting Systems Engineers, Technical Solutions Architects, Network Administrators

PRÉ-REQUISITOS

No formal prerequisites. Recommended: basic programming, virtualization, Linux/CLI, CCNP-level networking, Catalyst Center/Meraki/SD-WAN familiarity.

CONTEÚDO PROGRAMÁTICO

Course Outline

Network Automation Models

Network Automation Tooling

CLI Automation with Python

NETCONF and RESTCONF Automation

Automating Configuration Monitoring

Device Automation with Ansible

On-Box Automation

Controller-Based Day-0 Provisioning

Catalyst Center Day-0 with Configuration Management

Advanced Configuration Templates

Controller-Based Configuration Management with Ansible

Security Automation

Troubleshoot Controller-Based Network Automation

Testing and Validating Network Automation

Controller-Based Software Management

Automate Network Health Monitoring with Controller APIs

Monitor Network Health with Streaming Telemetry and Webhooks

AI Capabilities in Network Controllers

AI Assistance in Network Automation

Security Risks in AI-based Automation

Support AI Agents with Python FastMCP

Lab Outline

Explore YANG Trees with YANG Suite

Configure and Monitor Routing with Python and Netmiko

Manage Device Configurations with ncclient and RESTCONF

Monitor Device Configurations with NETCONF/RESTCONF

Configuration Compliance with Ansible

EEM-Based Device Automation

On-Box Python-Based Automation

Python-Based ZTP for Cisco IOS XE

Manage Device Configuration with Catalyst Center APIs

Manage Device Configuration with SD-WAN Manager APIs

Manage Device Configuration with Cisco Meraki APIs

Construct Advanced Jinja Templates

Manage Catalyst Center, SD-WAN, and Meraki with Ansible

Enforce Network Segmentation with Catalyst Center APIs

Troubleshoot Controller API Authentication

Software Management with Controller APIs

Monitor Network Health with Controller APIs

Implement Webhook-Based Alerting

Code Development with AI Assistant

Providing Network Information via Python FastMCP