DCNAUTO

Automating Cisco Data Center Networking Solutions

40 horas | Profissional | Cisco

Cisco Continuing Education Credits

43 CE Credits

INTRODUÇÃO

The Automating Cisco Data Center Networking Solutions (DCNAUTO) training teaches you how to implement and optimize automation in Cisco data center environments using Nexus platforms, programmability features, and modern automation tools.

OBJETIVO DO CURSO

Explain programmability and automation in Cisco data center networks

Explain benefits of programmability vs. manual CLI workflows

Identify data models and formats (XML, JSON, YAML)

Use Git for version control

Perform day-zero provisioning on Cisco Nexus using POAP

Enable and use Bash shell and Guest Shell on Cisco Nexus

Write Python scripts on-box to parse CLI output

Describe and configure Cisco NX-API CLI and REST

Implement model-driven programmability using NETCONF/RESTCONF and YANG

Describe Cisco NDFC architecture and automation capabilities

Use NDFC REST APIs for fabric automation

Automate fabric provisioning with Ansible and Terraform

Describe Cisco pyATS and Genie for network validation

Describe AI and ML capabilities in Cisco Data Center automation

Explain AI-driven monitoring and anomaly detection

PÚBLICO-ALVO

Network Designers, Systems Engineers, Network Administrators, Site Reliability Engineers, Technical Solutions Architects

PRÉ-REQUISITOS

No formal prerequisites. Recommended: basic programming, virtualization knowledge, Linux/CLI, CCNP-level data center knowledge.

CONTEÚDO PROGRAMÁTICO

Course Outline

Day-Zero Provisioning

On-Box Automation with Cisco NX-OS

Cisco Nexus Automation with NX-API CLI and REST

Model-Driven Programmability on NX-OS

IaC Tools and Lifecycle

Cisco NX-OS Automation with IaC Tools

Cisco ACI Automation with IaC Tools

Cisco Nexus Dashboard Automation with IaC Tools

Simulation of Data Center Topologies

Network Change Validation with pyATS

Model-Driven Telemetry Implementation

Troubleshoot Infrastructure Automation

AI-Assisted Coding and AI Security Considerations

AI Agent Integration

Lab Outline

Set Up POAP on Cisco Nexus 9000

Use Bash and Guest Shell on NX-OS

Use Python to Enhance CLI Commands

Make NX-API Calls with NX-API Sandbox

Configure and Verify NX-OS Using Python

Use NX-API REST with Python

Configure Using NETCONF, RESTCONF, and YANG

Track Changes with Git

Use Ansible with Cisco NX-OS

Use Terraform with Cisco NX-OS

Manage ACI Configuration with Ansible and Terraform

Automate NDFC with REST API and Ansible

Simulate Data Center Network with Cisco Modeling Labs

Capture and Compare Network State with pyATS

Configure Model-Driven Telemetry

AI Toolset - Jupyter Notebook