

DCNAUTO**Automating Cisco Data Center Networking Solutions**

40 horas

Professional

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.

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