Automating Cisco Data Center Networking Solutions (DCNAUTO)

ID DCNAUTO   **Price** on request   **Duration** 5 days

Who should attend

- Network Designers
- Systems Engineers
- Wireless Engineers
- Consulting Systems Engineers
- Technical Solutions Architects
- Network Administrators
- Wireless Design Engineers
- Network Managers
- Site Reliability Engineers
- Deployment Engineers
- Sales Engineers
- Account Managers
- Program Managers
- Project Managers

This course is part of the following Certifications

Cisco Certified Network Professional Data Center (CCNP DATA CENTER)
Cisco Certified Automation Professional (CCNP AUTOMATION)

Prerequisites

There are no formal prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Basic programming language concepts
- Basic understanding of virtualization and VMware
- Ability to use Linux and CLI tools, such as SSH and bash
- CCNP level data center knowledge
- Foundational understanding of Cisco ACI

These skills can be found in the following Cisco Learning Offerings:

- Implementing and Administering Cisco Solutions (CCNA)
- Implementing and Operating Cisco Data Center Core Technologies (DCCOR)
- Introducing Automation for Cisco Solutions (CSAU)

Course Objectives

- Explain the role of programmability and automation in Cisco data center networks
- Explain the benefits of programmability compared to manual CLI workflows
- Identify data models and data formats (XML, JSON, YAML) used in Cisco automation frameworks
- Use version control systems such as Git for storing and managing configuration files
- Perform day-zero provisioning on Cisco Nexus devices using Power-On Auto Provisioning (POAP)
- Enable and use the Bash shell and Guest Shell on Cisco Nexus devices
- Run Linux commands inside Guest Shell to interact with NX-OS and external services
- Write Python scripts on-box to parse CLI output and enhance operational workflows
- Describe and configure Cisco NX-API CLI and REST interfaces
- Send JSON/XML payloads to NX-API using Python scripts and verify device responses
- Use Cisco NX-API Developer Sandbox for testing and validation
- Implement model-driven programmability using NETCONF/RESTCONF and YANG data models
- Construct and validate Python scripts to configure and verify protocols with NX-OS APIs
- Implement off-box automation with Cisco NX-API CLI/REST, NETCONF/RESTCONF, and YANG models
- Describe Cisco NDFC architecture and automation capabilities
- Use NDFC REST APIs for fabric automation tasks
- Automate fabric provisioning and configuration with Ansible playbooks
- Build and apply Terraform plans for managing data center fabrics with NDFC
- Describe Cisco pyATS and Genie frameworks for network validation
- Build and run pyATS test cases to verify device state before and after automation
- Interpret test results and integrate them into automation workflows
- Describe how AI and ML capabilities are applied in Cisco Data Center automation
- Explain AI-driven monitoring and anomaly detection workflows
- Correlate AI insights with automated remediation actions

Training Centres worldwide
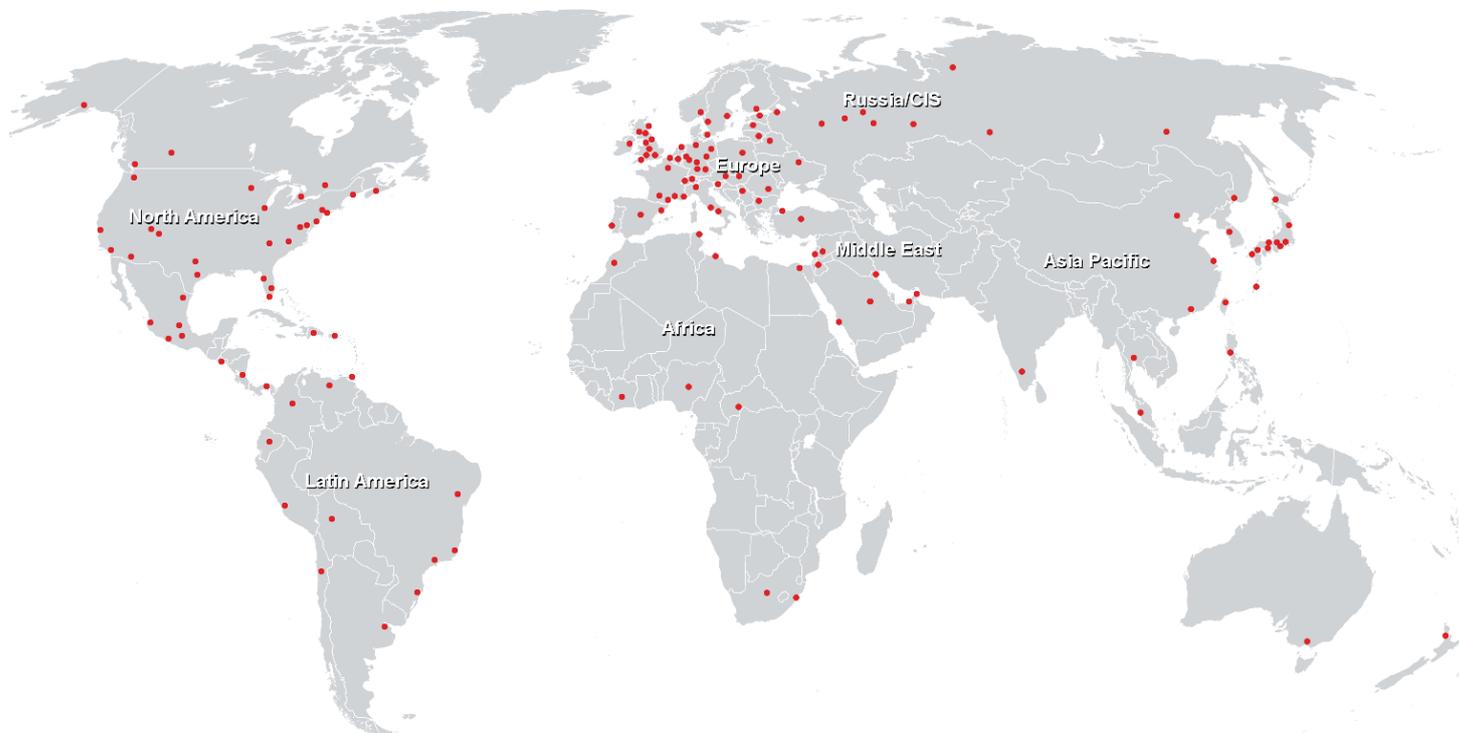
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