# Automating Cisco Data Center Networking Solutions (DCNAUTO)

**ID** DCNAUTO **Price** CHF 3,950.—(excl. VAT) **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

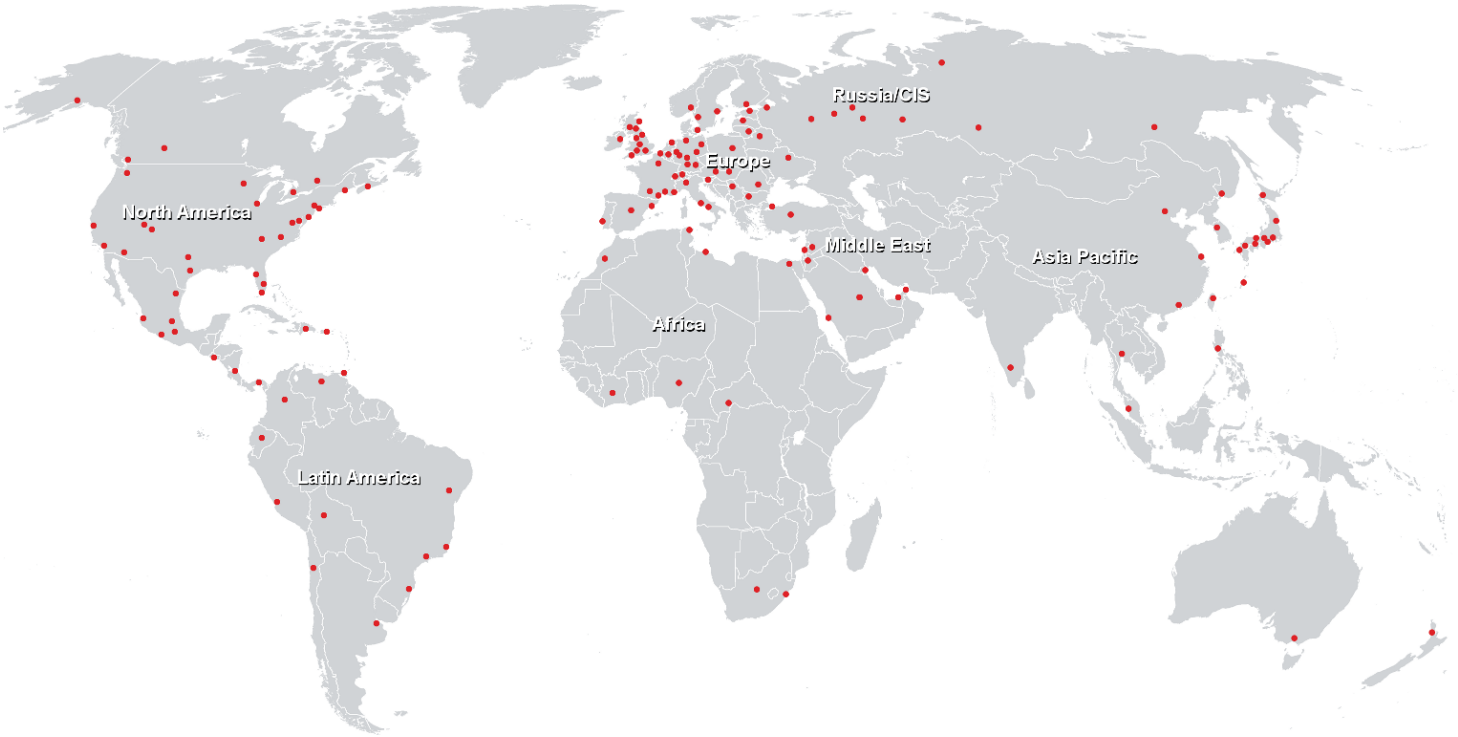
These skills can be found in the following Cisco Learning Offerings:

- 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

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