Automating Cisco Data Center Networking Solutions (DCNAUTO)

Category: Infrastructure & IT Operations | **Vendor:** Cisco

Duration: 40.00 hours (5 days) **32.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format:	Instructor Led - Online
Certification:	Cisco Certified Specialist - Data Center Networking Automation, Cisco Certified Network Professional (CCNP) Data Center and Automation certifications
Related Exam:	300-635

Course Overview

The Automating Cisco Data Center Networking Solutions (DCNAUTO) training teaches you how to implement and optimize automation in Cisco data center environments. You will gain hands-on experience with Cisco Nexus platforms, programmability features, and modern automation tools used to streamline operations across switching, compute, and fabric controllers. The training covers foundational concepts in network programmability, then advances into day-zero provisioning, on-box automation using Bash, Python, and Guest Shell, and off-box automation with Cisco NX-API, NETCONF/RESTCONF, and YANG models. You will also explore Infrastructure as Code (IaC) workflows with Cisco Nexus Dashboard Fabric Controller (NDFC), Ansible, and Terraform, as well as network validation and testing with Cisco pyATS. Finally, you will learn how AI-driven operations enhance network automation and simplify lifecycle management.

This training prepares you for the 300-635 DCNAUTO v2.0 exam. If passed, you earn the Cisco Certified Specialist - Data Center Networking Automation certification and satisfy the concentration exam requirements for the Cisco Certified Network Professional (CCNP) Data Center and Automation certifications. This training also earns you 43 Continuing Education (CE) credits toward recertification.

How You'll Benefit

This training will help you:

- Gain practical, hands-on experience with Cisco Nexus platforms and automation tools used in modern data centers
- Acquire skills in network programmability, including scripting with Python and using APIs for automating network operations
- Learn to implement IaC workflows using tools like Ansible and Terraform for efficient configuration management
- Develop troubleshooting expertise in both infrastructure automation and AI-driven operations, enhancing job readiness for advanced network roles
- Prepare for the 300-635 DCNAUTO v2.0 exam
- Earn 43 CE credits toward recertification

What to Expect in the Exam

Automating Cisco Data Center Networking Solutions (300-635 DCNAUTO) v2.0 is a 90-minute exam associated with the Cisco Certified Specialist - Data Center Networking Automation certification and satisfies the concentration exam requirements for the CCNP® Data Center and Automation certifications.

This exam tests your knowledge and skills related to implementing data center automated solutions, including:

- Infrastructure as code
- Network element programmability
- Operations
- AI in automation

About This Course

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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

Prerequisites & Entry Requirements

General 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)

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- 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

Detailed Course Outline

- Day-Zero Provisioning
- On-Box Automation with Cisco NX-OS
- Cisco Nexus Automation with NX-API CLI

- Cisco Nexus Programmability with NX-API REST
- Model-Driven Programmability on NX-OS
- IaC Tools
- IaC 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
- Troubleshoot Container Workloads Connectivity
- AI-Assisted Coding
- AI Security Considerations
- AI Agent Integration

□□ Certification Path

Cisco Certified Specialist - Data Center Networking Automation, Cisco Certified Network Professional (CCNP) Data Center and Automation certifications

Exam: 300-635

Skills You Will Learn:

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Frequently Asked Questions

Q: What delivery options are available for Automating Cisco Data Center Networking Solutions (DCNAUTO)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: What certification does this course prepare me for?

The Automating Cisco Data Center Networking Solutions (DCNAUTO) course helps prepare you for the Cisco Certified Specialist - Data Center Networking Automation, Cisco Certified Network Professional (CCNP) Data Center and Automation certifications certification path.

Q: Which exam does this course prepare me for?

This course prepares you for the 300-635 official exam. You can take this exam at any exam center across United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online wherever you are located.

Q: How many CPD hours does this course provide?

The 5-day Automating Cisco Data Center Networking Solutions (DCNAUTO) course provides up to 32.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Automating Cisco Data Center Networking Solutions (DCNAUTO) training?

The training takes place over 5 day(s), with each day lasting approximately 40.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Automating Cisco Data Center Networking Solutions (DCNAUTO)?

Yes, we provide corporate training, dedicated training, and closed classes for Automating Cisco Data Center Networking Solutions (DCNAUTO). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Automating Cisco Data Center Networking Solutions, Cisco Professional Level Data Center - CCNP, DCNAUTO

Q: Why choose Nexus Human for Automating Cisco Data Center Networking Solutions (DCNAUTO)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Automating Cisco Data Center Networking Solutions (DCNAUTO) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

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