

Automating Networks Using Cisco Platforms

: 5 : CCNAAUTO : 1.0 : Company Event

Discover how to implement network applications and automation workflows across network, security, collaboration, and computing infrastructure.

The Automating Networks Using Cisco Platforms (CCNAAUTO) training teaches you how to implement basic network applications using Cisco platforms as a base, and how to implement automation workflows across network, security, collaboration, and computing infrastructure. The training gives you hands-on experience solving real-world problems using Cisco Application Programming Interfaces (APIs) and modern development tools.

This course also prepares you for the 200-901 CCNAAUTO v1.1 exam. If passed, you earn the Cisco Certified Network Associate (CCNA) Automation certification.

This training also earns you 48 Continuing Education (CE) credits toward recertification.

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

- Network Automation Engineers
- Software Developers
- System Integration Programmers
- Infrastructure Architects
- Network Designers

After taking this course, you should be able to:

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| ■ Describe the importance of APIs and use of version control tools in modern software development | ■ Describe programmability features of different Cisco platforms |
| ■ Describe common processes and practices used in software development | ■ Describe basic networking concepts and interpret simple network topology |
| ■ Describe options for organizing and constructing modular software | ■ Describe interaction of applications with the network and tools used for troubleshooting issues |
| ■ Describe HTTP concepts and how they apply to network-based APIs | ■ Apply concepts of model-driven programmability to automate common tasks with Python scripts |
| ■ Apply Representational State Transfer (REST) concepts to integration with HTTP-based APIs | ■ Identify common application deployment models and components in the development pipeline |
| ■ Describe Cisco platforms and their capabilities | ■ Utilize tools to automate infrastructure through scripting and model-driven programmability |
| | ■ Describe common security concerns and types of tests, and utilize containerization for local development |

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

The CCNA Automation certification validates your knowledge of software development and design, including APIs, Cisco platforms, applications, security, automation, and more.

- Basic computer literacy
 - Basic PC operating system navigation skills
 - Basic Internet usage skills
- Hands-on experience with a programming language (specifically Python)

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

- PRNE - Programming for Network Engineers

Certification Title: CCNA Automation

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AUTOCOR - Designing, Deploying and Managing Network Automation Systems

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Course Outline:

- Practicing Modern Software Development
- Describing Software Development Process
- Designing Software
- Introducing Network-Based APIs
- Consuming REST-Based APIs
- Introducing Cisco Platforms and APIs
- Employing Programmability on Cisco Platforms
- Describing IP Networks
- Relating Network and Applications
- Employing Model-Driven Programmability
- Deploying Applications
- Automating Infrastructure
- Testing and Securing Applications
- Lab Code Reference

LABS:

- Parse API Data Formats with Python
- Use Git for Version Control
- Identify Software Architecture and Design Patterns on a Diagram
- Implement Singleton Pattern and Abstraction-Based Method
- Inspect HTTP Messages
- Use Postman
- Troubleshoot an HTTP Error Response
- Utilize APIs with Python
- Use the Cisco Webex Collaboration API
- Interpret a Basic Network Topology Diagram
- Identify the Cause of Application Connectivity Issues
- Perform Basic NETCONF Operations
- Utilize Bash Commands for Local Development
- Construct Infrastructure Automation Workflow
- Construct a Python Unit Test
- Interpret a Dockerfile
- Utilize Docker Commands to Manage Local Developer Environment

Exploit Insufficient Parameter Sanitization

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