Automating Networks Using Cisco Platforms

Duration: 5 Days **Course Code: CCNAAUTO** **Version: 1.1** **Delivery Method: Closed Events**

Overview:

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 training 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.

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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.

Target Audience:

This class is intended for the following participants:
- Network Automation Engineers
- Software Developers
- System Integration Programmers
- Infrastructure Architects
- Network Designers

Objectives:

- After this course participants should be able to:
- Describe the importance of APIs and use of version control tools in modern software development
- Describe common processes and practices used in software development
- Describe options for organizing and constructing modular software
- Describe HTTP concepts and how they apply to network-based APIs
- Apply Representational State Transfer (REST) concepts to integration with HTTP-based APIs
- Describe Cisco platforms and their capabilities
- Describe programmability features of different Cisco platforms
- Describe basic networking concepts and interpret simple network topology
- Describe interaction of applications with the network and tools used for troubleshooting issues
- Apply concepts of model-driven programmability to automate common tasks with Python scripts
- Identify common application deployment models and components in the development pipeline
- 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

Prerequisites:

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

Testing and Certification

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

- 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:

- Python Programming for Network Engineers (PRNE)
- PRNE - Programming for Network Engineers

Content:

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

Lab Outline

- 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

Further Information:

For More information, or to book your course, please call us on 00 966 92000 9278

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