FIREFLY

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Developing Applications and Automating Workflows Using Cisco Core Platforms

DURATION: 8 DAYS COURSE CODE: DEVASC FORMAT: LIVE/VIRTUAL

COURSE DESCRIPTION

The Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC) v1.0 course helps you prepare for Cisco® DevNet Associate certification and for associate-level network automation engineer roles. You will learn 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 course gives you hands-on experience solving real world problems using Cisco Application Programming Interfaces (APIs) and modern development tools.

This course helps you prepare to take the 200-901 DevNet Associate (DEVASC) exam. By passing this exam, you earn Cisco Certified DevNet Associate certification.

Instructor-led training: 5 days in the classroom and 3 days of self-study

Virtual instructor-led training: Equivalent of 5 days of classroom instruction and 3 days of self-study

E-learning: Equivalent of 8 days of classroom instruction

This course will help you:

- Take advantage of the network when you implement applications to fulfill business needs
- Gain a foundation in the essentials of applications, automation, and Cisco platforms
- Prepare for the 200-901 DEVASC exam, which earns Cisco Certified DevNet Associate certification

The 200-901 DEVASC exam certifies your knowledge of software development and design including understanding and using APIs, Cisco platforms and development, application development and security, and infrastructure and automation.

After you pass 200-901 DEVASC, you earn Cisco Certified DevNet Associate certification.

WHO SHOULD ATTEND

This course is designed for anyone who performs or seeks to perform a developer role and has one or more years of hands-on experience developing and maintaining applications that are built on top of Cisco platforms.

The course is appropriate for software developers, application developers, and network engineers who want to expand their skill base and validate their skills in programmability, software, and automation. Students preparing for Cisco Certified DevNet Associate certification will also find this material useful.

PREREQUISITES

There are no formal prerequisites for Cisco Certified DevNet Associate certification, but you should make sure to have a good understanding of the exam topics before taking the exam.

And before taking this course, you should have:

Basic computer literacy

Basic PC operating system navigation skills

Basic Internet usage skills

Hands-on experience with a programming language (specifically Python)

LEARNING OBJECTIVES

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

Describe common security concerns and types of tests, and utilize containerization for local development

Utilize tools to automate infrastructure through scripting and model-driven programmability

COURSE OUTLINE

1. Parse API Data Formats with Python
2. Use Git for Version Control
3. Identify Software Architecture and Design Patterns on a Diagram
4. Implement Singleton Pattern and Abstraction-Based Method
5. Inspect HTTP Protocol Messages
6. Use Postman
7. Troubleshoot an HTTP Error Response
8. Utilize APIs with Python
9. Use the Cisco Controller APIs
10. Use the Cisco Webex Teams™ Collaboration API
11. Interpret a Basic Network Topology Diagram
12. Identify the Cause of Application Connectivity Issues
13. Perform Basic Network Configuration Protocol (NETCONF) Operations
14. Use Cisco Software Development Kit (SDK) and Python for Automation Scripting
15. Utilize Bash Commands for Local Development
16. Construct a Python Unit Test
17. Interpret a Dockerfile
18. Utilize Docker Commands to Manage Local Developer Environment
19. Exploit Insufficient Parameter Sanitization
20. Construct Infrastructure Automation Workflow