Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC) v1.1

Instructor – Led Training (5 Days)

COURSE DESCRIPTION

The Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC) v1.0 The Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC) training 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 training helps you prepare to take the 200-901 DevNet Associate (DEVASC) exam. By passing this exam, you earn Cisco Certified DevNet Associate certification.

COURSE OBJECTIVE

This class includes lecture sections and self-study sections. In instructor-led classes, lectures are delivered in real-time, either in person or via video conferencing. In e-learning courses, the lectures are on recorded videos. In both versions, you will need to review self-study sections on your own before taking the certification exam.

- Practicing Modern Software Development — Lecture
- Describing Software Development Process — Self-study
- Designing Software — Self-study
- Introducing Network-Based APIs — Lecture
- Consuming REST-Based APIs — Lecture
- Employing Programmability on Cisco Platforms — Lecture
- Introducing Cisco Platforms — Self-study
- Describing IP Networks (ELT only) — Self-study
- Relating Network and Applications — Lecture
- Employing Model-Driven Programmability with YANG — Lecture
- Deploying Applications — Lecture
- Testing and Securing Applications — Lecture
- Automating Infrastructure — Lecture

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

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- Basic Internet usage skills
- Hands-on experience with a programming language (specifically Python)

COURSE OUTLINE

This class includes lecture sections and self-study sections. In instructor-led classes, lectures are delivered in real-time, either in person or via online platform in live. In both versions, you will need to review self-study sections on your own before taking the certification exam.

- Section title
- Practicing Modern Software Development
- Describing Software Development Process
- Designing Software
- Introducing Network-Based APIs
- Consuming REST-Based APIs
- Employing Programmability on Cisco Platforms
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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 Protocol Messages
- Use Postman
- Troubleshoot an HTTP Error Response
- Utilize APIs with Python
- Use the Cisco Controller APIs
- Use the Cisco Webex Teams™ Collaboration API
- Interpret a Basic Network Topology Diagram
- Identify the Cause of Application Connectivity Issues
- Perform Basic Network Configuration Protocol (NETCONF) Operations
- Use Cisco Software Development Kit (SDK) and Python for Automation Scripting
- Utilize Bash Commands for Local Development
- Construct a Python Unit Test
- Interpret a Dockerfile
- Utilize Docker Commands to Manage Local Developer Environment
- Exploit Insufficient Parameter Sanitization
- Construct Infrastructure Automation Workflow

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- Basic Internet usage skills

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

- Here are Cisco learning resources that can help you prepare:
- Python Programming for Network Engineers (PRNE)
- Explore the DevNet Certification area for specific topics and labs related to this course and certification: https://developer.cisco.com/certification/

WHO SHOULD ATTEND

This training 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 training 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.

The job roles best suited to the material in this course are:

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- Network automation engineer
- Software developer
- System integration programmer

Additional job roles that might be interested:

- Infrastructure architect
- Network designer