



Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC) V1.1

***WHERE GREAT TRAINING
HAPPENS EVERYDAY!***



Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC) V1.1

Course Duration

5 Days

Course Price

\$4,495.00

45 CLCs

Methods of Delivery

In-Person ILT

Virtual ILT

Onsite ILT

About this Class

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.

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How you will benefit

This class 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
- Earn 48 CE credits toward recertification
- Prepare for the 200-901 DEVASC exam

Why Attend with Current Technologies CLC

- Our Instructors are the top 10% rated by Cisco
- Our Lab has a dedicated 1 Gig Fiber Connection for our Labs
- Our Labs run up to Date Code for all our courses

Who Should Attend

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

- Network Automation Engineer
- Software Developer
- System Integration Programmer
- Infrastructure Architect
- Network Designer

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Objectives

After taking this course, you 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
- 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

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Course Outline

Module 1: Practicing Modern Software Development

Module 2: Describing Software Development Process

Module 3: Designing Software

Module 4: Introducing Network-Based APIs

Module 5: Consuming REST-Based APIs

Module 6: Employing Programmability on Cisco Platforms

Module 7: Introducing Cisco Platforms

Module 8: Describing IP Networks (ELT only)

Module 9: Relating Network and Applications

Module 10: Employing Model-Driven Programmability with YANG

Module 11: Deploying Applications

Module 12: Testing and Securing Applications

Module 13: Automating Infrastructure

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Lab Outline

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