

Document Generated: 10/28/2025 Learning Style: Virtual Classroom

Technology: Cisco Difficulty: Beginner

**Course Duration: 5 Days** 

Next Course Date: November 3, 2025

# **Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC)**



### **About this Course:**

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

# **Course 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

## Audience:

- 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:**

- Basic computer literacy
- Basic PC operating system navigation skills
- 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 realtime, 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

#### ?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

# **Credly Badge:**



# Display your Completion Badge And Get The Recognition You Deserve.

Add a completion and readiness badge to your Linkedin profile, Facebook page, or Twitter account to validate your professional and technical expertise. With badges issued and validated by Credly, you can:

- Let anyone verify your completion and achievement by clicking on the badge
- Display your hard work and validate your expertise
- Display each badge's details about specific skills you developed.

Badges are issued by QuickStart and verified through Credly.

Find Out More or See List Of Badges