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**Learning Style: On Demand**

**Technology: Cisco**

**Difficulty: Beginner**

**Course Duration: 40 Hours**

# Developing Applications and Automating Workflows Using Cisco Platforms (DEVASC) v1.0 - On Demand




## About this course:

The Developing Applications and Automating Workflows using Cisco Platforms (DEVASC) v1.0 course helps you prepare for Cisco Certified 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 DevNet Associate (200-901 DEVASC) exam. By passing this exam, you earn Cisco Certified DevNet Associate certification.

## Course 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

## 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.

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

- Network automation engineer
- Software developer
- System integration programmer

Additional job roles that might be interested:

- Infrastructure architect

## 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)

Here are Cisco learning resources that can help you prepare:

- 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

## Course Outline:

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

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