

Developing Applications and Automating Workflows using Cisco Core Platforms (DEVASC)

What you'll learn

The Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC) v1.0 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 training 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. This training also earns you 48 Continuing Education (CE) credits towards recertification.

How you'll benefit

This training 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

What to expect in the exam

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 enroll

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 training are:

Network automation engineer

Software developer

System integration programmer

Additional job roles that might be interested:

Infrastructure architect

Network designer

Technology areas

Automation

Network programmability

Training overview

Objectives

After taking this training, 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

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 training, 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:

Python Programming for Network Engineers (PRNE)

Explore the DevNet Certification area for specific topics and labs related to this training and certification: <https://developer.cisco.com/certification/>

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 (NETCONF) Operations

Use Cisco Software Development Kit (SDK) and Python for Automation Scripting

Utilize Bash Commands for Local Development



Construct Infrastructure Automation Workflow

Construct a Python Unit Test

Interpret a Dockerfile

Utilize Docker Commands to Manage Local Developer Environment

Exploit Insufficient Parameter Sanitization