DEVASC (DEVELOPING APPLICATIONS AND AUTOMATING WORKFLOWS USING CISCO PLATFORMS) 1.0

Objetivo

After taking this course, you should be able to: â□¢ Describe the importance of APIs and use of version control tools in modern software development; â□¢ Describe common processes and practices used in software development; â□¢ Describe options for organizing and constructing modular software; â□¢ Describe HTTP concepts and how they apply to network-based APIs; â□¢ Apply Representational State Transfer (REST) concepts to integration with HTTP-based APIs; â□¢ Describe Cisco platforms and their capabilities; â□¢ Describe programmability features of different Cisco platforms; â□¢ Describe basic networking concepts and interpret simple network topology â□¢ Describe interaction of applications with the network and tools used for troubleshooting issues; â□¢ Apply concepts of model-driven programmability to automate common tasks with Python scripts; â□¢ Identify common application deployment models and components in the development pipeline; â□¢ Describe common security concerns and types of tests, and utilize containerization for local development; â□¢ Utilize tools to automate infrastructure through scripting and model-driven programmability.

PÃºblico Alvo

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: â□¢ Network automation engineer; â□¢ Software developer; â□¢ System integration programmer. Additional job roles that might be interested: â□¢ Infrastructure architect; â□¢ Network designer.

PrÃ©-Requisitos

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: â□¢ Basic computer literacy; â□¢ Basic PC operating system navigati;on skills; â□¢ Basic Internet usage skills â□¢ Hands-on experience with a programming language (specifically Python). Here are Cisco learning resources that can help you prepare: â□¢ Python Programming for Network Engineers (PRNE); â□¢ Explore the DevNet Certification area for specific topics and labs related to this course and certification: https://developer.cisco.com/certification/ .

Carga HorÃ¡ria

40 horas (5 dias).

ConteÃºdo ProgramÃitico

Course Introduction
Course Outline
Course Goals & Objectives

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 Platform

Describing IP Networks (ELT only)

Relating Network and Applications

Employing Model-Driven Programmability with YANG

Deploying Applications

Testing and Securing Applications

Automating Infrastructure

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