



Developing Applications Using Cisco Core Platforms and APIs (DEVCOR) v1.0

Objetivos

After taking this course, you should be able to:

- Describe the architectural traits and patterns that improve application maintainability
- Describe the architectural traits and patterns that improve application serviceability
- Identify steps to design and build a ChatOps application
- Implement robust Representational State Transfer (REST) API integrations with network error handling, pagination, and error flow control
- Describe the necessary steps for securing user and system data in applications
- Describe the necessary steps for securing applications
- Identify common tasks in automated application release process
- Describe best practices for application deployment
- Describe methodologies for designing distributed systems
- Describe the concepts of infrastructure configuration management and device automation
- Utilize Yet Another Next Generation (YANG) data models to describe network configurations and telemetry
- Compare various relational and nonrelational database types and how to select the appropriate type based on requirements

Pre-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.

Before taking this course, you should have:

- Knowledge of program design and coding with focus on Python
- Familiarity with Ethernet, TCP/IP, and Internet-related networking
- Understand the utilization of APIs
- Understanding of software development and design methodologies
- Hands-on experience with a programming language (specifically Python)

Here are Cisco learning resources that can help you prepare:

- **Developing Applications and Automating Workflows Using Cisco Core Platforms (DEVASC)**
- Explore the DevNet Certification area for specific topics and labs related to this course and certification:

<https://developer.cisco.com/certification/>



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Contenido

Section title	Learning mode
Designing for Maintainability	Self-study
Designing for Serviceability	Self-study
Implementing ChatOps Application	Lecture
Describing Advanced REST API Integration	Lecture
Securing Application Data	Self-study
Securing Web and Mobile Applications	Self-study
Automating Application-Release	Lecture
Deploying Applications	Lecture
Understanding Distributed Systems	Lecture
Orchestrating Network and Infrastructure	Lecture
Modeling Data with YANG	Lecture
Using Relational and Non-Relational Databases	Self-study

Laboratorio

- Construct Sequence Diagram
- Construct Web Sequence Diagram
- Use Cisco Webex Teams™ API to Enable ChatOps
- Integrate Cisco Meraki™ API to List Service Set Identifiers (SSIDs) and Retrieve Location Data
- Use Paginated REST API Endpoint
- Utilize REST API Error Control Flow Techniques
- Evaluate Application for Common Open Web Application Security Project (OWASP) Vulnerabilities
- Resolve Merge Conflicts with Git
- Diagnose Continuous Integration and Continuous Delivery (CI/CD) Pipeline Failures
- Containerize Application Using Docker
- Integrate Application into Existing CI/CD Environment
- Diagnose Problems Using Application Logs
- Configure Network Parameters Using Ansible and Puppet
- Synchronize Firepower Device Configuration
- Utilize RESTCONF for Network Configuration
- Query Relational Database

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- Query Document Store
 - Query Time Series Database
 - Query Graph Database
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