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

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

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

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

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