

Developing Applications Using Cisco Core Platforms and APIs (DEVCOR)

Description

The **Developing Applications Using Cisco Core Platforms and APIs (DEVCOR)** training is designed to help you prepare for the Cisco DevNet Professional certification and professional-level network automation engineer roles. The focus of this training is implementation of network applications using Cisco platforms as a base, from initial software design to diverse system integration, as well as testing and deployment automation. The training provides hands-on experience solving real world problems using Cisco Application Programming Interfaces (APIs) and modern development tools.

This training prepares you for the 350-901 DEVCOR v1.0 exam. If passed, you earn the Cisco Certified DevNet Specialist – Core certification and satisfy the core exam requirement for the Cisco Certified DevNet Professional and Cisco Certified DevNet Expert certifications. This training also earns you 64 Continuing Education (CE) credits toward recertification.

How you'll benefit

This training will help you:

- Take full advantage of the network and software development practices when implementing applications to fulfill business needs
- Design and implement automated workflows for network provisioning
- Design and develop applications built on Cisco platforms
- Design and implement integration of custom applications with Cisco platforms and devices
- Understand challenges in network programmability and system integration
- Gain knowledge for protocols, solutions, and designs to acquire professional-level and expert-level DevOps roles
- Prepare for the 350-901 DEVCOR v1.0 exam
- Earn 64 CE credits toward recertification

Who should enroll

- Sr. Network Automation Engineers
- Sr. Software Developers
- Sr. System Integration Programmers
- Sr. Infrastructure Architects
- Sr. Network Designers
- Test Development Engineers

Technology areas

- Automation
- Network Programmability

Objectives

- Describe the architectural traits and patterns that improve application maintainability and 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 applications and their user and system data
- 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

Prerequisites

There are no prerequisites for this training. However, the knowledge and skills you are recommended to have before attending this training are:

- Knowledge of program design and coding with focus on Python
- Familiarity with Ethernet, Transmission Control Protocol Internet Protocol (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)

These skills can be found in the following Cisco Learning Offering:

- [Developing Applications and Automating Workflows using Cisco Platforms \(DEVASC\)](#)

Outline

- Designing for Maintainability
- Designing for Serviceability
- Implementing ChatOps Application

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- Advanced REST API Integration
 - Securing Application Data
 - Securing Web and Mobile Applications
 - Automating Application Release
 - Deploying Applications
 - Exploring Distributed Systems
 - Orchestrating Network and Infrastructure
 - Modeling Data with YANG
 - Using Relational and Nonrelational Databases

Lab Outline

- Construct Sequence Diagram
- Construct Web Sequence Diagram
- Use Paginated REST API Endpoint
- Use REST API Error Control Flow Techniques
- Evaluate Application for Common OWASP Vulnerabilities
- Resolve Merge Conflicts with Git
- Containerize Application Using Docker
- Integrate Application into Existing CI/CD Environment
- Diagnose Problems Using Application Logs
- Automate and Manage Cisco IOS XE Network Infrastructure with Terraform and GitLab CI/CD Pipelines
- Configure Network Parameters Using Ansible
- Synchronize Firepower Device Configuration
- Utilize RESTCONF for Network Configuration
- Query Relational Database
- Query Document Store
- Query Time Series Database
- Query Graph Database

What to expect on the exam

Developing Applications Using Cisco Core Platforms and APIs (350-901 DEVCOR) v1.0 is a 120-minute exam associated with the Cisco Certified DevNet Specialist – Core certification and satisfies the core exam requirement for the Cisco Certified DevNet Professional and Cisco Certified DevNet Expert certifications.

The exam tests your knowledge of software development and design, including:

- Using APIs
- Cisco platforms
- Application deployment and security
- Infrastructure and automation

Links

- [Cisco U. Learning Path](#)
- [Cisco Learning Network Store](#)
- [Cisco Learning Locator](#)