Developing Applications Using Cisco Core Platforms and API's (DEVCOR)

Days: *5*

Course Overview: The Developing Applications Using Cisco Core Platforms and APIs (DEVCOR) v1.0 course helps you prepare for Cisco DevNet Professional certification and for professional-level network automation engineer roles. You will learn how to implement network applications using Cisco® platforms as a base, from initial software design to diverse system integration, as well as testing and deployment automation. The course gives you hands-on experience solving realworld problems using Cisco Application Programming Interfaces (APIs) and modern development tools.

This course helps you prepare to take the 350-901 Developing Applications Using Cisco Core Platforms and APIs (DEVCOR) exam. By passing this exam, you satisfy the core exam requirement toward the Cisco Certified DevNet Professional, and you earn the Cisco Certified DevNet Specialist – Core certification.

This course will help you:

- Take full advantage of the network and software development practices when you implement applications to fulfill business needs
- Gain proficiency with applications, automation, and Cisco platforms
- Prepare for the 350-901 DEVCOR exam, which satisfies the core exam requirement toward Cisco Certified DevNet Professional, and earns Cisco Certified DevNet Specialist – Core

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.

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)

Audience: 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.

This course covers specialized material about designing, developing, and debugging applications using Cisco APIs and platforms, and managing and deploying applications on Cisco infrastructure. To fully benefit from this course, you should have three to five years of experience designing and implementing applications that are built on top of Cisco platforms.

The course is appropriate for:

- Network engineers expanding their skill-base to include software and automation
- Developers expanding expertise in automation and DevOps
- Solution architects moving to the Cisco ecosystem
- Infrastructure developers designing hardened production environments

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The job roles best suited to the material in this course are:

- Senior network automation engineer
- Senior software developer
- Senior system integration programmer

Additional job roles that could find this course useful are:

- Senior infrastructure architect
- Senior network designer
- Senior test development engineer

Students preparing for Cisco Certified DevNet Professional and Cisco Certified DevNet Specialist – Core certification will also find this material useful.

Course Objectives: 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 the 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

OUTLINE:

This class includes lecture sections and self-study sections. In instructor-led classes, lectures are delivered in real-time, either in person or via video conferencing. In e-learning courses, the lectures are on recorded videos. In both versions, you will need to review self-study sections on your own before taking the certification exam.

Lecture:

- Designing for Maintainability
- Implementing ChatOps Application
- Describing Advanced REST API Integration
- Automating Application-Release
- Deploying Applications
- Understanding Distributed Systems
- Orchestrating Network and Infrastructure
- Modeling Data with YANG

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Self-study:

- Designing for Serviceability
- Securing Application Data
- Securing Web and Mobile Applications
- Using Relational and Non-Relational Databases