Implementing DevOps Solutions and Practices Using Cisco Platforms

Description

The Implementing DevOps Solutions and Practices Using Cisco Platforms (DEVOPS) v1.0 course teaches you how to automate application deployment, enable automated configuration, enhance management, and improve scalability of cloud microservices and infrastructure processes on Cisco® platforms. You will also learn how to integrate Docker and Kubernetes to create advanced capabilities and flexibility in application deployment. This course prepares you for the 300-910 Implementing DevOps Solutions and Practices Using Cisco Platforms (DEVOPS) certification exam.

Course Content
Introducing the DevOps Model Introducing Containers Packaging an Application Using Docker Deploying a Multitier Application Introducing CI/CD Building the DevOps Flow Validating the Application Build Process Building an Improved Deployment Flow Extending DevOps Practices to the Entire Infrastructure Implementing On-Demand Test Environments at the Infrastructure Level Monitoring in NetDevOps Engineering for Visibility and Stability Securing DevOps Workflows Exploring Multicloud Strategies Examining Application and Deployment Architectures Describing Kubernetes Integrating Multiple Data Center Deployments with Kubernetes Monitoring and Logging in Kubernetes

Lab / Exercises

- Interact with GitLab Continuous Integration (CI)
- Explore Docker Command-Line Tools
- Package and Run a WebApp Container
- Build and Deploy Multiple Containers to Create a Three-Tier Application
- Explore Docker Networking
- Build and Deploy an Application Using Docker Compose
- Implement a Pipeline in Gitlab CI
- Automate the Deployment of an Application
- Validate the Application Build Process
- Validate the Deployment and Fix the Infrastructure
- Build a Yaml Ain't Markup Language (YAML) Infrastructure as Code (IaC) Specification for the Test Environment
- Manage On-Demand Test Environments with Terraform
- Build Ansible Playbooks to Manage Infrastructure
- Integrate the Testing Environment in the CI/CD Pipeline
- Implement Pre-deployment Health Checks
- Set Up Logging for the Application Servers and Visualize with Kibana
- Create System Dashboard Focused on Metrics
- Use Alerts Through Kibana
- Instrument Application Monitoring
- Use Alerts and Thresholds to Notify Webhook Listener and Cisco Webex® Teams™ Rooms
- Secure Infrastructure in the CI/CD Pipeline
- Explore Kubernetes Setup and Deploy an Application
- Explore and Modify a Kubernetes CI/CD Pipeline
- Kubernetes Monitoring and Metrics—Elasticsearch, Logstash, and Kibana (ELK)

Documentation

- Digital courseware included

Exam

- This course prepares you to the 300-910 DEVOPS Implementing DevOps Solutions and Practices Using Cisco Platforms exam. If you wish to take this exam, please contact our secretariat who will let you know the cost of the exam and will take care of all the necessary administrative procedures for you.

Participant profiles

- Account managers and technical solutions architects
- Network administrators, engineers and managers

Prerequisites

- Basic programming language concepts and familiarity with Python
- Basic understanding of compute virtualization
- Ability to use Linux, text-driven interfaces
- Foundational understanding of Linux-based OS architecture and system utilities
- CCNA® level core networking knowledge
- Foundational understanding of DevOps concepts
- Participants should have followed or have knowledge covered by: Developing Applications and Automating Workflows using Cisco Core Platforms ou Developing Applications Using Cisco Core Platforms and APIs

Objectives

- Describe the DevOps philosophy and practices applied to infrastructure
- Explain the architectures based on the tools provided by Docker
- Describe the packaging of applications and create secure images
- Package and deploy a three-tier network application
- Explain the concepts of configuration element (CI) pipelines
- Implement a basic pipeline with Gitlab CI which creates and deploys applications
- Implement automated build tests and validations
- Implement test environments and integrate them into an existing pipeline

Niveau
Avancé
Classroom Registration Price (CHF)
4350
Virtual Classroom Registration Price (CHF)
4090
Duration (in Days)
5
Reference
CIS-DEVOPS