Certified DevSecOps Engineer (CDSOE)

OEM: Global Skill Development Council • Duration: 3 Days (24 hrs) • Code: GSDC-CDSOE

COURSE MODULES & TOPICS

1 Overview

- Definition of DevOps and DevSecOps
- Historical Origins and related concepts
- Advantages of implementing DevSecOps
- Guiding principles of DevOps
- Key concepts of DevSecOps
- Overview of the DevSecOps Manifesto
- Addressing security challenges with DevSecOps
- Implementing security as code
- Benefits of DevSecOps in CI/CD pipelines
- Roles, responsibilities, and Collaboration in DevSecOps

2 Journey with SDLC

- Introduction to DevSecOps within the SDLC
- Navigating the DevSecOps journey in the software development life cycle
- Maturity models for implementing DevSecOps

3 Phase-wise SDLC Integration with DevSecOps

- Incorporating DevSecOps in the Planning phase
- Integrating DevSecOps in the Coding Phase
- DevSecOps considerations during the Building phase
- The importance of SAST and SCA
- DevSecOps practices in the Testing phase
- Deploying securely with DevSecOps
- Operating securely with DevSecOps

4 DevOps Basics

- Exploring the concept of DevOps
- Incorporating security into the DevOps workflow

5 DevSecOps Foundation

- Challenges faced in implementing DevSecOps
- Importance of DevSecOps in modern software development

6 Beginning the DevSecOps Journey

- Understanding the Shift Left security approach
- Common aspects of DevOps and Cloud computing
- Introduction to SAST and common tools
- Overview of DAST and common tools
- Tips for selecting the appropriate security tools

7 DevSecOps Controls

- Implementing security controls in DevSecOps
- Security considerations during the Planning and Development phases
- Ensuring security during code commits
- Security practices in the Build and Test phases

8 Modern Application Development

- The rise of Microservices architecture
- Comparing Microservices with Monoliths
- Exploring the Relationship between Microservices and APIs
- Advantages and disadvantages of adopting Microservices

9 Containerization

- What are Docker Containers?
- Developing applications using Containerization
- Advantages of Containerization
- Drawbacks of Containerization

10 Information Security

- Distinguishing Ethical Hacking, Cyber Security, and Information Security
- Essential Concepts of Information Security
- Career opportunities in Information Security
- Encryption techniques to protect sensitive data
- Effective Policy Management
- Password Management
- Implementing Secure Development LifeCycles
- Conducting Threat Modeling and Risk Management

11 Cloud Computing and Infrastructure as Code

- What is Cloud Computing?
- Cloud Service Providers and their offerings
- Advantages of Cloud Computing
- Various Cloud Service Models
- Different Cloud Deployment Models

12 Continuous Integration/Continuous Deployment

- Understanding the Software Development Life Cycle (SDLC)
- Defining Integration, Delivery, and Deployment
- What is CI/CD?

13 Personalized Mentorship and Expert Engagement

- A dedicated 1-hour personalized session with a certified DevSecOps professional
- Resolve individual queries on tool integration, security implementation, or CI/CD concerns
- Tailored insights into enterprise DevSecOps practices and trends

14 Tools, Certification & Real-World Case Studies

- Hands-on with DevSecOps tools: Jenkins, GitLab, SonarQube, OWASP ZAP, Docker, and Terraform
- DevSecOps pipeline templates and IaC scripts
- Real-world case studies from regulated industries
- Certification preparation: DevSecOps Foundation, CKS, Certified DevSecOps Engineer
- Final project: Designing and securing a CI/CD pipeline with real tools