
Cloud Devops Engineer

1.Introduction to Cloud and DevOps

- 1.1 Understanding Cloud Computing
- 1.2 DevOps Principles and Practices
- 1.3 Benefits of Cloud DevOps

2.Cloud Platforms

- 2.1 Introduction to Cloud Service Providers (e.g., AWS, Azure, Google Cloud)
- 2.2 Creating and Managing Cloud Accounts
- 2.3 Cloud Resource Management and Cost Control

3.Version Control and Collaboration Tools

- 3.1 Git and GitHub/GitLab
- 3.2 Git Branching and Merging Strategies
- 3.3 Collaborative Development Practices

4.Infrastructure as Code (IaC)

- 4.1 Introduction to IaC
- 4.2 Using Terraform or AWS CloudFormation
- 4.3 Managing Infrastructure as Code

5.Containerization and Orchestration

- 5.1 Docker and Containerization Concepts
- 5.2 Kubernetes Orchestration
- 5.3 Deploying Applications with Containers

6. Continuous Integration (CI)

- 6.1 CI/CD Concepts and Principles
- 6.2 Setting Up CI Pipelines with Jenkins or GitLab CI/CD
- 6.3 Automated Testing and Code Quality

7. Continuous Deployment (CD)

- 7.1 Implementing CD Pipelines
- 7.2 Blue-Green Deployments
- 7.3 Canary Deployments
- 7.4 Deployment Automation

8. Monitoring and Logging

- 8.1 Application and Infrastructure Monitoring
- 8.2 Log Management and Analysis
- 8.3 Alerts and Incident Response

9. Security in DevOps

- 9.1 DevSecOps Principles
- 9.2 Secure Coding Practices
- 9.3 Identity and Access Management (IAM) in Cloud

10. Configuration Management

- 10.1 Managing Configuration Files
- 10.2 Infrastructure Configuration with Ansible or Puppet

11. Cloud-Native Application Development

- 11.1 Microservices Architecture
- 11.2 Serverless Computing

12.High Availability and Disaster Recovery

- 12.1 Strategies for High Availability
- 12.2 Backup and Disaster Recovery Planning

13.Scalability and Load Balancing

- 13.1 Auto-scaling Applications
- 13.2 Load Balancing Strategies

14.Collaboration and Communication Tools

- 14.1 Communication and Documentation Tools
- 14.2 Agile and Scrum Principles

15.DevOps Culture and Best Practices

- 15.1 Building a DevOps Culture
- 15.2 DevOps Best Practices and Case Studies

16.Capstone Project

- 16.1 Building and Deploying a Real-World Cloud-NativeApplication
- 16.2 Final Project Presentation and Assessment

17.Exam Preparation (if applicable)

- 17.1 Review and Practice for Certification Exams