

Google Professional Cloud DevOps Engineer Training Course

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Google Professional Cloud DevOps Engineer Training Course Overview:

The Google Professional Cloud DevOps Engineer Training Course is designed to equip participants with a comprehensive understanding of DevOps practices and tools within the Google Cloud Platform GCP. This engaging course covers a wide range of topics, from bootstrapping a Google Cloud organization and designing resource hierarchies to mastering CI/CD architectures and implementing site reliability engineering SRE practices. Learners will dive deep into managing infrastructure as code with Terraform, deploying applications with Google Kubernetes Engine GKE and Google Cloud Deploy, and ensuring security through Binary Authorization and Vulnerability Analysis. The training emphasizes hands-on learning with Google Cloud's key management and secrets management tools, optimizing performance, and leveraging multi-cloud CI/CD pipelines for dynamic environments. With a focus on real-world application, this course is uniquely positioned to provide the skills and knowledge necessary to design, implement, and manage robust, secure, and efficient solutions on Google Cloud.

Target Audience:

- Cloud DevOps Engineers
- IT Professionals and System Administrators
- Cloud Architects and Infrastructure Engineers
- Professionals seeking Google Cloud DevOps certification

Targeted Organizational Departments:

- IT and Systems Operations
- Cloud Infrastructure and Security
- Software Development and Engineering
- DevOps and Site Reliability Engineering

Targeted Industries:

- Technology and Software Development
- Financial Services and Fintech
- Healthcare and Life Sciences
- Retail and E-commerce

Course Offerings:

By the end of this course, participants will be able to:

- Design and implement a secure, scalable resource hierarchy in Google Cloud.
- Manage IAM roles, policies, and service accounts effectively.
- Utilize Terraform and Google Cloud's infrastructure as code tools for efficient infrastructure management.
- Develop and maintain CI/CD pipelines using Cloud Build and Google Cloud Deploy.
- Secure applications and infrastructure using Binary Authorization and conduct vulnerability analysis.
- Apply SRE practices to manage service reliability and incident response.
- Optimize cloud resource usage and costs with preemptible VMs and committed-use discounts.
- Implement and manage comprehensive monitoring and logging strategies.

Training Methodology:

This course employs a variety of training methodologies to ensure a rich, interactive learning experience. Participants will engage in practical, hands-on labs to apply concepts in real-world scenarios, enhancing their understanding of Google Cloud DevOps tools and practices. The course includes case studies that mirror typical cloud engineering challenges, group work to foster collaboration, interactive sessions to facilitate knowledge sharing, and feedback sessions to ensure concepts are well understood. This diverse approach caters to different learning styles, making complex topics accessible and engaging for all participants.

Course Toolbox:

- Access to Google Cloud Platform
- Terraform and other infrastructure as code tools
- CI/CD pipeline templates and blueprints
- SRE and incident management checklists
- Custom metrics and dashboard examples
- Performance optimization guides and resources

Course Agenda:

Day 1: Foundations of Google Cloud DevOps

- **Topic 1:** Introduction to Google Cloud DevOps and Course Objectives
- **Topic 2:** Bootstrapping a Google Cloud Organization
- **Topic 3:** Designing Resource Hierarchy and Managing IAM Roles & Policies
- **Topic 4:** Service Accounts Management in Google Cloud
- **Reflection & Review:** Key Concepts and Q&A Session

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Day 2: Infrastructure as Code and CI/CD Architecture

- **Topic 1:** Infrastructure as Code with Terraform in Google Cloud
- **Topic 2:** Exploring CI/CD Architecture in Google Cloud
- **Topic 3:** Continuous Integration with Cloud Build
- **Topic 4:** Continuous Deployment with Google Cloud Deploy
- **Reflection & Review:** Hands-on Lab Recap and Discussion

Day 3: Deploying and Securing Applications

- **Topic 1:** Google Kubernetes Engine GKE for Dynamic Environments
- **Topic 2:** Securing Deployments with Binary Authorization and Vulnerability Analysis
- **Topic 3:** Secrets Management in Google Cloud
- **Topic 4:** Implementing Immutable Artifacts and Artifact Registry
- **Reflection & Review:** Security Best Practices and Tooling Discussion

Day 4: Reliability, Monitoring, and Performance Optimization

- **Topic 1:** Site Reliability Engineering SRE Practices
- **Topic 2:** Google Cloud Monitoring, Logging, and Custom Metrics
- **Topic 3:** Optimizing Google Cloud Performance
- **Topic 4:** Cost Optimization with Preemptible VMs and Discounts
- **Reflection & Review:** SRE and Performance Optimization Strategies

Day 5: Advanced Topics and Certification Preparation

- **Topic 1:** Multi-Cloud CI/CD Pipelines and Advanced Deployment Strategies
- **Topic 2:** Hybrid and Multi-Cloud DevOps Strategies
- **Topic 3:** Preparing for Google Cloud DevOps Engineer Certification
- **Topic 4:** Course Recap and Next Steps
- **Reflection & Review:** Certification Study Tips and Closing Remarks

How This Course is Different from Other Google Professional Cloud DevOps Engineer Training Courses:

Unlike other courses, the Google Professional Cloud DevOps Engineer Training Course is uniquely designed to offer a holistic view of DevOps practices within the Google Cloud ecosystem. This course not only covers foundational knowledge but also dives into advanced topics such as multi-cloud CI/CD pipelines, hybrid cloud strategies, and cost optimization techniques. With a strong emphasis on hands-on learning, participants will gain practical experience through interactive labs, real-world case studies, and group discussions. Additionally, this course prepares participants for the Google Cloud DevOps Engineer certification, providing them with the skills, knowledge, and confidence to excel in their careers. By focusing on the latest tools, practices, and industry trends, this course stands out as a premier training program for professionals aiming to master DevOps in Google Cloud.

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Training Course Categories

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