

# Pro DevOps with Google Cloud Platform: Revolutionizing the Way You Develop and Deploy

Have you ever wondered how software development and deployment can be made more efficient and reliable? If so, you're not alone. The world of technology is constantly evolving, and developers are always on the lookout for new tools and methodologies to enhance their workflows.

Enter Google Cloud Platform (GCP), a suite of cloud computing services offered by Google. With its comprehensive set of tools and services tailored for developers, GCP has become an essential platform for modern software development and deployment practices, popularly known as DevOps.

DevOps is a software development approach that focuses on collaboration, integration, automation, and communication between developers and IT operations professionals. It aims to shorten the development lifecycle, increase deployment frequency, and deliver a wide range of features, bug fixes, and updates faster and more reliably.



## Pro DevOps with Google Cloud Platform: With Docker, Jenkins, and Kubernetes

by Vipra Jena (1st ed. Edition, Kindle Edition)

★★★★☆ 4.2 out of 5

Language : English

File size : 10434 KB

Text-to-Speech : Enabled

Screen Reader : Supported

Enhanced typesetting : Enabled

Print length : 366 pages



Pro DevOps with Google Cloud Platform takes this approach to the next level by leveraging the power and scalability of GCP's infrastructure and services. By integrating GCP into your DevOps workflows, you can achieve unprecedented levels of efficiency, scalability, and reliability throughout the entire development and deployment lifecycle.

So, what makes Pro DevOps with Google Cloud Platform stand out? Let's take a closer look at some key features:

## **1. Containerization with Kubernetes**

Containerization has revolutionized software deployment by encapsulating applications and their dependencies into self-contained units called containers. Kubernetes, an open-source container orchestration platform, takes containerization to the next level by automating container deployment, scaling, and management.

With GCP's native support for Kubernetes, you can easily deploy and manage containerized applications, regardless of scale. Kubernetes handles load balancing, scaling, and failover, enabling your applications to run smoothly and seamlessly.

## **2. Infrastructure as Code with Deployment Manager**

Infrastructure as Code (IaC) is the practice of provisioning and managing infrastructure resources using code. Google Cloud Deployment Manager allows you to define your infrastructure resources, such as virtual machines, disks, networks, and firewall rules, as code.

By leveraging the power of Deployment Manager, you can provision and manage your infrastructure resources in a repeatable, predictable, and automated manner. This ensures that your development and deployment environments are consistent and easily reproducible.

### **3. Continuous Integration and Delivery with Cloud Build**

Continuous Integration (CI) and Continuous Delivery (CD) are crucial components of any DevOps workflow. With Cloud Build, GCP's CI/CD platform, you can automate the process of building, testing, and deploying your applications.

Cloud Build integrates seamlessly with popular source code repositories like GitHub and Bitbucket, enabling you to trigger builds and deployments automatically whenever changes are pushed to your repository. This ensures that your applications are always up-to-date and in a deployable state.

### **4. Monitoring and Logging with Stackdriver**

Effective monitoring and logging are essential for maintaining the health and performance of your applications. GCP's Stackdriver provides a comprehensive suite of monitoring, logging, and alerting tools that give you real-time visibility into the state of your applications.

Stackdriver allows you to monitor system metrics, application logs, and traces from a single, centralized dashboard. It also provides powerful alerting capabilities, allowing you to set up proactive notifications based on various thresholds and conditions.

### **5. Collaboration with Google Cloud Source Repositories**

Collaboration and version control are integral parts of modern software development. Google Cloud Source Repositories provide a secure, scalable, and fully managed version control system that integrates seamlessly with popular tools like Git.

With Cloud Source Repositories, you can host your code securely, collaborate with your team, and keep track of changes and versions. It also provides built-in code search capabilities, making it easy to navigate and explore your codebase.

Pro DevOps with Google Cloud Platform brings these features together to revolutionize the way you develop and deploy software. By leveraging the power and scalability of GCP's infrastructure and services, you can streamline your workflows, eliminate bottlenecks, and deliver high-quality, secure, and reliable applications.

So, if you're looking to take your DevOps practices to the next level, consider diving into Pro DevOps with Google Cloud Platform. It's time to embrace the future of software development and deployment.



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Use DevOps principles with Google Cloud Platform (GCP) to develop applications and services. This book builds chapter by chapter to a complete real-life scenario, explaining how to build, monitor, and maintain a complete application using DevOps in practice.

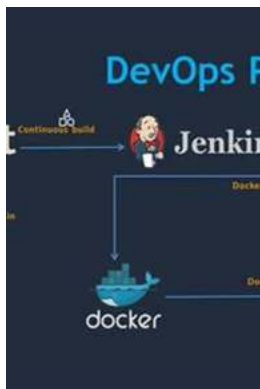
Starting with core DevOps concepts, continuous integration, and continuous delivery, you'll cover common tools including Jenkins, Docker, and Kubernetes in the context of a real microservices application to deploy in the cloud. You will also create a monitor for your cloud and see how to use its data to prevent errors and improve the stability of the system. By the end of Pro DevOps with Google Cloud Platform, you will be able to deploy, maintain, and monitor a real application with GCP.

## What You Will Learn

- Build and deploy applications and services using DevOps on Google Cloud Platform
- Maintain a complete continuous integration (CI) and continuous delivery (CD) pipeline
- Use containerization with Docker and Kubernetes
- Carry out CD with GCP and Jenkins
- Create microservices with Jenkins, Docker, and Kubernetes
- Monitor your newly deployed application and its deployment and performance
- Set up security and manage your network with GCP

## Who This Book Is For

Developers and software architects who want to implement DevOps in practice. Some prior programming experience is recommended as well as a basic knowledge of a Linux command-line environment.



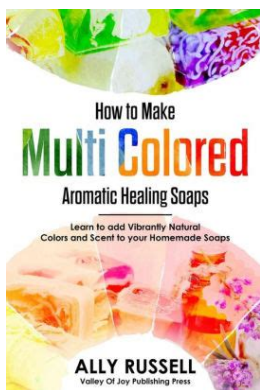
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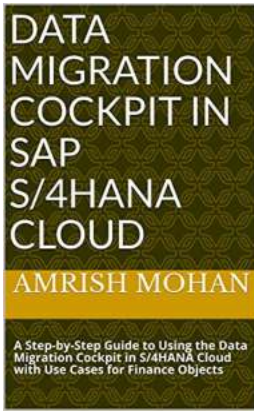
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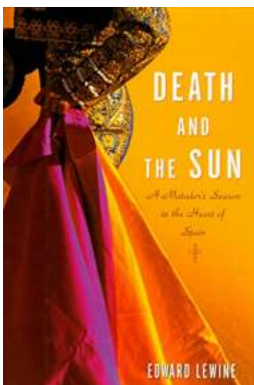
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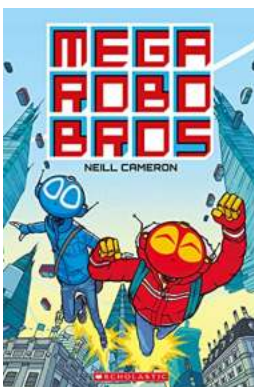
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