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# Building and Delivering Microservices on AWS

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Reliable automation is crucial for any code change going into production. A release pipeline enables you to deliver features for your users efficiently and promptly. AWS CodePipeline, with its powerful integration and automation capabilities of building, testing, and deployment, offers a unique solution to common software delivery issues such as outages during deployment, a lack of standard delivery mechanisms, and challenges faced in creating sustainable pipelines.

You'll begin by developing a Java microservice and using AWS services such as CodeCommit, CodeArtifact, and CodeGuru to manage and review the source code. You'll then learn to use the AWS CodeBuild service to build code and deploy it to AWS infrastructure and container services using the CodeDeploy service. As you advance, you'll find out how to provision cloud infrastructure using CloudFormation templates and Terraform. The concluding chapters will show you how to combine all these AWS services to create a reliable and automated CodePipeline for delivering microservices from source code check-in to deployment without any downtime. Finally, you'll discover how to integrate AWS CodePipeline with third-party services such as Bitbucket, Blazemeter, Snyk, and Jenkins.

By the end of this microservices book, you'll have gained the hands-on skills to build release pipelines for your applications.

## WHAT YOU WILL LEARN

- Understand the basics of architecture patterns and microservice development
- Get to grips with the continuous integration and continuous delivery of microservices
- Delve into automated infrastructure provisioning with CloudFormation and Terraform
- Explore the CodeCommit, CodeBuild, CodeDeploy, and CodePipeline services
- Get familiarized with automated code reviews and profiling using CodeGuru
- Grasp AWS Lambda function basics and automated deployment using CodePipeline
- Understand Docker basics and automated deployment to ECS and EKS
- Explore CodePipeline integration with Jenkins Pipeline and on premises deployment

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