

# What We Covered

In this book, we covered 24 of the most popular patterns from Kubernetes, grouped as the following:

- *Foundational patterns* represent the principles that containerized applications must comply with in order to become good cloud-native citizens. Regardless of the application nature, and the constraints you may face, you should aim to follow these guidelines. Adhering to these principles will help ensure that your applications are suitable for automation on Kubernetes.
- *Behavioral patterns* describe the communication mechanisms and interactions between the Pods and the managing platform. Depending on the type of the workload, a Pod may run until completion as a batch job, or be scheduled to run periodically. It can run as a daemon service or singleton. Picking the right management primitive will help you run a Pod with the desired guarantees.
- *Structural patterns* focus on structuring and organizing containers in a Pod to satisfy different use cases. Having good cloud-native containers is the first step, but not enough. Reusing containers and combining them into Pods to achieve a desired outcome is the next step.
- *Configuration patterns* cover customizing and adapting applications for different configuration needs on the cloud. Every application needs to be configured, and no one way works for all. We explore patterns from the most common to the most specialized.
- *Advanced patterns* explore more complex topics that do not fit in any of the other categories. Some of the patterns, such as *Controller* are mature—Kubernetes itself is built on it—and some are still new and might change by the time you read this book. But these patterns cover fundamental ideas that cloud-native developers should be familiar with.

## Final Words

Like all good things, this book has come to an end. We hope you have enjoyed reading this book and that it has changed the way you think about Kubernetes. We truly believe Kubernetes and the concepts originating from it will be as fundamental as object-oriented programming concepts are. This book is our attempt to create the Gang of Four Design Patterns but for container orchestration. We hope this is not the end, but the beginning for your Kubernetes journey; it is so for us.

Happy kubectl-ing.