

Handling Microservices with Kubernetes - Basic Info

This course is for organizations who:

- you are considering expanding your DevOps skills with a future-proof platform,
- you want to understand Kubernetes better,
- you want to migrate to Kubernetes.

Prerequisites

- Unix based system and basic command line knowledge are required

Training length: 2 days

This training is available in:

- [Barcelona](#) (February 22-23)
- [Warsaw](#) (March 22-23)
- [Berlin](#) (April 26-27)
- [Tel-Aviv](#) (May 23-24)

Handling Microservices with Kubernetes

- Full Agenda

Day One:

1. Kubernetes & Docker
2. Basic resource overview
3. Deploy the first application
4. Getting ready for production
5. Advanced resources

Day Two:

6. Services & Networking
7. Package Handling for Kubernetes
8. Monitoring with Prometheus & Zipkin
9. Platform management tools

Handling Microservices with Kubernetes - Day 1

1. Kubernetes & Docker

We will take a quick overview of dockerizing an application and we'll compare the most popular container management platforms, especially focusing on Kubernetes and its concept.

2. Basic resources overview

We will learn about objects, the abstraction layers of Kubernetes that represent the state of your system.

Handling Microservices with Kubernetes - Day 1

3. Deploy the first application

We will implement a cluster using vanilla Kubernetes resources (without 3rd party service integrations).

4. Getting ready for production

We will prepare the deployed application to be rolled out to production and apply some best practices.

5. Advanced resources

You'll learn about some higher-level abstractions called controllers, also, we will cover the usage of the more advanced Kubernetes objects.

Handling Microservices with Kubernetes - Day 2

6. Services & Networking

We will take a look at scaling and securing our prepared application.

7. Package handling for Kubernetes

We will learn how to use helm to easily install 3rd party infrastructural elements to Kubernetes. We will also take a look at the process of packing your own services to securely backup your infrastructure.

8. Monitoring with Prometheus & Zipkin

As you distribute your system, you distribute errors and bottleneck as well. In order to learn how to properly monitor Microservices we will take quick look at Prometheus. We will learn how to use Zipkin and how distributed tracing can help you when ordinary monitoring and logging can't.

Handling Microservices with Kubernetes - Day 2

9. Platform management tools

When building a complex monolithic application around classic software architectural principles, discipline is key in preventing emergent behaviour of your system components. When you create a distributed system, you move complexity from the codebase to the communication layer and the infrastructure. But that does not need to be a grave problem as you have tools you can just install configure and take advantage of while keeping your individual codebases clean. We dive into the installation & configuration of Envoy and Mixer using Istio - so you can benefit from safe deployment strategies, built-in retry logic, caching, circuit breakers and more. In order to take the most out of this part we recommend taking our Designing Microservices course first, so you will know more about why these components are essential.

In case you have any questions regarding this training, or you'd like to invite our team to provide a training exclusively for your company, please reach out to us at info@risingstack.com