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# Skaffold training: learning Kubernetes orchestration

2 days (14 hours)

## Presentation

Skaffold training will immerse you in the world of Kubernetes orchestration, with a focus on learning. You'll master how to set up [Kubernetes](#) application development, deployment and management workflows.

In this training course, you'll learn how to create Kubernetes deployment pipelines with Skaffold, using a user-friendly dashboard for your configurations.

Skaffold offers unrivalled flexibility to tailor the process to your company's specific needs.

Skaffold is the ideal tool for perfecting your day-to-day business process tasks. It will also enable you to use Kubernetes to improve the productivity of your in-house web projects, using a variety of technologies.

With this Skaffold training course, you'll gradually build up your skills and be able to design your own Kubernetes deployment pipelines in record time.

As with all our training courses, this one will introduce you to the [latest version of Skaffold](#) (at the time of writing: Skaffold 2.0).

## Objectives

- Master the essential Skaffold commands
- Understanding how to manage dependencies
- Customize and automate Skaffold profiles
- Securing deployments with Skaffold and implementing security measures

# Target audience

- DevOps
- Developers
- System administrators

# Prerequisites

A basic understanding of concepts related to containerization, Kubernetes and software development tools is recommended.

# Our Skaffold training program

## Introduction

- Introducing Skaffold
- Why use Skaffold?
- The benefits of continuous integration with Skaffold
- Useful resources for further reading

## Skaffold fundamentals

- Installation
- Skaffold configuration
- Basic structure of a Skaffold file
- Essential controls
  - skaffold build
  - skaffold dev
- [PRACTICE] Creating your first Skaffold project
- Solving common problems

## Managing dependencies

- Understanding dependencies in Skaffold
- Using Helm with Skaffold
- Integrating Kubernetes into your Skaffold pipeline
- [PRACTICE] Dependency management with Skaffold
- Tips for optimizing dependency management

## Customization and automation

- Customizing Skaffold profiles

- Creating advanced Skaffold pipelines
- Integrating Skaffold into CI/CD tools
- [PRACTICE] Advanced automation with Skaffold
- Best practices for customization and automation

## Application deployment and management

- Deployment in different environments: development, test, production
- Monitor and manage deployed applications with Skaffold
- Continuous updates with Skaffold
- [PRACTICE] Application deployment and management
- Solving common deployment problems

## Security and error management

- Securing deployments with Skaffold
- Error and fault management
- Backup and restore with Skaffold
- [PRACTICE] Safety and error management
- Safety measures and error prevention

## Performance optimization

- Monitor application performance
- Application profiling
- Optimizing Docker images
- Performance enhancement
- Best practices for performance optimization

## Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

## Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

## Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Sanction

A certificate will be issued to each trainee who completes the course.