

# Building Microservices with Spring Cloud & Docker

## Description

Spring Cloud is an open-source lightweight microservices framework for building Java applications for the cloud.

Docker is an open-source platform for building, shipping and running applications inside containers. Docker lends itself well to the creation of microservice applications.

In this instructor-led, live training, participants will learn the fundamentals of building microservices using Spring Cloud and Docker. Participant knowledge is put to the test through exercises and the step-by-step development of sample microservices.

### **By the end of this training, participants will be able to:**

- Understand the fundamentals of microservices.
- Use Docker to build containers for microservice applications.
- Build and deploy containerized microservices using Spring Cloud and Docker.
- Integrate microservices with discovery services and the Spring Cloud API Gateway.
- Use Docker Compose for end-to-end integration testing.

## Outline

Introduction

Understanding Microservices and the Microservice Architecture

Overview of Docker and Containerization

Overview of Spring Cloud and Spring Boot

Creating the Configuration Service and the Discovery Service with Spring Cloud

Using the API Gateway with Spring Cloud

Building a Container Image for Each Microservice Using Docker

Storing Data Across Different Databases

Building an API Gateway with Spring Cloud Gateway

Using the Netflix Eureka and Consul Discovery Services (Service Registries) to Register and Discover Services

Using Docker Compose for Integration Testing

Summary and Conclusion

## Prerequisites

- Java development experience
- Experience with Spring Framework