

Advanced Spring

Course 43581 – 24 Hours

Overview

Spring Framework became the favorite framework for Java Server-side and Fullstack development. Spring community is very much alive, providing amazing out-of-the-box solutions to most technological requirements. As Spring programming becomes a common skill & knowledge for Java developers, there are some very powerful capabilities most of us miss. This course takes you to the next level of dealing with Spring core programming by covering SpringBoot testing , cache & CGlib smart proxying & exposing repositories with GraphQL. Than the course relates to advanced APIs – Reactive (Reactive streams , reactive REST & reactive NoSQL repositories), and cloud streaming (based on Kafka/RabbitMQ). The last part of this course is about automated configuration. This part begins with SpringBoot starters and building auto-configuration mechanism and ends with a detailed session regarding Docker containers and how to Dockerize SpringBoot applications along with a whole Microservice ecosystem

Who Should Attend

- Experienced Spring developers that wants to take the next step
- Spring developers that wants to use reactive platform for BigData streaming and in-memory manipulations
- Spring developers that wants to Create custom Boot platforms & starters via GCLib & Autoconfiguration
- Spring developers that wants to perform data streaming & microservice intra-communication over Kafka/RabbitMQ
- Spring Developers that want to learn how to use Docker & Docker Hub for Spring Applications and Microservices eco-systems

Prerequisites

- Experience in Java 8 functional programming
- Experience with Spring framework
- Experience with SpringBoot
- Familiarity with Microservices (spring.cloud)

Course Contents

- **Spring Cache**
 - Introduction
 - Cache providers
 - Caching results
 - Evicting cache
 - Using conditions
 - Applying to REST endpoints

- **Spring Testing**
 - Introduction
 - SpringBoot testing
 - Testing annotations
 - Unit & integration testing
 - Testing DB repositories
 - Testing web endpoints
 - Mocking & using alternative DB

- **Spring Reactive Programming**
 - Introduction
 - Reactive Streams
 - Flux
 - Mono
 - Connectable Streams
 - Reactive REST Services
 - Reactive noSQL Repositories

- **Spring Cloud Streaming**
 - Introduction
 - Using SINK
 - Using SOURCE
 - Functional Consumers
 - Functional Producers
 - Functional Processors
 - Functional Suppliers

- **Spring GraphQL**
 - Introduction to GraphQL
 - Setting dependencies
 - Creating entities/data objects
 - Creating repositories
 - Defining GraphQL schema
 - Coding GraphQL resolver
 - Testing with GraphQL Web UI

- **Spring AOP with GCLib**
 - Introduction
 - Setting up
 - Defining Proxies with Enhancer
 - Generating Beans
 - Creating Mixin

- **Spring Auto Configuration – Boot Starters**
 - Introduction
 - Creating Spring starters
 - META-INF/spring-factories
 - Conditional configuration
 - Running with SpringBoot applications

- **Dockerizing SpringBoot**
 - Introduction, basic terms
 - Setting up the environment
 - Creating SpringBoot Image
 - Running Image
 - Managing via Docker Desktop
 - Running multiple instance
 - Docker image basic commands
 - DockerHub
 - Dockerizing Microservice ecosystem
 - SpringBoot Docker image on Kubernetes