Introduction to Spring Boot 2

Course Summary

Description

As the Spring framework has grown, creating and configuring Spring applications has become more and more complex. Spring Boot takes an “opinionated” view of an application (via intelligent defaults) that minimizes configuration and boilerplate Spring code. Spring Boot makes it easier to use Spring’s many frameworks, and adds advanced capabilities such as health monitoring.

This course introduces Spring Boot from the ground up, including overviews of building blocks such as maven. It covers the key features and capabilities of Spring Boot, and teaches experienced Spring developers the skills they need to use Spring Boot productively.

This course covers Spring Boot 2 and Spring 5 - the current releases of these frameworks.

The standard platform does all labs with the Eclipse IDE, and the lab instructions include detailed directions for setting up and using it. The course can be made available for all major development environments, including IBM RAD and IntelliJ.

Objectives

After taking this course, students will be able to:

- Get an overview of Spring Core (focus on @Configuration) and maven/gradle - building blocks for Spring Boot
- Understand the needs that Spring Boot fulfills
- Use Spring Boot starters and start.spring.io to easily create new applications
- Understand and use Spring Boot’s auto-configuration
- Customize your application configuration
- Understand and use Spring Boot’s Web MVC/REST capabilities, including embedded servlet containers
- Understand and use Spring Boot’s Spring Data / Spring Data JPA capabilities
- Use Spring Security with Spring Boot
- Understand and use Spring Boot’s Actuator
- Use Actuator endpoints to monitor and manage applications
- Be familiar with the Spring CLI

Topics

- Spring Configuration Overview
- Introduction to Spring Boot
- Starters and Customization
- Spring Boot Database Support
- Spring Boot Web and Security
- Actuator and Devtools:
- Spring Boot CLI

Audience

This course is designed to teach experienced Spring developers the skills they need to use Spring Boot productively.

Prerequisites

There are no prerequisites for this course.

Duration

Two days
Introduction to Spring Boot 2

Course Outline

I. Spring Configuration Overview
   A. Overview of Spring Dependency Injection and Metadata types
   B. Java-based Configuration (@Configuration)
   C. Externalizing properties
   D. Spring Profiles

II. Introduction to Spring Boot
   A. Brief maven Overview
   B. What is Spring Boot, and What Does it Provide?
   C. Spring Boot Hello World / SpringApplication
   D. CommandLineRunner / ApplicationRunner

III. Starters and Customization
   A. Spring Boot Starters, Initializr
   B. Spring Boot Properties (.properties, .yaml)
   C. Auto-configuration Overview
   D. Controlling Auto-configuration
   E. Logging and its Configuration

IV. Spring Boot Database Support
   A. Datasource Configuration
   B. Spring Boot's JPA Support
   C. Spring Boot Data (JPA in Detail)
   D. Other Support

V. Spring Boot Web and Security
   A. Web Starters and Configuration
   B. Using Embedded Servers
   C. Deploying to an External Server
   D. Spring Security Overview (Web)
   E. Spring Boot Data Rest - Automatic Web Services from Repositories

VI. Actuator and Devtools:
   A. Actuator Overview and Capabilities
   B. Actuator Endpoints
   C. Custom Actuators and Health Checks
   D. Devtools Overview
   E. Other Tools and Features

VII. Spring Boot CLI
   A. Overview and Capabilities
   B. Grabbing / @Grab
   C. Other Capabilities

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