

Spring Boot: Developer

Course Overview

This 2-day course offers experience with Spring Boot and its major features, including auto-configuration, Actuator, Spring Boot testing framework and more. On completion, participants will have a foundation for creating enterprise and cloud-ready applications.

Please note that this course is a subset of the material in our 4-day Spring: Core Training course - there is no need to take both courses. This course is recommended if you have a good working knowledge of Spring Basics (see Prerequisites) but are new to Spring Boot.

Course Objectives

By the end of the course, you should be able to meet the following objectives:

- Describe the benefits provided by Spring Boot
- Initialize a project using Spring Boot Starters
- Leverage Spring Boot's auto configuration features
- Create simplified backing-store solutions using Spring Data JPA
- Build a simple MVC application using Spring Boot, embedded Web Server and fat JARs or classic WARs
- Build a RESTful Web application
- Use Spring Security to secure Web and REST endpoints
- Enable and extend metrics and monitoring capabilities using Spring Boot actuator
- Leverage advance configuration capabilities
- Utilize Spring Boot enhancements to testing

Target Audience

Application developers who want to increase their understanding of Spring and Spring Boot and a focus on fundamentals.

Prerequisites

- A good working knowledge on web application development using Java and an IDE (Eclipse, STS or IntelliJ).
- Basic understanding of Spring: Java Config, component- scanning, Spring driven testing and Spring data-management (*JdbcTemplate*, *@Transactional*).
- Experience using Java and build tools such as Maven or Gradle.

Course Delivery Options

- Classroom
- Live Online
- [Onsite](#)

Course Modules

1 Introduction to Spring Essentials

- Why Spring
- Configuration using Spring
- Bean creation
- Data Management

2 Spring Boot Introduction

- Introduction to Spring Boot Features
- Value Proposition of Spring Boot
- Creating a simple Boot application using Spring Initializr website

3 Spring Boot Dependencies, Auto-configuration, and Runtime

- Dependency management using Spring Boot starters
- How auto-configuration works
- Configuration properties
- Overriding auto-configuration
- Using CommandLineRunner

4 JPA with Spring and Spring Data

- Quick introduction to ORM with JPA
- Benefits of using Spring with JPA
- JPA configuration in Spring
- Configuring Spring JPA using Spring Boot
- Spring Data JPA dynamic repositories

5 Spring MVC Architecture and Overview

- Introduction to Spring MVC and request processing
- Controller method signatures
- Using @Controller, @RestController and @GetMapping annotations
- Configuring Spring MVC with Spring Boot
- Spring Boot packaging options, JAR or WAR

6 Rest with Spring MVC

- An introduction to the REST architectural style
- Controlling HTTP response codes with @ResponseStatus
- Implementing REST with Spring MVC, @RequestMapping, @RequestBody and @ResponseBody

- Spring MVC's HttpMessageConverters and automatic content negotiation

7 Spring Security

- What problems does Spring Security solve?
- Configuring authentication
- Implementing authorization by intercepting URLs
- Authorization at the Java method level
- Understanding the Spring Security filter chain
- Spring security testing

8 Actuators, Metrics and Health Indicators

- Exposing Spring Boot Actuator endpoints
- Custom Metrics
- Health Indicators
- Creating custom Health Indicators
- External monitoring systems

9 Spring Boot Testing Enhancements

- Spring Boot testing overview
- Integration testing using @SpringBootTest
- Web slice testing with MockMvc framework
- Slices to test different layers of the application

Contact

If you have questions or need help registering for this course, click [here](#).



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