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.

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
- Utilize Spring Boot enhancements to testing
- Use Spring Security to secure Web and REST endpoints
- Enable and extend metrics and monitoring capabilities using Spring Boot actuator
- Leverage advance configuration capabilities

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
- Private Training
- On Demand
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 – A Closer Look
   • Dependency management using Spring Boot starters
   • How auto-configuration works
   • Configuration properties
   • Overriding auto-configuration
   • Using CommandLineRunner

4 Spring Boot – Spring Data JPA
   • 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 Web Applications with Spring Boot
   • 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 RESTful Application with Spring Boot
   • An introduction to the REST architectural style
   • Controlling HTTP response codes with @ResponseStatus
   • Implementing REST with Spring MVC, @RequestMapping, @RequestBody and @ResponseBody

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

8 Securing REST Application with 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

9 Actuators, Metrics and Health Indicators
   • Exposing Spring Boot Actuator endpoints
   • Custom Metrics
   • Health Indicators
   • Creating custom Health Indicators
   • External monitoring systems

Contact
If you have questions or need help registering for this course, click here.