vmware LEARNING

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
- Spring MVC's HttpMessageConverters and automatic content negotiation

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.

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