Spring Boot Developer

Building on the benefits of the Spring framework, Spring Boot represents the next chapter in Java development. Spring Boot's opinionated approach removes much of the boilerplate and configuration that characterizes Spring, making development faster and deployment easier.

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

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

PIVOTAL TRAINING APPROACH

Upon completion of this course, participants will understand how Spring Boot enhances the following:

- Describe the benefits provided by Spring Boot
- Initialize a project using Spring Boot Starters
- Leverage Spring Boot's auto configuration features to enable JDBC setup and initialization
- Create simplified backing-store solutions using Spring Data and 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

SKU
EDU-1100

DELIVERY METHODS
Public (classroom-based and virtual)
Private, onsite

DURATION
Two days of instructor-led training

PREREQUISITES
A good working knowledge web application development using Java and an IDE.
Basic understanding of Spring: Java Config, component-scanning, Spring driven testing and Spring data-management (*JdbcTemplate*, *@Transactional*).
Experience using Java, Git, and a build tool (Maven or Gradle).

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

MORE INFORMATION
On-site training is also available for customers who prefer to bring a Pivotal Certified Instructor to their own facilities For more information about on-site classes, contact us at
pivotal.io/training/contact

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COURSE MODULES

REVIEW OF SPRING ESSENTIALS

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

SPRING BOOT INTRODUCTION

- Introduction to Spring Boot
- Value Proposition of Spring Boot
- High-level Spring Boot features
- Creating a simple Boot application using Spring Initializr web-site

SPRING BOOT DEPENDENCIES, AUTO-CONFIGURATION AND RUNTIME

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

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

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

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

SPRING SECURITY

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

ACTUATORS, METRICS AND HEALTH INDICATORS

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

SPRING BOOT TESTING ENHANCEMENTS

- Spring Boot testing overview
- Integration testing and slices
- Slices to test different layers of the application

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TERMS AND CONDITIONS

By procuring these services, Customer agrees that the terms and conditions set forth here: https://pivotal.io/training/ terms are incorporated by reference into this Training Brief and shall govern the provision of Pivotal's Services herein, unless Customer has a signed applicable agreement with Pivotal.

You may not record the training in any medium, nor may you reproduce, copy, or distribute any Course Materials provided pursuant to or in conjunction with the Training Services. Pivotal will determine the personnel assigned to perform the Training Services.

INSTRUCTOR-LED TRAINING

Delivery. These courses may be delivered in-person or online, and can be purchased pursuant to a Purchase Order Cancellation Policy.

By Pivotal. Pivotal reserves the right to cancel or reschedule any instructor-led class. If a cancellation or reschedule is necessary, Pivotal will make every effort to notify you at least 10 business days in advance. Unfortunately, last-minute cancellations and rescheduling sometimes require this notification period to be less than 10 business days. Please consider this when making your travel plans. Pivotal will not, in any way, be held responsible for any costs, including loss of airfare or other transportation costs, hotel expenses, or other damages that you may incur in the event that Pivotal cancels or reschedules a class. Pivotal will refund the tuition fee only.

By You. Instructor-led private training course fees are 100% refundable if Pivotal receives written notice of cancellation at least 10 business days prior to the start date of the class. If notice is received within 1-9 days prior to the start date, 50% of the registration fees will be refunded. A refund will not be issued if notice is received on the course start date. Cancellations must be submitted in writing to education@pivotal.io. Private course attendees may transfer their enrollment with written consent by Pivotal by contacting education@pivotal.io.

Expiration Policy. Instructor-led public training course entitlement expires within 12 months from date of purchase (if purchased online), or 12 months from date of invoice (if purchased pursuant to a Purchase Order), after which You will not be entitled to a refund.

BUSINESS HOURS

Training Services shall be performed by Pivotal from 9:00 A.M. until 5:00 P.M. in the local time zone where the Training Services are being performed by Pivotal, Monday through Friday excluding local statutory holidays (for example, within the State of California for Pivotal's US employees), and any additional holidays that Pivotal grants to its employees, a list of which can be provided by Pivotal to you prior to the commencement of Training Services.

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