

## Spring Core Training Plus (SCTP)

**ID** SCTP **Price** CHF 3,250.—(excl. VAT) **Duration** 4 days

### Who should attend

Application developers who want to deepen their understanding of Spring and Spring Boot with practical experience and a focus on the fundamentals.

### Prerequisites

Some experience as a developer with Java, an IDE (Eclipse, STS or IntelliJ) and build tools such as Maven or Gradle.

### Course Objectives

By the end of the course, you should have acquired the following knowledge and skills:

- Configure Spring using Java configuration and annotations, understand and use dependency injection and properties
- Understand aspect-oriented programming (AOP) with Spring and use it for application development
- Integration test Spring applications with JUnit 5
- Spring Data Access – select and apply Spring JDBC, JPA, and Spring Data according to appropriate criteria
- Understand Spring Transaction Management and configure it according to practical criteria
- Set up a Spring Boot application
- Know and use Spring Boot simplifications and conventions: autoconfiguration, Spring Boot Starter, dependencies, managing properties, and the build process
- Create a REST application with Spring Boot, an embedded web server, and fat JARs or classic WARs while adhering to REST principles
- Implement REST client applications using RestTemplate, RestClient, and WebClient, and select them according to appropriate criteria
- Understand and use Spring Boot extensions for testing
- Spring Security: authentication, authorization, password encryption, database storage of user credentials Configure, customize, implement, and test an OAuth2 resource server with JSON Web Token (JWT)
- Enable and extend metrics and monitoring functions with Spring Boot Actuator

### Course Content

- Introduction to Spring: Principles and Definition
- Spring Java Configuration, Annotation-Based Configuration, Dependency Injection
- BeanFactory, Dynamic Proxies, Resource Abstraction: The Cornerstones of Spring
- Advanced Spring: How the Spring Application Context Works Internally
- Aspect-Oriented Programming for Application Developers
- Testing a Spring-Based Application
- Data Access and JDBC Abstraction with Spring
- Database Transactions with Spring
- Introduction to Spring Boot
- Spring Boot Dependencies, Autoconfiguration, Properties, and Build
- JPA with Spring, SpringBoot, and Spring Data
- Spring MVC for Dynamic Web Applications and REST
- REST with Spring MVC: A full backend application
- Spring Boot Test Improvements
- Spring Security: Authentication, Authorization, OAuth2 Resource Server with JWT
- Actuators, Metrics, and Health Indicators

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### Training Centres worldwide



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