trainitek

Spring Boot

Hands-on training in Spring Framework and Spring Boot. This course is for programmers new to this technology who want to get started quickly in the Spring ecosystem. It covers the most important topics used in real projects and explains some of the more advanced concepts.

Audience: Developers, Team Leads
Duration: 2-3 days

- 1 day: Introduction, Spring Core, Components, Configuration
- 2 day: Application Events, Additional features, Data access, Web Development
- 3 day: Testing, AOP, Logging and Monitoring, Containerizing Spring Boot application

Format: 60% workshop / 40% lecture

Training program

1. Introduction
    a. Why choose Spring Boot in my project?
    b. Spring Ecosystem
2. Spring Core
    a. Framework Architecture
    b. Dependency Injection
    c. Inversion of Control
3. Components
    a. Stereotypes
    b. Scopes
    c. Life cycle
4. Configuration
    a. Code-based configuration
    b. File-based configuration
    c. Profiles
    d. Auto-configuration
5. Application Events
6. Additional features
    a. SPeL expressions
    b. Scheduling
    c. I18n
    d. Asynchronous operations

7. Data access
    a. JDBC template
    b. Spring Data
        i. Introduction
        ii. JDBC
        iii. Jpa / Hibernate
    c. Transaction management
8. Web development
    a. Rest Controllers
    b. Hypermedia support (HATEOAS)
    c. WebFlux
9. Testing
    a. Unit tests setup, Spock, Junit
    b. Integration tests setup
        i. Integration with database
        ii. Testing application services
        iii. Testing REST
        iv. Test execution listeners
    c. Profiles
10. AOP - Aspect Oriented Programming
11. Logging and Monitoring
    a. Logging
    b. Actuator
    c. Metrics
12. Containerizing Spring Boot application
    a. Building Docker images
        i. Using Dockerfile
        ii. Using maven plugins (Spring, Jib, Buildpack)
    b. Optimizing size of Docker images