

Course code: **SPRING**

Course title: **Spring Framework**

Days: 2

Description:

Course intended for:

The training is intended for Java programmers wishing to develop applications on the basis of IoC container and basic API provided by Spring Framework.

Course objective:

The training objective is to acquire the skills of configuration and use of the IoC Spring Framework container.

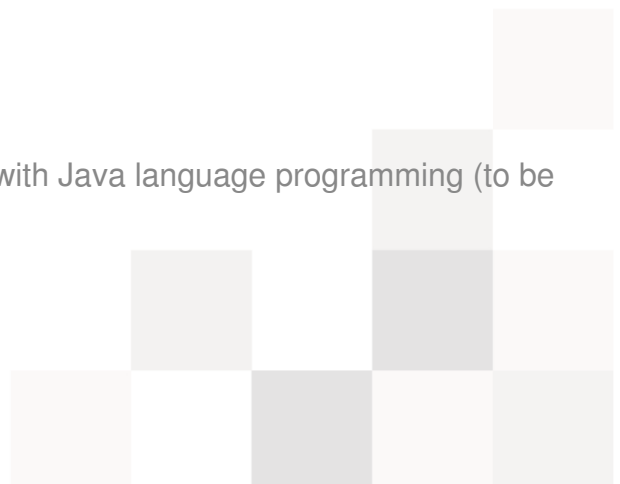
In particular, the participants are to:

- Get familiar with the capabilities of Spring Framework
- Get familiar with the Dependency Injection pattern and learn to use it with the IoC Spring Framework container
- Find out how to configure the components from the XML Spring Framework descriptor level and using Java annotations
- learn to use Spring Expression Language
- get familiar with advanced issues, such as AOP
- find out how to test business components
- find out how to integrate applications in Spring Framework using webservice.

Requirements:

The training participants are required to be familiar with Java language programming (to be learned at the course J/JP).

Course parameters:



2*8 hours (2*7 net hours) of lectures and workshops (with a visible emphasis on workshops).

Group size: no more than 8-10 participants.

Course curriculum:

1. Introduction

- A review of Spring Framework modules
- IoC container
- Data layer: Hibernate
- Web layer: Spring MVC and webservices
- AOP
- Testing

2. IoC container

- IoC pattern
- Application structure in Spring Framework
- Container launching
- Defining of beans
 - Constructors, factories
 - Simple properties,
 - Complex properties, collections
 - Combining of collections
 - Inheritance
 - p-namespace
- Specification of dependencies



- Lazy initialization
- Autowiring
- Resources
- Cooperation with container
- Bean range
 - singleton, prototype, request, session
 - own ranges
- Method injection
- Bean life cycle and listening
- Closing of container
- Separation of configuration parts to property files
- Location
- Events
- Injection of resources

3. Data validation and conversion in Spring

- Validator interface
- Replacement of validation error codes with messages
- Properties editors
- Type conversion
- Field formatting
- Specification of limitations

4. Spring Expression Language

- Review of capabilities



- Syntax
- Use

5. Basics of Spring AOP

- Basic terminology: aspect, join point, advice, pointcut
- Action types
- Configuration

6. Component testing

7. Introduction to webservices

- JAX-WS
- Hessian/Burlap

REST

