Mastering Spring 4.2 & The Enterprise (TT3374)

Duration: 5 Days      Course Code: GK3805      Delivery Method: Virtual Learning

Overview:

Mastering Spring 4.2 and the Enterprise is a five day in-depth course geared for experienced Java and Spring developers who need to understand how to use Spring in conjunction with the enterprise resources and technologies available in today’s systems and architectures. The course covers a wide spectrum of topics, so students should have a basic understanding of those technologies and resources prior to taking this class.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

This an intermediate level and beyond Java/Spring training course, designed for developers who need to understand how and when to use Spring applications within the enterprise. Attendees should have practical basic Java development experience as well as an understanding of the Spring framework. Attendees should have attended TT3328: Spring 4.2 Essentials prior to taking this class.

Objectives:

- Core Spring Framework (including Inversion of Control, Dependency Injection, and Aspect-Oriented Programming)
- Advanced Framework Features and Projects (including Spring Boot, Handling Application Events, and Spring Security)
- Spring and Persistence (including Spring DAOs, Transactions, and Spring Data)
- Spring and the Web (including Spring MVC and Web Flow supporting WebSockets, HTML5, and asynchronous processing)
- Integrating Spring into the Enterprise (including Spring Integration working with JMS and other remoting options)
- Spring Security (including interceptors, authentication managers, access decision managers, and filters)
- Spring Remoting (working with RMI, Hessian, Burlap, and HttpInvoker)
- Spring-WS (including web service endpoints, marshalling/unmarshalling, and gateways)
- Spring and REST (including support for RESTful services)
- Spring and EJBs (working with various types of local and remote EJBs)
- Spring and Testing (working with JUnit and Mock Objects)

Prerequisites:

Students should have basic development skills and a working knowledge in the following topics, or attend these courses as a pre-requisite:

- TT3328: Spring 4.2 Essentials
Content:

Session: Review of Spring 4.2
- Lesson: The Spring Framework
- Spring Architecture
- Dependency Injection
- Spring DI Container
- Configuration Options: XML, Annotations, or JavaConfig

Session: Advanced Spring Persistence Topics
- Lesson: Data Access and Transactions
- Transaction Support
- Approaches to Transaction Management
- Transaction Bound Events
- Lesson: Spring Caching
- Enabling Caching
- Configuring using Annotations
- Configuring using XML
- Support for JCache
- Caching Resolver
- Lesson: Spring and ORMs
- Configuring Hibernate in Spring
- Transaction Management
- Open Session in View
- Spring and Java Persistence API
- Lesson: Spring Data
- Overview of Spring Data
- Extending JDBC
- Automatic JPA Repositories
- Spring and NoSQL Databases
- Spring and Hadoop

Session: Spring Integration
- Lesson: Enterprise Integration
- Loose Coupling in the Enterprise
- Core Integration Style
- Enterprise Integration Patterns – The Parts
- Lesson: Spring Messaging
- spring-messaging Module
- Message
- Message Channel
- Message Handler
- Lesson: Basic Integration
- Messaging in Spring Integration
- Messages in Spring Integration
- Channels in Spring Integration
- Pollers
- Lesson: Advanced Integration
- Channel Adapter
- Messaging Gateway
- Service Activator
- Routers
- Filters
- Splitters and Aggregators
- Message Transformer

Session: Spring and JMS
- Lesson: JMS Overview (Optional)
- Java Message Service (JMS) Architecture
- JMS Queue Architecture
- Topic Architecture
- Message Consumption
- JMS Messages
- Lesson: Spring and JMS
- Spring JMS Access
- JmsTemplate Methods
- Spring-Messaging and JMS
- Message Converters
- MessagePostProcessor
- Registering using @JmsListener

Session: Spring Web Services
- Lesson: Spring Web Services
- Spring-WS
- MessageDispatcherServlet
- The Spring-WS Beans Config File
- Endpoints and Endpoints
- Lesson: Implementing Spring-WS
- Server-Side Web Service Components
- Spring Endpoints
- End Point Interceptors
- Spring-WS Client
- WebServiceTemplate
- Spring-WS Web Service
- Marshall Interface
- UnMarshaler Interface

Session: Working with Enterprise Services
- Lesson: Spring Enterprise
  - ServicesSpring and JNDI
  - Injecting JNDI Resources
  - Timers
  - ScheduledTimerTask
  - Quartz Jobs
  - Spring and JMX

Session: Spring Remoting
- Lesson: Spring Remoting
- Spring Remoting Core Concepts
- Service Exporter and Proxy
- Sample Service Bean Interface
- Remoting with Java Serialization: RMI
- Spring Remoting in the Web Container
- Hessian and Burlap Remoting
- HttpInvoker Remoting

Session: Enterprise Spring Security
- Lesson: Enterprise Spring Security
- Spring Security Framework
- Security Interceptors – Function and Types
- Performing Authentication
- Wiring in Encoders and Salts
- Access Decision Managers
- Votes and Voters

Session: Introduction to Spring Batch
- Lesson: Spring Batch
- Job Repository
- Job and Joblnstance
- ItemReaders and ItemWriters
- Job Launcher and Listeners
- Job Inheritance and Restartability
- Tasklet Oriented
- Scheduling Batch Jobs
- Spring Batch Admin
Further Information:
For More information, or to book your course, please call us on 353-1-814 8200
info@globalknowledge.ie
www.globalknowledge.ie

Global Knowledge, 3rd Floor Jervis House, Millennium Walkway, Dublin 1