



Suggested Topics of Study for the Spring Framework Certification Examination

1. Spring Basics

- Goal of the Spring Framework
- Spring's role in enterprise application architecture
- Web application development support
- Enterprise application development support
- The Spring triangle
- Writing bean definitions
- Configuring objects
- Going beyond constructor instantiation
- Creating an application context
- The lifecycle of a Spring application context
- Bean Definition Inheritance
- Inner Beans
- Property Editors
- Bean Naming
- Importing Configuration Files
- Custom XML Namespace
- The Util Namespace
- Test Driven Development
- Unit Testing vs. Integration Testing
- Unit Testing with Stubs
- Unit Testing with Mocks
- Integration Testing with Spring
- Motivations of Spring Security
- Spring Security in a Web Environment
- Configuring Web Authentication
- Configuring Web Authorization
- Using Spring Security's Tag Libraries



2. Aspect Oriented Programming with Spring
 - What Problem Does AOP Solve?
 - Core AOP Concepts
 - Defining Pointcuts
 - Implementing Advice

3. Spring JDBC Support
 - The role of Spring in enterprise data access
 - Spring resource management
 - Spring data access support
 - Data access in a layered architecture
 - Common data access configurations
 - Spring's JdbcTemplate
 - Configuration
 - Query execution
 - Working with result sets
 - Exception handling
 - ORM Fundamentals
 - Benefits of O/R Mapping
 - Configuring a Hibernate SessionFactory
 - Spring's HibernateTemplate
 - Implementing Native Hibernate DAOs

4. Transaction Management
 - Why use Transactions?
 - Local Transaction Management
 - Programmatic JTA
 - Declarative Transactions
 - Spring Transaction Management
 - Transaction Propagation



5. Spring with JNDI and JMS
 - Configuring JMS Resources with Spring
 - Spring's JmsTemplate
 - Sending Messages
 - Receiving Messages

6. Spring with JMX
 - JMX Architecture
 - Goals of Spring JMX
 - Spring JMX (server)
 - Spring JMX (client)

7. Spring WebServices
 - Why use or build a web service?
 - Best practices for implementing a web service
 - Endpoint mappings
 - Object-XML marshalling
 - Client access

8. Spring Remoting
 - Goals of Spring Remoting
 - Remoting Overview
 - Supported Protocols
 - RMI
 - EJB
 - HttpInvoker
 - Hessian/Burlap



9. Web Applications with Spring MVC and Web Flow
 - Goals of effective web application architecture
 - Bootstrapping a Spring-based application
 - Accessing a Spring-based application
 - Overview of Spring MVC
 - Spring MVC Request Processing Lifecycle
 - Key Spring MVC Artifacts
 - DispatcherServlet
 - Handlers
 - Handler Mappings
 - Views
 - Available HandlerMapping Strategies
 - Chaining HandlerMappings
 - Handler Method Mapping Techniques
 - Resolving Handler Exceptions
 - Attaching Handler Interceptors
 - Spring MVC Form Processing APIs
 - DataBinder
 - Validator
 - Form UI Tag Library
 - SimpleFormController
 - State and Flow Management
 - Defining States and Transitions
 - Defining the View
 - Actions
 - Subflows

10. Security
 - Motivations of Spring Security
 - Spring Security in a Web Environment
 - Configuring Web Authentication
 - Configuring Web Authorization
 - Using Spring Security's Tag Libraries