

# Oracle Development Kit for Spring

## Introduction

Thank you for downloading version 1.0 of the Oracle Development Kit for Spring (ODK4Spring). The Development Kit is intended to help you develop, deploy and manage Spring-based enterprise Java applications on the Oracle Fusion Middleware stack. We know you will have a great experience using Spring on the award-winning Oracle JDeveloper and Oracle Application Server 10g.

Creating high-quality applications in a rapid fashion requires the freedom to choose technologies, components and frameworks from a variety of commercial and open source sources. As a result, developers are increasingly using components of Oracle Fusion Middleware with Spring's leading open source application development framework. Spring's layered architecture allows developers to pick and choose pieces of the framework, which provides optimal flexibility without sacrificing performance or ease of development.

## Getting Started

The Oracle Development Kit for Spring includes the following:

- **The Spring Framework 2.0:** The latest distribution of Spring's lightweight, open source application development framework
  - The ODK4SPRING ships with a number of Spring Framework libraries required to run the sample applications provided in the Development Kit. The files are from the Spring distribution version 2.0.4, the most current production version at the time this Kit was created.
  - You can download the latest Spring Framework release from <http://www.springframework.org/>
- **Oracle JDeveloper Extension for Spring:** Provides wizards and full editor support for both Spring 1.x and 2.0-style definitions complete with code insight, auto-complete and XML validation
  - The Oracle JDeveloper Extension for Spring is included in this Kit in the /jdev directory, and can also be downloaded through the automatic update utility provided with JDeveloper.

For more information about the Spring extension please see either the JDeveloper-Spring-Extension-Overview.pdf packaged with this Kit, or <http://www.oracle.com/technology/products/jdev/htdocs/partners/addins/exchange/spring/spring-extension.html> online

- **Oracle Developer Depot:** A free, Spring-based developer productivity tool that dramatically simplifies the way Java developers find, configure and provision Java applications. ODD is packaged in the /odd directory of the Kit as a Java EE Archive (EAR) that can be easily deployed to the Oracle Application Server or OC4J standalone server instance.
- **Pre-packaged Sample Applications and Tutorials:** A set of sample applications intended to help developers build and deploy Spring-based applications on OC4J. Samples are available in the Samples directory.

## Spring-Based Sample Applications

Oracle provides a number of Spring based applications for you to explore and learn from. An Apache Ant-based build file that will build all the samples is included in the root of the /samples directory.

- Spring-ized Version of the SRDEMO Application
  - This application presents the SRDEMO application that should be familiar to developers using OC4J 10.1.3 re-written in Spring.
- Spring PetClinic
  - The classic Spring sample which includes support for TopLink Essentials.
- How-To: Using EJB 3.0 with Spring
  - This example application demonstrates using EJB 3.0 Session beans from Spring Beans.
- How-To: Using EJB 3.0 and Java Persistence API with Spring in OC4J
  - This example application demonstrates Oracle's support for Spring with EJB 3.0 Session beans, container-managed entity manager with Spring's JpaTemplate.
- DevX: SpringMVC Example - Trading Application
  - This sample illustrates how to use the Spring MVC framework to build a trading application.
- SourceLabs - Sash Starter Kit 2.0
  - Demonstrates using Spring with Axis for AJAX, Struts for MVC, and Hibernate for data access.

## White Papers and Documentation Included With ODK4SPRING

The Development Kit includes the following documentation to help you learn about Oracle's support for Spring.

- White Paper: Managing Spring Beans (OC4J-Spring-JMX.PDF)
  - This paper provides an overview of the Spring Framework's support for dynamically exposing Spring Beans as managed resources (MBeans) in a JMX

environment. Exposing Spring Beans with Spring JMX allows them to be accessed and managed as standard MBeans.

- How-To: Using JTA with Spring in OC4J (OC4J-Spring-JTA.PDF)
  - Shows you how to develop a simple Spring enabled JTA application, then use the OC4JJtaTransactionManager to create named transactions, specify per-transaction isolation level, and properly suspend and resume transactions.
- How-To: Using EJB 3.0 and Java Persistence API with Spring in OC4J (OC4J-Spring-JPA-EJB.PDF)
  - Illustrates development of using a simple Spring-enabled EJB 3.0 Session Bean and JPA Integration with Spring on Oracle Application Server 10g 10.1.3.1

## Using ODK4SPRING

ODK4SPRING ships with a number of sample applications highlighting different features and capabilities of Spring and Oracle products.

These sample applications can be accessed and run in the following ways:

- Using Oracle Developer Depot. See the ODD Installation Guide packaged with the Kit for details.
- Using the Ant build scripts provided with each sample, which build the application and deploy it to OC4J
- Using Oracle JDeveloper with the provided JDeveloper project files (\*.jpr). *(Oracle JDeveloper is Oracle's free Java IDE and can be downloaded from XYZ. Describe what needs to be done next, I assume one can deploy into the local OC4J container in Jdev or to a remote instance? Do we support both? We can keep it simple if the remote case creates additional effort.)*

## Installation Instructions

Note that you will need the following:

- Oracle Containers for Java EE (OC4J) 10.1.3.2 from <http://www.oracle.com/technology/software/products/ias/htdocs/utlsoft.html>
  - Optionally Oracle JDeveloper IDE
  - An Oracle Database, such as Oracle Express Edition (XE)
1. Unzip ODK4SPRING into a directory of your choice
  2. After unzipping the Kit, you will find the following content in your installation directory:
    - \ODK4SPRING\ODD\...: Oracle Developer Depot
    - \ODK4SPRING\Samples\ : List all sample apps. This dir should contain all sample app zip files, JDeveloper project files, and how-tos for these samples, maybe this ends up being \ODK4SPRING\Samples\Sample1, \ODK4SPRING\Samples\Sample2, etc.
    - \ODK4SPRING\Docs: List all papers we ship as part of the Kit and describe them very briefly

- \ODK4SPRING\Misc: the Jdev extension for Spring (if possible), and whatever other files we need to provide
- 3. If you plan to use ODD for automatic discovery and deployment of available Spring sample applications, please follow the installation instructions (link to doc on docs directory). Once ODD is up and running it will automatically identify available applications on Oracle Technology Network OTN, download them onto your machine and install and configure them with OC4J.
- 4. If you prefer to deploy the applications manually to OC4J, please refer to the How-to guides and sample application archives in the Samples directory.
- 5. All sample applications come with source code and project files for Oracle JDeveloper, Oracle's free Java IDE.
- 6. All samples include a JDeveloper project file that can be used to launch the project into the JDeveloper IDE automatically.

## Support

Please post questions related to Spring development with Oracle Application Server / OC4J to the following newsgroup: <http://forums.oracle.com/forums/forum.jsp?forum=46>

## Links to Additional Resources

The Spring Framework

<http://www.springframework.org>

<http://forum.springframework.org>

Community Links

[http://en.wikipedia.org/wiki/Spring\\_Framework\\_\(Java\)](http://en.wikipedia.org/wiki/Spring_Framework_(Java))

<http://www.nabble.com/SpringFramework-f13209.html>

<http://sourceforge.net/projects/springframework>

<http://swik.net/springframework+Development>