

**Oracle® Insurance Calculation
Engine (OICE)**

WebLogic Deployment

Installation Instructions – Step 2

Version 9.7.0.0

Documentation Part Number: E51103-01

December, 2013

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INTRODUCTION

The Oracle Insurance Calculation Engine (OICE) application and the Oracle Insurance Rules Palette form a solution for configuring, managing and processing policy data. Both applications, along with the Web Application Utility, must be installed and then configured to work together.

This install guide will cover step two of the installation process, in which the OICE application and the Web Application Utility are configured using Web Logic. Please refer to the OICE database installation instructions in the documentation library provided with the release to ensure the database is set up correctly.

CUSTOMER SUPPORT

If you have any questions about the installation or use of our products, please visit the My Oracle Support website: <https://support.oracle.com>, or call (800) 223-1711.

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

PREREQUISITES

Before beginning the installation steps, you must have the following components:

- A server with a Windows or Linux operating system.
- WebLogic 11g (Version 10.3.6.0). It is recommended that the Oracle 1.6.0.41 JDK is used. This can be downloaded from the Oracle Technology Network.
- Administrative rights to the server.
- Oracle Insurance Calculation Engine v9.7.0.0 Media Pack from The Oracle Software Delivery Cloud.
- Oracle Insurance Rules Palette V9.7.0.0 Media Pack from The Oracle Software Delivery Cloud. The Web Application Utility files are included in this Media Pack in the PaletteConfig folder.

INITIAL SYSTEM CONFIGURATION

Database Driver Setup

1. Create a directory on the WebLogic installation machine to store database driver jar files for OICE (i.e., /opt/oracle/db_drivers/ or C:\oracle\db_drivers\).
2. Copy the database drivers for your database into this directory.
 - **Oracle 11.2** – The necessary driver, **ojdbc-11.2.0.2.jar**, is included in the **libs** directory of the OICE Media Pack.
 - **Microsoft SQL Server 2008** – download the latest **jtds.jar** file.
 - a. Download **jtds** from the following site: <http://sourceforge.net/projects/jtds/>.
 - b. Click the green **Download** box on the right side of the screen. A pop-up window will open.
 - c. Save the download .zip file to the lib directory you created (i.e., /opt/oracle/lib).
 - d. Open the downloaded .zip file and extract the file **jtds-1.2.6** from the root of the .zip file.
 - e. Rename the file **jtds.jar**.
 - **IBM DB2** – The two necessary .jar files (**db2jcc** and **db2jcc_license_cu**) are included with the purchase of the DB2 software. These files are not available for download. Contact your IT department if you need assistance locating these files.

Note: Each version of DB2 requires specific drivers. The files above correspond with DB2 9.7.

OICE Setup

1. Create a directory on the WebLogic server to store various configuration files for OICE (i.e., /opt/oracle/oice/ or C:\oracle\oice\).
2. Create subdirectories inside the directory from Step 1 called **conf**, **libs** and **war**.
3. Copy **OICE-weblogic.war** file from the OICE distribution zip file into the **war** subdirectory and rename to **PASJava.war**

Note: Extension classes/jars developed using OICE extension interfaces should be copied to OICE-weblogic.war/WEB-INF/lib before copying **OICE-weblogic.war** to the war subdirectory. This is required for the extensions to work.
4. Copy the following files from the **properties files** directory into the **conf** directory:
 - coherence-cache-config.xml
 - coherence-config.xml
 - PAS.properties
5. Copy the following files from the **ext jars** directory into the **libs** directory:
 - antlr-3.4.jar
 - commons-collections-3.2.1.jar
 - commons-logging-1.1.1.jar
 - el-api-2.2.jar
 - log4j-1.2.16.jar
 - spring-instrument-3.0.6.RELEASE.jar
6. Download aspectj-1.6.11.jar from <http://www.eclipse.org/downloads/download.php?file=/tools/aspectj/aspectj-1.6.11.jar>
 1. Open aspectj-1.6.11.jar with an unzipping software and retrieve aspectjrt.jar and aspectjweaver.jar from the lib folder.
 2. Copy aspectjrt.jar and aspectjweaver.jar into **libs** sub-directory.
7. Use a text editor to open the PAS.properties file that you just copied to the server. The PAS.properties file contains properties for Oracle, SQL Server, and DB2 database types, with the Oracle settings active by default. The inactive settings are commented out with a '#' character at the start of each line. To change a setting, remove the '#' from the required property setting, and insert it at the beginning of the setting you want to de-activate.
8. The properties setting must match the type of database being used. The two properties that are used to do this are:
 - application.databaseType
 - jpa.databasePlatform

Note: Refer to the System Properties document in the Oracle Insurance Calculation Engine Documentation Library on the OTN for a complete list of all properties and allowed values.

9. Identify the default locale in the PAS.properties file. The locale selected will determine the translation that is loaded in the database for OICE when it launches.
 - application.defaultLocale
10. If using an Oracle or Microsoft SQL Server database, please skip this step. If using a DB2 database, you will need to modify the PAS.properties file to include configuration for case-insensitive searching:
 - Modify the PAS.properties file to include the following line:
search.field.text.caseInsensitive=true

Web Application Utility Setup

1. Create a directory on the WebLogic server to store various configuration files for the Web Application Utility (i.e., /opt/oracle/paletteconfig/ or C:\oracle\paletteconfig).
2. Create subdirectories inside the directory from Step 1 called **conf**, **libs**, **uploads** and **war**.

Note: Grant read-write-execute permissions on all these directories.

3. Copy the **PaletteConfig-waswl.war** file into the **war** subdirectory and rename to **PaletteConfig.war**.
4. Copy the **PaletteWebApplication.properties** file into the **conf** subdirectory.
5. Open the **PaletteWebApplication.properties** file and edit the **download.dir** property to point to the **uploads** subdirectory created in Step 2.

CONFIGURING WEBLOGIC

To configure WebLogic use the WebLogic Administration Console. By default the port number is 7001 and `/console` is the context root. Example: <http://hostname:7001/console>

Note: When selecting a menu option in the WebLogic Administrative Console, the names may differ depending on whether WebLogic is used in development mode or production mode.

Create a Machine

1. Select **Environment>Machines>New**.
2. Enter the name for the machine.
3. If the OS is not UNIX, select **Other** from the **Machine OS** drop-down list.
4. Click **Next**.
5. Click **Finish**.

Create and Configure OICE Server

Important: OICE and the Web Application Utility can exist on the same WebLogic server if necessary.

Create the OICE Server

1. Select **Environment>Servers**.
2. Click **New**.
3. Enter OICE for the name of the server.
4. Set the listener port to a port that is not used by any other application.
5. Click **Next**.
6. Select **Finish**.

Add the OICE Server to the Machine

1. Select **Environment>Machines**.
2. Select the machine that was created.
3. Select the **Servers** tab.
4. Select **Add**.
5. Select the name of the OICE server created from the **Select a server** drop-down box.

6. Click **Finish**.

Configure the OICE Server

1. Select **Environment>Servers**.
2. Select the OICE server that was created.
3. Select the **Server Start** tab.
4. Specify the class path. The path names will vary depending on the configuration.

```
/opt/oracle/Middleware/wlserver_10.3/server/lib/weblogic.jar:/opt/oracle/oice/conf:/opt/oracle/oice/libs/antlr-3.4.jar:/opt/oracle/oice/libs/commons-collections-3.2.1.jar:/opt/oracle/oice/libs/commons-logging-1.1.1.jar:/opt/oracle/oice/libs/el-api-2.2.jar:/opt/oracle/oice/libs/log4j-1.2.16.jar:/opt/oracle/Middleware/wlserver_10.3/server/lib/consoleapp/APP-INF/lib/jstl.jar:/opt/oracle/oice/libs/aspectjrt.jar:/opt/oracle/oice/libs/aspectjweaver.jar
```

Note: If using WebLogic on Windows, then the separator for files/directories in the classpath is a semicolon.

5. Enter the following arguments. The path names will vary depending on the configuration. The memory settings can be altered for your needs as well. .

```
-server -Xms512M -Xmx2048M -XX:PermSize=128M -XX:MaxPermSize=512M
-javaagent:/opt/oracle/oice/libs/spring-instrument-3.0.6.RELEASE.jar
-Dtangosol.coherence.cacheconfig=/opt/oracle/oice/conf/coherence-cache-config.xml
-Dtangosol.pof.config=com-adminserver-pas-web-pof-config.xml
-Dtangosol.coherence.override=/opt/oracle/oice/conf/coherence-config.xml
-Dweblogic.wsee.skip.async.response=true
```

6. Select **Save**.

Create and Configure Web Application Utility Server

Create the Web Application Utility Server

1. Select **Environment>Servers**.
2. Click **New**.
3. Enter PaletteConfig for the name of the server.
4. Set the listener port to a port that is not used by any other application.
5. Click **Next**.
6. Select **Finish**.

Add the Web Application Utility Server to the Machine

1. Select **Environment>Machines**.
2. Select the machine that was created.
3. Select the **Servers** tab.
4. Select **Add**.
5. Select the name of the Web Application Utility server created from the **Select a Server** drop-down box.
6. Click **Finish**.

Configure the Web Application Utility Server

1. Select **Environment>Servers**.
2. Select the PaletteConfig server that was created.
3. Select the **Server Start** tab.
4. Specify the class path. The path names will vary depending on the configuration.

```
/opt/Oracle/Middleware/wlserver_10.3/server/lib/weblogic.jar:/opt/oracle/paletteconfig/conf/:/opt/oracle/db_drivers/ojdbc-11.2.0.2.jar
```

Note: The example lists the driver for the Oracle database. Make sure that the classpath refers to the correct drivers for SQL Server or DB2 as needed.

Make sure the classpath points to the correct directory for the Web Application Utility.

5. Enter the following arguments. This will vary depending on the configuration.
`-server -Xms256M -Xmx512M -XX:PermSize=128M -XX:MaxPermSize=256M`
6. Select **Save**.

Create Data Sources

Create the Data Source for ADMINSERVERDS

1. Select **Services> Data Sources for WebLogic 11g (10.3)**.
2. In the configuration section on the right, click **New** and Select **Generic Data Source**.
3. In the **JDBC Data Source Properties** pane that appears:
 - a. Change the Name. This name can be anything, but has to be unique for the entire WebLogic server. If you have more than one OICE instance on the server, then each instance should have a unique name.
 - b. Change the JNDI Name to ADMINSERVERDS. This name cannot be anything other than ADMINSERVERDS.
 - c. Select the Oracle database type.
 - d. Click **Next**.
 - e. Keep the default driver.
4. Select **Next**.
5. Select **Next** again when Transaction options are displayed.
6. In the **Connection Properties** pane:
 - a. Enter the Database Name.
 - b. Enter the Host Name of the database server.
 - c. Enter the Port number of the database server.
 - d. Enter the Database user name. This can be obtained from the database administrator who installed the databases.
 - e. Enter both password entries. This can be obtained from the database administrator who installed the databases.
 - f. Select **Next**.

What is the name of the database you would like to connect to?

Database Name:

What is the name or IP address of the database server?

Host Name:

What is the port on the database server used to connect to the database?

Port:

What database account user name do you want to use to create database connections?

Database User Name:

What is the database account password to use to create database connections?

Password:

Confirm Password:

Figure 1-1: Connection Properties Pane

7. Test the database connection.
8. Select **Next**.
9. In the **Select Targets** pane that appears, check the box for the OICE application server. This links the data source to the server that was created.
10. Select **Finish**.

Create the Data Source for ADMINERVERRESOURCEDS

1. Select **Services> Data Sources**.
2. In the configuration section on the right, click **New** and then **Select Generic Data Source**.
3. In the **JDBC Data Source Properties** pane that appears:
 - a. Change the Name. This name can be anything, but has to be unique for the entire WebLogic server. If you have more than one OICE instance on the server, each instance should have a unique name.
 - b. Change the JNDI Name to ADMINERVERRESOURCEDS.
 - c. Select the database type.
 - d. Select the driver type.
4. Select **Next**.
5. Select **Next** again when Transaction options are displayed.
6. In the **Connection Properties** pane:
 - a. Enter the Database Name.
 - b. Enter the Host Name of the database server.
 - c. Enter the Port number of the database server.
 - d. Enter the Database user name for a readonly user. This can be obtained from the database administrator who installed the databases.
 - e. Enter both password entries. This can be obtained from the database administrator who installed the databases.
 - f. Select **Next**.
7. Test the database connection.
8. Select **Next**.
9. In the **Select Targets** pane that appears, check the box for the OICE application server. This links the data source to the servers that were was created.
10. Select **Finish**.

Create the Data Source for ADMINERVERSEARCHDS

1. Select **Services> Data Sources**.
2. In the configuration section on the right, click **New** and then **Select Generic Data Source**.
3. In the **JDBC Data Source Properties** pane that appears:
 - a. Change the Name. This name can be anything, but has to be unique for the entire WebLogic server. If you have more than one OICE instance on the server, each instance should have a unique name.
 - b. Change the JNDI Name to ADMINERVERSEARCHDS.
 - c. Select the database type.
 - d. Select the driver type.
4. Select **Next**.
5. Select **Next** again when Transaction options are displayed.
6. In the **Connection Properties** pane:
 - a. Enter the Database Name.
 - b. Enter the Host Name of the database server.
 - c. Enter the Port number of the database server.
 - d. Enter the Database user name for a readonly user. This can be obtained from the database administrator who installed the databases.
 - e. Enter both password entries. This can be obtained from the database administrator who installed the databases.
 - f. Select **Next**.
7. Test the database connection.
8. Select **Next**.
9. In the **Select Targets** pane that appears, check the box for the OICE application server. This links the data source to the servers that were was created.
10. Select **Finish**.

Create Data Source for ADMINERVERREADONLYDS

1. Select **Services> Data Sources**.
2. In the configuration section on the right, click **New** and then **Select Generic Data Source**.
3. In the **JDBC Data Source Properties** pane that appears:
 - a. Change the Name to ADMINERVERREADONLYDS.
 - b. Change the JNDI Name to ADMINERVERREADONLYDS.
 - c. Select the database type.
 - d. Select the driver type.
4. Select **Next**.
5. Select **Next** again when Transaction options are displayed.
6. In the **Connection Properties** pane:
 - a. Enter the Database Name.
 - b. Enter the Host Name of the database server.
 - c. Enter the Port number of the database server.
 - d. Enter the Database user name for the readonly user. This can be obtained from the database administrator who installed the databases.
 - e. Enter both password entries. This can be obtained from the database administrator who installed the databases.
 - f. Select **Next**.
7. Test the database connection.
8. Select **Next**.
9. In the **Select Targets** pane that appears, check the box for the OICE application server. This links the data source to the servers that were was created.
10. Select **Finish**.

Deploy OICE Application

1. Using the navigation tree on the left, select **Deployments**.
2. In the configuration section on the right, select **Install**.
3. In the **Install Application Assistant**:
 - a. Locate the **PASJava.war** file.
 - b. Click **Next**.
 - c. For the **Choose targeting style** keep the default of Install this deployment as an application.
 - d. Click **Next**.
 - e. For the **Select deployment targets**, select the checkbox for the server that will host the OICE application.
 - f. Click **Next**.

- g. Change the application name if needed.
- h. Click **Next**.
- i. Select **Finish**.

Deploy the Web Application Utility

1. Using the navigation tree on the left, select **Deployments**.
2. In the configuration section on the right, select **Install**.
3. In the **Install Application Assistant**:
 - a. Locate the **PaletteConfig.war** file.
 - b. Click **Next**.
 - c. For the **Targeting Style** keep the default of **Install this deployment as an application**.
 - d. Click **Next**.
 - e. For the **Deployment Target** select the checkbox for the server that will host the Web Application Utility.
 - f. Click **Next**.
 - g. Change the application name if needed.
 - h. Click **Next**.
 - i. Select **Finish**.

Start the Servers

1. Select **Environment>Servers**.
2. In the configuration section on the right, select **Control** tab.
3. Select the checkbox next to the OICE and PaletteConfig servers.
4. Select the **Start** option.

Important: When configuring the Rules Palette environment use the URL of the PaletteConfig server. The Web Application Utility must always be running in order for users to access the Rules Palette.

TEST THE DEPLOYMENTS

The initial test of the deployment is to confirm that the application presents a login screen when the application URL is opened. Final testing of the OICE deployment must wait until after the Web Application Utility is configured and initial users have been set up.

OICE Deployment

1. Open a new Internet Explorer window.
2. Navigate to <http://hostname:port/PASJava/>.

Note: If you change the context name, use that name in the URL instead of PASJava.

3. Confirm that the login screen appears.

Web Application Utility Deployment

1. Open a new Internet Explorer window.
2. Navigate to <http://hostname:port/PaletteConfig/>.

Note: If you change the context name, use that name in the URL instead of PaletteConfig.

3. Confirm that the Web Application Utility set-up screen appears.