

**Oracle® Insurance Policy
Administration**

WebSphere Deployment

Installation Instructions – Step 2

Version 9.3.1.0

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INTRODUCTION

The Oracle Insurance Policy Administration (OIPA) 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, where the OIPA application and Web Application Utility are configured using IBM WebSphere. Please refer to the OIPA Database Installation Instructions provided in the documentation library to ensure the database is set up correctly.

Prerequisites

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

- A server with a Windows, Linux, Solaris or AIX operating system
- WebSphere Fix Pack 35
- Administrative rights to the server
- Oracle Insurance Rules Palette V9.3.1 Media Pack from E-Delivery. The Web Application Utility files are included in this Media Pack.

INITIAL SYSTEM CONFIGURATION

Create a Directory for the Configuration Files

1. Create a directory on the WebSphere installation machine to store configuration files for OIPA (i.e., /opt/oracle/server1).
2. Copy into this folder the following files from the .zip file downloaded from E-Delivery.

File	Description
PASJava.war	OIPA application file
AdminServerMessages.properties	error message
APEMessages.properties	error message
MathMessages.properties	error message
PAS.properties	application settings. A description of the application settings is available on OTN in the OIPA documentation library.
PASMessages.properties	error message
ResourceBundleMessages.properties	error message
SREMessages.properties	error message
UtilMessages.properties	error message
Coherence-config.xml	Coherence configuration file
Coherence-cache-config.xml	Coherence configuration file
ExtensibilityMessages.properties	Extensibility properties
PaletteConfig.war	Web Application Utility application file
PaletteWebApplication.properties	Web Application Utility properties file

3. Create a lib directory and add the database driver (i.e., /opt/oracle/lib). The type of database you are using will determine the driver you need to download.
 - **Oracle** – The necessary driver, **ojdbc14.jar**, is included in the OIPA Media Pack.
 - **Microsoft SQL Server** – download the **jtids.jar** file.
 - a. Download **jtids** from the following site: <http://sourceforge.net/projects/jtids/>.
 - b. Click **Download** on the top menu bar.
 - c. Click the **download** link for jtids (release 1.2.2).
 - d. Select the **jtids-1.2.2-dist.zip** file. Save the download .zip file to the lib directory you created (i.e., /opt/oracle/lib).
 - e. Open the downloaded .zip file and extract the file **jtids-1.2.2** from the root of the .zip file.
 - f. Rename the file **jtids.jar**.
 - **IBM DB2** – The three necessary .jar files (**db2jcc**, **db2jcc_license_cisuz**, 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 9.1.

4. Identify the database type and platform in the PAS.properties file. The property 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 PAS.properties document in the Oracle Insurance Policy Administration E21044-01 Documentation Library on the OTN for a complete list of all properties and allowed values.

5. If using a DB2 database, you will need to modify the PAS.properties file to include configuration for case-insensitive searching. If using an Oracle or Microsoft SQL Server database, please skip this step and proceed to step 6.
 - Modify the PAS.properties file to include the following line:

```
search.field.text.caseInsensitive=true
```

6. Copy the following .jar files to the WebSphere lib folder (i.e., /opt/IBM/WebSphere/AppServer/lib/ext). These files are located in the **ext jars** folder in the archive file downloaded from E-Delivery.
 - antlr-2.7.6.jar
 - commons-collections.jar
 - commons-logging-1.1.jar
 - el-api.jar
 - log4j-1.2.9.jar
 - spring-agent.jar

CONFIGURING WEBSPHERE FOR OIPA

Configure WebSphere Environment for Database Driver

A variable must be used to define the location where the database driver is located. The name of the variable depends on the type of database.

- Oracle: **ORACLE_JDBC_DRIVER_PATH**
- IBM DB2: **DB2UNIVERSAL_JDBC_DRIVER_PATH**
- Microsoft SQL Server: **User-defined_JDBC_DRIVER_PATH**

1. Select **Environment>WebSphere Variables**.
2. Click **New**.
3. Enter the **Name** of the database driver variable, as listed above.
4. In the **Value** field, enter the path to the directory where the database driver is located. For example:
/opt/oracle/lib or C:\oracle\lib\
5. Click **OK**.
6. Ensure **Generate Unique Http Ports** is checked.
7. Click **Finish**.

Create the OIPA Application Server

1. Select **Servers>Application servers>New**.
2. Enter the name for the machine.
3. Click **Next**.
4. Select the **default** server template.
5. Click **Next**.
6. Ensure **Generate Unique Http Ports** is checked.
7. Click **Finish**.
8. After the application has been created, navigate to it by clicking on its name within the list of Application Servers.
9. Click the Session management link in the Container Settings section.
10. Verify that **Enable Cookies** is checked. (This is checked by default.)
11. Click the **Enable Cookies** link and verify that '**Restrict cookies to HTTPS sessions**' is unchecked. (This is unchecked by default.)
12. Click **OK**.
13. Save the configuration changes.

Note: These instructions assume that a fresh installation of the application server was performed. All configuration settings must use the default settings unless otherwise noted. If the application server has been used for previous deployments, you may want to create a new application server specifically for the deployment of the OIPA environment.

Configure the OIPA Application Server

JVM Settings

1. Select the newly created application server.
2. Expand **Java and Process Management**.
3. Select **Process Definition**.
4. Select **Java Virtual Machine**.
5. In the **Classpath** text box, enter the location of the OIPA property files.
Example: /opt/Oracle/OIPA/properties or C:\Oracle\OIPA\properties\
6. Set **Initial Heap Size** to **512**.
7. Set **Maximum Heap Size** to **1024**.
8. In the **JVM Arguments** text box, enter the following arguments, replacing the location of each file with the correct location for the configuration.

```
-Duser.language=en -Duser.region=US -Djava.net.preferIPv4Stack=true -
Djava.net.preferIPv6Addresses=false -
javaagent:C:\Oracle\OIPA\lib\spring-agent.jar -
Dtangosol.coherence.override=C:\Oracle\OIPA\properties\coherence-
config.xml -
Dtangosol.coherence.cacheconfig=C:\Oracle\OIPA\properties\coherence-
cache-config.xml -Dtangosol.pof.config=com-adminserver-pas-web-pof-
config.xml
```
9. Click **OK**.

Configure the Listening Port

1. Select **Servers>Application servers**.
2. Select the created application server.
3. In the **Communications** section, select **Ports**.
4. Note, or change if need be, the port listed for **WC_defaulthost**.
5. Select **Finish**.

Configure the Virtual Host

1. Select **Environment > Virtual Hosts**.
2. Click **default_host**.
3. Click **Host Aliases**.
4. Click **New**.
5. Enter the port selected for **WC_defaulthost** in the previous step.
6. Click **OK**.

Creating Data Sources

Add the JDBC Provider

1. Select **Resources>JDBC>JDBC Providers**.
2. Select the **scope** of the server.
3. Click **New**.
4. Select the **Database type**.
 - For Oracle, select **Oracle**.
 - For DB2, select **DB2**.
 - For Microsoft SQL Server, select **user-defined**.
5. Select the **Provider type**.
 - For Oracle, select **Oracle JDBC Driver**.
 - For DB2, select **DB2 Universal JDBC Driver**.
6. Select **Implementation type**.
 - For Oracle, select **XA data source**.
 - For DB2, select **XA data source**.
 - For Microsoft SQL Server, enter **net.sourceforge.jtds.jdbcx.JtdsDataSource** for the **Implementation class name**.
7. Click **Next**.
8. Enter the variable name used for the database driver.
 - For Oracle, enter **\${ORACLE_JDBC_DRIVER_PATH}**
 - For DB2, enter **\${DB2UNIVERSAL_JDBC_DRIVER_PATH}**
 - For Microsoft SQL Server, enter **\${User-defined_JDBC_DRIVER_PATH}**
9. Click **Finish**.

Create the Data Sources

Four data sources must be created: **ADMINSERVERDS**, **ADMINSERVERRESOURCEDS**, **ADMINSERVERSEARCHDS** and **ADMINSERVERREADONLYDS**. The database connection information, including username and password, will most likely be the same for all four data sources in a development environment. Repeat the following steps for each data source, replacing **<DATASOURCE_NAME>** with the specific data source being configured.

1. Select **Resources>JDBC>Data sources**.
2. Click **New**.
3. For the data source name, enter **<DATASOURCE_NAME>**.
4. For the JNDI name, enter **<DATASOURCE_NAME>**.
5. Click **Next**.
6. Select the **JDBC provider** created in the last step.
7. Click **Next**.
8. Enter the database connection information.
 - For Oracle, enter the database information in the following format:
jdbc:oracle:thin:@**hostname:port:SID**
 - For DB2, enter the **database name**, **hostname** and **port**.
 - For Microsoft SQL Server, skip to the next step.
9. Uncheck the checkbox for **Use this data source in container managed persistence**.
10. Click **Finish**.
11. Select **<DATASOURCE_NAME>** from the list of data sources that appears.
12. Select **Custom Properties**.
13. Click **New** to create new variables for each property listed below.
 - For Oracle:
 1. Name: **user** Value: database user name
 2. Name: **password** Value: database password
 - For DB2:
 1. Name: **user** Value: database user name
 2. Name: **password** Value: database password
 - For Microsoft SQL Server:
 1. Name: **user** Value: database user name
 2. Name: **password** Value: database password
 3. Name: **datasename** Value: name of database
 4. Name: **servername** Value: hostname of database server
14. Click **Save**.

Once complete, use the **Test Connection** button on the main data source list to confirm that the settings were successful.

Deploy the OIPA Application

1. Select **Applications>Enterprise Application>Install**.
2. Use the **Local file system** and **Remote file system** browsing feature to locate the **PASJava.war** file.
3. For the **Context Root**, enter **PASJava**.
4. Click **Next**.
5. Confirm the settings on the following screen.
6. Click **Next**.
7. Select the correct **scope** for the **OIPA** application server.
8. Check the checkbox for the **PASJava.war module**.
9. Click **Next**.
10. For each of the three listed **Target Resource JNDI Names**, click the **Browse** button to select the data sources configured in the previous section.
11. Click **Next**.
12. Click **Finish**.

Configure the OIPA Application

1. Select **Applications>Enterprise Application**.
2. Select the **PASJava.war** application.
3. Click **Class loading and update detection**.
4. Check the checkbox for **Classes loaded with application class loader first**.
5. Check the checkbox for **Single class loader for application**.
6. Click **OK**.

Start the OIPA Application

1. Select **Servers>Application Servers**.
2. Select the **PASJava.war** application.
3. Click **Start**.

CONFIGURING WEBSHERE FOR THE WEB APPLICATION UTILITY

Note: The files that are used to set up the Web Application Utility are often named PaletteConfig. Any files with the name PaletteConfig are part of the Web Application Utility.

Create the Web Application Utility Server

1. Select **Servers>Application servers>New**.
2. Enter the name for the machine.
3. Click **Next**.
4. Select the **default** server template.
5. Click **Next**.
6. Ensure **Generate Unique Http Ports** is checked.
7. Click **Finish**.

Configure the Web Application Utility Server

JVM Settings

1. Select the newly created application server.
2. Expand **Java and Process Management**.
3. Select **Process Definition**.
4. Select **Java Virtual Machine**.
5. In the **Classpath** text box, enter the location of the Web Application Utility property files.
Example: /opt/Oracle/PaletteConfig/properties/ or C:\Oracle\PaletteConfig\properties\
6. Set **Initial Heap Size** to **512**.
7. Set **Maximum Heap Size** to **1024**.
8. In the **JVM Arguments** text box, enter the following arguments, replacing the location of each file with the correct location for the configuration. For example:
-server -javaagent:C:/Oracle/OIPA/lib/spring-agent.jar
9. Click **OK**.

Configure the Listening Port

1. Select **Servers>Application servers**.
2. Select the created application server.
3. In the **Communications** section, select **Ports**.
4. Note, or change if need be, the port listed for **WC_defaulthost**.
5. Select **Finish**.

Configure the Virtual Host

1. Select **Environment > Virtual Hosts**.
2. Click **default_host**.
3. Click **Host Aliases**.
4. Click **New**.
5. Enter the port selected for **WC_defaulthost** in the previous step.
6. Click **OK**.

Deploy the Web Application Utility

1. Select **Applications>Enterprise Application>Install**.
2. Use the **Local file system** and **Remote file system** browsing feature to locate the **PaletteConfig.war** file. This file is in the Oracle Insurance Rules Palette V9.3.0 Media Pack in the Web Application Utility folder.
3. For the **Context Root**, enter **PaletteConfig**.
4. Click **Next**.
5. Confirm the settings on the following screen.

6. Click **Next**.
7. Select the correct **scope** for the **PaletteConfig** application server.
8. Check the checkbox for the **PaletteConfig.war** module.
9. Click **Next**.
10. Click **Next**.
11. Click **Finish**.

Configure the Web Application Utility

1. Select **Applications>Enterprise Application**.
2. Select the **PaletteConfig.war** application.
3. Click **Class loading and update detection**.
4. Check the checkbox for **Classes loaded with application class loader first**.
5. Check the checkbox for **Single class loader for application**.
6. Click **OK**.

Start the Web Application Utility

1. Select **Servers>Application Servers**.
2. Select the **PaletteConfig.war** application.
3. Click **Start**.

TESTING THE DEPLOYMENTS

OIPA Deployment

1. Open a new Internet Explorer window.
2. Navigate to <http://hostname:port/PASJava/>.
3. Type the following when the login screen appears:
 - Type **install** for the **Client ID**.
 - Type **install** for the **Password**.
 - Select **Login**.

Web Application Utility Deployment

1. Open a new Internet Explorer window.
2. Navigate to <http://hostname:port/PaletteConfig/>.
3. Type the following when the login screen appears:
 - Type **admin** for the **Client ID**.
 - Type **admin** for the **Password**.
 - Select **Login**.