Installing Third-Party JAR Files for Oracle® Java CAPS

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Installing Third-Party JAR Files

The following sections provide instructions on how to install and configure Third-Party JAR files.

- "Setting Up the Third-Party Library Installer" on page 5
- "Installing Third-Party JAR Files for the CICS Adapter" on page 7
- "Installing Third-Party JAR Files for the WebSphere MQ Adapter" on page 9
- "Installing Third-Party JAR Files for the SAP Adapters" on page 11
- "Installing Third-Party JAR Files for the Siebel EAI Adapter" on page 12
- "Installing Third-Party JAR Files for the DB2 Connect Adapter" on page 13
- "Installing Third-Party JAR Files for the VSAM Adapter" on page 14

Setting Up the Third-Party Library Installer

This section includes information for installing and configuring the Third-Party Library Installer provided by Java CAPS to complete the installation of certain adapters. Third-party libraries are required for the following components:

- Oracle Java CAPS Adapter for CICS
- Oracle Java CAPS Adapter for WebSphere MQ
- Oracle Java CAPS Adapters for SAP BAPI and SAP ALE
- Oracle Java CAPS Adapter for Siebel EAI
- Oracle Java CAPS Adapter for DB2 Connect
- Oracle Java CAPS Adapter for VSAM

The Installer script requires the installation of Apache Ant version 1.7 or above, which can be downloaded from the following location:

`http://ant.apache.org/`

You can also use the ant version distributed with Java CAPS.

▼ To Set Up the Third-Party Installer

1. **On the Java CAPS Uploader, click the Download tab.**
2. **Click Adapter's Third Party Library Installer and extract it into a working directory.**
3. **Set the environment variable ANT_HOME to point to the home directory of your ANT installation. For example:**

   ```
   set ANT_HOME=C:\JavaCAPS6\netbeans\java2\ant
   ```

4. **Set the environment variable JAVA_HOME to point to your JDK installation. For example:**

   ```
   set JAVA_HOME=C:\Program Files\Java\jdk1.6.0_03
   ```

5. **Set your PATH to include the bin directory of your ANT installation.**

   ```
   set PATH=C:\JavaCAPS6\netbeans\java2\ant
   ```

▼ To Configure the Build File

The installer uses the `build.properties` file to determine where to install the JAR files and where to obtain the JAR files to install. This file contains information specific to each JAR file, so you should make a backup copy before making any changes.

1. **Make a backup copy of the `build.properties` file.**
2. **Modify the properties listed in the following table. For more information on the `product.name` and third-party files properties, refer to the third-party JAR installation instructions for each Adapter.**
3. **When you are done modifying properties, save and close the file.**

Name	Description	Value
netbeans.home	The location of the NetBeans installation in Java CAPS.	For a default installation of Java CAPS, the location is `C:/JavaCAPS63/netbeans/` for Windows, or `~/JavaCAPS63/netbeans/` for UNIX. This property is automatically set. Only change this value if you changed the location of the Java CAPS installation.

Name	Description	Value
glassfish.home	The location of the GlassFish installation in Java CAPS. This allows third-party libraries to be installed to the right location in the runtime environment.	For a default installation of Java CAPS, the location is `C:/JavaCAPS63/appserver` for Windows, or `~/JavaCAPS63/appserver` for UNIX. This property is automatically set. Only change this value if you changed the location of the Java CAPS installation.
installation.domains	The name of the domains in the GlassFish installation where the third-party libraries will be placed.	The default is domain1, which is the name of the default domain that is created when you install Java CAPS.
product.name	A list of products that you are installing third-party jar files for. You can add or remove indicators, but do not change the actual indicator text.	A list of product indicators separated by semicolons. Each Adapter has one or more indicators that let the installer know which components are being updated. To find out which indicators to use for an Adapter, see the instructions for that Adapter.
thirdpartyfiles	For each Adapter, a list of absolute paths and filenames to the JAR files that will be installed. Separate the files by a semicolon.	For each adapter, the libraries vary depending on platform and the paths vary depending on where your third-party software is installed. Below is an example for CICS: `cicsadapterra.thirdpartyfiles=C:/Program Files/IBM/CICS Transaction Gateway/classes/ctgclient.jar;C:/Program Files/IBM/CICS Transaction Gateway/classes/ctgserver.jar` To find out which third–party file properties you need to use for an Adapter, see the instructions for that Adapter.

Installing Third-Party JAR Files for the CICS Adapter

This section includes information for installing and configuring JAR files for the IBM CICS Transaction Gateway (CTG). The CTG must be installed and configured as the underlying connection transport to access z/OS CICS transactions.

Perform the following steps to install the files for the CICS Adapter:

- "To Install the JAR Files for CICS" on page 8
- "To Add Third-Party DLLs to the Shared Library" on page 8

▼ To Install the JAR Files for CICS

The following steps are for running the Third-Party Installer with default settings. If you are running the Installer for specific instantiations of NetBeans or GlassFish (separately), you must specify each specifically when running ant (for example, `ant install-glassfish` or `ant install-netbeans`).

1. **Install the Third-Party Library Installer and set up the environment, as described in "Setting Up the Third-Party Library Installer" on page 5.**

2. **Open a command window and navigate to the directory that you extracted the Third Party Installer ZIP file.**

3. **Customize the `build.properties` file with at least the following changes. For more information on build properties, see "To Configure the Build File" on page 6.**

   a. **Remove all values from the `product.name` property except cicsadapterra.**

   b. **Modify the `cicsadapterra.thirdpartyfiles` property by adding the paths and filenames of the IBM CTG third-party libraries.**

      For example:

      On Windows: `cicsadapterra.thirdpartyfiles=C:/Program Files/IBM/CICS Transaction Gateway/classes/ctgclient.jar;C:/Program Files/IBM/CICS Transaction Gateway/classes/ctgserver.jar`

      On Solaris: `cicsadapterra.thirdpartyfiles= /opt/IBM/cicstg/classes/ctgclient.jar; /opt/IBM/cicstg/classes/ctgserver.jar`

4. **Shutdown the instances of Java CAPS NetBeans and GlassFish.**

5. **Invoke the Third Party Installer by typing `ant`.**

6. **Restart the Java CAPS NetBeans instance.**

▼ To Add Third-Party DLLs to the Shared Library

The following steps address updating the shared library files during runtime. This procedure only applies to `LOCAL:` protocol with IBM CTG on GlassFish.

1. **Open the Admin Console for your GlassFish instance.**

2. **Add the `C:\Program Files\IBM\CICS Transaction Gateway\bin` path to the Native Library Path Prefix field in the JVM Settings Tab.**

3. **Click Save.**

Installing Third-Party JAR Files for the WebSphere MQ Adapter

This section includes information for installing and configuring the third-party JAR files for the WebSphere MQ Adapter.

▼ To Install the JAR Files for WebSphere MQ

The following steps are for running the Third-Party Installer with default settings. If you are running the Installer for specific instantiations of NetBeans or GlassFish (separately), you must specify each specifically when running ant (for example, `ant install-glassfish` or `ant install-netbeans`).

1. **Install the Third-Party Library Installer and set up the environment, as described in "Setting Up the Third-Party Library Installer" on page 5.**

2. **Navigate to the location of the Third-Party Library Installer.**

3. **Customize the `build.properties` file with at least the following changes. For more information on build properties, see "To Configure the Build File" on page 6.**

   a. **Remove all values from the `product.name` property except webspheremq.**

   b. **Modify the `webspheremq.thirdpartyfile` property by adding the full path to `com.ibm.mq.jar`.**

      For example:

      On Windows: `webspheremq.thirdpartyfile=C:/Program Files/IBM/Websphere MQ/Java/lib/com.ibm.mq.jar`

      On Solaris: `webspheremq.thirdpartyfile= /opt/IBM/webspheremq/Java/lib/opt/com.ibm.mq.jar`

4. **Shutdown the instances of Java CAPS NetBeans and GlassFish.**

5. **Invoke the Third Party Installer by typing `ant`.**

6. **Restart the Java CAPS NetBeans instance.**

WebSphere MQ Adapter Required JAR Files

The WebSphere MQ Adapter requires the file `com.ibm.mq.jar`, a system specific JAR file, for normal operation. If you are using WebSphere MQ 6.x, the adapter also requires the `com.ibm.mqetclient.jar` file for XA transactions in Client mode and for deploying EAR files to a WebLogic application server.

If you are using WebSphere MQ 7.x and JMS JCA, you also need the following files:

- `com.ibm.mqjms.jar`
- `dhbcore.jar`
- `connector.jar`
- `com.ibm.mq.jmqi.com`

If you are using WebSphere MQ 7.x and the WebSphere MQ Adapter, you need the following additional files:

- `dhbcore.jar`
- `com.ibm.mq.jmqi.com`
- `com.ibm.mq.commonservices.jar`
- `com.ibm.mq.headers.jar`

The files must be copied from the MQ server that you are running against. Depending on the mode of operation, the WebSphere MQ Library utilized by the adapter requires modules specific to the operating system. If a WebSphere MQ Adapter project is deployed to a different MQ server running on a different operating system, the files in the application server must be replaced with the files from that specific MQ server to ensure that the JAR file remains corresponds to he operation system of the current MQ server.

▼ To Install the System-Specific JAR Files

1. **Navigate to** *WebSphereMQ_Home*`\java\lib`**.**
2. **Copy the required JAR files (listed above).**
3. **Paste the JAR files to the** *JavaCAPS_Home*`\appserver\lib` **directory.**

Adding the required JAR files to the Integration Server Classpath for XA Transactions

If you are using WebSphere MQ 6.x, the WebSphere MQ Adapter requires the `com.ibm.mqetclient.jar` file for XA transactions in Client mode and for deploying EAR files to a WebLogic application server. The JAR file is installed as part of the WebSphere MQ Extended Transaction client installation. Both the `com.ibm.mq.jar` and the `com.ibm.mqetclient.jar` must be added to the Integration Server classpath to run XA transactions in Client mode.

▼ To add the required JAR files to the IS Classpath

1 **Note the location of the com.ibm.mq.jar and the com.ibm.mqclient.jar files on your logical host.**

2 **Open the Integration Server Administration tool. Add the absolute path for both JAR files to the IS Administration tool's Classpath Prefix field.**

3 **Save your work.**

Installing Third-Party JAR Files for the SAP Adapters

This section includes information for installing the SAP Java Connector, SAP Java Base IDoc Class Library, and the SAP Java Connector IDoc Class Library. The SAP libraries must be installed and configured as the underlying connection transport to access an SAP instance.

▼ To Install the JAR Files for SAP

The following steps are for running the Third-Party Installer with default settings. If you are running the Installer for specific instantiations of NetBeans or GlassFish (separately), you must specify each specifically when running ant (for example, `ant install-glassfish` or `ant install-netbeans`).

1 **Install the Third-Party Library Installer and set up the environment, as described in "Setting Up the Third-Party Library Installer" on page 5.**

2 **Navigate to the location of the Third-Party Library Installer.**

3 **Customize the `build.properties` file with at least the following. For more information on build properties, refer to "To Configure the Build File" on page 6.**

   a. **Remove all values from the `product.name` property except sapaleadapter or sapbapiadapter**

   b. **Modify the `sapbapiadapter.thirdpartyfiles` or `sapaleadapter.thirdpartyfiles` property by adding the full paths and filenames to the SAP Connector third-party libraries.**

      For example:

      On Windows:

```
sapbapiadapter.thirdpartyfiles=C:\Projects\SAP\JCO_jarfiles\sapjco.jar;
C:\Projects\SAP\JCO_jarfiles\librfc32.dll;
C:\Projects\SAP\JCO_jarfiles\sapjcorfc.dll;
C:\Projects\SAP\JCO_jarfiles\sapidoc.jar;
C:\Projects\SAP\JCO_jarfiles\sapidocjco.jar
```

On Solaris:

```
sapaleadapter.thirdpartyfiles=/home/sapuser/SAP/JCO_jarfiles/sapjco.jar;
/home/sapuser/SAP/JCO_jarfiles/librfccm.so;
/home/sapuser/SAP/JCO_jarfiles/libsapjcorfc.so;
/home/sapuser/SAP/JCO_jarfiles/sapidoc.jar;
/home/sapuser/SAP/JCO_jarfiles/sapidocjco.jar
```

Note – The above text was wrapped for display purposes.

4. **Shutdown the instances of Java CAPS NetBeans and GlassFish.**
5. **Invoke the Third Party Installer by typing `ant`.**
6. **Restart the Java CAPS NetBeans instance.**

Installing Third-Party JAR Files for the Siebel EAI Adapter

This section includes information for installing and configuring the third-party JAR files for the Siebel EAI Adapter.

▼ To Install the JAR Files for Siebel EAI

The following steps are for running the Third-Party Installer with default settings. If you are running the Installer for specific instantiations of NetBeans or GlassFish (separately), you must specify each specifically when running ant (for example, `ant install-glassfish` or `ant install-netbeans`).

1. **Install the Third-Party Library Installer and set up the environment, as described in "Setting Up the Third-Party Library Installer" on page 5.**
2. **Navigate to the location of the Third-Party Library Installer.**
3. **Customize the `build.properties` file with at least the following. For more information on build properties, see "To Configure the Build File" on page 6.**

   a. **Remove all values from the `product.name` property except siebeleaiadapter80, siebeleaiadapter78, siebeleaiadapter77, or siebeleaiadapter75x.**

   b. **Modify any of the following properties (depending on what you specified above):**

      - `siebeleaieaiadapter80.thirdpartyfiles`: Add the full path and file name to `Siebel.jar` and `SiebelJI_enu.jar`

- `siebeleaieaiadapter78.thirdpartyfiles`: Add the full path and file name to `Siebel.jar` and `SiebelJI_enu.jar`
- `siebeleaieaiadapter77.thirdpartyfiles`: Add the full path and file name to `Siebel.jar` and `SiebelJI_enu.jar`
- `siebeleaieaiadapter75x.thirdpartyfiles`: Add the full path and file name to `SiebelJI.jar`, `SiebelJI_Common.jar`, and `SiebelJI_enu.jar`

For example:

On Windows: `siebeleai.thirdpartyfile=C:/Program Files/IBM/Siebel EAI/Java/lib/com.ibm.mq.jar`

On Solaris: `siebeleai /opt/IBM/siebeleai/Java/lib/opt/com.ibm.mq.jar`

4. **Shutdown the instances of Java CAPS NetBeans and GlassFish.**

5. **Invoke the Third Party Installer by typing `ant`.**

   Siebel JAR files are only used in design time and not in runtime. The ant script installs Siebel JAR files to the NetBeans environment, but nothing is installed in the GlassFish environment.

6. **Restart the Java CAPS NetBeans instance.**

Installing Third-Party JAR Files for the DB2 Connect Adapter

This section includes information for installing and configuring the third-party JAR files for the DB2 Connect Adapter.

▼ To Install the JAR Files for DB2 Connect

The following steps are for running the Third-Party Installer with default settings. If you are running the Installer for specific instantiations of NetBeans or GlassFish (separately), you must specify each specifically when running ant (for example, `ant install-glassfish` or `ant install-netbeans`).

1. **Install the Third-Party Library Installer and set up the environment, as described in "Setting Up the Third-Party Library Installer" on page 5.**

2. **Navigate to the location of the Third-Party Library Installer.**

3. **Customize the `build.properties` file with at least the following. For more information on build properties, see "To Configure the Build File" on page 6.**

   a. **Remove all values from the `product.name` property except db2connectadapter.**

b. **Modify the `db2connectadapter.thirdpartyfiles` property by adding the full path and filename of the DB2 Connect third-party libraries.**

For example:

On Windows:

```
db2connectadapter.thirdpartyfiles=C:\temp\jars\db2jars\db2jcc.jar;
C:\temp\jars\db2jars\db2jcc_license_cisuz.jar;
C:\temp\jars\db2jars\db2jcc_license_cu.jar
```

On Solaris:

```
db2connectadapter.thirdpartyfiles=/home/db2jars/db2jcc.jar;
/home/db2jars/db2jcc_license_cisuz.jar;/home/db2jars/db2jcc_license_cu.jar
```

Note – The above text was wrapped for display purposes.

4 **Shutdown the instances of Java CAPS NetBeans and GlassFish.**

5 **Invoke the Third Party Installer by typing `ant`.**

6 **Restart the Java CAPS NetBeans instance.**

Installing Third-Party JAR Files for the VSAM Adapter

This section includes information for installing and configuring the third-party JAR files for the VSAM Adapter.

▼ To Install the JAR Files for VSAM

The following steps are for running the Third-Party Installer with default settings. If you are running the Installer for specific instantiations of NetBeans or GlassFish (separately), you must specify each specifically when running ant (for example, `ant install-glassfish` or `ant install-netbeans`).

1 **Install the Third-Party Library Installer and set up the environment, as described in "Setting Up the Third-Party Library Installer" on page 5.**

2 **Navigate to the location of the Third-Party Library Installer.**

3 **Customize the `build.properties` file with at least the following. For more information on build properties, see "To Configure the Build File" on page 6.**

a. **Remove all values from the `product.name` property except vsamadapter.**

b. Modify the `vsamadapter.thirdpartyfiles` property by adding the path and filenames of the VSAM third-party libraries.

For example:

On Windows:
```
vsamadapter.thirdpartyfiles=C:\temp\jars\vsamjars\cacjdbc30.jar;
C:\temp\jars\vsamjars\cacjdbcoem21.jar
```

On Solaris:
```
vsamadapter.thirdpartyfiles=/home/vsamjars/cacjdbc30.jar;
/home/vsamjars/cacjdbcoem21.jar
```

Note – The above text has been wrapped for display purposes.

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4 Shutdown the instances of Java CAPS NetBeans and GlassFish.

5 Invoke the Third Party Installer by typing `ant`.

6 Restart the Java CAPS NetBeans instance.