

## JDBC drivers supported by Business Process Framework V4.1

### Question

What JDBC drivers does Business Process Framework support?

Does Business Process Framework support the same JDBC drivers as IBM FileNet P8?

The JDBC requirements that are described in the Business Process Framework V4.1 installation documentation do not match the JDBC requirements that are described IBM FileNet P8 V5.0 Hardware and Software Requirements documentation.

### IBM FileNet P8 V5.0 statement

The IBM FileNet P8 V5.0 Hardware and Software Requirements document, which is available from the IBM Support Portal at <http://www.ibm.com/support/docview.wss?uid=swg27013654>, states that IBM FileNet P8 supports the following JDBC drivers:

- For Microsoft SQL Server, the Microsoft JDBC driver version that corresponds to the Microsoft SQL Server version is supported.
- For Oracle, the JDBC driver version that corresponds to the Oracle database version is supported.

### Business Process Framework V4.1 statement

The [JDBC driver requirements](#) topic in the Business Process Framework V4.1 installation guide, which is available in the IBM FileNet P8 V5.0 information center at <http://publib.boulder.ibm.com/infocenter/p8docs/v5r0m0/topic/com.ibm.p8.installingbpf.doc/bpfpi017.htm>, states that Business Process Framework V4.1 supports the following JDBC drivers:

- For Microsoft SQL Server, jtds-1.x.y.jar is supported.
- For Oracle, ojdbc14.jar is supported.

### Question

Does Business Process Framework support the same JDBC drivers as IBM FileNet P8?

### Answer

At the time of this publication, Business Process Framework V4.1 supports the following JDBC drivers:

- For Microsoft SQL Server, the following drivers are supported:
  - jtds-1.x.y.jar is supported.
  - sqljdbc.jar is supported for BPF Web only.
  - sqljdbc4.jar is supported for BPF Web only.
- For Oracle, the following drivers are supported:
  - ojdbc14.jar is supported.
  - ojdbc5.jar is supported.
  - ojdbc6.jar is supported.

Business Process Framework V4.1 supports the same JDBC drivers as IBM FileNet P8 V5.0 with the exception that BPF Operations supports only the jtds-1.x.y.jar driver for Microsoft SQL Server.

**Important:** To use Business Process Framework with the following drivers, you must implement the workaround described later in this document:

- sqljdbc.jar
- sqljdbc4.jar
- ojdbc5.jar
- ojdbc6.jar

**Remember:** For Microsoft SQL Server, BPF Operations requires the jtds-1.x.y.jar driver. If the BPF metastore database is Microsoft SQL Server, you must download and install the jTDS JDBC driver regardless of the JDBC driver that you use for the BPF Web Application. You can download the jTDS JDBC driver from <http://sourceforge.net/projects/jtds/files/>.

### **Workaround for using the JDBC drivers supported by IBM FileNet P8**

This workaround that enables you to resolve the errors that occur during the following Business Process Framework installation steps:

- Installing the BPF Metastore
- Creating the JDBC DataSources for BPF Metastore and Process Engine
- Adding the database stubs in the component manager classpath

These errors occur because the Business Process Framework installation program is hardcoded to use the jtds-1.2.2.jar driver for Microsoft SQL Server and the ojdbc14.jar driver for Oracle.

### **Applying the workaround**

To apply the workaround on Business Process Framework V4.1.0, you must:

1. Install the JDBC drivers that are supported by IBM FileNet P8.
2. Install Business Process Framework V4.1.0.
3. Resolve the errors that occur during installation.

See the following sections for detailed information about completing each task.

### **Step 1 – Installing the JDBC drivers**

Install the JDBC drivers for your application server by following the instructions in [Planning and preparing for IBM FileNet P8 installation](#):

- If Business Process Framework is deployed on WebSphere Application Server, see steps 1 and 2 in [Specifying the WebSphere environment variables](#).
- If Business Process Framework is deployed on WebLogic Server, see step 4 in [Configuring WebLogic Server for Content Engine](#).
- If Business Process Framework is deployed on JBoss Application Server, see step 9 in [Configuring JBoss Application Server for Content Engine](#).

### **Step 2 – Installing Business Process Framework**

Install Business Process Framework V4.1.0 by following the procedures in the [Business Process Framework V4.1 installation guide](#).

### **Step 3 – Resolving the errors that occur during installation**

After you install Business Process Framework V4.1.0, you must resolve the errors that occur during the following installation steps:

- Installing the BPF Metastore
- Creating the JDBC DataSources for BPF Metastore and Process Engine
- Adding database stubs in the component manager classpath

### **Step 3a – Resolving the errors that occur when installing the BPF Metastore**

To resolve the errors that occur when installing the BPF Metastore, complete the following tasks, which are documented in the [Business Process Framework V4.1 installation guide](#):

1. [Load the Business Process Framework Metastore](#)
2. [Import the Metastore manifest](#)
3. [Edit the Metastore settings](#)

#### 4. [Configure Business Process Framework Explorer](#)

##### **Step 3b – Resolving the errors that occur when creating the JDBC DataSources for BPF Metastore and Process Engine**

To resolve the errors that occur when creating the JDBC DataSources for BPF Metastore and Process Engine complete the appropriate tasks for your environment:

- If Business Process Framework is deployed on WebSphere Application Server 7 with a Microsoft SQL Server database, see the following technote on the IBM Support Portal:  
<http://www.ibm.com/support/docview.wss?uid=swg21452221>
- If Business Process Framework is deployed on JBoss Application Server with a Microsoft SQL Server database, complete the following tasks:

##### 1. Create the Metastore data source on JBoss Application Server:

- a. Create a file named ms-ds.xml with the following content:

```
<datasources>
  <local-tx-datasource>
    <jndi-name> {meta datasource}</jndi-name>
    <use-java-context>false</use-java-context>
    <set-tx-query-timeout/>
    <connection-url>jdbc:sqlserver://{meta data server}: {meta data port};DatabaseName=
{meta database} </connection-url>
    <driver-class>com.microsoft.sqlserver.jdbc.SQLServerDriver</driver-class>
    <user-name>{meta user} </user-name>
    <password>{meta password}</password>
    <!-- sql to call when connection is created -->
    <new-connection-sql>select count(*) from sysusers</new-connection-sql>
    <!-- sql to call on an existing pooled connection when it is obtained from pool -->
    <check-valid-connection-sql>select count(*) from sysusers</check-valid-connection-sql>
    <metadata>
      <!-- corresponding type-mapping in the standardjbosscomp-jdbc.xml (optional) -->
      <type-mapping>MS SQLSERVER2000</type-mapping>
    </metadata>
  </local-tx-datasource>
</datasources>
```

- b. Modify the following values in the ms-ds.xml with the values from the prerequisite worksheet:

- meta datasource
- meta data server
- meta data port
- meta database
- meta user
- meta password

- c. Copy the file to directory JBOSS\_HOME/server/server\_name/deploy.

##### 2. Create the Process Engine data source on JBoss Application Server:

- a. Create a file named ps-ds.xml with the following content:

```
<datasources>
  <local-tx-datasource>
    <jndi-name>{pe datasource} </jndi-name>
    <use-java-context>false</use-java-context>
```

```

        <set-tx-query-timeout/>
        <connection-url>jdbc:sqlserver://{pe data server}:{pe data port};DatabaseName= {pe
database}</connection-url>
        <driver-class>com.microsoft.sqlserver.jdbc.SQLServerDriver</driver-class>
        <user-name>{pe user}</user-name>
        <password>{pe password}</password>
        <!-- sql to call when connection is created -->
        <new-connection-sql>select count(*) from sysusers</new-connection-sql>
        <!-- sql to call on an existing pooled connection when it is obtained from pool -->
        <check-valid-connection-sql>select count(*) from sysusers</check-valid-connection-sql>
        <metadata>
            <!-- corresponding type-mapping in the standardjbosscomp-jdbc.xml (optional) -->
            <type-mapping>MS SQLSERVER2000</type-mapping>
        </metadata>
    </local-tx-datasource>
</datasources>

```

b. Modify the following values in the ps-ds.xml with the values from the prerequisite worksheet:

- pe datasource
- pe data server
- pe data port
- pe database
- pe user
- pe password

c. Copy the file to directory JBOSS\_HOME/server/server\_name/deploy.

- If Business Process Framework is deployed on a different application server or uses a different database, complete the following tasks, which are documented in the [Business Process Framework V4.1 installation guide](#):
  1. [Create the JDBC data source for the Business Process Framework Metastore](#).
  2. [Create the JDBC data source for Process Engine](#)

### Step 3c – Resolving the errors that occur when adding the database stubs in the component manager classpath

**Important:** The error message for this issue is not displayed in the installation summary page. However, you must modify the Task Manager libraries to ensure that Business Process Framework uses the correct JDBC drivers.

To resolve the errors that occur when adding the database stubs in the component manager classpath, complete the appropriate task for your environment:

- If Business Process Framework uses a Microsoft SQL Server database, add the jtids-1.x.y.jar file to the vwtaskman.xml file.
- If Business Process Framework uses an Oracle database, in the vwtaskman.xml file, replace the ojdbc14.jar file with either the ojdbc5.jar file or the ojdbc6.jar file.

More detailed information on this task is available in [Adding taskman libraries \(vwtaskman.xml\)](#), which is in the [Business Process Framework V4.1 installation guide](#).