Configuring JDBC/ODBC Drivers for Oracle® Java CAPS

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Contents

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Configuring JDBC/ODBC Drivers

This topic provides detailed information on configuring JDBC/ODBC drivers for your database or external system connection. It includes the following sections:

About JDBC/ODBC Drivers

Drivers are uniquely different in what they do and the type of functions they support. The JDBC/ODBC Adapter allows you to pick and choose which driver is best suited for your application environment. There can be significant differences and limitations between drivers. The performance and functionality of the JDBC/ODBC Adapter depends on the selected driver(s). Certain drivers may not support all JDBC features. Consult the documentation for your respective drivers for more information.

While any standards compliant JDBC/ODBC database driver may be used, the drivers covered in this chapter are used more frequently. For runtime, only drivers that support Connection Pool Data Source and XA Data Source are supported. Connection Pool Data Source takes advantage of the Integration Service's connection pooling in order to improve performance. For the OTD Wizard, the driver Manager Class will work. However, not all drivers support all metadata discovery methods, some of which are needed to build the OTD. Additionally, not all drivers support Updatable ResultSets, Stored Procedures, or Stored Procedures with ResultSets. Check with your driver vendor for what is supported. The ConnectionPoolDataSource should only be used for Outbound Adapters. The Inbound Adapter uses native JDBC and must use Driver Manager.

It is recommended that you use the Oracle Adapter when using the native Oracle driver. The JDBC Adapter does not support some of the functions available in the Oracle Adapter such as creating an OTD from a Prepared Statement, using a Stored Procedure with ResultSets, and CLOB support.

It is also recommended that you use the SQL Server Adapter. The JDBC driver available for download from the Microsoft web site may not contain the latest version from the vendor.

Not all drivers support updateable ResultSets. However, it does allow standard Insert and Update operations when used with the Prepared Statement feature:

```
Insert into employee (empno) values(?);
```

Remember to ensure that the input parameter data types match the data types specified in the database table targeted by the Prepared Statements as some drivers always return the data type as a string. Optionally, you may perform the data conversion in the Collaboration.

Configuring JDBC/ODBC Drivers

This document provides database configuration information and environment properties specifications for specific JDBC/ODBC drivers. You should use the information listed in the included tables to define values for required input parameters.

AS/400 Toolbox Driver Configuration Properties

OTD Wizard: Database Connection Information

To connect to AS/400, use the information provided in Table 1–1 to complete the Connect to Database step of the JDBC/ODBC OTD Wizard. To access DB2, it is recommended to use the DB2 Adapter or the DB2 Connect Adapter.

TABLE 1–1 AS/400 Database Connection Information

Parameter	Value
Driver Jar Files	`jt400.jar`
Driver Java Class Name	com.ibm.as400.access.AS400JDBCDriver
URL Connection String	`jdbc:as400://`*server-name*`:`*server-port*`/` **Note –** NOTE: Default server port is 446.
User Name	Login name of the account used to access the AS/400 database.
Password	Password associated with the login account name used to connect to the AS/400 database.

Environment Properties

Use Table 1–2 to configure the environment properties for the specified JDBC/ODBC driver.

TABLE 1–2 AS/400 Database Environment Properties

Parameter	Value
Description	JDBC Connection Pool Datasource
ClassName	com.ibm.as400.access.AS400JDBCConnectionPoolDataSource
ClassNamefor OtherInterfaces	
ServerName	Server name of the machine hosting the database.
PortNumber	*server-port* **Note –** NOTE: Default server port is 446.
DatabaseName	
User	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.
DriverProperties	
Delimiter	The default is #.
DataSourceName	
MinPoolSize	The default is **0**.
MaxPoolSize	The default is **10**.

TABLE 1–2 AS/400 Database Environment Properties *(Continued)*

Parameter	Value
MaxIdleTime	The default is **0**.

Attunity Driver Configuration Properties

OTD Wizard: Database Connection Information

To connect to Attunity, use the information provided in Table 1–3 to complete the Connect to Database step of the JDBC/ODBC OTD Wizard.

TABLE 1–3 Attunity Driver Database Connection Information

Parameter	Value
Driver Jar Files	nvjdbc2.jar
Driver Java Class Name	com.attunity.jdbc.NvDriver
URL Connection String	`jdbc:attconnect://`*server-name*`;DefTdpName=`*database-logical-name*`;OneTdpMode=1` **Note –** The *database-logical-name* is created in the Attunity server.
User Name	Leave password field blank. Value configured when the database entry is created in the Attunity Server.
Password	Leave password field blank. Value configured when the database entry is created in the Attunity Server.

Environment Properties

Use Table 1–4 to configure the environment properties for the specified JDBC/ODBC driver.

TABLE 1–4 Attunity Driver Database Environment Properties

Parameter	Value
Description	JDBC Connection Pool Datasource
ClassName	com.attunity.jdbc.NvXADataSource

TABLE 1–4 Attunity Driver Database Environment Properties *(Continued)*

Parameter	Value
ClassNamefor OtherInterfaces	
ServerName	Server name of the machine hosting the database.
PortNumber	*server-port* **Note –** NOTE: Default server port is **2551**.
DatabaseName	<database-name>
User	Leave user field blank. Value configured when the database entry is created in the Attunity Server.
Password	Leave password field blank. Value configured when the database entry is created in the Attunity Server.
DriverProperties	setDefTdpName#*database-logical-name*##setWorkspace#Navigator##
Delimiter	The default is #.
DataSourceName	
MinPoolSize	The default is **0**.
MaxPoolSize	The default is **10**.
MaxIdleTime	The default is **0**.

MySQL Connector/J Driver Configuration Properties

OTD Wizard: Database Connection Information

To connect to MySQL, use the information provided in Table 1–5 to complete the Connect to Database step of the JDBC/ODBC OTD Wizard.

TABLE 1–5 MySQL Connector/J Driver Database Connection Information

Parameter	Value
Driver Jar Files	`mysql-connector-java-3.0.11-stable-bin.jar`
Driver Java Class Name	com.mysql.jdbc.Driver

TABLE 1–5 MySQL Connector/J Driver Database Connection Information *(Continued)*

Parameter	Value
URL Connection String	jdbc:mysql://*server-name*:*server-port*/`database-name` **Note –** The default server port is 3306
User Name	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.

Environment Properties

Use Table 1–6 to configure the environment properties for the specified JDBC/ODBC driver.

TABLE 1–6 MySQL Connector/J Driver Environment Properties

Parameter	Value
Description	JDBC Connection Pool Datasource
ClassName	ccom.mysql.jdbc.jdbc2.optional.MysqlConnectionPoolDataSource
ClassNamefor OtherInterfaces	
ServerName	Server name of the machine hosting the database.
PortNumber	*server-port* **Note –** NOTE: Default server port is **3306**.
DatabaseName	*database-name*
User	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.
DriverProperties	
Delimiter	The default is **#.**
DataSourceName	
MinPoolSize	The default is **0**.
MaxPoolSize	The default is **10**.
MaxIdleTime	The default is **0**.

Note – It is not mandatory to enter driver properties in the Outbound JDBC Adapter Environment properties for MySQL.

PostgreSQL Driver Configuration Properties

OTD Wizard: Database Connection Information

To connect to SQL, use the information provided in Table 1–7 to complete the Connect to Database step of the JDBC/ODBC OTD Wizard. To access SQL, it is recommended to use the SQL Server Adapter.

TABLE 1–7 PostgreSQL Driver Connection Information

Parameter	Value
Driver Jar Files	`postgresql-8.0-310.jdbc3.jar`
Driver Java Class Name	org.postgresql.Driver
URL Connection String	`jdbc:postgresql://`*server-name*`:`*server-port*`/`*database-name* **Note –** The default server port is **5432**.
User Name	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.

Environment Properties

Use Table 1–8 to configure the environment properties for the specified JDBC/ODBC driver.

TABLE 1–8 PostgreSQL Driver Environment Properties

Parameter	Value
Description	JDBC Connection Pool Datasource
ClassName	org.postgresql.jdbc3.Jdbc3ConnectionPool
ClassNamefor OtherInterfaces	

TABLE 1–8 PostgreSQL Driver Environment Properties *(Continued)*

Parameter	Value
ServerName	Server name of the machine hosting the database.
PortNumber	*server-port* **Note –** NOTE: Default server port is **5432**.
DatabaseName	*database-name*
User	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.
DriverProperties	
Delimiter	The default is **#.**
DataSourceName	
MinPoolSize	The default is **0**.
MaxPoolSize	The default is **10**.
MaxIdleTime	The default is **0**.

Note – It is not mandatory to enter driver properties in the Outbound JDBC Adapter Environment properties for PostgreSQL.

Sybase JConnect Driver Configuration Properties

OTD Wizard: Database Connection Information

To connect to Sybase, use the information provided in Table 1–9 to complete the Connect to Database step of the JDBC/ODBC OTD Wizard. To access Sybase, it is recommended to use the Sybase Adapter.

TABLE 1–9 Sybase JConnect Driver Database Connection Information

Parameter	Value
Driver Jar Files	`jconn2.jar`

TABLE 1–9 Sybase JConnect Driver Database Connection Information *(Continued)*

Parameter	Value
Driver Java Class Name	com.sybase.jdbc2.jdbc.SybDriver
URL Connection String	`jdbc:sybase:Tds:`*server-name*`:`*server-port* **Note –** The default server port is **4100**.
User Name	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.

Environment Properties

Use Table 1–10 to configure the environment properties for the specified JDBC/ODBC driver.

TABLE 1–10 Sybase JConnect Driver Environment Properties

Parameter	Value
Description	JDBC Connection Pool Datasource
ClassName	com.sybase.jdbc2.jdbc.SybConnectionPoolDataSource
ClassNamefor OtherInterfaces	
ServerName	Server name of the machine hosting the database.
PortNumber	*server-port* **Note –** The default server port is **4100**.
DatabaseName	*database-name*
User	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.
DriverProperties	
Delimiter	The default is **#.**
DataSourceName	
MinPoolSize	The default is **0**.
MaxPoolSize	The default is **10**.
MaxIdleTime	The default is **0**.

Note – It is not mandatory to enter driver properties in the Outbound JDBC Adapter Environment properties for Sybase.

Sequelink DataDirect Informix ODBC Driver Configuration Properties

OTD Wizard: Database Connection Information

The settings in Table 1–11 describe how to use the DataDirect Sequelink JDBC/ODBC bridge with the JDBC/ODBC Adapter. This information demonstrates how Sequelink can be used to interface with the ODBC driver. To connect to an Informix database, it is recommended to use the Informix Adapter.

TABLE 1–11 Sequelink DataDirect Informix ODBC Driver Database Connection Information

Parameter	Value
Driver Jar Files	`sljc.jar`
Driver Java Class Name	com.ddtek.jdbc.sequelkink.SequeLinkDriver
URL Connection String	`jdbc:sequelink://`*server-name*`:`*server-port* **Note –** The default server port is **19996**.
User Name	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.

Environment Properties

Use Table 1–12 to configure the environment properties for the specified JDBC/ODBC driver.

TABLE 1–12 Sequelink DataDirect Informix ODBC Driver Environment Properties

Parameter	Value
Description	JDBC Connection Pool Datasource
ClassName	com.ddtek.jdbcx.sequelkink.SequeLinkDataSource

TABLE 1–12 Sequelink DataDirect Informix ODBC Driver Environment Properties *(Continued)*

Parameter	Value
ClassNamefor OtherInterfaces	
ServerName	Server name of the machine hosting Sequelink.
PortNumber	*server-port* **Note –** The default server port is **19996**.
DatabaseName	
User	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.
DriverProperties	
Delimiter	The default is **#.**
DataSourceName	
MinPoolSize	The default is **0**.
MaxPoolSize	The default is **10**.
MaxIdleTime	The default is **0**.

Note – It is not mandatory to enter driver properties in the Outbound JDBC Adapter Environment properties for Sequelink DataDirect Informix ODBC.

Sequelink DataDirect MS Access ODBC Driver Configuration Properties

OTD Wizard: Database Connection Information

To connect to Microsoft Access, via the Microsoft Access ODBC driver, use the information provided in Table 1–13 to complete the Connect to Database step of the JDBC/ODBC OTD Wizard.

TABLE 1–13 MS Access ODBC Driver Database Connection Information

Parameter	Value
Driver Jar Files	`sljc.jar`
Driver Java Class Name	com.ddtek.jdbc.sequelink.SequeLinkDriver
URL Connection String	`jdbc:sequelink://`*server-name*`:server-port` **Note –** The default server port is **19996**.
User Name	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.

Environment Properties

Use Table 1–14 to configure the environment properties for the specified JDBC/ODBC driver.

TABLE 1–14 MS Access ODBC Driver Environment Properties

Parameter	Value
Description	JDBC Connection Pool Datasource
ClassName	com.ddtek.jdbcx.sequelkink.SequeLinkDataSource
ClassNamefor OtherInterfaces	
ServerName	Server name of the machine hosting Sequelink.
PortNumber	*server-port* **Note –** The default server port is **19996**.
DatabaseName	
User	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.
DriverProperties	
Delimiter	The default is **#.**
DataSourceName	
MinPoolSize	The default is **0**.
MaxPoolSize	The default is **10**.

TABLE 1–14 MS Access ODBC Driver Environment Properties *(Continued)*

Parameter	Value
MaxIdleTime	The default is **0**.

Note – It is not mandatory to enter driver properties in the Outbound JDBC Adapter Environment properties for Sequelink DataDirect MS Access ODBC.

Teradata Driver Configuration Properties

OTD Wizard: Database Connection Information

To connect to Teradata, via the Teradata driver, use the information provided in Table 1–15 to complete the Connect to Database step of the JDBC/ODBC OTD Wizard.

TABLE 1–15 Teradata Driver Database Connection Information

Parameter	Value
Driver Jar Files	`teradata.jar`
Driver Java Class Name	com.ncr.teradata.TeraDriver
URL Connection String	`jdbc:teradata://`*server-name*`:`*server-port*`/`*database-server-name* **Note –** The default server port is **6666** for the Type-3 driver Gateway.
User Name	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.

Environment Properties

Use Table 1–16 to configure the environment properties for the specified JDBC/ODBC driver.

TABLE 1–16 Teradata Driver Environment Properties

Parameter	Value
Description	JDBC Connection Pool Datasource

TABLE 1–16 Teradata Driver Environment Properties *(Continued)*

Parameter	Value
ClassName	com.ncr.teradata.TeraConnectionPoolDataSource
ClassNamefor OtherInterfaces	
ServerName	Server name of the machine hosting the database.
PortNumber	*server-port* **Note –** The default server port is **6666** for the Type-3 driver Gateway.
DatabaseName	*database-name*
User	Login name of the account used to access the database.
Password	Password associated with the login account name used to connect to the database.
DriverProperties	`setURL#jdbc:teradata://`*server-name*`:`*server-port*`/`*database-server-name* `##setDSName#`*database-server_name*`##`
Delimiter	The default is **#**.
DataSourceName	
MinPoolSize	The default is **2**.
MaxPoolSize	The default is **10**.
MaxIdleTime	The default is **0**.

Troubleshooting

Refer to the following when troubleshooting Driver issues.

- The ReceiveOne operation in BPEL is not supported when using inbound functions with some drivers.
- Some drivers do not support Updateable ResultSets. If you find this to be the case, use a Prepared Statement to update, insert, and delete data.
- Not all drivers provide metadata information such as column names and data types. If your table does not have column names and data types, add them before saving the OTD.

Installing JDBC/ODBC Drivers

The database drivers specified in your projects need to be installed on the GlassFish server. To install the driver on the GlassFish server, copy the driver from the database installation to *JavaCAPS_Home*`\appserver\lib` where *JavaCAPS_Home* is the location of your Java Composite Application Platform Suite installation.

For procedures on how to install database drivers, see "Configuring JDBC/ODBC Drivers" on page 6