

Java CAPS 6, Using MySQL with JDBC eWay (Repository) Configuring MySQL Connectivity

Michael Czapski, August 2008

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Introduction

In a number of blog entries I used Oracle 9i as the database against which solutions under discussion were executed. This is dandy for people who have Oracle, which is a payware piece and quite expensive. For these who don't have Oracle the examples would have been less useful. To remedy this situation, and take advantage of availability of Sun MySQL Community Server as a Free, Open Source software, I resolved to use My SQL in all blog notes, which require a database, which I will be developing from now on. For these who care, MySQL is the third most used RDBMS in the World. Some of the largest web sites in the World use it. See my blog at http://blogs.sun.com/javacapsfieldtech/entry/mysql_community_server_and_gui for discussion of how to obtain, install and configure MySQL Community Server on Windows.

This note discusses how to configure the Java CAPS 6 JDBC eWay (Repository) to connect to the MySQL Community Server both in XA and non-XA mode. In particular, the note points out an additional, critical configuration item that is undocumented and is bound to trip plenty of people. I hope this will save you the time and the trouble of working out for yourself what the correct incantations are.

Obtaining JDBC Driver Software

To connect to the MySQL RDBMS one needs a JDBC driver. The most recent, in August 2008, is the MySQL JDBC Driver package, Connector/J 5.1, downloadable from <http://dev.mysql.com/downloads/connector/j/5.1.html>. The driver distribution is called mysql-connector-java-5.1.6.tar.gz.

Adding JDBC Driver package to the Application Server

Untar the driver archive and copy the driver archive, mysql-connector-java-5.1.6-bin.jar, to <JavaCAPS6InstallDir>/appserver/domains/domain1/lib/ext. If the application server domain is running it will have to be restarted.

Generating MySQL OTDs

To generate JDBC table-, view-, or prepared statement-based OTDs using the MySQL metadata it is necessary to correctly configure JDBC connectivity properties.

Start the New OTD wizard and choose the JDBC Database Wizard type, as illustrated in Figure 1.

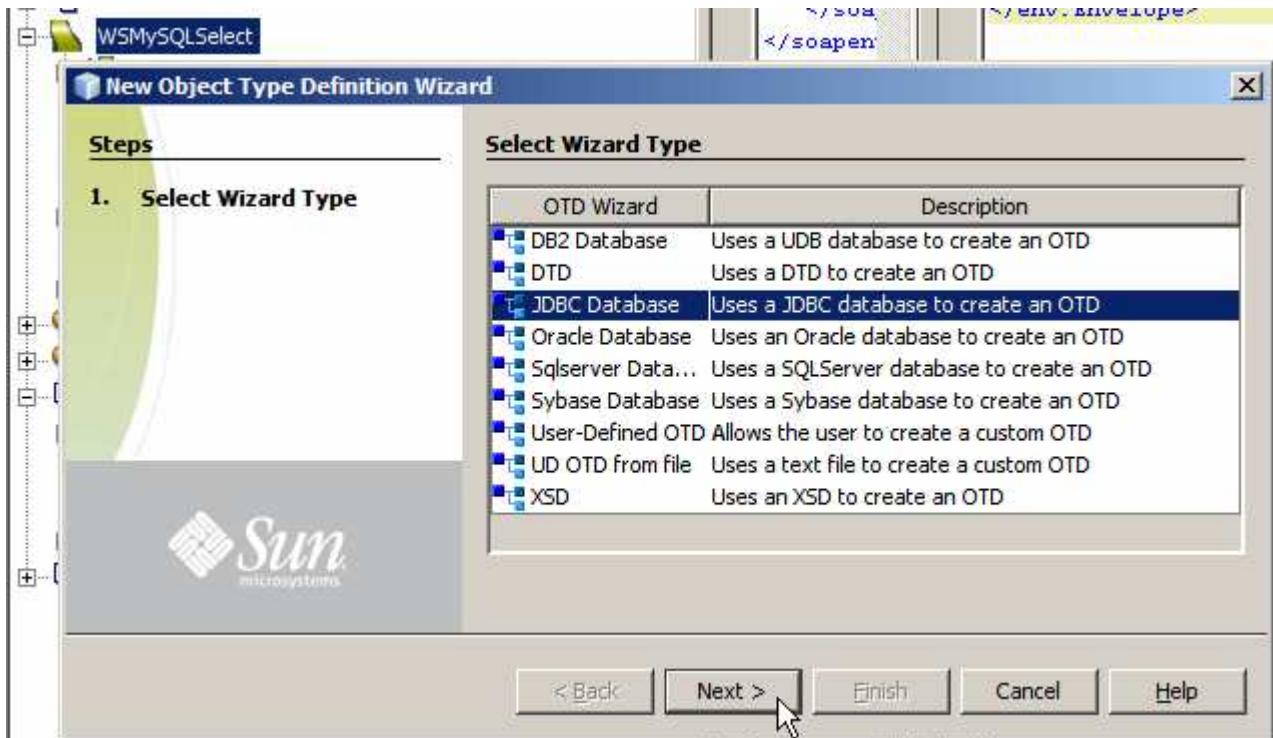


Figure 1 Choose the JDBC Database Wizard

Configure the Database Connection Information. Figure 2 illustrates the dialogue box and Table 1 reproduces property values for convenience.

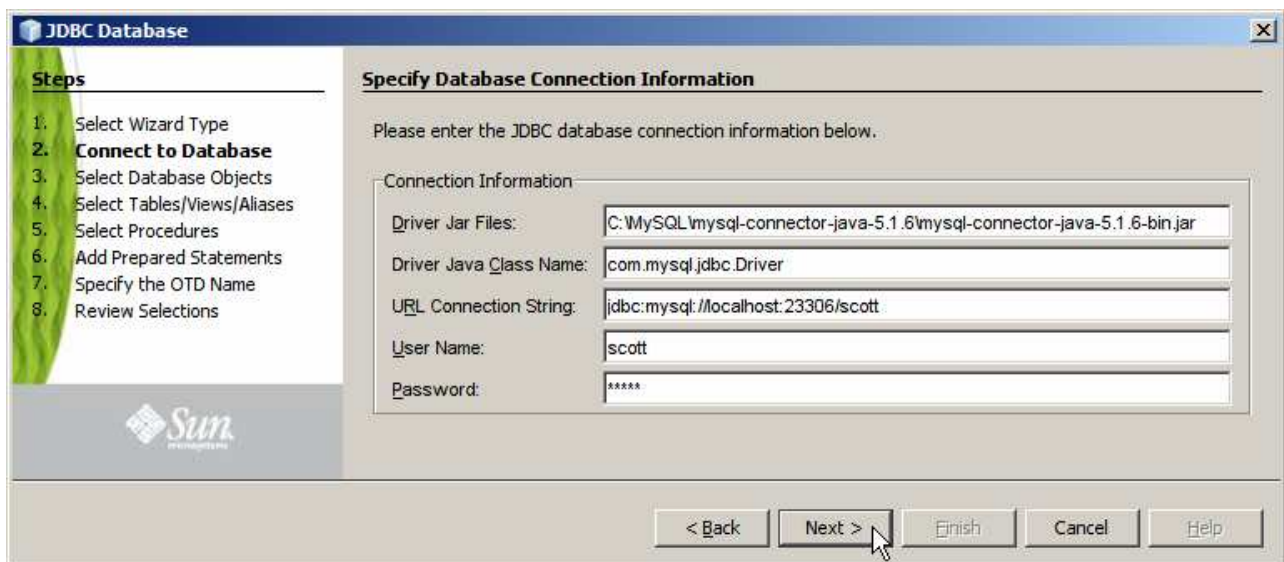


Figure 2 Database Connection Information

Driver Jar Files	<JDBCdriverJarDirPath>/mysql-connector-java-5.1.6-bin.jar
Driver Java Class Name	com.mysql.jdbc.Driver
URL Connection String	jdbc:mysql://<dbhost>:<dbport>/<dbschema>

Table 1 Key properties and their values

From this point on go through the regular steps of selecting the database schema, selecting tables/views/etc., and allowing the OTD Wizard to complete creation of the OTD. From here on the steps are the same for all Database Wizards I ever used.

This part of the configuration applies to design time activity of generating JDBC-based OTDs.

Configuring non-XA Connectivity

JDBC eWay runtime configuration is accomplished in two places, the Connectivity Map and the Java CAPS Environment.

On the Connectivity Map one chooses whether to use the Outbound JDBC XA eWay or the Outbound JDBC eWay (Transactional but not XA). Figure 3 illustrates the point. For non-XA connectivity choose the “Outbound JDBC eWay”.

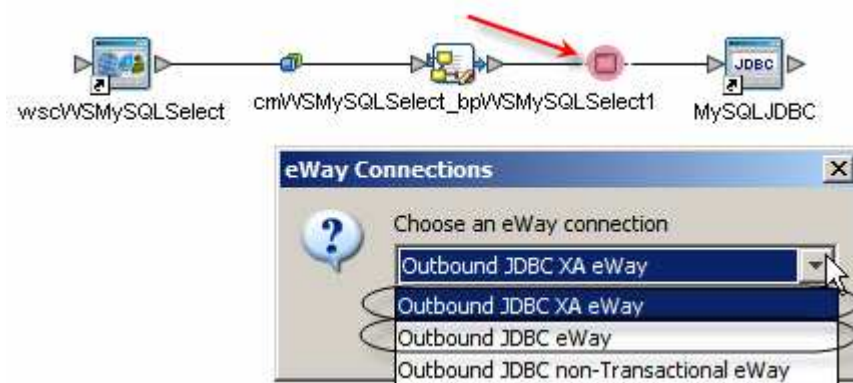


Figure 3 Choosing connectivity type

In the Environment create a JDBC External System Container and configure property values in the relevant section. Figure 4 illustrates the section pertaining to the non-XA eWay. Table 2 supplies values for the critical properties for ease of use.

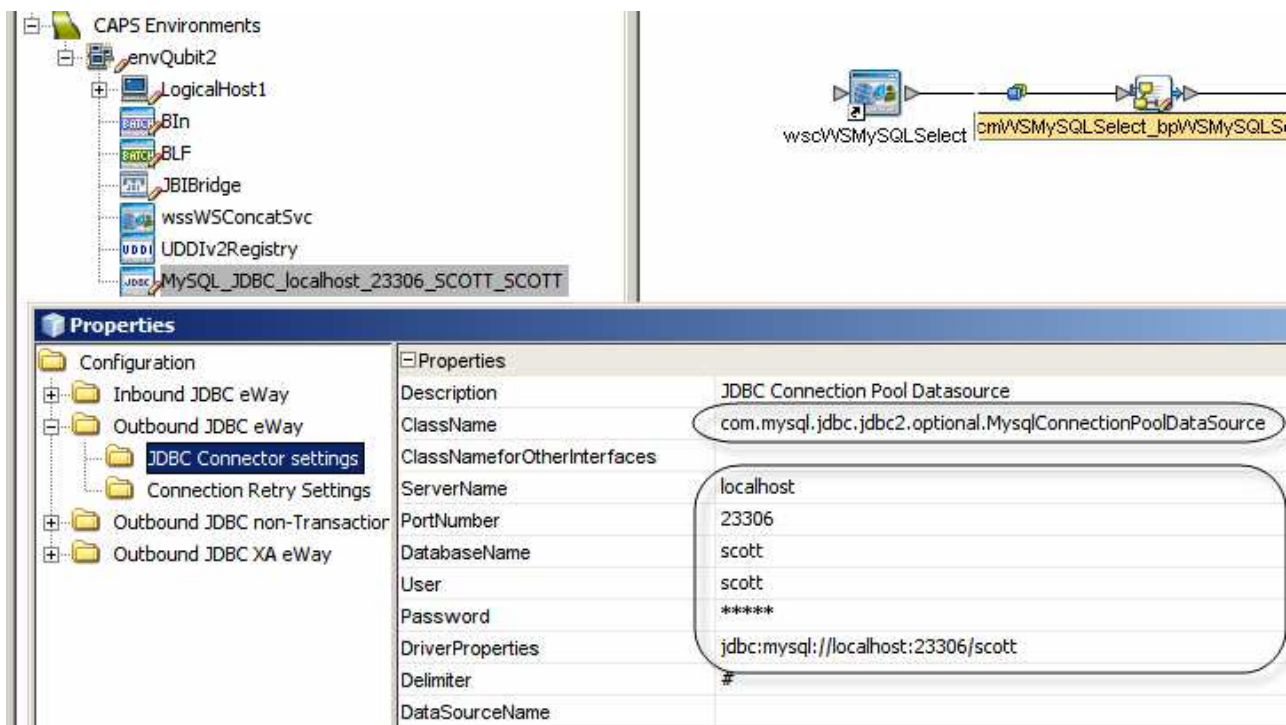


Figure 4 Configuration for the Outbound JDBC eWay

ClassName	com.mysql.jdbc.jdbc2.optional.MysqlConnectionPoolDataSource
Servename	<dbhost >
PortNumber	<dbportnumber>
DatabaseName	<dbschema>
User	<username of the db user>
Password	<password of the db user>
DriverProperties	jdbc:mysql://<dbhost>:<dbportnumber>/<dbschema>

Table 2 Outbound JDBC eWay configuration in the Java CAPS Environment

Note that DriverProeprties must be valued and the variable values in the URL must be the same as the values of the corresponding properties. This is critical as otherwise runtime exceptions will be experienced.

Configuring XA Connectivity

To configure XA support, on the Connectivity Map one chooses whether to use the Outbound JDBC XA eWay or the Outbound JDBC eWay (Transactional but not XA). Figure 5 illustrates the point. For XA connectivity choose the “Outbound JDBC XA eWay”.

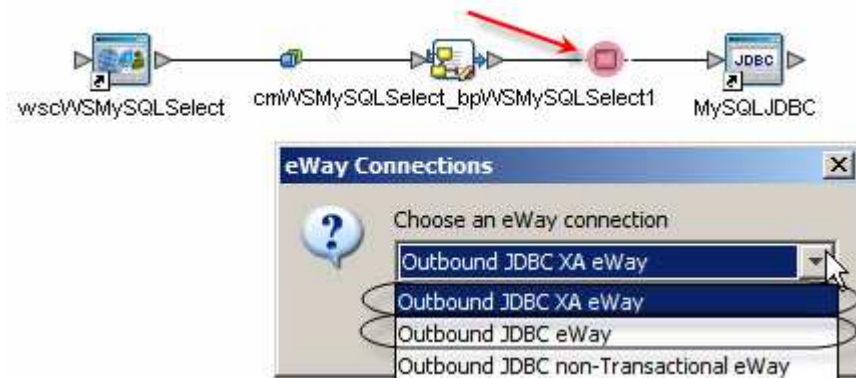


Figure 5 Choosing connectivity type

If you don't already have one, in the Environment create a JDBC External System Container and configure property values in the relevant section. Figure 6 illustrates the section pertaining to the XA eWay. Table 3 supplies values for the critical properties for ease of use.

ClassName	com.mysql.jdbc.jdbc2.optional.MysqlXADataSource
Servename	<dbhost >
PortNumber	<dbportnumber>
DatabaseName	<dbschema>
User	<username of the db user>
Password	<password of the db user>
DriverProperties	jdbc:mysql://<dbhost>:<dbportnumber>/<dbschema>

Table 3 Outbound JDBC XA eWay configuration in the Java CAPS Environment

Note that the only difference in this configuration is the value of the ClassName property.

Note that DriverProeprties must be valued and the variable values in the URL must be the same as the values of the corresponding properties. This is critical as otherwise runtime exceptions will be experienced.

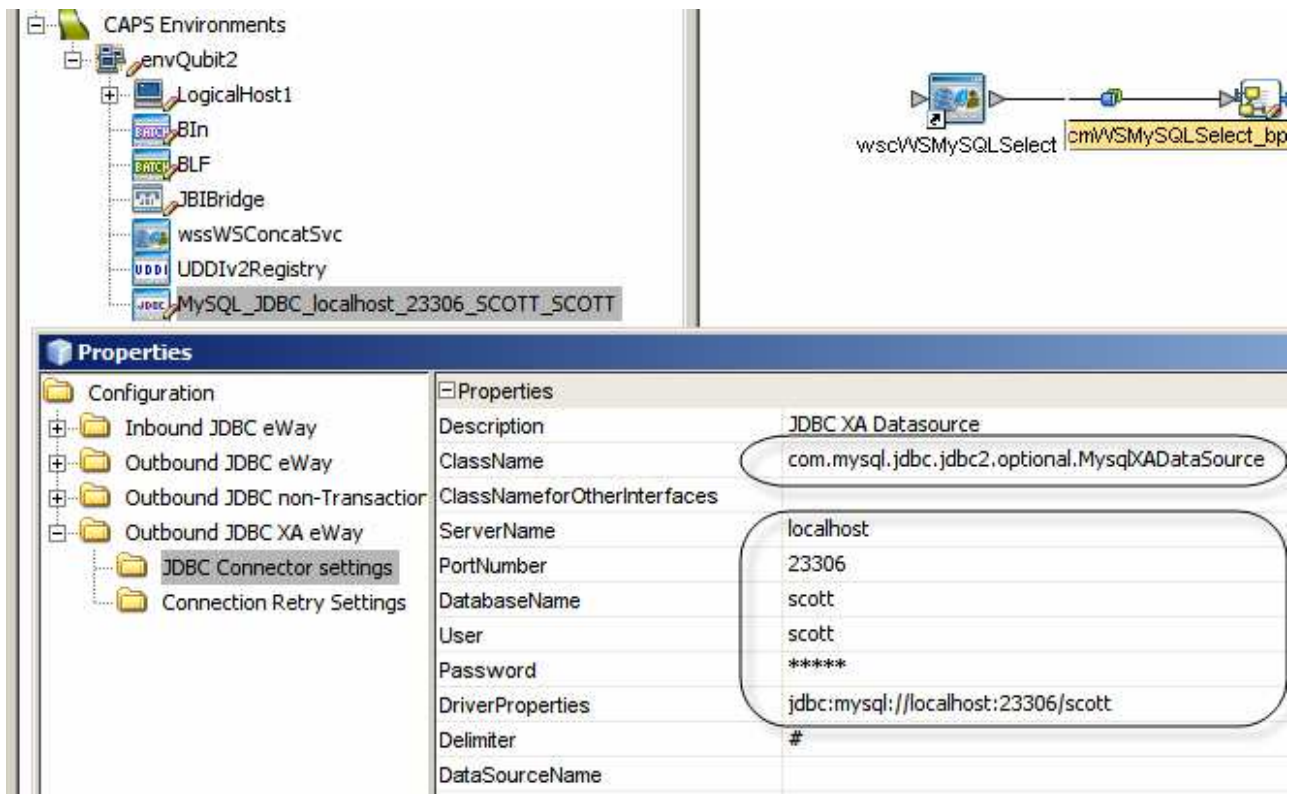


Figure 6 Configuration for the Outbound JDBC XA eWay

Summary

This note discussed how to configure the Java CAPS 6 JDBC eWay (Repository) to connect to the MySQL Community Server both in XA and non-XA mode. In particular, the note pointed out an additional, critical configuration item that is undocumented and is bound to trip plenty of people.