

## Chapter 6.2 - Configuring Database Connections

Tomcat uses its context.xml file to create database connection pools and find the database. Shrine-setup.zip contains a sample context.xml file. Copy that file to **/opt/shrine/tomcat/conf**.

Here's an example of a context.xml file for a local mariaDB:

```
<?xml version='1.0' encoding='utf-8'?>
<!-- The contents of this file will be loaded for each web application -->

<Context>
  <WatchedResource>WEB-INF/web.xml</WatchedResource>
  <Resource name="jdbc/problemDB" auth="Container" type="javax.sql.DataSource"
    maxTotal="128" maxIdle="32" maxWaitMillis="10000"
    username="shrine" password="demouser" driverClassName="com.mysql.jdbc.Driver"
    url="jdbc:mysql://localhost:3306/shrine_query_history"
    testOnBorrow="true" validationQuery="SELECT 1" />

  <Resource name="jdbc/shrineDB" auth="Container" type="javax.sql.DataSource"
    maxTotal="128" maxIdle="32" maxWaitMillis="10000"
    username="shrine" password="demouser" driverClassName="com.mysql.jdbc.Driver"
    url="jdbc:mysql://localhost:3306/shrine_query_history"
    testOnBorrow="true" validationQuery="SELECT 1" />

  <Resource name="jdbc/adaptersAuditDB" auth="Container" type="javax.sql.DataSource"
    maxTotal="128" maxIdle="32" maxWaitMillis="10000"
    username="shrine" password="demouser" driverClassName="com.mysql.jdbc.Driver"
    url="jdbc:mysql://localhost:3306/adaptersAuditDB"
    testOnBorrow="true" validationQuery="SELECT 1" />

  <Resource name="jdbc/repAuditDB" auth="Container" type="javax.sql.DataSource"
    maxTotal="512" maxIdle="32" maxWaitMillis="10000"
    username="shrine" password="demouser" driverClassName="com.mysql.jdbc.Driver"
    url="jdbc:mysql://localhost:3306/repAuditDB"
    testOnBorrow="true" validationQuery="SELECT 1" />

  <Resource name="jdbc/stewardDB" auth="Container" type="javax.sql.DataSource"
    maxTotal="128" maxIdle="32" maxWaitMillis="10000"
    username="shrine" password="demouser" driverClassName="com.mysql.jdbc.Driver"
    url="jdbc:mysql://localhost:3306/stewardDB"
    testOnBorrow="true" validationQuery="SELECT 1" />
</Context>
```

For MariaDB you will need to use an appropriate driver. In our tests, we have had success with the MySQL Connector/J driver from <https://dev.mysql.com/downloads/connector/j/>. The jar file we used was mysql-connector-java-5.1.38-bin.jar. It should be installed under **/opt/shrine/tomcat/lib**.

### MS SQL Server

For MS SQL Server, you will need to use an appropriate driver and url for your database. In our tests, we have had success with the JTS driver from <https://sourceforge.net/projects/jtds/files/>. The jar file we used was ds-1.3.1.jar. It should be installed under **/opt/shrine/tomcat/lib**.

```
driverClassName="net.sourceforge.jtds.jdbc.Driver"
```

The URL we use looks like this:

```
url="jdbc:jtds:sqlserver://shrine-qa-mssql.clpwbhemhmx.us-east-1.rds.amazonaws.com:1433/adaptersAuditDB"
```

### Oracle

For Oracle, you will need to use an appropriate driver and url for your database. In our tests, we have had success with the Oracle DB driver from <https://www.oracle.com/technetwork/database/application-development/jdbc/downloads/jdbc-ucp-19c-5460552.html>. The jar file we used was **ojdbc7.jar**. It should be installed under **/opt/shrine/tomcat/lib**.

```
driverClassName="oracle.jdbc.OracleDriver"
```

The URL we use looks like this:

```
url="jdbc:oracle:thin:@shrine-qa-ora.c1pwbbhemhmx.us-east-1.rds.amazonaws.com:1521:SHRINEDB"
```

We also changed the validationQuery:

```
validationQuery="SELECT 1 FROM DUAL"
```