**[Configuring a PostgreSQL Datasource in Apache Tomcat](https://confluence.atlassian.com/display/DOC/Configuring+a+PostgreSQL+Datasource+in+Apache+Tomcat)**

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This page tells you how to set up a PostgreSQL datasource connection for Confluence.

**Step 1. Shut down Tomcat**

1. Run bin/shutdown.sh or bin/shutdown.bat to bring Tomcat down while you are making these changes.
2. Make a backup of your <CONFLUENCE\_HOME>/confluence.cfg.xml file and your <CONFLUENCE\_INSTALLATION>/conf/server.xml file, so that you can easily revert if you have a problem.

**Step 2. Install the PostgreSQL Server database driver**

1. Download the PostgreSQL Server JDBC driver JAR file.
   * Links are available on this page: [Database JDBC Drivers](https://confluence.atlassian.com/display/DOC/Database+JDBC+Drivers).
   * Alternatively, you can get the driver from your Confluence installation: /confluence/WEB-INF/lib/postgresql-x.x-x.jdbcx.jar, where 'x' represents a version number.
2. Copy the JAR file into the lib folder of your Tomcat installation: <TOMCAT-INSTALLATION>/lib.

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**Related pages:**

* [Database Setup for PostgreSQL](https://confluence.atlassian.com/display/DOC/Database+Setup+for+PostgreSQL)

**Step 3. Configure Tomcat**

1. Edit the conf/server.xml file in your Tomcat installation.
2. Find the following lines:

|  |
| --- |
| <Context path="" docBase="../confluence" debug="0" reloadable="true">        <!-- Logger is deprecated in Tomcat 5.5. Logging configuration for Confluence is specified in confluence/WEB-INF/classes/log4j.properties --> |

1. Insert the DataSource Resource element inside the Context element, directly after the opening <Context.../> line,  before Manager:

|  |
| --- |
| <Resource name="jdbc/confluence" auth="Container" type="javax.sql.DataSource"            username="postgres"            password="postgres"            driverClassName="org.postgresql.Driver"            url="jdbc:postgresql://localhost:5432/yourDatabaseName"            maxActive="20"            maxIdle="10"            validationQuery="select 1" /> |

* + Replace the username and password parameters with the correct values for your database
  + In the url parameter, replace the word 'yourDatabaseName' with the name of the database your Confluence data will be stored in.

**Notes:**

* If switching from a direct JDBC connection to datasource, you can find the above details in your <CONFLUENCE\_HOME>/confluence.cfg.xml file.
* Here are the configuration properties for Tomcat's standard data source resource factory (org.apache.tomcat.dbcp.dbcp.BasicDataSourceFactory):
  + driverClassName — Fully qualified Java class name of the JDBC driver to be used.
  + maxActive — The maximum number of active instances that can be allocated from this pool at the same time.
  + maxIdle — The maximum number of connections that can sit idle in this pool at the same time.
  + maxWait — The maximum number of milliseconds that the pool will wait (when there are no available connections) for a connection to be returned before throwing an exception.
  + password — Database password to be passed to our JDBC driver.
  + url — Connection URL to be passed to our JDBC driver. (For backwards compatibility, the property driverName is also recognized.)
  + user — Database username to be passed to our JDBC driver.
  + validationQuery — SQL query that can be used by the pool to validate connections before they are returned to the application. If specified, this query MUST be an SQL SELECT statement that returns at least one row.
* Why is the validationQuery element needed? When a database server reboots, or there is a network failure, all the connections in the connection pool are broken and this normally requires a Application Server reboot. However, the Commons DBCP (Database Connection Pool) which is used by the Tomcat application server can validate connections before issuing them by running a simple SQL query, and if a broken connection is detected, a new one is created to replace it. To do this, you will need to set the "validationQuery" option on the database connection pool.

**Step 4. Configure the Confluence web application**

1. Edit this file in your Confluence installation: <CONFLUENCE\_INSTALLATION>/confluence/WEB-INF/web.xml.
2. Insert the following element just before </web-app> near the end of the file:

|  |
| --- |
| <resource-ref>      <description>Connection Pool</description>      <res-ref-name>jdbc/confluence</res-ref-name>      <res-type>javax.sql.Datasource</res-type>      <res-auth>Container</res-auth>  </resource-ref> |