

Connecting JIRA to Firebird

Note:

Before you begin: If you are already using JIRA, create an export of your data as an [XML backup](#). You will then be able to transfer data from your old database to your new database, as described in [Switching databases](#).

1. 1. Configure Firebird

1. Create a database user which JIRA will connect as (e.g. **jirauser**).
2. Create a database for JIRA to store issues in (e.g. **jiradb**).
3. Ensure that the user has permission to connect to the database, and create and populate tables.

2. 2. Copy the Firebird driver to your application server

1. Download the Firebird JDBC driver from <http://firebird.sourceforge.net>.
2. Add the Firebird JDBC driver jar (**firebirdsql.jar**) to the `common/lib/` directory.

3. 3. Configure your application server to connect to Firebird

1. Edit `conf/server.xml` (if you are using JIRA Standalone) and customise the `username`, `password`, `driverClassName` and `url` parameters for the Datasource. (If you are using JIRA WAR/EAR, edit the appropriate file on your [application server](#); e.g. for Tomcat, edit `conf/Catalina/localhost/jira.xml`.)

```
<Server port="8005" shutdown="SHUTDOWN">
  <Service name="Catalina">
    <Connector port="8080"
      maxHttpHeaderSize="8192" maxThreads="150" minSpareThreads="25" maxSpareThreads="
      enableLookups="false" redirectPort="8443" acceptCount="100"
      connectionTimeout="20000" disableUploadTimeout="true" />
    <Engine name="Catalina" defaultHost="localhost">
      <Host name="localhost" appBase="webapps" unpackWARs="true" autoDeploy="true">
        <Context path="" docBase="${catalina.home}/atlassian-jira" reloadable="false"
          <Resource name="jdbc/JiraDS" auth="Container" type="javax.sql.DataSource"
            username="[enter db username]"
            password="[enter db password]"
            driverClassName="org.firebirdsql.jdbc.FBDriver"
            url="jdbc:firebirdsql:localhost/3050:/opt/firebird/examples/jiradb.fdb?
            [ delete the minEvictableIdleTimeMillis and timeBetweenEvictionRunsMilli
            />
          <Resource name="UserTransaction" auth="Container" type="javax.transaction.
            factory="org.objectweb.jotm.UserTransactionFactory" jotm.timeout="60"/>
          <Manager className="org.apache.catalina.session.PersistentManager" saveOnR
        </Context>
      </Host>
    </Engine>
  </Service>
</Server>
```

(Note: if you can't find this section at all, you've probably got the wrong file - search for mentions of 'jira' in the files under `conf/`.)

2. If you are using JIRA Standalone, edit `conf/server.xml`, and delete the **`minEvictableIdleTimeMillis`** and **`timeBetweenEvictionRunsMillis`** attributes (which are only needed for HSQL, and degrade performance otherwise).

4. 4. Configure the JIRA Entity Engine

1. Edit `atlassian-jira/WEB-INF/classes/entityengine.xml` (if you are using JIRA Standalone) or `edit-webapp/WEB-INF/classes/entityengine.xml` (JIRA WAR/EAR), and change the `field-type-name` attribute to **firebird**. (If you forget to do this and start JIRA, it may create database tables incorrectly. See [this page](#) if this happens to you.) Also delete the `schema-name="PUBLIC"` attribute:

```
<!-- DATASOURCE - You will need to update this tag for your installation.
-->
<datasource name="defaultDS" field-type-name="firebird"
  schema-name="PUBLIC"
  helper-class="org.ofbiz.core.entity.GenericHelperDAO"
  check-on-start="true"
  use-foreign-keys="false"
  ...
```

Note:

If you are using JIRA WAR/EAR, your [application server](#) may require other changes to `entityengine.xml` (e.g. to customise the `jndi-jdbc` tag).

5. Additional notes

- A constraint within Firebird does not allow key sizes to be greater than 250. Due to this restriction, it should be noted that the performance of JIRA is significantly reduced as some indexes can not be created. When starting up JIRA for the first time you will see warning messages caused by this constraint, which look like this:

```
2006-08-31 11:27:48,328 main [core.entity.jdbc.DatabaseUtil]
SQL Exception while executing the following: CREATE INDEX
action_issue ON jiraaction (issueid, actiontype) Error was:
org.firebirdsql.jdbc.FBSQLException: GDS Exception. 335544351.
unsuccessful metadata update key size too big for index
ACTION_ISSUE
```

6. Next steps

You should now have an application server configured to connect to a database, and JIRA configured to use the correct database type. If you are using JIRA Standalone, start it up and watch the logs for any errors. If you are using the JIRA WAR/EAR distribution, rebuild and redeploy the webapp in your application server.

7. User-contributed notes

Have experiences to share with Firebird and JIRA? We welcome your thoughts. Please see the [user-contributed Firebird notes](#).