

# H2 database configuration

## What's this about?

This page describes a sample configuration for Jackrabbit in Magnolia that uses the [h2 embedded database engine](#).

Why would you want this? h2 is an alternative to the embedded Derby database used by default in Jackrabbit, and has the following advantages:

- it uses only a few files to store the entire db, unlike Derby which will create (and keep open) thousands of files
- faster (possibly, the h2 developer claims it is, but I haven't tested myself)

In particular the first advantage is a solution to the "too many open files" problem many people have running magnolia under linux.

## Get the JDBC driver

Download from: <http://www.h2database.com/html/download.html> (get the JAR file)

Maven dependency:

```
<dependency>
  <groupId>com.h2database</groupId>
  <artifactId>h2</artifactId>
  <version>1.3.174</version>
</dependency>
```

Put the JAR in magnolia's **WEB-INF/lib** folder or in your tomcat's **lib** folder.

## Sample Jackrabbit configuration

Here's the sample. Put it in your repo-conf folder and point to it from magnolia.properties:

```
magnolia.repositories.jackrabbit.config=WEB-INF/config/repo-conf/jackrabbit-bundle-h2-search.xml
```

Sample jackrabbit-bundle-h2-search.xml:

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE Repository PUBLIC "-//The Apache Software Foundation//DTD Jackrabbit 2.0//EN" "http://jackrabbit.
apache.org/dtd/repository-2.0.dtd">
<Repository>
  <FileSystem class="org.apache.jackrabbit.core.fs.local.LocalFileSystem">
    <param name="path" value="{rep.home}/repository" />
  </FileSystem>
  <Security appName="magnolia">
    <SecurityManager class="org.apache.jackrabbit.core.DefaultSecurityManager" />
    <AccessManager class="org.apache.jackrabbit.core.security.DefaultAccessManager">
    </AccessManager>
    <LoginModule class="info.magnolia.jaas.sp.jcr.JackrabbitAuthenticationModule">
    </LoginModule>
  </Security>
  <DataStore class="org.apache.jackrabbit.core.data.FileDataStore">
    <param name="path" value="{rep.home}/repository/datastore" />
    <param name="minRecordLength" value="1024" />
  </DataStore>
  <Workspaces rootPath="{rep.home}/workspaces" defaultWorkspace="default" />
  <Workspace name="default">
    <FileSystem class="org.apache.jackrabbit.core.fs.local.LocalFileSystem">
      <param name="path" value="{wsp.home}/default" />
    </FileSystem>
    <PersistenceManager class="org.apache.jackrabbit.core.persistence.bundle.H2PersistenceManager">
      <param name="url" value="jdbc:h2:{wsp.home}/db" />
      <param name="schemaObjectPrefix" value="pm_{wsp.name}_" />
    </PersistenceManager>
    <SearchIndex class="org.apache.jackrabbit.core.query.lucene.SearchIndex">
      <param name="path" value="{wsp.home}/index" />
      <param name="useCompoundFile" value="true" />
      <param name="minMergeDocs" value="100" />
      <param name="volatileIdleTime" value="3" />
      <param name="maxMergeDocs" value="100000" />
      <param name="mergeFactor" value="10" />
      <param name="maxFieldLength" value="10000" />
      <param name="bufferSize" value="10" />
      <param name="cacheSize" value="1000" />
      <param name="forceConsistencyCheck" value="false" />
      <param name="autoRepair" value="true" />
      <param name="queryClass" value="org.apache.jackrabbit.core.query.QueryImpl" />
      <param name="resultFetchSize" value="100" />
      <param name="extractorPoolSize" value="3" />
      <param name="extractorTimeout" value="100" />
      <param name="extractorBackLogSize" value="100" />
    </SearchIndex>
    <WorkspaceSecurity>
      <AccessControlProvider class="info.magnolia.cms.core.MagnoliaAccessProvider" />
    </WorkspaceSecurity>
  </Workspace>
  <Versioning rootPath="{rep.home}/version">
    <FileSystem class="org.apache.jackrabbit.core.fs.local.LocalFileSystem">
      <param name="path" value="{rep.home}/workspaces/version" />
    </FileSystem>
    <PersistenceManager class="org.apache.jackrabbit.core.persistence.bundle.H2PersistenceManager">
      <param name="url" value="jdbc:h2:{rep.home}/version/db" />
      <param name="schemaObjectPrefix" value="version_" />
    </PersistenceManager>
  </Versioning>
</Repository>

```