



# Lucid<sup>®</sup> Key Server

## Installation Documentation

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[www.lucidcentral.org](http://www.lucidcentral.org)

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## System Requirements

Unix/Linux or Windows based server with the following technologies:



### Web Server

Apache 2 or IIS 6 or greater

<http://www.apache.org>



### Database Server

Recommended: MySQL 4.1 or MySQL 5.0

Optional: PostgreSQL, Microsoft SQL Server

<http://www.mysql.com>



### Java

<http://www.java.com>

Recommended: 1.6 or greater



### Tomcat

<http://www.tomcat.apache.org>

Recommended: 5.5 or greater

## Installation files

The installation files for the Lucid Key Server come compressed within a ZIP archive file. Extract the archive file into an empty, non public folder. After extraction you should see the following folder structure:

key-server/	
db/	← Database scripts
docs/	← Documentation and help
webapp/	← Web application files and subfolders

Use these files and folders to perform the installation of the Lucid Key Server as described below.

## Creating the Database

*Note: These instructions are for MySQL, if using a different database server please refer to the relevant vendor help files to create a database.*

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### Step 1: Create the database

```
mysqladmin -u admin -p create key_server
```

“admin” is the name of the database user with administrative rights, “key\_server” is the name of the new database.

MySQL will be prompt for the password for the admin account, next create the database with the specified name.

### Step 2: Create the database user and assign permissions

```
mysql -u admin -p
```

MySQL will prompt for the admin password, then at the `mysql>` prompt enter the following command:

```
GRANT SELECT, INSERT, UPDATE, DELETE, CREATE, DROP, INDEX, ALTER ON database.* TO 'username@localhost' IDENTIFIED BY 'password';
```

Replacing:

- “database” with the name of the database you created in step 1.
- “username” with the username of the new or existing user.
- “password” with the password of the new or existing user.

### Step 3: Apply the new permissions

From the `mysql>` prompt, run the following command:

```
flush privileges;
```

## Step 4: Populate the database

First, run the following script to create the required tables and indices.

```
mysql -u username -p database < key-server-create.sql
```

Next, run the following script to populate the database with the initial data fill.

```
mysql -u username -p database < key-server-datafill.sql
```

## Install the Web Application

Copy the 'key-server' folder from the *webapp* folder to the *webapp* folder of your Tomcat installation.

On unix based systems this is typically */usr/local/tomcat/webapps*, on windows based systems this is usually *C:\tomcat\webapps*.

## Configure the Web Application

This section explains how to configure and customise the web application for your system and needs.

### Database Connection

To configure the database connection parameters edit the following file:

```
{tomcat_home}/webapps/key-server/WEB-INF/classes/META-INF/ applicationContext-core-dao-datasource.xml
```

Edit the value attribute on the following line to specify the database to connect to:

```
<property name="url" value="jdbc:mysql://localhost:3306/key_server"/>
```

Edit the value attribute on the following line to specify the database user to connect with:

```
<property name="username" value="username"/>
```

Edit the value attribute on the following line to specify the password of the user you are connecting with:

```
<property name="password" value="password"/>
```

### Mail Configuration

To configure the SMTP connection parameters edit the following file:

```
{tomcat_home}/webapps/key-server/WEB-INF/classes/META-INF/ applicationContext-webapp-mail.xml
```

### Logging

By default error level logs are written to the console (output to *catalina.out*) and info level logs are written to */usr/local/tomcat/logs/key-server.log*

To configure the logging parameters edit the following file:

```
{tomcat_home}/webapps/key-server/WEB-INF/classes/log4j.xml
```

## Data Folder

The data folder is the location on the file system where key related data (icons, multimedia files, etc) are stored. The data folder needs to be writable by the user that the tomcat server is running under.

The default location for the data folder is `/usr/local/tomcat/webapps/key-server/data`, this path is configured UNIX based systems. If you are running a windows based system you will need to edit the configuration to reflect the location of the data folder.

To customise the data folder location, edit the following file:

```
{tomcat_home}/webapps/key-server/WEB-INF/web.xml
```

At the bottom of the file locate the following block:

```
<context-param>  
  <param-name>dataFolderPath</param-name>  
  <param-value>/usr/local/tomcat/webapps/key-server/data</param-value>  
</context-param>
```

Update the contents of the param-value to the location of your data folder, a typical setting for windows would be "C:/tomcat/webapps/key-server/data"

***Note: the data folder must be located inside the web applications folder, otherwise references to media files will be broken in the player.***

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To ensure the data folder is owned and writable by the user that tomcat is running with, use the following commands:

```
ls -al /usr/local/tomcat/webapps/key-server
```

You should see a similar line below in the directory listing:

```
drwxrwxr-x  9 tomcat tomcat 306 9 Sep 14:23 data
```

Ensure the permissions match the mode above (775) and the user and group is tomcat (or the relevant user/group).

To change the permissions use the following command:

```
chmod 775 /usr/local/tomcat/webapps/key-server/data
```

To change the owner/group use the following command:

```
chown tomcat:tomcat /usr/local/tomcat/webapps/key-server/data
```

## Testing the Installation

Using your default web browser visit the Lucid Key Server web address on the server.

For example:

[http://localhost:8080/key\\_server/index.jsp](http://localhost:8080/key_server/index.jsp)

Login as *Administrator* using the default credentials that were created as a part of the installation process. They are:

**Username:** admin  
**Password:** admin

***Note: It is highly recommended you change the 'admin' account password before proceeding further.***

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*For further information on setting up user accounts, groups and uploading keys please see the Lucid Key Server Documentation.*

## Appendix: Apache, IIS and Tomcat Connectors

Tomcat connectors allow you to integrate Tomcat with a separate web server, for example, an Apache web server forwarding requests to a Tomcat process running behind it.

Typically, the Tomcat http connector runs on port 8080, such as <http://localhost:8080/key-server/index.jsp>. Using Tomcat connectors, you can have your regular web server listening on port 80 and forwarding requests to certain paths to a Tomcat engine. Using this approach the previous URL would become <http://localhost/key-server/index.jsp>.

For instructions on configuring Apache and Tomcat integration, using connectors, refer to the following page:

[http://tomcat.apache.org/connectors-doc/generic\\_howto/quick.html](http://tomcat.apache.org/connectors-doc/generic_howto/quick.html)

For instructions on configuring IIS and Tomcat integration, refer to the following page:

[http://tomcat.apache.org/connectors-doc/webserver\\_howto/iis.html](http://tomcat.apache.org/connectors-doc/webserver_howto/iis.html)