

REQUITOPIA

A NEW PARADIGM IN REQUIREMENTS MODELING

Installation Guide

Version 0.8A

July 18, 2007

Copyright 2007, Isotope 28

www.isotope28.com



Requitopia - Quick Reference Guide

Requitopia - Installation Guide

Thomas A. Bullinger

Copyright (c) 2007 by Isotope28

All rights reserved. Printed in the USA.

Available online at: <http://www.isotope28.com/Requitopia>

While every precaution has been taken in the preparation of this material to make the information as complete and accurate as possible, the author assumes no responsibility for errors or omissions, or for damages resulting from the use of this information contained herein, which is provided on an "as-is" basis.

Contact:

Thomas A. Bullinger

Isotope28

2500 Turk Hill Road

Victor, New York 14564

<http://www.isotope28.com>

mailto: tom@isotope28.com

Table of Contents

| | |
|--|-----------|
| System Requirements | 4 |
| OS X | 5 |
| <i>Installing Java</i> | <i>5</i> |
| <i>Installing MySQL (for the multi-user version)</i> | <i>5</i> |
| <i>Installing Requitopia</i> | <i>5</i> |
| Windows | 6 |
| <i>Installing Java</i> | <i>6</i> |
| <i>Installing MySQL (for the multi-user version)</i> | <i>6</i> |
| <i>Installing Requitopia</i> | <i>6</i> |
| Linux | 7 |
| <i>Installing Java</i> | <i>7</i> |
| <i>Installing MySQL</i> | <i>7</i> |
| <i>Installing Requitopia</i> | <i>7</i> |
| Configuring the MySQL Database (for the multi-user version) | 8 |
| Updating the Database | 10 |
| Configuring Requitopia | 11 |
| Licensing Requitopia | 12 |

System Requirements

Requitopia has been developed and tested on an Apple Macintosh Pro. The application is written in Java, and is intended to be a write-once, run anywhere application. Unfortunately, the reality is that different Java virtual machines on different platforms behave differently. Consequently, even the appropriate environment on your platform may have problems. The latest version of Java can be downloaded and installed from <http://java.sun.com>.

Requitopia is built on the open-source database engine MySQL. While any database engine may serve, MySQL has been configured and tested with Requitopia. Installation information for MySQL is included here, but is supplemented by all the documentation available at the MySQL web site: <http://www.mysql.org>. MySQL supports a large number of platforms with binary and source distributions, and detailed installation instructions for each platform. A standalone version of the tool is also available built on the open-source SQLite package. The standalone version does not require MySQL to be installed, but does not support multiple users.

The following describe the development environment utilized for Requitopia:

Operating System: Apple OS X Version 10.4.9

Java Version: 1.5.0_07-87

MySQL Version: 5.0.27-standard (for the multi-user version)

In addition to the Mac platform, Requitopia has been installed and tested on Microsoft Windows. The Windows test environment is as follows:

Operating System: Microsoft Windows 2000, Build 5.00.2195 Service Pack 4

Java Version: 1.5.0_06-b05

MySQL Version: 5.0.37-community-nt (for the multi-user version)

The MySQL version of Requitopia has been designed to support a database running on the same platform, or on completely separate, and even different platforms. Consequently, the database server can run on a central unix or windows server, and clients can each run on Windows, OS X, or Linux as desired. As Requitopia interacts frequently with the database, a distributed environment should utilize a fast ethernet connection. Requitopia was developed in a distributed environment with Gigabit ethernet between the client and the database.

The various configuration options to support distributed environments are discussed later.

OS X

Installing Java

Fortunately, Apple's OS X comes bundled with Java. If you're running a newer version of OS X, you need not do anything to install or configure Java.

Installing MySQL (for the multi-user version)

MySQL is an open source, public domain software package. As such, the acquisition and installation is fairly straightforward. Please refer to

<http://dev.mysql.com/doc/refman/5.0/en/mac-os-x-installation.html>

For details on installation of MySQL on OS X.

Installing Requitopia

Requitopia is packaged as a complete application for OS X. Unzip the downloaded file to extract the package installer. To install the application, double click on the installer and follow the directions. The Requitopia application will be installed on your applications folder.

Windows

Installing Java

Sun Microsystems provides multiple versions of Java, and various installation packages. For some platforms, Sun provides an automated online installation package. Please refer to Sun's download website for details and installation instructions.

<http://www.java.com/en/download/manual.jsp>

Installing MySQL (for the multi-user version)

MySQL is an open source, public domain software package. As such, the acquisition and installation is fairly straightforward. Please refer to

<http://dev.mysql.com/doc/refman/5.0/en/windows-installation.html>

For details on installation of MySQL on Windows.

Installing Requitopia

Requitopia is provided in a zip file with all the required directories and files. Unzip the downloaded file into your C:\Program Files directory in a subdirectory called Requitopia. Depending on your Java installation, you can double-click on the Requitopia.jar file to run the application, or on the provided Requitopia.bat file. In either case, a shortcut can be created on your desktop or in your startup menu.

Linux

(A stand-alone version is not available for the Linux platforms)

Installing Java

Sun Microsystems provides multiple versions of Java, and various installation packages. For some platforms, Sun provides an automated online installation package. Please refer to Sun's download website for details and installation instructions.

<http://www.java.com/en/download/manual.jsp>

Installing MySQL

MySQL is an open source, public domain software package. As such, the acquisition and installation is fairly straightforward. Please refer to

<http://dev.mysql.com/doc/refman/5.0/en/linux-rpm.html>

For details on installation of MySQL on Linux. Other Unix distributions are handled in a similar manner.

Installing Requitopia

Requitopia is provided in a zip file with all the required directories and files. Unzip the downloaded file into your a suitable directory (i.e. /usr/local/bin) in a subdirectory called Requitopia. Depending on your Java installation, you can double-click on the Requitopia.jar file to run the application, or on the provided Requitopia.sh file. In either case, a shortcut can be created on your desktop. Be sure to verify the permissions on the jar file are executable, and that the ifconfig utility is in the default path.

Configuring the MySQL Database (for the multi-user version)

The initial installation of the database needs to be slightly altered to enable access for the Requitopia application, and to configure the initial database. The first activity is to create the user and password for the Requitopia application. To begin, open a shell or command line tool and log into the MySQL server using the root MySQL account.

```
> /usr/local/mysql/bin/mysql -u root
```

If access is granted, the root password must be specified to prevent inadvertent changes to the database. From the sql prompt, enter the following command to set the root password:

```
mysql> set password for 'root'@'localhost' = password('password');
```

Replace the ***password*** in the above statement with your desired root password. The root access to MySQL will now be limited to those with the password.

If your installation of MySQL requested the entry of a root password, use the following command to log into the MySQL server.

```
> /usr/local/mysql/bin/mysql -u root -p
```

When prompted, enter the password specified during installation.

Once logged into the database as the root user, create the username and password for the Requitopia application. The username is “requitopia”, and the password is “isotope28”. A script has been provided to add the username and password for both local and remote access. To execute the script, enter the following at the command prompt:

```
mysql>source AddUser.sql;
```

This script is a set of three commands which will add the username and password for the local host, the username and password for a remote host, and flush the privileges to enable the new accounts.

If this is a new installation, please consider removing the anonymous account which provides access to anyone on the local host. Remove the anonymous account with the following command:

```
mysql> delete from mysql.user where user = '';
```

The end of the command are two single quotes with no space or characters in between. Deactivate the account by flushing the privileges.

```
mysql> flush privileges;
```

When complete, logout of the root account:

```
mysql> quit
```

The next step is to configure the database for use by Requitopia. Log into the server using the Requitopia username and password.

```
> /usr/local/mysql/bin/mysql -urequitopia -pisotope28
```

Once logged in to the server, run the CreateTables.sql script to create the database and tables for Requitopia.

```
mysql>source CreateTables.sql;
```

This command initializes the database, removing any previous data that might exist. This command is only run once for new installations and never again as it will delete any existing information in your database.

When complete, exit the server and your database configuration is complete.

```
mysql>quit;
```

Updating the Database

If you are updating an existing implementation, the database may require updates for the new version of the application. If so, a script is provided to facilitate the update. To verify the current version of the database schema, log into mysql or sqlite and execute the command:

```
mysql>select * from Installation;
```

or

```
sqlite>select * from Installation;
```

This dumps the contents of the installation table, which includes the current version of the database listed under the column for dbVersion. In the release directory, look for a sql script called "UpdateTables_x_x.sql", where "x.x" represents the version of the database update. The SQLite version of the script will have an extension of .sqlite. If your version does not match the latest (highest) version number, execute the update script to update your database schema. For example:

```
mysql>source UpdateTables_1.1.sql;
```

or

```
sqlite>.read UpdateTables_1.1.sqlite;
```

Verify that the database version now matches the latest version specified in the release notes. If there are more than one updates available (for example from 1.0 to 1.2), each update script will need to be applied in order.

Configuring Requitopia

Requitopia contains one configuration file that specifies the location of the database server and other options. The configuration file is plain text, and can be edited with any text editor on your platform.

The default configuration is set to the single-user mode (using SQLite as a standalone application). To enable multi-user support using MySQL, the configuration must be modified. To enable multi-user mode, comment out the single user section of the configuration file, and un-comment the multi-user section provided. Update the configuration parameters for your environment per the notes below.

On OS X, the configuration file is found within the application package, and can be accessed by right-clicking the mouse on the package Requitopia.app, and selecting the option for "Show Package Contents". The configuration file can be found in the package in the Contents/Resources/Java subdirectory.

The configuration file contains a series of key / value pairs that specify the configuration. On startup, Requitopia looks for the values associated with specific keys, and uses the values to configure the execution. The following configuration keys are currently supported:

| Key | Default Value | Description |
|-------------------------|---------------|---|
| RegisteredName | Trail User | The name of the licensee |
| LicenseKey | None | The license key provided by Isotope28 to enable your permanent license |
| LanguageDirectory | languages | The name of the subdirectory location of the language files for different translations. |
| ImageDirectory | images | The name of the subdirectory location for the icons and images used by Requitopia. |
| Locale | en_US | The language and locale used to determine the language file to use for text strings |
| EventFileFilterLevel | Warning | The severity level at which events are added or filtered from the event history file. |
| EventDisplayFilterLevel | Warning | The severity level at which events are added or filtered from the display. |

| Key | Default Value | Description |
|-------------------------|---|---|
| DatabaseUsers | Multiple | Determines whether record locking is enabled. Must be "Single" for the standalone version. |
| DatabaseURL | <code>jdbc:mysql://localhost:3306/Requitopia</code> | The location and port of the database server. |
| DatabaseUsername | requitopia | The database username used by Requitopia. This name must match the account name configured in the database. |
| DatabasePassword | isotope28 | The database password used by Requitopia. This password must match the account configured in the database. |
| DatabaseDriverClassName | <code>com.mysql.jdbc.Driver</code> | The Java interface class used to interface to the database. Do not change this value. |

To configure a remote server, or a local server on a different port, change the value of the key `DatabaseURL` to the desired value. Replace the string "localhost" with the IP Address of the server. For example,

```
jdbc:mysql://192.168.0.4:3306/Requitopia
```

The first portion of the string specifies the protocol to use for the interface, or `jdbc:mysql`. The portion after the double slashes is the IP Address and port number, or `192.168.0.4` on port `3306`. If the default port number of the database is changed during or after installation, the number can be changed to match. The final portion of the name is the database to connect to for operations. This value should not be changed.

Licensing Requitopia

Requitopia can be downloaded and installed, and used until the built-in expiration date. The trial version is fully functional. When the expiration date is reached, the application will no longer function and a license must be acquired. To license Requitopia, email the computer key generated during the startup sequence to license@isotope28.com along with your name as you would like it to appear in the license. A license key will be generated from your computer key and name and emailed back to you. Copy the license key into the `Requitopia.ini` file as the value for the `LicenseKey` entry, and your name as the value for `RegisteredName` key. For example:

RegisteredName=John Q. Public

LicenseKey=8975b5f43be4dd9b9e5987069492db5b50b57da5

The computer key generated on startup reads unique information from your computer, and encrypts the information via a one-way, SHA-1 encryption algorithm into a computer key. The one-way encryption ensures that the unique information cannot be extracted from the computer key by us or anyone else. Whenever the program is started, it recreates the computer key, combines it with your registered name, and creates a unique license key. The unique license key is compared to the key found in the configuration file. If the keys do not match, the application starts in trial mode, or exits if the trial period has expired. The contents of the database are not affected by licensing or trial periods.