JAMESUI – Technical Guide

What is
JamesUI is an unofficial Web interface to manage Apache James 3.0 a mail server written in java (http://james.apache.org/server/3/).
Maybe, looking around the web you could find other solutions better or similar at JamesUI....

Why JamesUI
Some time ago i have decided to try Vaadin (https://vaadin.com/home) to create web applications. The best solution to learn it was create a "real case application". At work i have used Apache James to perform some tests, and i noticed that was missing a graphical user interface for the administration tasks....ok, that was my "real case application".

How to build the application
You can download the war file or built it from source code. If you chose the first solution, skyp this section.

To build JamesUI starting from the source code you need Java and Apache Maven as build tool. After the checkout of the source code, inside the folder containing the pom.xml file execute:

mvn clean package

At the end of the build, the final war file (ie: jamesui.war) will be placed in the folder named "target".

If you would import the source code as Eclipse project (optional task) execute:

mvn eclipse:clean eclipse:eclipse

Then, from Eclipse import the project (File → import –> Existing Project into workspace...)

How to configure JamesUI
JamesUI comes with some pre-configured values and other ones that MUST be provided by the user because they depends on the environment where JamesUI is deployed (eg: everyone can have installed Apache James in a different folder so that is not possible use a default value).
The default values can be overwritten placing custom configuration files in Tomcat/conf folder.
There are two configuration files:

1) **users.properties** define jamesUI user login credential.
Optionally you can overwrite the default values (Username: user Password: user)

To overwrite them create a "users.properties" file and insert an entry like this:
<user-name>=<user-password>,ROLE_USER
Note: replace <user-name> and <user-password> with you custom ones.

Place that file in Tomcat/conf folder.

2) **jamesui.config** define the application configuration.
You <u>MUST</u> provide a custom version of this file inside Tomcat/conf folder.
You can use and adapt the one provided in the "Files" section where you have found this guide and the war file.
Open that file and change the values of the entry with the keys:
```
statistic_db_location
```
```
james_base_folder
```

For example:

```
# put here the file system folder where save the Database files with James statistics
statistic_db_location=C:\\Users\\james\\Desktop\\MY_APP\\TEST

# the folder where is installed Apache James 3 server
james_base_folder=C:\\Users\\james\\Desktop\\MY_APP\\JamesUI\\apache-james-3.0-beta4
```

Provide your custom values: a valid writable folder path (remember to escape the special characters).

NOTE: The other entry values must be changed ONLY in case of the James server developers will change the names/extensions of the Jamse configuration files.

If you use james beta4 version the template files extension must be changed to .xml
If you use james beta5 the template files extension is correct the one provided in the sample jamesui.config file.
As best practice, before start jamesui adjust the files names placed in jamesui.config according with the ones found in your james installation.

Deploy
Copy the war file in the "webapps" folder of Tomcat (I have used Tomcat 7 but also the version 6 should be ok).
Before deploy, remember to provide your configuration file(s) (see "How to configure JamesUI" section).
The application will be available at the url:
http://<host>:<port>/jamesui/

Techincal details
JamesUI is a web application written in Java using Vaadin 7 as web framework to build the user interface.
Is packaged as war file ready to be deployed on Apache Tomcat, like any other web application.
IMPORTANT: to execute some administrative tasks (eg: edit Apache James configuration files) JamesUI must be installed on the same host of Apache James mail server.

Other functionality are performed using other Java frameworks or library:
- Spring Security to manage authentication and authorization of the user
- Qartz is used to perform scheduled operations (ie the monitoring task/job).
- MapDB (http://www.mapdb.org/) a key-value database to store statistic informations picked up from James server.
- JMX is the technology used to monitor Apache James.
- Flot a Javascript plotting library used to draw the statistic chart
- Other Java library, like Itext, are used for not core functionality (eg: pdf export)

The following diagram synthesizes the above concepts:
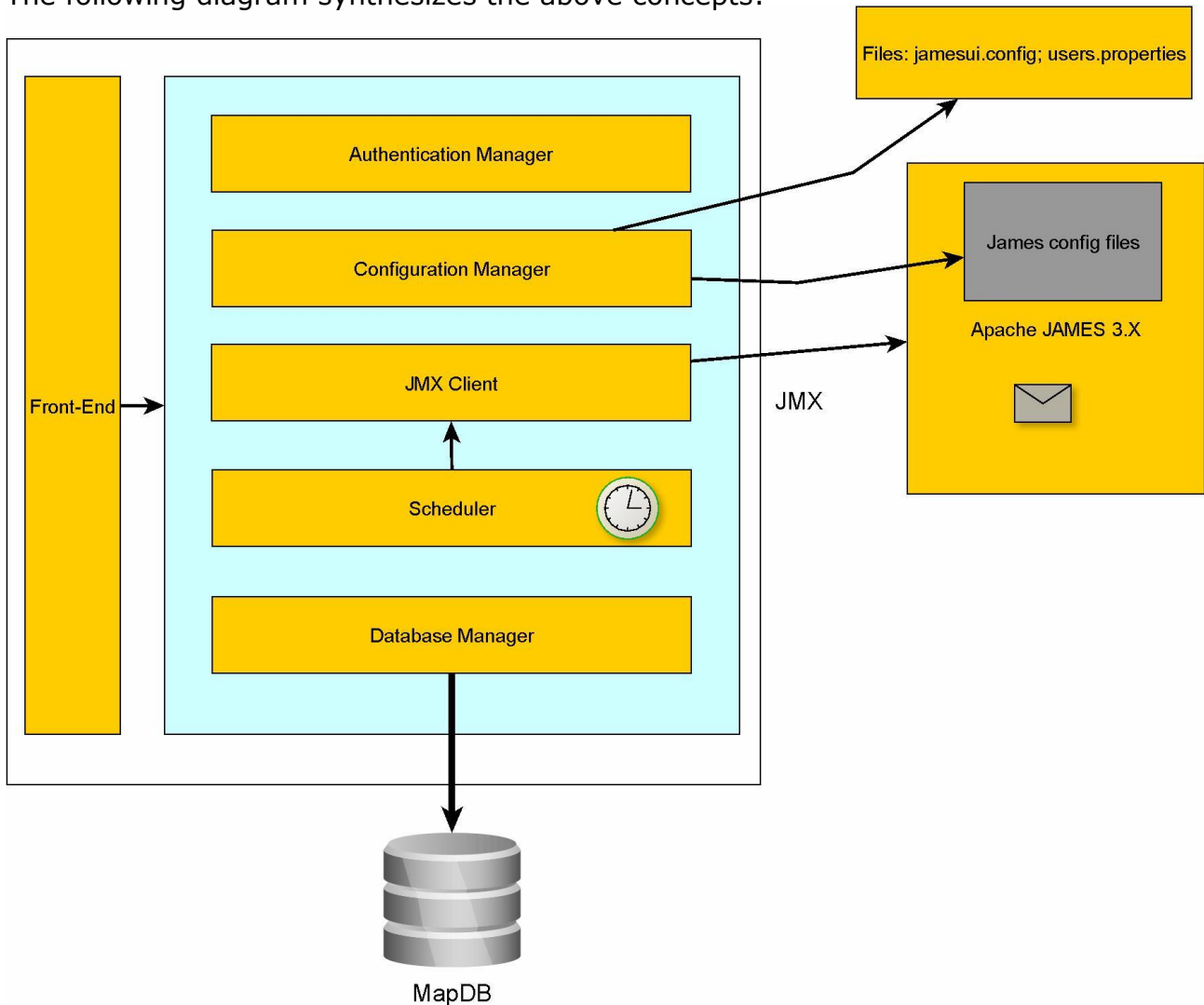
How to create a jamesUI custom build

Is possible create a custom build of JamesUI using different versions of the used library.

For example, this version of JamesUI uses jar library Apache james 3.0-beta4; in future suppose that will be available Apache James 3.0-beta5 and you want use it instead of the old version. To do this edit the pom.xml editing the values of the properties.

In this case only the one: <james.lib.version>

Then recreate the war file (see Section "How to build the application") and deploy.

Note: the same operation can be done to update other library used by JamesUI.

IMPORTANT: Obviously, the switch to a newest version of James Server, work ONLY IF the new library version is available in the Maven repository and the new version have the same JMX API signature od the old one.

Application Logging

JamesUI log files are placed inside the folder <TOMCAT_HOME>\logs\jamesui splitted in different files. The old log files are placed in the subfolder named "archived" according with the rotate policy. The logging is managed by Logback framework (See logback.xml file inside the source tree for more informations).

To get information about Logback status visit the url:
http://<host>:<port>/jamesui/lbClassicStatus
(replace <host> and <port> with your right values according with the Jamesui intallation).

Known issues
During my test I haven't found any particular issues, maybe some little layout/style problems with some browser versions (I have tested it with Firefox 37 and Internet Explorer 11 and I haven't found problems).

License
All the code of JamesUI is released under the term of GPL v3 License (https://www.gnu.org/copyleft/gpl.html)
For the third part library and frameworks used by JamesUI see their web site.

Warranty
JamesUI come with no warranty. The author has no responsibility for any activity or damage executed with JamesUI users.

Changelog

version 1.0 Initial Release

versione 1.1 Fix bugs about errors in case of Jamesui is used with clean James server installation (ie: no users, no domains...)

version 1.2 Refactoring about Jamesui configuration reading.
Placed in the Jamesui configuration file the names of the James server configuration files, to prevent future changes by James developer at the files names or extensions.
Little bug fixes in server configuration files writing.