TAMEE Installation Guide

Introduction

This document describes the requirements and necessary steps to install and configure the Tissue Array Management and Evaluation Environment (TAMEE). TAMEE relies on the Authentication and Authorization System (AAS), which is also part of the distribution.

Requirements

Hardware Requirements

Server with at least 1 GB of main memory available to the application, storage requirements depend on the number of section images stored in the database.

Software Requirements

- Java installation: JDK 1.5.x, JAVA_HOME has to point to the JDK installation
- MySQL 4.0.x

The JBoss Application Server is bundled with the application, so no separate installation is needed.

Installation

Download tamee.tar.gz, open a shell (or command prompt) and unpack the compressed tar file to the directory of your choice.
A directory “jboss” will be created. Change to that directory and enter all further commands from there.

MySQL Database Setup

This document assumes that MySQL 4.0.x is installed, running and listening on default port 3306.

MySQL Configuration

Edit the MySQL configuration file (<MySQL install folder>\my.ini) and add the following line to support the storage of BLOBs:

```
set-variable = max_allowed_packet=64MB
```

Creation of Databases

Invoke the MySQL client using a privileged account. Enter

```
source sql/initializeAAS.sql;
source sql/initializeTAMEE.sql;
```

This will create two accounts (for AAS and tmadbuser/tmadbuser for TAMEE) and the databases (usermanagement and tma) together with all necessary tables. Change the passwords if required. Enter

```
show databases;
```

You should see tma and usermanagement in the list of available databases, if both the databases were created successfully.

JBoss Application Server Setup

TAMEE and AAS will be running in JBoss 4.0.1. JBoss configuration was already done for both the applications, what is left is to configure the data sources properly.

Edit the datasource configuration file for AAS

Open the file jboss/server/aas/deploy/mysql-ds.xml
Change the the following entries to match your configuration

```
<connection-url>jdbc:mysql://10.1.0.12:3306/tma</connection-url>
<password>xxxxxxxx</password>
```

Define Mailrelay for AAS

When a user is created, AAS sends an e-mail to the user specifying the username and the password. If a user is disabled a notification e-mail is sent to the administrator. Therefore the mail-server and a sender e-mail has to be specified.
Open the file jboss/server/aas/conf/UsermanagementEJB.properties file and change the following lines to match your setup:

```
mailrelay=mailrelay.tugraz.at

#if a user gets disabled, the mail to the user has the sender:
from=Max.Muster@tugraz.at
```

Edit the properties file for TAMEE

Open the file jboss/server/default/conf/tma.properties
Edit the http_url to the server IP in which the AAS application will be deployed. TAMEE uses this information to connect to the AAS system.

```
protocol=HTTP
##### HTTP Protocol #####
http_url=10.2.0.6
```

Edit the datasource configuration file for TAMEE

Open the file jboss/server/default/deploy/mysql-ds.xml
Change the the following entries to match your configuration

```
<connection-url>jdbc:mysql://10.1.0.12:3306/tma</connection-url>
<user-name>tmadbuser</user-name>
<password>tmadbuser</password>
```

Starting the Applications

Change to the JBoss binaries directory:

```
cd jboss/bin
```

AAS

First start the Authentication and Authorization System

```
./run.sh –c aas
```

The application should be deployed without any errors. You should see a line similar to the following line at the end

```
INFO  [Server] JBoss (MX MicroKernel) [4.0.1 (build:
CVSTag=JBoss_4_0_1 date=200505022023)] Started in 45s:702ms
```

To check if everything is fine, open a browser and go to
http://<server name or ip>:17080/UsermanagementWeb/

Login with username: admin and password: 12345
You should be able to login without any problem

Create Users

Try to create a new user following the Users-create and filling the details. You should be able to create the user without any problem. JBoss console will show some error regarding the LDAP status. This can be safely ignored.

Adding the user to the application

Click on Users and choose application and select TAMEE.
You will see list of available users and user enabled for the application. Select the users you want to enable and pass it to the other side by clicking on the >> button.

Adding Users to a Group

In many cases, it is easy to create Acls and assign to a group rather than to individual users. So after creating a user, the user can be assigned to a group. Choose Group, add user.
We should also enable the groups through Groups-application-enable/disable

TAMEE

First start the Authentication and Authorization System

```
./run.sh –c default
```

The application should be deployed without any errors. You should see a line similar to the following line at the end

```
INFO  [Server] JBoss (MX MicroKernel) [4.0.1 (build:
CVSTag=JBoss_4_0_1 date=200505022023)] Started in 45s:702ms
```

To check if everything is fine, open a browser and go to http://<server name or ip>:18080/tma/

Login with username and password created earlier in the AAS application
You should be able to login without any problem

If all the above steps have been implemented, then you should be able to see the login page. Make sure that the AAS server is also running before attempting to login. After successful login, you can navigate through the side menu to different tables. Except the Dictionary table all the other tables should be empty. Click on the Dictionary menu to see the list of dictionary values.

Important Note: First populate the Datadictionary table by following the Dictionary-Add DictionaryList.
Choose the Domain from the drop down list and add corresponding values to it.
For example, if ‘Microtome’ domain is selected, then add the following values. The value is important, description can be left empty.
Value: OF1 Description:
Value: OF2 Description:

Be careful while entering the DataDictionary values. It is very important to go through all the domains, list the corresponding potential values for each domain and make the dictionary entries one by one before you start using the system.

If you have any questions, please feel free to contact **TAMEE@genome.tugraz.at**