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Building the European Network for Lifelong Competence Development

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
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Building the European Network
For Lifelong Competence Development

TENCompetence IST-2005-027087

Building The European Network for Lifelong Competence Development

Project Internal Deliverable Report

ID3.8 Release 2.0 of the TENCompetence integrative software

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Contributors	
Authors (Partner)	Harrie Martens (OUNL), Hubert Vogten (OUNL), Ruud Lemmers (LOGICACMG), Roy Cherian (University of Bolton), Sue Nasiopoulos (LOGICACMG), Roberto Celle (ILABS), Arne Koesling (UHANN), Paul Sharples (University of Bolton), Phil Beauvoir (University of Bolton), Michele Dicerto (ILABS)
Contact Person	Ruud Lemmers (LOGICACMG)
WP/Task responsible	WP3 / Ruud Lemmers (LOGICACMG)
EC Project Officer	Mr. M. Májek
Abstract (for dissemination)	The document explains the installation and configuration steps to set up instances of the PCM client and the PCM server.
Keywords List	TENCompetence Software installation and configuration

TENCompetence Project Coordination at: Open University of the Netherlands
Valkenburgerweg 177, 6419 AT Heerlen, The Netherlands
Tel: +31 45 5762624 – Fax: +31 45 5762800

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Version history

Version	Date	Description	Editor(s)
0.1	21-04-2008	Initial version.	Arne Koesling (UHANN)
0.2	24-04-2008	Review by Ruud Lemmers.	Ruud Lemmers (LCMG)

1. Introduction

The TENCompetence software consists to date of several tools, but the main ones are the Personal Competence Manager (PCM) applications. This includes the PCM server and the PCM client. The server application provides the different services, the storage space for learning material and the meeting point for learners. The PCM client is the application to make use of those services and provide the learner a combined learning and communication environment for an individualized learning experience. The goal of this document is the formal delivery of release 2.0 of the TENCompetence integrative software.

This internal deliverable is comprised of three parts:
1. The second version of the actual software.
2. An installation & configuration guide for the PCM client, included in this document.
3. An installation & configuration guide for the PCM server, included in this document.

The software is available on Sourceforge, an open accessible online repository hosting only software projects under open source license models, at http://sourceforge.net/projects/tencompetence/. The source files for this release have been tagged at the end of January 2008 with label tenc-pcm-server-release-1p0p0 (PCM server) and tenc-pcm-client-release-1p0p0 (PCM client). The “1.0.0” label might be unexpected. It’s because the first release was tagged as “1.0 beta 2”.

Documentation for the software is available in internal deliverables ID3.6 (Architecture Design) and ID3.7 (Final API definitions for the second release), as JavaDoc in the source code itself and in the user manual created by the Training work package.

2. PCM client installation & configuration

Note: the described steps are targeted at installation & configuration on a Windows system. The steps for Linux and Mac systems will differ slightly.

2.1. Installation

To install the PCM client on a Windows machine, take the following steps:

1. Download the PCM client software for your operating system from SourceForge: http://sourceforge.net/projects/tencompetence/:
   - Linux: tencomp-pcm-lnx-1.0.tar.gz
   - MAC: tencomp-pcm-mac-1.0.tar.gz

   The following give the choice between a zip file or an installer which installs the product automatically via a wizard.
   - Windows: if you are sure you have installed the Java Runtime Environment ("JRE"), select tencomp-pcm-win-1.0.zip. In all other cases select tencomp-pcm-win-jre-1.0.zip.
   - Windows: installer with JRE; tencomp-pcm-win-jre-1.0.exe
     Windows: installer without JRE; tencomp-pcm-win-1.0.exe
2. Unzip the downloaded file to a folder of your personal choice.

2.2. Configuration

1. Run *tencomp-pcm.exe* from the folder created in installation step 2.
2. The PCM client uses a default public PCM server. In case you need to switch to a special PCM server: select menu option *File => Preferences*, then set *Discovery Server URL* to the "http address" of your discovery server. Ask your PCM system administrator for this http address. The regular format is http://{server:port}/TENCDiscovery/servers.

   The two figures below illustrate this step.

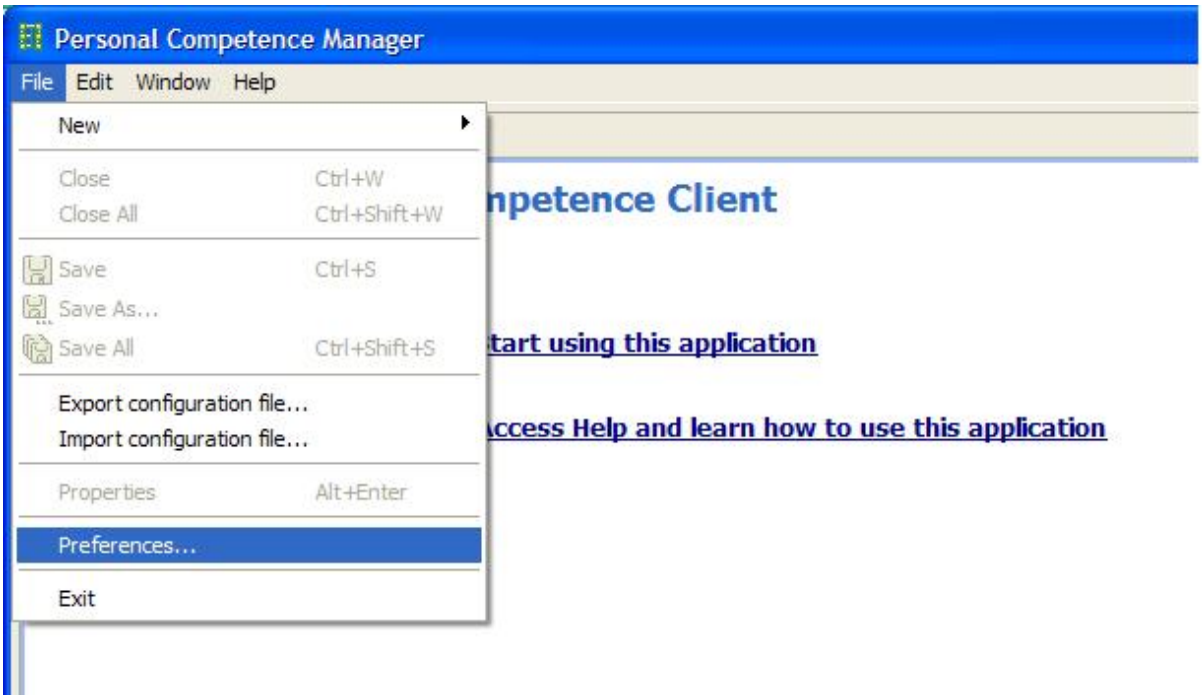


Figure 1: select menu option

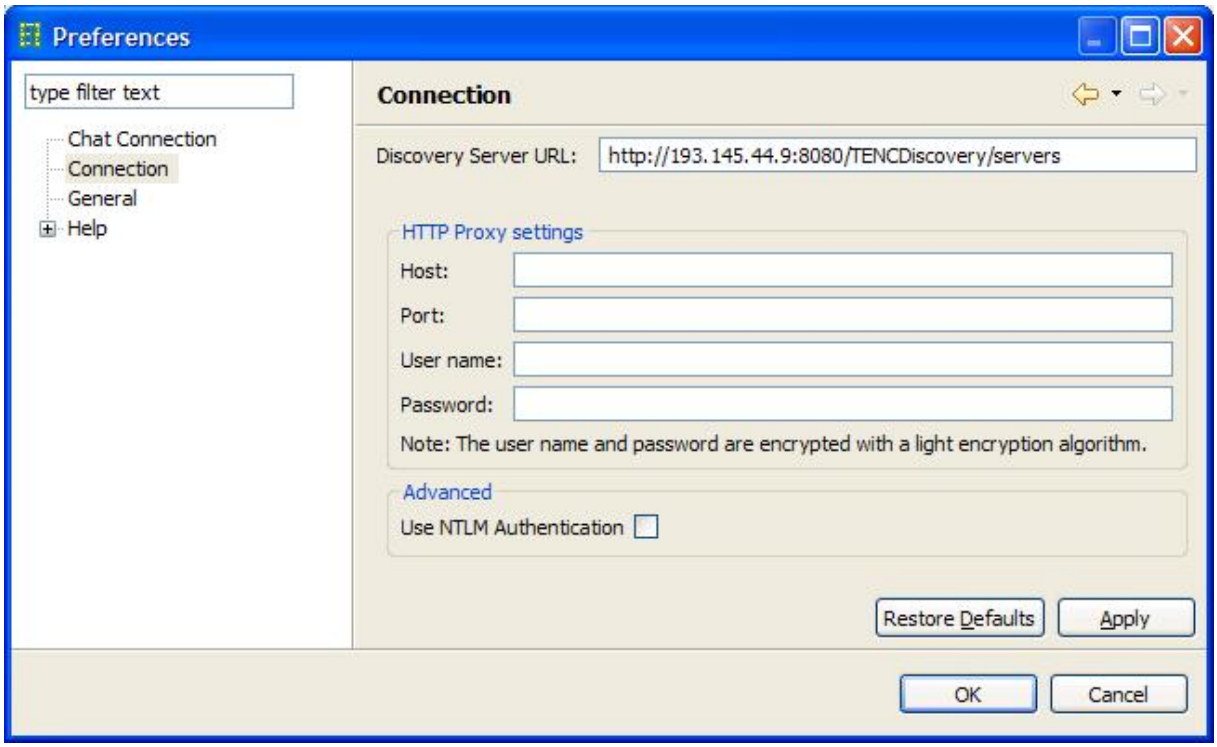


Figure 2: set Discovery Server URL

3. PCM server installation & configuration

This document covers installation and configuration on Windows and Linux systems. Installation on Apple machines (Mac) is not incorporated.

3.1. Installation

To install the PCM server on a Windows machine, take the following steps:

1. Download and install the *Java Runtime Environment (JRE) 5.0 Update 6* (or a later 5.0 update or a 6.0 version) from http://java.sun.com/javase/downloads/index_jdk5.jsp.
2. Download and install the *Core distribution for Apache Tomcat 5.5.23* (or a later 5.5 update) from http://tomcat.apache.org/download-55.cgi.
3. Download and install the *MySQL 5.0.41 Community Server* (or a later 5.0 update) from http://dev.mysql.com/downloads/mysql/5.0.html#downloads.
4. Download and install the *MySQL GUI Tools Bundle for 5.0* from http://dev.mysql.com/downloads/gui-tools/5.0.html.
5. Download the *PCM server* software from SourceForge: http://sourceforge.net/projects/tencompetence/.
6. Download the Openfire chat server from http://www.igniterealtime.org/projects/openfire/index.jsp.

3.2. Standard Configuration

Create environment variables for your Java version.

In Windows this is done via *Control Panel => System => Advanced => Environment Variables => System Variables*. Create the system variable:

JRE_HOME: if you downloaded a JRE.

JAVA_HOME: if you downloaded a JDK.

And assign it the path to the root folder of your installed Java version to this new system variable. Example: "C:\java\jdk1.5.0_11".

For Linux installations information on how to do this can be found in your distributions documentation. If multiple Java versions are installed, it is advised to use a wrapper script around the Tomcat start/stop script.

Unzip the downloaded *PCM server* file to a temporary folder.

From the temporary folder, copy the *TENCServer.war* and *TENCDiscovery.war* files to your *apache-tomcat-5.5.23\webapps* folder.

From the temporary folder, copy the *mysql-connector-java-5.0.5-bin.jar* file to your apache-tomcat-5.5.23\common\lib folder.

Run the *MySQL Server Instance Config Wizard*, to set up an instance of MySQL. Use the typical installation and accept the defaults. Use user *root* and password *admin* for the root user account as they are the defaults in the TENCompetence installation files. Be aware that there is no default root password for MySQL on Linux systems. The root password can be set using MySQL Administrator.

Open the *MySQL Query Browser*, this shows the screen from *Figure 3*. Use the username *root* and password *admin* combination you selected during step 5. Because there is no "Default Schema", the popup from *Figure 4* will be shown next. Select "Ignore" to continue without selecting a schema.

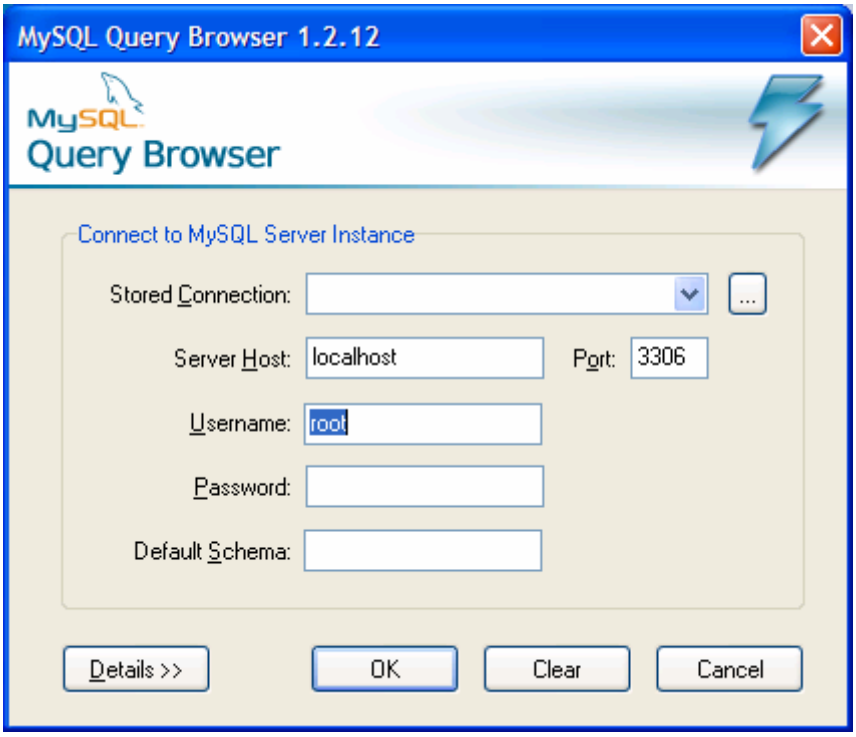


Figure 3: connect to MySQL Server Instance

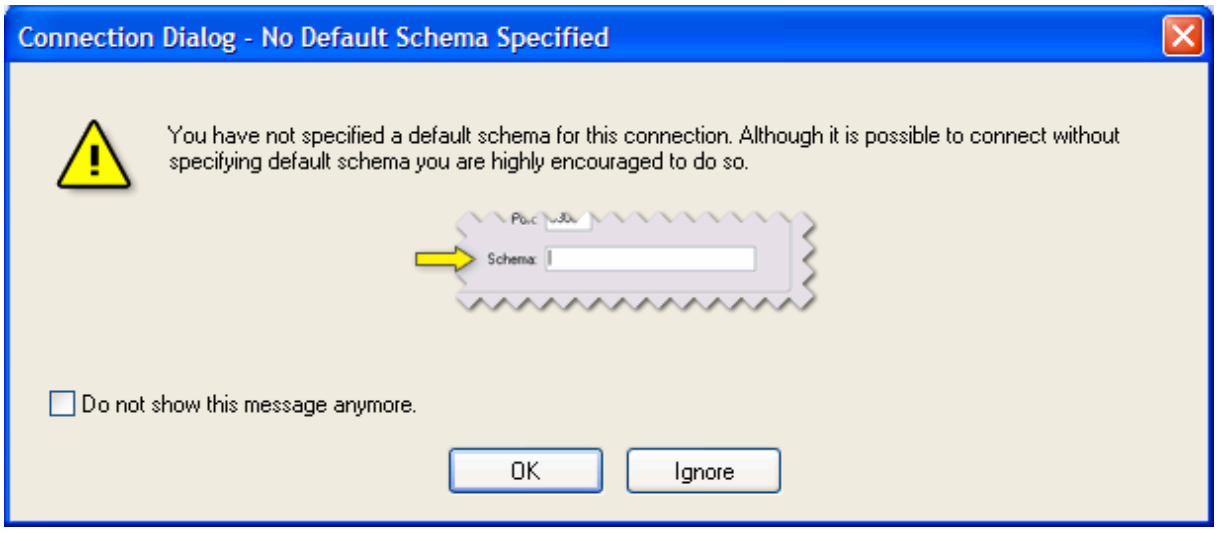


Figure 4: Connection Dialog - No Default Schema Specified

Select menu option *File => Open Script…* and open the *full_setup_db.sql* file from the temporary folder. Your screen should look like *Figure 3* now. After opening the full_setup_db.sql script, click the green Execute button to create the initial database.

Note: If there is an existing PCM database from PCM v1.0 beta 2 which contains data that must be reused then use the *update_db_competencelevel.sql* script. This script will update the database to PCM v1.0.0.

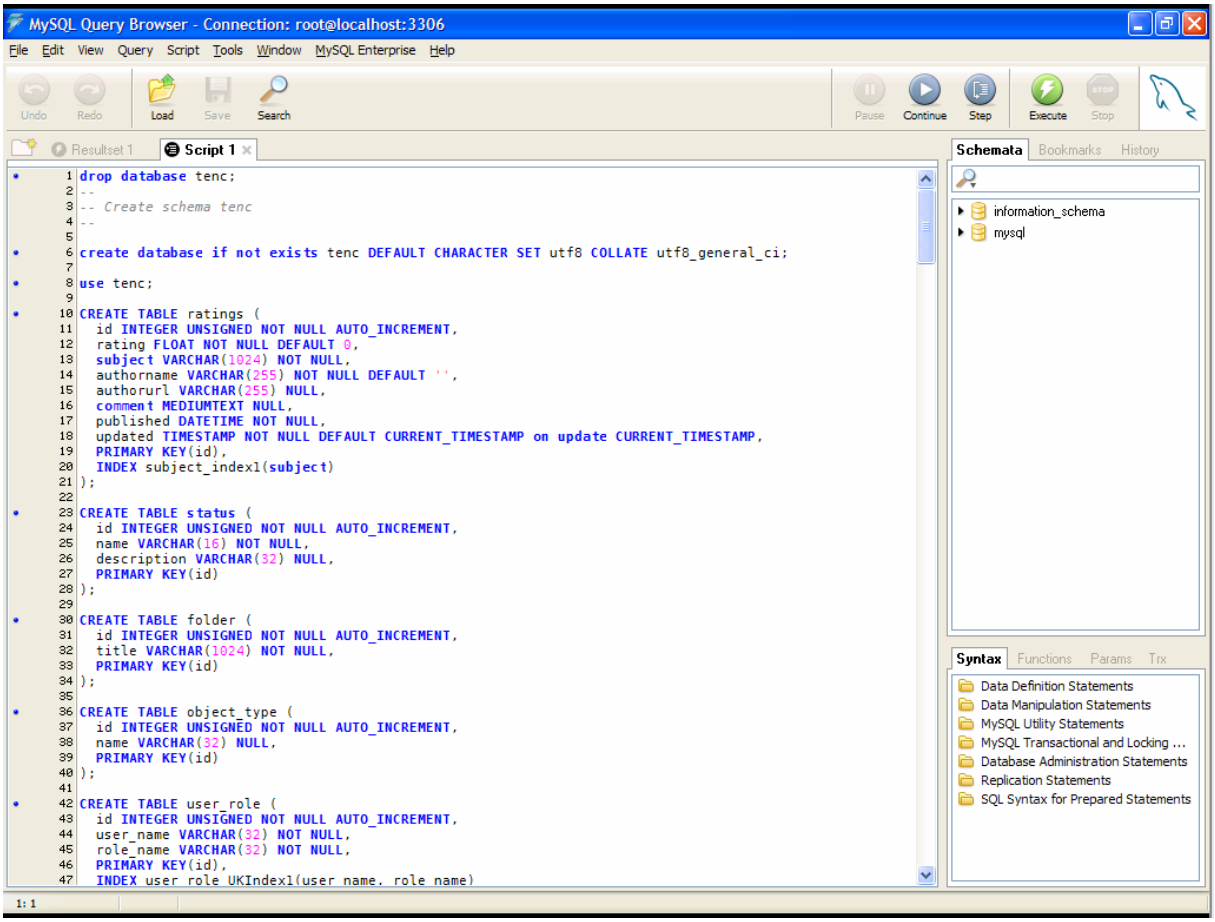


Figure 5: full_setup_db.sql file

For Windows installations move the serverlist.xml file in the temporary folder to folder *c:\data* (if the folder does not exist, create it). For Linux installations, move serverlist.xml to a folder that is reachable for the user running the Tomcat process.

The ....\apache-tomcat-5.5.23\webapps\TENCDiscovery\WEB-INF\conf\server.properties file now contains the location (file.path setting) and filename (file.name) for the serverlist.xml file.
Note: the file.path setting should end with a folder separator.

After these steps, the default configuration for the PCM server is complete. Starting and stopping the application is done by standard Tomcat scripts:
In Windows:

1. Running ....\apache-tomcat-5.5.23\bin\startup.bat starts the Tomcat server.
2. Running ....\apache-tomcat-5.5.23\bin\shutdown.bat stops the Tomcat server.

In Linux:

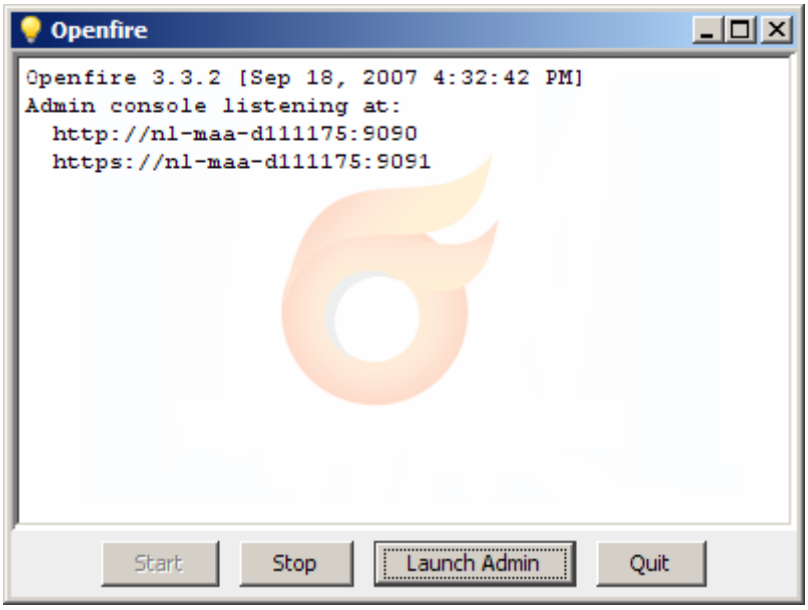
3. Running ....\apache-tomcat-5.5.23\bin\catalina.sh start|stop controls the Tomcat server or alternatively the wrapper script.

3.3. Openfire installation & configuration

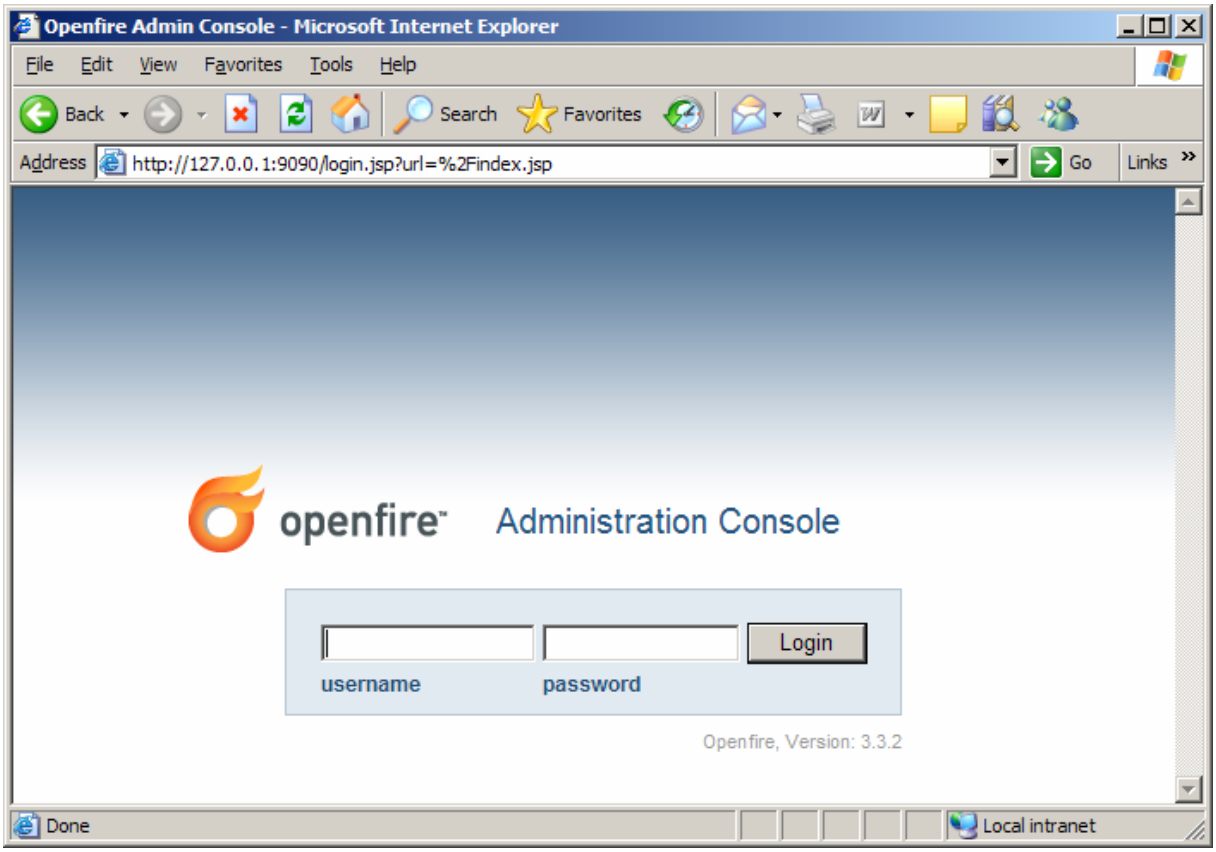
1. Run the OpenFire installer. After successful installation, it shows the Admin console.
2. Select "Launch Admin" to configure OpenFire. The default settings can be accepted, except for *Database Settings*. Set this to "Embedded Database".
3. Open the *Openfire.xml* file found in the *PCM server software* package (see section 1, step 5).
4. Add an admin username between <authorizedUsernames> </authorizedUsernames> This has to be a username which is available in the TENC database.
5. Make sure the following sections contain the right information relating to the TENC database you want to use.

```
<database>
   <defaultProvider>
      <driver>com.mysql.jdbc.Driver</driver>
      <serverURL>jdbc:mysql://<host>:<port>/tenc</serverURL>
      <username><username></username>
      <password><password></password>
      <minConnections>5</minConnections>
      <maxConnections>15</maxConnections>
      <connectionTimeout>1.0</connectionTimeout>
   </defaultProvider>
</database>
<setup>true</setup>
<jdbcProvider>
   <driver>com.mysql.jdbc.Driver</driver>
<connectionString>jdbc:mysql://<host>/tenc?user=<username>&amp;pa
ssword=<password></connectionString>
</jdbcProvider>
```

6. When the necessary changes are completed copy the *openfire.xml* file to *Program Files\Openfire\conf.*
7. Restart the Openfire server and click “Launch admin”. This will open up a login screen to the Openfire administration website. Logon with the user you configured in openfire.xml.

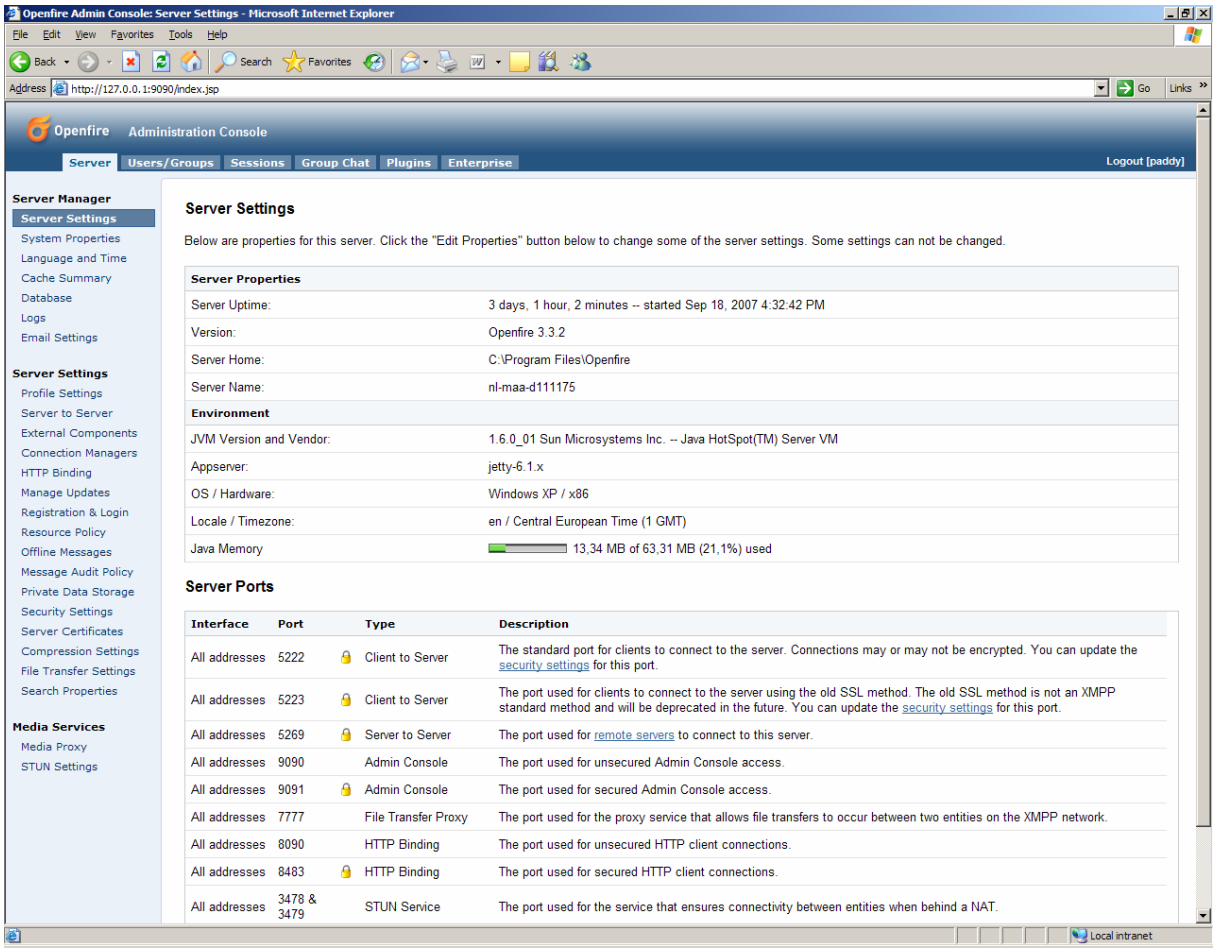


Click Launch Admin



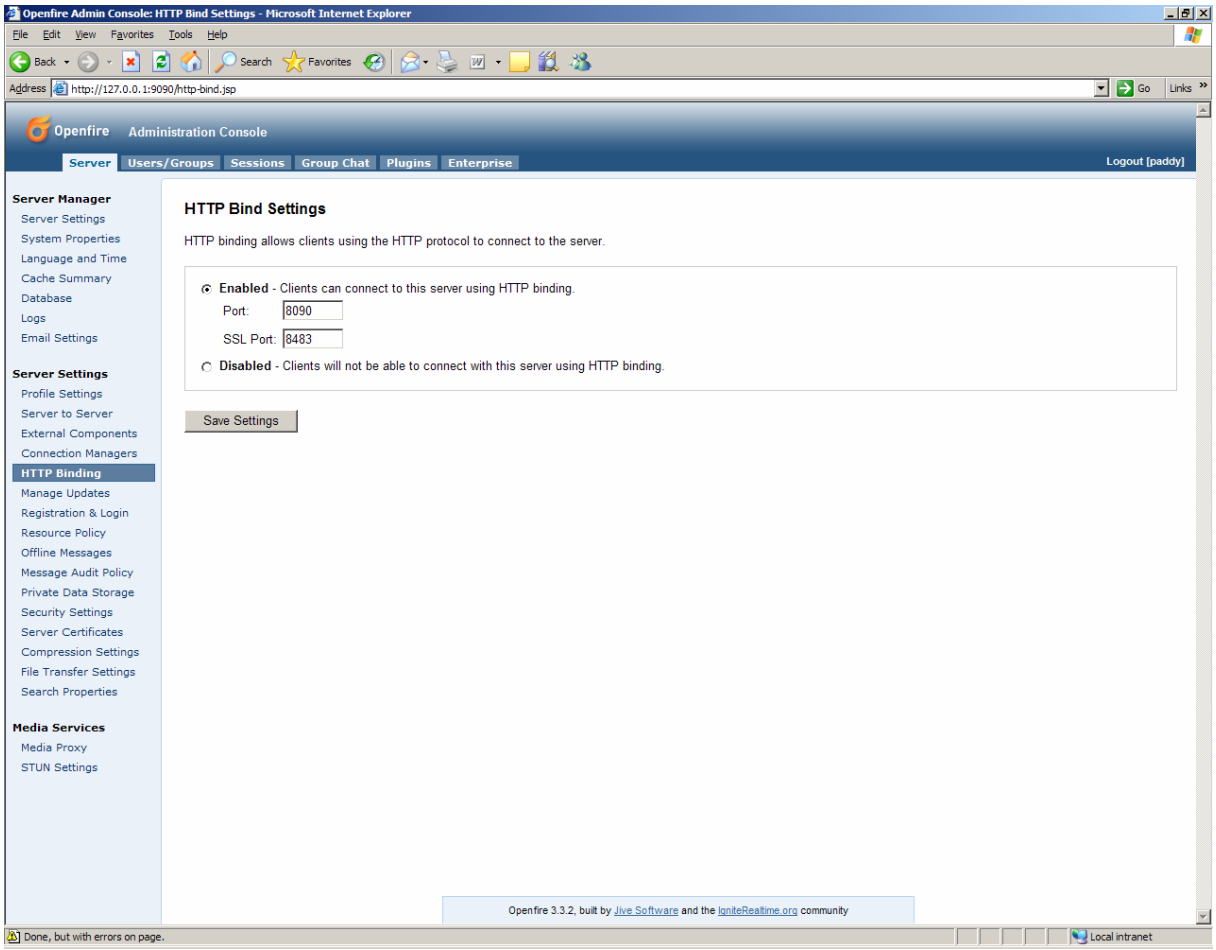
Login screen

8. In the first screen (Server => Server settings) it will show a *Server Name*. If this is an IP address you will need to change it to the publicly resolvable hostname of the server. Click edit at the bottom of the page to change the *Server name*.



Check Server Name and edit if necessary.

9. Click *HTTP Binding* in the left hand menu and check that it is set to enabled. If it is disabled then enable it and change the port number from 8080 to a free port on the server.



Change HTTP binding port if necessary.

10. Restart the Openfire server by clicking stop -> start.