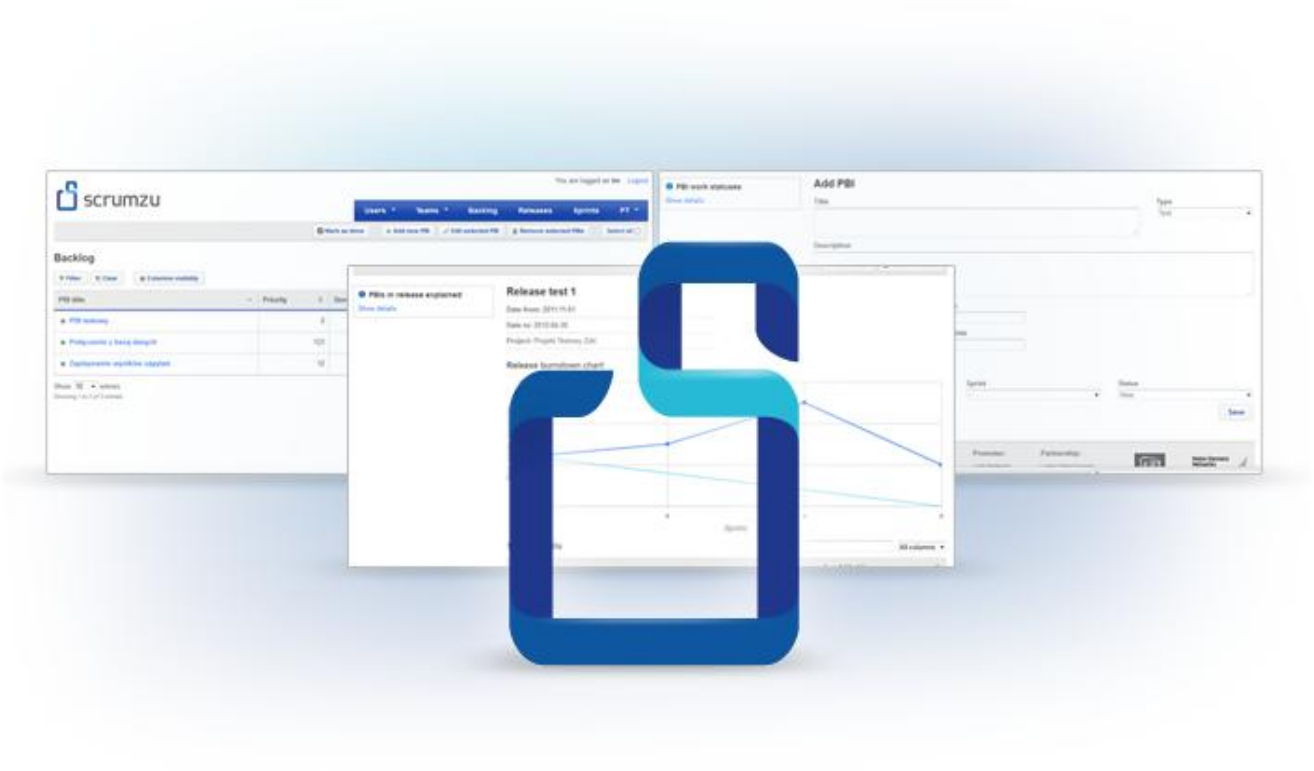


scrumzu Web Application Installation Guide

Authors:

Maciej Haliniak
Tomasz Muc
Sylwia Pelc
Tomasz Wierzowiecki

Promoter:

Lech Madeyski

ZPI 2011
Wroclaw University of Technology

Partnership:

Lukasz Maszczynski

Wroclaw University of Technology

Nokia Siemens Networks

RELEASE 1.0

Wroclaw 2011

Contents

About this guide

Welcome to official Scrumzu Installation Guide. This document was created to simplify the start of work with Scrumzu as much as possible. In first chapter of this manual we present minimal requirements and general assumptions. The second chapter describes required installation steps on all environments. In the third chapter we put an example installation procedure on Glassfish server with MySQL database on Linux Ubuntu Server Machine.

If you just want to *use* Scrumzu, you do not need to install it on your own computer. None of the chapters in this document is relevant to you. Ask your Scrumzu administrator for the URL to access it from your web browser. If you need to know how to use application please read user manual, available in different document file.

Disclaimer

Please notice that authors of that installation manual has done they best to avoid and fix as many mistakes as possible. However, we cannot ensure that following procedures are safe for your system and guide you to working Scrumzu copy. Because there are many available environments where Scrumzu application can be installed, we are not able to present them in this guide. Please follow all the procedures with care and do not proceed if you do not understand what are you going to do. You are strongly recommended to make a backup copy of your system before Scrumzu installation.

Although the Scrumzu development team has taken a great care to ensure that all bugs have been fixed, much of an attention should be given during the installation of this software. The Scrumzu development team members assume no responsibility for usage of Scrumzu. This application is released under GPL license, so the source code is freely available for everyone. You are responsible for auditing it to ensure that, all your security expectations are fulfilled.

1. Introduction

1.1 Minimal system requirements

To run Scrumzu you will need:

- Web server which runs applications developed in Spring Framework,
- MySQL Database Server.

Scrumzu is Java EE application compiled to WAR (Web application ARchive) so it is possible to use it on every web server which runs applications developed in Spring Framework. We recommend to use Glassfish Open Source Edition as your application server, because of it simple configuration of JNDI (Java Naming and Directory Interface) and easy deployment procedure.

All configurations files included in Scrumzu application WAR are configured to work with MySQL database. Never the less, thanks to usage of Hibernate persistence framework, it is possible to use different relational database servers after minor changes in configuration files and JNDI preferences. For further information, please visit Spring Reference Manual

1.2 General assumptions

In this manual we assume that you have basic skills in administration of web servers and database servers. If not, please visit documentation of software that you are going to use. MySQL Database Server manual can be found under http://dev.mysql.com/doc/refman/5.6/en/. Glassfish manual is available under http://glassfish.java.net/docs/index.html

It is necessary to have administrative access to the server. It is not possible to install and run Scrumzu without administrative access except in the very unlikely situation that every single prerequisite is already installed.

2. Installation procedures

In this chapter we present general installation procedures. The first part concerns database installation, followed by web application server installation. You are not required to strictly follow all the procedures. Nevertheless it is recommended way to start working with Scrumzu.

2.1 Database installation

a. Install MySQL database server;
b. Create new schema named “main”;
c. Run SQL script creating database model – “db_create_script.sql” for that schema;
d. Run SQL script creating default users for Scrumzu application – “users_insert.sql”;
e. Make sure that database server is running, tables has been created and user data is available.

During the set up of your database please notice that Scrumzu application has been created to work with UTF-8 charset encoding. Make sure that the database is working with the same charset to avoid unexpected query results. In MySQL database server it can be set through configuration file modification. In line “character-set-server” put “utf8” value and save file.

2.2 Web application server installation

a. Install application server;
b. Configure JNDI (Java Naming and Directory Interface) to retrieve data source prepared in previous point – please notice that Scrumzu is configured to work with JNDI called jdbc/mysql. However, it can be changed with applicationContext.xml file modification in WAR package.
c. Deploy scrumzu.war file on application server.
d. Run browser and check whether the application is running.

To start working with application type Scrumzu URL, login as “admin”, add new users and grant privileges for them. Default password for “admin” is “asdqwe”. For further information, please see Scrumzu User Manual available in different document file.

Please remember to change all default users’ passwords. Otherwise, Scrumzu application can be vulnerable for security issues. Default passwords are widely known and should be changed as soon as possible.

3. Example installation

This chapter presents example installation procedure for MySQL 5.5.17 database server and Glassfish 3.1.1 Open Source Edition application server running on Ubuntu Server 10.04 LTS.

3.1 MySQL installation

In the first part of Scrumzu installation it is recommended to configure and start MySQL server. To install it on Ubuntu Server type in command line:

```
sudo apt-get install mysql-server
```

During the installation process you will be prompted to enter a password for the MySQL root user. Once the installation is complete, the MySQL server should be started automatically.

After successful installation you should adjust database server settings for your needs. A configuration can be set up in configuration file. You can view and edit it after typing:

```
sudo nano /etc/mysql/my.cnf
```

You should change default character set used by MySQL server to avoid unexpected query results. Find line containing “character-set-server” and put “utf8” value and save “my.cnf” file. If you want to connect with your database from remote machines (for example to model data schema in external tools) you have to comment out “bind-address” line. After that, database server will accept connections from all IPs.

After making any changes in my.cnf file, the database server should be restarted.

```
sudo /etc/init.d/mysql restart
```

In the next step of database installation you should prepare new schema and tables. There are many ways to edit MySQL database. We recommend to use official MySQL modeling tool – MySQL Workbench. The newest version of this tool can be gained from http://www.mysql.com/downloads/workbench/.

After MySQL Workbench installation, run the tool and set up new connection. It would require IP address of your database server, user name and password. As soon as you successfully connect with the database, you can start editing it.

First of all, create new schema called “main”. Secondly, you can run following scripts (in this particular order) - “db_create_script.sql” and “users_insert.sql”. Last but not least, double check that you have everything done properly (“main” schema was created, there are some tables in it and table user contains logins and hashed passwords). If so, you can move to next step of Scrumzu installation.

Any time you encounter any difficulties in database installation please read following manuals:
http://dev.mysql.com/doc/refman/5.1/en/installing.html
http://dev.mysql.com/doc/workbench/en/index.html
https://help.ubuntu.com/10.04/serverguide/C/mysql.html

3.2 Glassfish set up

3.2.1 Glassfish configuration

Before Glassfish set up, make sure that you have current version of Java JDK installed on your system.

The second part of Scrumzu installation concerns web application server installation. As an example we use Glassfish 3.1.1 OpenSourceEdition. Up to date version of Glassfish can always be gained from http://glassfish.java.net/public/downloadsindex.html. To run Glassfish perform following steps.

First of all, you have to download current version of Glassfish on you server machine. We recommend to use ZIP archive version, because it does not need installation. Assuming that our version of web server is available under link http://download.java.net/glassfish/3.1.1/release/glassfish-3.1.1-web.zip, we can download it on our system typing:

```
wget http://download.java.net/glassfish/3.1.1/release/glassfish-3.1.1-web.zip
```

After successful download we can unzip package to our home directory

```
unzip glassfish-3.1.1-web.zip
```

Finally we can start Glassfish server

```
/GLASSFISHHOME/bin/asadmin start-domain
```

3.2.2 Data source configuration

In this part of Scrumzu installation we present you how create and configure MySQL data source in Glassfish Application Server.

First of all, get MySQL JDBC driver from pagehttp://www.mysql.com/downloads/connector/j/. The driver can be downloaded with wget command line tool, like in previous chapter. For example:

```
wget http://www.mysql.com/downloads/mirror.php?id=404191
```

Afterwards unzip downloaded package:

```
unzip mysql-connector-java-5.1.18.zip
```

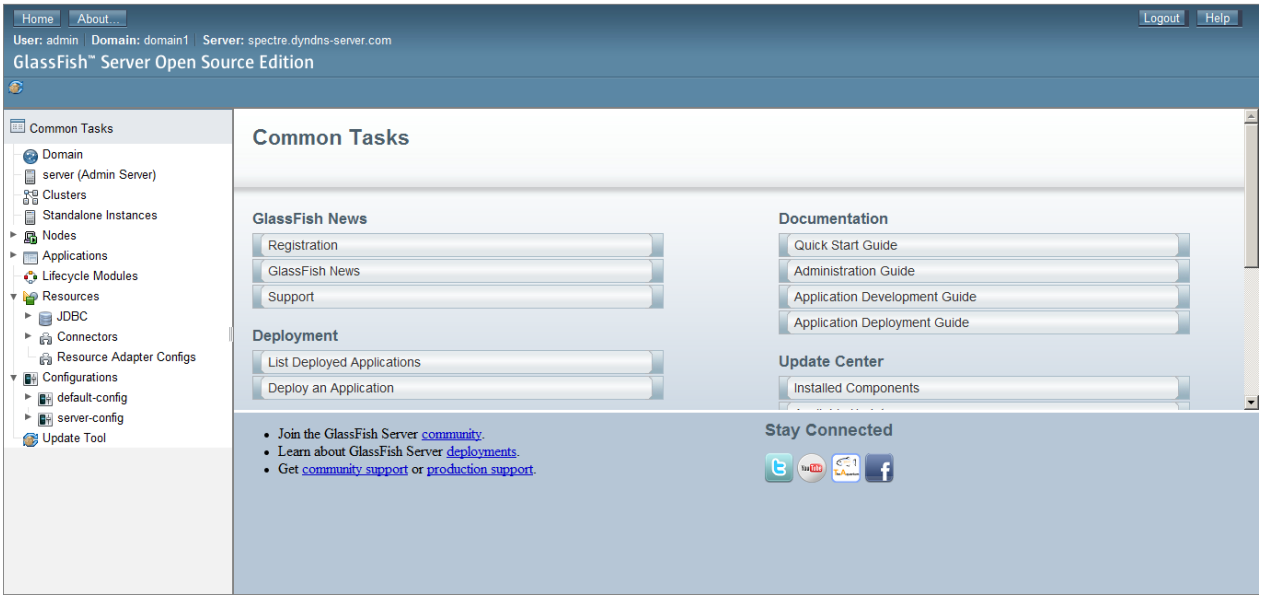
Then, copy mysql-connector-java-5.1.18-bin.jar to Glassfish library directory.

```
cp mysql-connector-java-5.1.18-bin.jar
GLASSFISHHOME/glassfish3/glassfish/lib
```

Start the server as soon as you finish coping files.

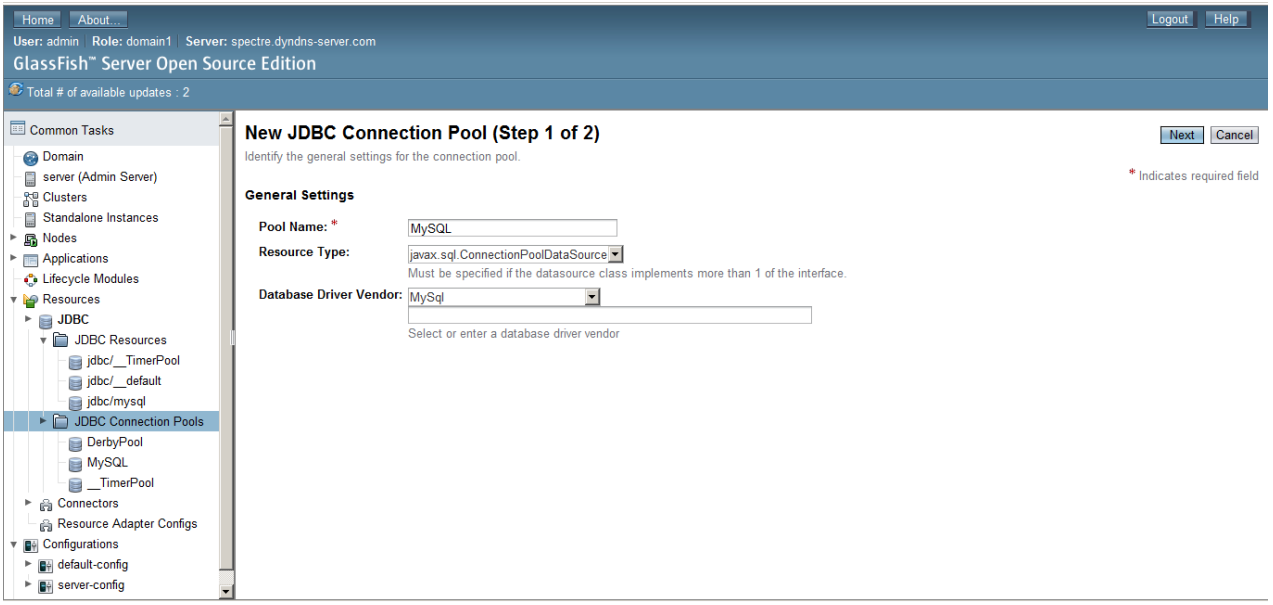
When the server is started, you can connect with Glassfish admin console from remote host. By default it can be accessed from web browser under 4848 port (http://yourserverip:4848). The default username and password to the admin console is admin and adminadmin respectively.

As soon as you login to administration console you should see screen similar to the one below:

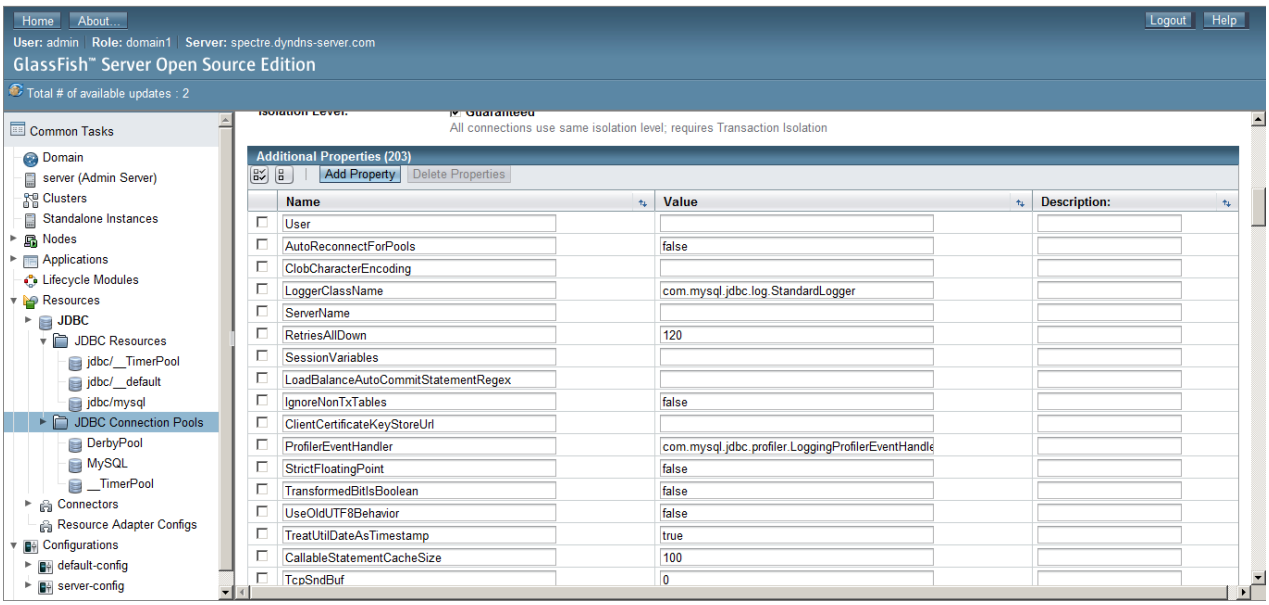


Next, go to The Connection Pools page – from Common Task menu expand Resources menu, expand JDBC and finally click on Connection Pools. To create new connection pools, click New button.

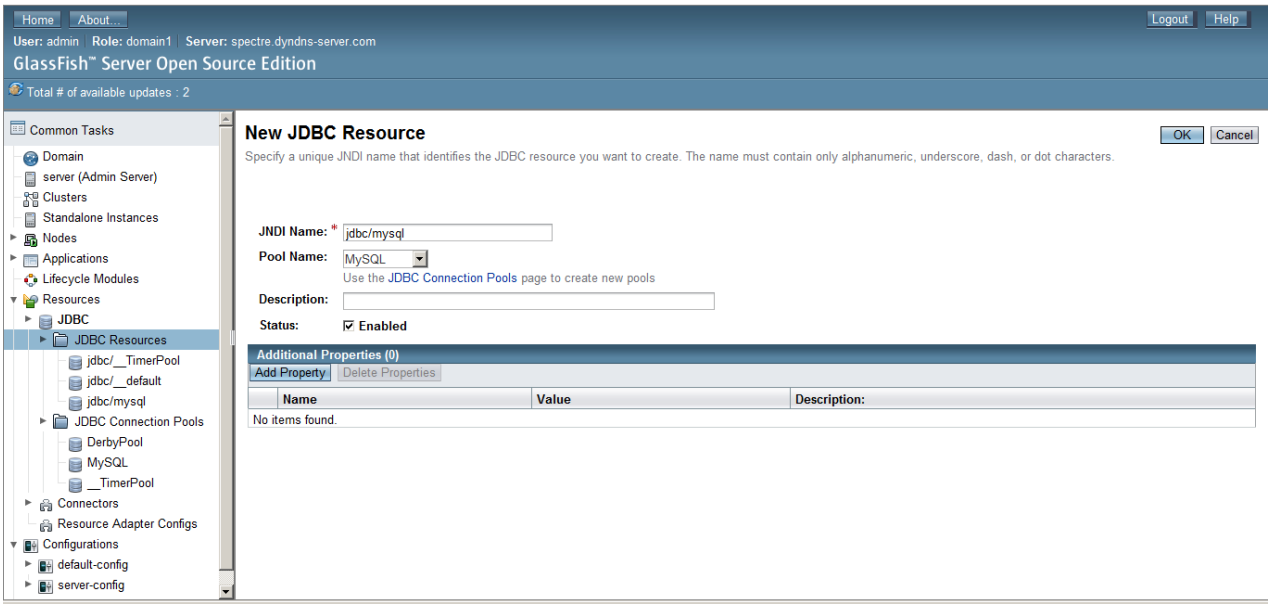
Fill the form. Enter a name for your new JDBC Connection pool. Then select javax.sql.ConnectionPoolDataSource as your Resource Type and select MySQL as your Database vendor. Click on Next button.



You have to fill the details of Connection pool according to your needs. Required fields are: DatabaseName, Password, URL, ServerName, User. URL should be in following format: jdbc:mysql://localhost:3306/main (we assume that you have not changed default MySQL port and create schema called “main” to work with Scrumzu). Double check whether all settings are correct and click on Finish button.



Afterwards go to JDBC Resources. Link can be found under JDBC menu. Click on New button and then fill the form. Enter a JNDI name for your data source (remember that Scrumzu application is configured to work with JNDI called “jdbc/mysql”). From the list select the pool that you created few minutes ago. Click on OK button.



3.2.3 Deploying application

In the final part of that tutorial we present how to deploy Scrumzu application on Glassfish server. Thanks to autodeploy function it is the easiest part of Scrumzu installation.

To deploy application, just copy Scrumzu WAR to autodeploy directory:

```
cp scrumzu.war
GLASSFISHHOME/glassfish3/glassfish/domains/domain1/autodeploy/
```

After successful deployment, Scrumzu application can be accessed from web browsers under URL http://yourserverip:8080/scrumzu

Please notice, that this instruction presents only basic steps to start Scruzmu. We strongly recommend you to adjust the software configurations to all your needs.

If you encounter any difficulties during Glassfish installation you can gain help under following links:

http://glassfish.java.net/docs/index.html

http://dev.mysql.com/doc/refman/5.6/en/connector-j.html