

How to develop on IceScrum²

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1) SVN account creation

- SourceForge (to commit on svn) : <http://sourceforge.net/> (You need to ask to be added on IceScrum project : stephane@icescrum.org)

- Forum : <http://forum.icescrum.org/>

2) Download and installation of the production environment

- Install JDK 6

- Download and install Tomcat v6 : <http://tomcat.apache.org/download-60.cgi> (core)

- For the MySQL database , install Wamp 2 (or EasyPHP) <http://www.wampserver.com/download.php>

-Launch Wamp, and create two new databases « **icescrum2** » and « **icescrum2test**». Hibernate will create the tables later.

Only for Eclipse (Maven is already included in NetBeans) :

- Download and install Maven 2.0.9 (<http://maven.apache.org/download.html>). Follow the instructions from the page.

3) Download and installation of the IDE

3.1) IDE Eclipse

Under Eclipse, after the installation of the EE version :

- Add SVN plugin : "help/software updates", tuto : <http://subclipse.tigris.org/install.html>
- Add maven plugin : <http://m2eclipse.sonatype.org/update/>

In Window/Preferences :

Java/Installed JREs : You need at least JDK 1.5, (for example, jdk1.6.0_11).
Java/Compiler : JDK Compliance = 1.5, Use default compliance settings = true

Eclipse configuration is not stocked in SVN. Files ".project" or ".settings" are specific to the IDE Eclipse and they are ignore by SVN client (.svnignore). The MUST NOT be committed manually.

3.2) IDE NetBeans

Under NetBeans :

- Install SVN :
Versioning -> Subversion -> checkout -> ok
- Verify that Maven is installed (before NetBeans 6.7) :

Tools -> Plugins -> Available Plugins
If "Maven" is not ticked, then tick it , and "Install".

- Verify that Maven is activated:
Tools -> Plugins -> Installed
If "Maven" is not activated, click ont it, then "Activate"

NetBeans configuration is not stocked in SVN. Files "nbaction.xml" or others are specific to the IDE NetBeans and they are ignore by SVN client (.svnignore). The MUST NOT be committed manually.

4) How to get IceScrum² project

4.1) Under Eclipse

Checkout

- Create a new project in Eclipse from SVN repository
 - URL : <https://icescrum.svn.sourceforge.net/svnroot/icescrum>
 - Login/password SourceForge (only for commit)
- Select the branch "trunk/icescrum2".
- Make an import (Menu File/Import) of the type "General/Maven projects" and select the folder icescrum2 in your workspace. Four small project should appear. Select them and click on finish. This step requires a few time (sometimes 15 minutes).
- Go on "Window => Preferences => Maven" and untick "Download repository index updates on startup"
- You need to make a maven compilation :
 - . on the main project "icescrum2" : [Run As/Maven clean] then [Run As/Maven install]
- Create a new server Tomcat v6 in Eclipse (server tab) and associate it to icescrum-web.
- Finally, go to the properties of each project (right-click on it), icescrum2, icescrum-dao, icescrum-presentation, icescrum-services, icescrum-web and verify :
 - Java Compiler : untick "Enable project specific settings"
 - Project Facets : Java - Version = 5.0
- Make a new compilation on main project (icescrum2) : RunAs/Maven install.

DB configuration for development :

By default, IceScrum uses an embed database HSQLDB located in "<HOME> (My Documents on windows)/.icescrum/hsqldb".

If you want to change it, to use MySQL for example, you can do it by modifying the configuration file in the project "icescrum-web", in the file : /src/main/webapp/META-INF/icescrum2/config/configuration.properties (which is empty by default)

You can change the default parameters (HSQLDB) for MySQL DB by putting the following lines in the file.

```
database.driverClassName = org.gjt.mm.mysql.Driver
database.url = jdbc:mysql://127.0.0.1/icescrum2
database.dblogin = root
database.dbpwd =
database.dialect = org.hibernate.dialect.MySQLInnoDBDialect
```

Access restriction to JAXB :

Access restriction to JAXB library (javax.xml.bin). Equinox is the cause of compilation errors.

- With JDK 5 : pas d'erreurs

- With JDK 6 : There are errors of type *Access restriction: The type XmlElement is not accessible due to restriction on required library C:\Program Files\Java\jdk1.6.0_12\jre\lib\rt.jar*

To get rid of it : Window/preference =>Java/Compiler/"Errors/Warnings"=>Deprecated and restricted API => Forbidden reference (access rules) => Warning

Activation of assertions in Java

- With Tomcat in Eclipse :

View "Servers", make a "Open" on Tomcat 6 Server at localhost

Click on "Open launch configuration"

In the tab "Arguments", add at the end "VM arguments", the parameter : "-enableassertions" ou "-ea" (to activate assertions for all the code)

4.2) Under NetBeans

Checkout

- Under NetBeans, download Icescrum project

Versionning -> Subversion -> checkout

In "Repository URL" put <https://icescrum.svn.sourceforge.net/svnroot/icescrum>

Enter login and password Sourceforge.net

Click on "Next"

In "Repository folder" click on "Browse" and select Trunk -> Icescrum2

In "Local Folder" select the file where IceScrum2 will be imported

Click on "Finish"

After the checkout, NetBeans asks if we want to associate an IDE : select close

File -> Open Project : select icescrum2 then select "Open as Main Project" and "Open Required Project"

Select a server : right click on WAR Module -> run -> GlassFish

On the project icescrum2(pom) do a "clean and build". (Be careful, the first build takes a few time, it's normal).

- Run the IceScrum project :

Right click on WAR Module -> run

Remark : You can use Tomcat instead of Glassfish (default).

5) Start the development

On the repertory icescrum2, you can do "Run As => Maven clean"and then "Run As => Maven install" to install the project and its dependencies.

To start the application, you must start WAMP first, then, launch the server by right clicking on icescrum-web and "Run as => run on Server".

IceScrum² is launched by default on <http://localhost:8080/icescrum2/>

5.1) Database configuration for development

By default, IceScrum uses an embed database HSQLDB located in "<HOME> (My Documents on windows)/.icescrum/hsqldb".

If you want to change it, to use MySQL for example, you can do it by modifying the configuration file in the project "icescrum-web", in the file : /src/main/webapp/META-INF/icescrum2/config/configuration.properties (which is empty by default)

using IHM :

Connect to IceScrum (see "How to use the project") as super admin : Login : sa / Pass : sa) and modify the informations of database connection. **After validation, the application will restart, you have to wait a little bit (around 15 seconds).**

using config file :

if it doesn't work with IHM, you can do it by modifying the configuration file in the project "icescrum-web", in the file : /src/main/webapp/META-INF/icescrum2/config/configuration.properties (which is empty by default).

Parameters to use the embed HSQL database (Default) :

```
database.driverClassName = org.hsqldb.jdbcDriver
database.url = jdbc:hsqldb:file:${user.home}/.icescrum/hsqldb/icescrum2.tmp
database.dblogin = sa
database.dbpwd = sa
database.dialect = org.hibernate.dialect.HSQLDialect
```

Parameters to use MySQL database :

```
database.driverClassName = org.gjt.mm.mysql.Driver
database.url = jdbc:mysql://127.0.0.1/icescrum2
database.dblogin = root
database.dbpwd =
database.dialect = org.hibernate.dialect.MySQLInnoDBDialect
```

5.2) Update (from SVN repository)

If your application is well configured, you can do an update by Right click, Team=>Update, from the main project, or another son project. Son projects are only synchronized duplications (alias) of repositories of the main project.

5.3) Commit (send your work on SVN repository)

As for updating, you can commit by Right click, Team=>commit from a file that has been changed. A pop-up will appear asking you login and password. You have to put your SourceForge id. You can choose to remember them, so that next time you won't have to write them again.

5.4) When should I do a "Maven install"

- When you make a checkout
- When there are libraries changes
- With NetBeans : when you have made changes to a layer, for exemple the Services layer or Dao layer. With Eclipse, you don't need to do it, just relaunch the server.

6) Bug report

When you find a bug in the application, you have two options :

The story is in progress

You correct the bug or you add a task to correct it before the end of the sprint

The story is finished

It depends of the criticalness of the bug

- **Critical defect**

It must be treated as soon as possible. We had a task of an hour in the sprint backlog to identify the cause and correct it. We have to update our tests. If after an hour, the bug is still not corrected, you will have to identify the tasks needed to solve it and add them to the sprint backlog. It will probably have an impact on the sprint perimeter. A bug is critical only if it is really disastrous for the use of the product, without any workaround.

- **Top defect**

It is treated in the same way. The difference is that if the bug is not corrected in an hour, we put it in the product backlog to solve it in a future sprint.

- **Minor defect**

If it can be corrected very fast, we do it, else, we put it in the product backlog.

7) Known problems with the project

7.1) Eclipse performances

You have to add the following arguments in Eclipse launching shortcut :

```
"-vmargs -Xms768m -Xmx768m -XX:PermSize=256m -XX:MaxPermSize=256m -XX:+CMSPermGenSweepingEnabled -XX:+CMSClassUnloadingEnabled"
```

from : <http://jvillage.wordpress.com/2008/02/09/optimisation-de-la-memoire-de-la-jvm-pour-eclipse/>

7.2) Maven 1

Sometimes, JDK is not selected by default. Go to Window => Preferences => Java => Installed JREs. If the jdk doesn't appear, add the path to the folder. If he is not selected, select it.

7.3) Maven 2

To solve the following problem:

"The maven integration requires that eclipse be running in a JDK, because a number of Maven core plugins are using jars from the JDK."

You have to specify Eclipse launching variable :

- In the file "**eclipse.ini**" adding : **-vm C:\<chemin_vers_JDK>\bin\javaw**
- When we have Windows **shortcut**, modify the target path :

C:\<chemin_vers_eclipse>\eclipse.exe -vm
"C:\<chemin_vers_JDK>\bin\javaw"
or **C:\<chemin_vers_eclipse>\eclipse.exe -vm "C:\<chemin_vers_JDK>\bin\"**

7.4) Wamp/EasyPHP and Skype

These softwares uses the same port. If you want to use both of them at the same site, you have to launch first Wamp/EasyPhp and then Skype. If wamp icon is yellow, it means that it's not OK.