Installation and maintenance guide

For basic and advanced users with F.A.Q.

A document from Open Lab

Updated for Teamwork version 3.1
Last modified on Wednesday, June 20, 2007

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Table of contents

1 System Requirements

Being a Java application, Teamwork runs everywhere. It is a server application, so it runs as web server on a server, and it has to be installed only on the server. From all other machines, it is sufficient to point to the server with a browser, like Firefox or Microsoft Explorer.

It needs a relational database where to write data. Almost all relational databases are supported; the installer supports natively MySql, SQL Server, Oracle, PostgreSQL, HsqlDB, and Ingres. For testing purposes, you may rely on the provided HsqlDB; it is fast, but is not built to scale. For installing on other databases, you need to provide the JDBC driver and connection data (contact Open Lab if you need support on this).

The installer provides Java for the server (version 5), Apache Tomcat web server (version 5), and databases drivers; this makes a default installation very easy: it consists in clicking a series of "next" on the installer. Technical staff can customize every aspect of how teamwork runs, like changing the web server, clustering the database access, and so on.

2 Install using the graphical installer

Teamwork installation guide is in video form, and can be seen or downloaded at

http://www.twproject.com/documentation.page

as "simple install" and "advanced install".

This document is an integration of the information provided in the videos.

To proceed with installation just follows these steps:

1. download the installer application for your platform from

   http://www.twproject.com/download.page

2. On a Linux box, give execute permissions to the downloaded file and launch it from a console; both on Linux and OSX systems, launch it as root user. On Windows, just double click the file. Follow the install instructions.

2.1 Installation completed correctly

At the end of installation, if the Tomcat and browser checkboxes are selected, Tomcat is launched by the installer as a system process, so to stop it you must bring the process down. But actually the normal way to launch Teamwork is by launching teamwork.sh (on Linux; or teamworkOSX.sh, for MacOSX, or teamwork.bat for Windows), and actually the best way is to install it as service (see below).

3 Platform specific requirements

3.1 Linux systems

You MUST do the installation and launch as ROOT user: on some Linuxes, even binding a port by http requires being a super user.

3.2 Windows XP

Take care that the Personal Firewall is either off or allows Java to run.

3.3 Mac OSX

The “dmg” file does not bundle a Java Runtime Environment (JRE); it is assumed that version 5 or above of JRE is installed. You need to launch the installer as root; as the installer finishes by launching Teamwork, it is better to login as root or launch the installer as root. The script that launches Teamwork on end is teamworkOSX.sh; if any “java.net.BindException: Permission denied:80” error appears, you likely have a permission problem. If you prefer not to login as root, but are administrator, just use

```
sudo ./teamworkOSX.sh
```

4 Database specific requirements

4.1 Ingres

Currently this is the only database that needs the schema creation to be launched by hand: in the admin.jsp page, export the entire db schema and then launch the creation in separate creation scripts through a db client. Contact us for support for more details.

4.2 Oracle

You may have problems in installing on Oracle only if you are using two schema names for Teamwork on the same database. For example, one for testing and one for production; in some cases Oracle's JDBC gets confused and tries to index the wrong one. In this case it is sufficient to de-comment the following line which is in settings.jsp, set the schema name you want to use, and restart the web app:

```
//ApplicationState.platformConfiguration.schemaName = "[your schema name]";
```

4.2.1 Oracle 8

Be careful that the installer proposes Oracle 9 dialect as default; this works with Oracle 9 and 10, but not with Oracle 8. For Oracle 8, set as dialect

```
org.hibernate.dialect.OracleDialect
```

instead of

```
org.hibernate.dialect.Oracle9Dialect
```

in the installer, or in the twdb.properties.

4.3 MySql

In the case of MySql, teamwork requires version 5 and InnoDB to be enabled to work properly. This because Teamwork relies on the database' referential integrity in case of deletion, and only with MySql version 5 and InnoDB tables, referential integrity is properly supported.

If you have encoding problems, see 9.14 below "I can't configure Teamwork to support my language characters.

5 Hand/custom install

It may be necessary to install by hand because of your network or server settings.

See the “advanced install 01” and “advanced install 02” videos at

http://www.twproject.com/documentation.page

The videos cover several cases: one is that you have already a web server running and a Java JDK installed, and you want to add Teamwork as a web app. The simplest way is to install using the installer on a client machine, with access to real database, as the installer will:

- create the database schema
- fill sample data
- create a global.properties file with SMTP and similar settings
- create a twdb.properties with the JDBC connection parameters
- create a lic.properties file with the license data supplied

As all the files created are fine on any O.S., just copy the resulting webapp from webapps/ROOT in the webapp folder for Teamwork. Otherwise you will need to create all these by hand. A sample complete global.properties can be found as

webapps/ROOT/commons/settings/sampleGlobal.properties

Do not install using the installer in text mode, as this gives you the illusion of having installed, without completing properly, as all the parameter setting screens options are not presented.

6 First access

When you access teamwork you have to authenticate using the login screen:

figure 1- login screen

The default user login is:

LOGIN	**administrator**
PASSSWORD	***[empty]***

Set the password as soon as possible!

7 Upgrading or reinstalling the application

For upgrading from alpha or beta versions, please contact us directly.

7.1 Upgrading using the installer

The installer contains an upgrade procedure (see the end of “simple install” video). Since version 3.1.1, there is no more need to delete manually the

- [ROOT]/WEB-INF/twdb.properties
- [ROOT]/commons/settings/global.properties

files, as they won’t be overwritten.

In order to upgrade with the installer

1. make a complete backup of your application and data
2. stop the application server (Tomcat or other)
3. reinstall in the same location:
4. the installer will warn you that it has found a previous installation; choose “upgrade”
5. There are two cases:
    A. You are using the provided default Tomcat and folder structure. In this case just proceed with the overwrite
    B. You are using a custom web server and webapp structure. In this case proceed with the installer, which will extract in webapps/ROOT, and then move the content by hand, overwriting the existing files. Take care that the pre-existing folders must be merged with the new ones, which is default on Windows, but not on Linuxes and OSXs.
6. restart the application server

7.2 Upgrading by hand

The only files that should not be replaced, eventually synchronized, for an upgrade are:

- [ROOT]/WEB-INF/lic.properties
- [ROOT]/WEB-INF/twdb.properties
- [ROOT]/commons/settings/global.properties

In order to upgrade with the installer

1. make a complete backup of your application and data
2. stop the application server (Tomcat or other)
3. extract the zip or tar.gz or rpm files, merging with the existing files. Take care that the pre-existing folders must be merged with the new ones, which is default on Windows, but not on Linuxes and OSXs.
4. restart the application server

The application on restart after upgrade does also a database upgrade.

8 The administration tools

8.1 The administration page

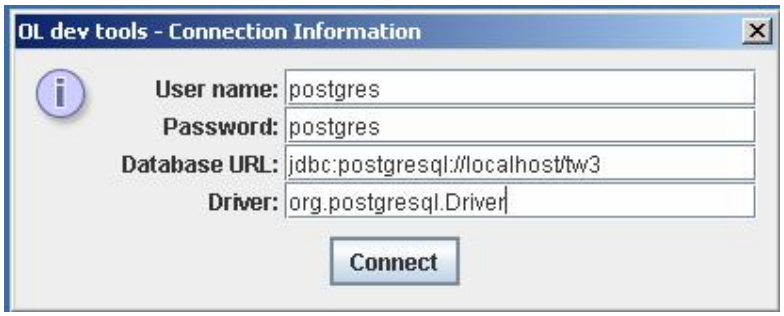
The page

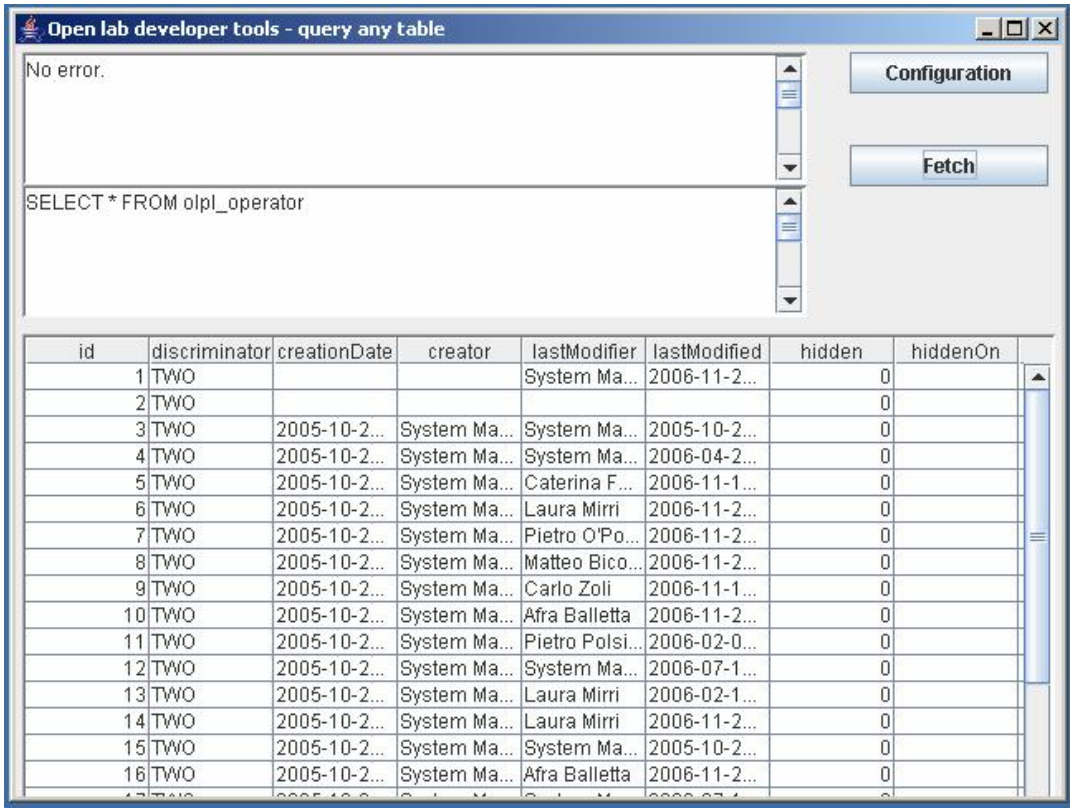
http://[your server ip]/admin.jsp

allows access to various systemic information even in cases when the web app is not responding. The administrative password is “domagic”.

8.2 Database connection tool

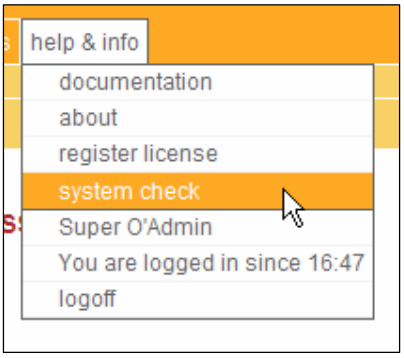
The database connection verifier is the dbConn.jar file, which is an executable (double click it), and give it the JDBC connection parameters (yes, this is for technical people). This way you can verify whether the JDBC connection works; actually this is done already by the installer, so it should be useless.

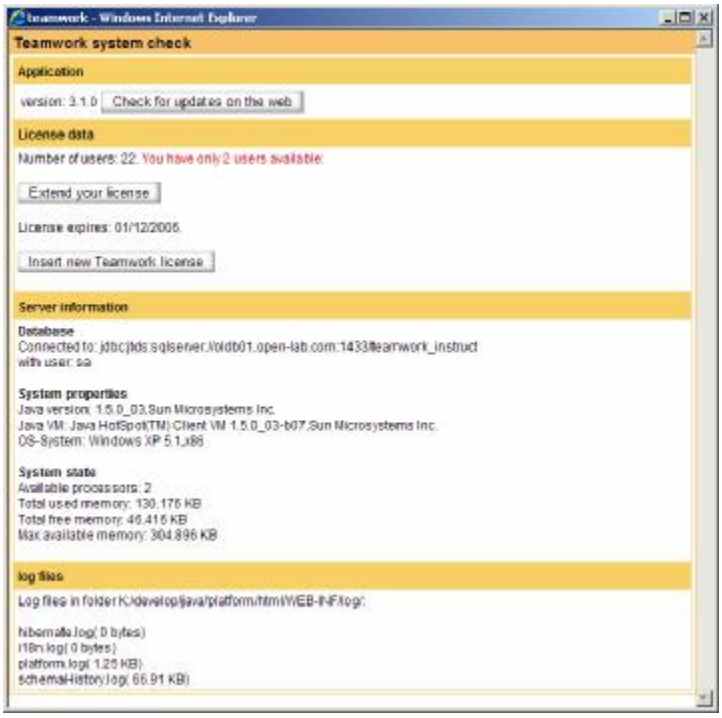




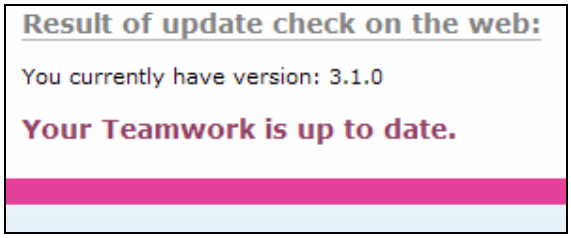
8.3 Maintenance

A useful tool to verify that your current installation is correctly set is the “system check” window:

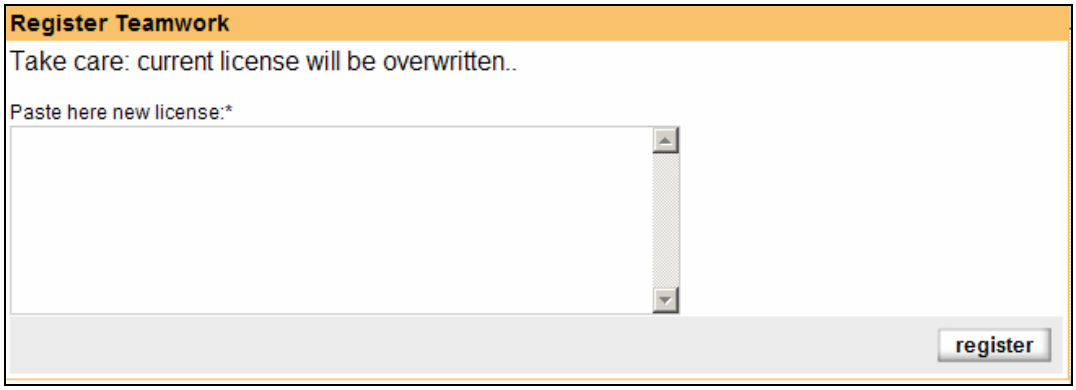




From which you can also check memory and logs, check for updates on the web:



and update the current license:



Recall to backup and then delete periodically the log files.

9 Install and maintain F.A.Q.

Generally, in order to get help from us you should provide us with as much information as possible on the forum: provide the information as in Appendix: How to ask for help

9.1 How do I log in after installation?

Answer. The default user is “administrator” with empty password.

9.2 Installation fails: Failure to connect to the database.

Answer. The installer tests the JDBC connection, without which it doesn’t proceed. So the problem may arise only when migrating from a test server to production, or when doing a hand installation. In these cases, database connection should be tested outside the web framework, in order to simplify testing. To this end, we've published an executable jar (requires a graphical interface) whose scope is testing the reachability through Java/JDBC of your database: you find it at

[installation location]/webapps/ROOT/WEB-INF/lib/dbConn.jar

This application searches for JDBC drivers in the same folder where it is launched. Just launch it (Linux: in a graphical environment) to check connection.

9.3 Using a server with JDK 4 (or 1.4 as it was called)

Answer. Teamwork 3 needs JDK 5, also for JSP compilation.

9.4 Using Tomcat 5.5.9 until 5.5.16, or any other version that compiles JSP pages using JDK 4, even if the sever default JDK is 5

Answer. See 12 Appendix: Tomcat compiling JSPs for JDK 1.4, excerpted from:

http://blog.taragana.com/index.php/archive/how-to-run-javac-15-or-beyond-compiler-for-jsp-compilation-in-tomcat-55-with-generics-enabled-and-other-15-only-features

9.5 The installer freezes at the step "launch Tomcat and browser"

Answer. The wizard should have successfully ended the installation of the software; just check if you have "java" as active process, and turn it down. Then go to your teamwork installation folder and double click on teamwork.bat (or teamworkOSX.sh, or teamwork.sh, according to the operating system), and launch the browser at the proper URL (http://localhost:80 is the default one).

If this does not succeed, try to install tw3 again, but at the wizard last screen UNCHECK the two options ("launch tomcat" and "launch browser"); then double click on teamwork.bat (or teamworkOSX.sh, or teamwork.sh, according to the operating system; may need a "sudo" prefix) and launch the browser by yourself

A typical problem is that http port 80 is taken by another application. If you test the port using installation, you won't have any problem.

9.6 I installed using the installer in textual mode; the application started but gives a lot of exceptions.

Answer. The text mode installer does not set a host of parameters. It's not a recommended procedure.

In particular it does not create the lic.properties file, so assuming that you are hacking Teamwork, the application throws random errors (tells you that it does not find the file in platform.log file).

Actually we tried to install using your technique and we had the same behavior.

It would be better to do an installation from your client windows or Linux with a graphical interface, and then copy he ROOT folder into the tomcat of your Linux server; this way you set all the parameters needed through the installer graphical interface.

9.7 Tried all FAQ's, installation fails.

Answer. Post on the forum at www.twproject.net, following the rules of Appendix: How to ask for help, or get a remote install from Open Lab.

9.8 How do I know which version I have downloaded or saved?

Answer. The files Platform.number and Teamwork.number determine the version. From the web interface, go in the menu -> help & info -> about page.

9.9 Doing this or that, I get a blank screen. The error shown by the error page is not informative.

Answer. In order to see complete errors, check out the application logs, in

[…]WEB-INF/log/platform.log

. You can also see the logs through the web interface if you are administrator:

tools -> administration -> debug -> see log

9.10 At restart of the server, Teamwork is down.

Answer. The installer launches Teamwork through a script, and immediately after setup if you enabled the "Launch Tomcat Web Server" checkbox, Teamwork will be active as a Java process. At restart of the server, or after killing the process, you need to either re-launch Teamwork manually, or install the web server (the provided one is Tomcat) as service.

To start Teamwork manually, on Windows launch teamwork.bat, on Linux launch as root teamwork.sh, on OSX launch as root teamworkOSX.sh.

To install the web server as service, see for example for Tomcat and Windows

http://tomcat.apache.org/tomcat-5.5-doc/windows-service-howto.html

9.11 After a while, or after several users log in, Teamwork hangs.

Answer. Verify your memory settings. The distributed Tomcat runs by default in 128MB or memory, which is may not be sufficient for a lot of concurrent access. To check your configuration, see the Maintenance section.

In order to change it:

ON LINUX OR OSX:

Open

[..]/bin/tw.sh

and put in the line

```
exec "$JAVA_HOME"/bin/java -Xms64m -Xmx128m -classpath…
```

the appropriate memory parameters, for example

```
exec "$JAVA_HOME"/bin/java –Xms128m –Xmx512m -classpath…
```

ON WINDOWS:

Open

[..]/bin/tw.bat

and put in the line

```
%JAVA_HOME%\bin\java -Xms64m -Xmx128m –classpath …
```

the appropriate memory parameters, for example

```
%JAVA_HOME%\bin\java –Xms128m –Xmx512m –classpath …
```

9.12 I am running Tomcat as service on Windows: how do I verify/change memory settings?

Answer. To see what parameters the Tomcat service is starting with, Go to Start -> Run, and run "regedt32.exe". There should be an entry at HKEY_LOCAL_MACHINE -> SOFTWARE -> Apache Software Foundation -> Procrun 2.0 -> [Tomcat service name].

9.13 I've just run a wizard tool (following portal/dashboard tutorial), and something went wrong. And now the home page displays nothing but this message, 'Page "teamworkHome" is not currently available. Contact system administrator.'

Answer. This could happen only in releases older then 3.1.0. To get back your home page, open the file

[...]ROOT/commons/settings/global.properties

modify the HOME_PAGE value:

HOME_PAGE=index.jsp

then restart Teamwork.

9.14 I can't configure Teamwork to support my language characters.

Answer. Check whether your database is configured to support UTF-8 encoding.

In the case of MySql, you can add some properties to JDBC connection url in twdb.properties file:

```
url=jdbc\:mysql\://localhost/teamwork?useUnicode\=true&characterEncodi
ng\=utf-8
```

(thanks to Rafał Bałaga).

9.15 I inserted some test data, and now I want to start production usage, but I am unable to delete the fake data; for example, I cannot delete areas.

Answer. We assume now that you are logging in as administrator, so you don't have security related problems. One way is to repeat installation on an empty database.

Otherwise, notice that Teamwork is structured with referential integrity; hence you cannot delete areas until there are objects in the area. It would be very dangerous to "cascade delete" from area to the other objects, as tasks, resources, documents, issues etc., possibly thousands of objects, would be deleted with one click.

Any area created with the wizard page has several roles on it. In this case, if one wants to delete it, one way is simply to rename it to a wanted area; otherwise one has to delete all the roles of the area, and then delete the area.

9.16 I want to have Teamwork on my Tomcat, not on the provided one.

Answer. Proceed in this way:

1. ensure that your Tomcat is updated, i.e. version above 5.5.16, and using JDK 5
2. install anywhere using the graphical installer with access to the real database, until the last step of the installer, where you disable the "launch Tomcat" and "launch browser" checkboxes
3. the installer will:
    a. create a twdb.properties with the JDBC connection parameters
    b. create a lic.properties file with the license data supplied
4. copy the resulting webapp, that is, the webapps/ROOT folder, from the provided Tomcat to your Tomcat
5. if you are not using the Teamwork web app as ROOT, configure your Tomcat adding the Teamwork web app

6. Launch Tomcat and browse to the web app root, the schema will be created and filled

9.17 At the end of installation, I don't see how to stop Tomcat, nor do I know how to re-launch it

Answer. Tomcat is launched by the installer as a system process, so to stop it you must bring the process down. The normal way to launch Teamwork is by launching teamwork.sh (on Linux; or teamworkOSX.sh, for MacOSX, or teamwork.bat for Windows), and actually the best way is to install it as service.

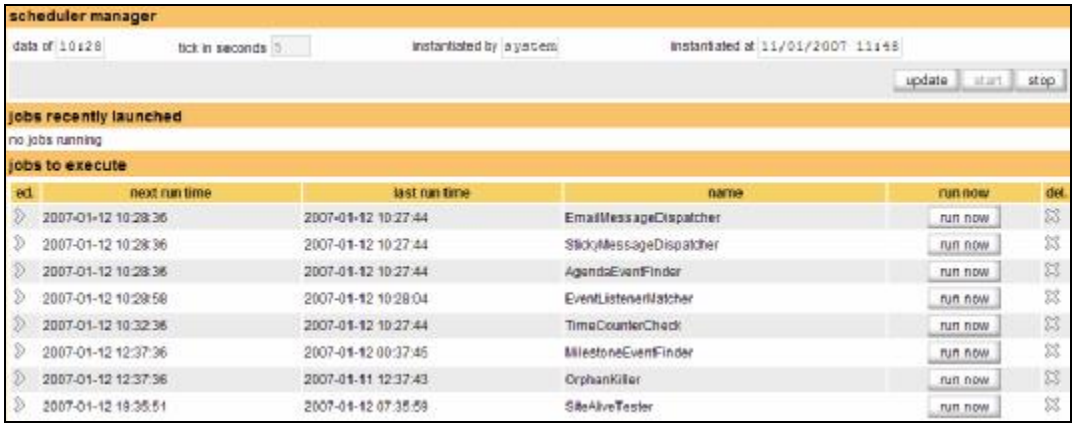
9.18 Sending mails doesn't work. There is some user subscribed to something that does not receive notifications by mail.

Answer. First of all, configure mail as in **Error! Reference source not found. Error! Reference source not found.**. To test whether send mail works, and also whether a particular user will receive email, proceed as follows:

1. (optional) back up and clear the log file platform.log
2. log in with administrator rights
3. verify that you and the user have a correct email address set in their data
4. check whether the scheduler is running: go to

   tools -> administration -> schedule manager -> monitor

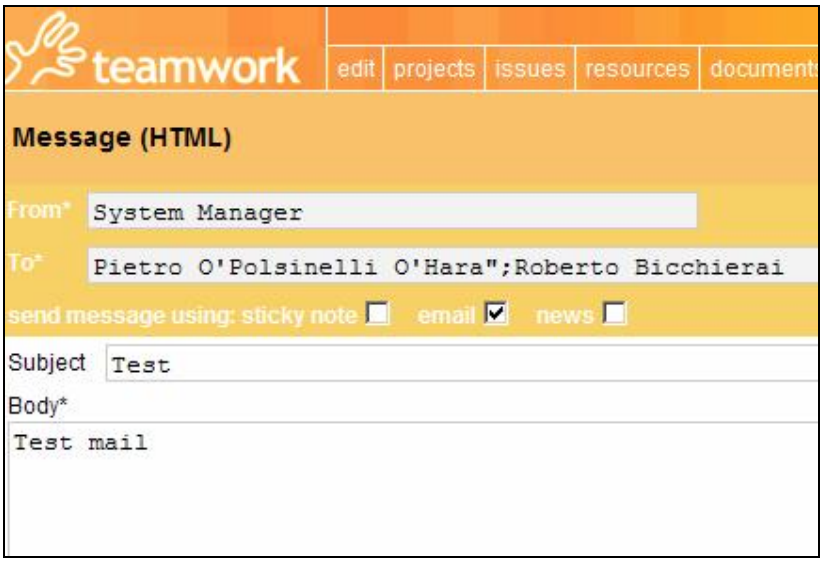
   and you should see something like



If it isn't running, set a tick, like 5 seconds, and start it

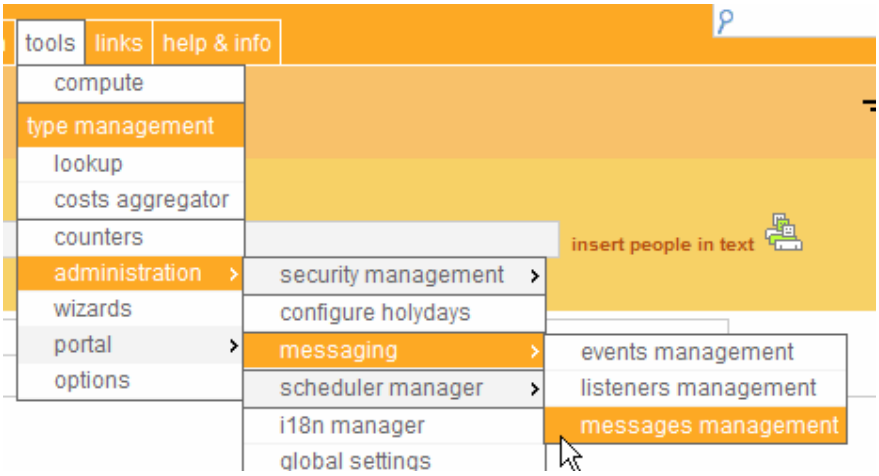
5. go to

   team -> send message



select the check email and send a message to yourself (to be sure) and to the user

6. in at most 2 minutes the scheduler will send the message; you can check the message queue from *messages management*:



7. if the message is not received, check the platform.log, the error will be filed under "EmailMessageDispatcher error". It may be that your SMTP server is incapable of sending mail to the specified addresses

9.19 On which files Teamwork web server needs write permissions?

It needs to write the log files: by default these are in […]WEB-INF/log; in Tomcat by default they are in <TOMCAT-HOME>/logs/, but we don't know on which web server you are running.

10 Appendix: Global settings

The global application parameters are saved on the “global.settings” file, in the

[..]/commons/settings

folder; the file is created by the Teamwork installer. The properties can be edited through Teamwork’s web interface by logging in as administrator and going to

tools -> administration -> global settings

Not all parameters present in the distributed global.properties are necessarily currently in use; some are present for future compatibility.

11 Appendix: How to ask for help

INFORMATION:
- whether it is an installation or usage problem
- version of Teamwork you are using (e.g. 3.0.7 build 13.066)
- operating system and database you are using
- web server (e.g. Tomcat 5.5.17) you are using, and whether you are using your own, or the one provided in the download

FOR INSTALLATION PROBLEMS:
- if you are doing an installation, whether you are using the graphical installer, and if not, which archive you are using

FOR USAGE PROBLEMS:
- all the information found on the “system check” page, if available:
  tools -> administration -> debug system check
- check out [..]WEB-INF/log/platform.log for an error reported there for the intended page

- if a page doesn't seem to work, do "view source" of the html of the page and post the eventual error found
- check out the JavaScript errors of the page

LOG AND CONFIG FILES:
send us by mail, eventually cleared of sensitive data, and possibly zipped:
1. [..]commons/settings/global.properties file
2. [..]WEB-INF/log/platform.log
3. [..]WEB-INF/db.properties

If the platform.log file is huge, stop the web server, backup it, clean it, reproduce the error and send that file.

12 Appendix: Tomcat compiling JSPs for JDK 1.4, using Tomcat 5.5.9 up to 5.5.16

Tomcat 5.5 (unlike Tomcat 5.0 and versions below) comes with Eclipse JDT compiler enabled by default for JSP compilation. JDT compiler is not jdk 1.5 compliant as of now.

To just use the javac 1.5 compiler with Java 1.4 source code compliant JSP pages (you cannot use generics or autoboxing in scripted jsp code and other Java 1.5
features) and Java 1.4 compliant target classes generated, you have to add tools.jar from your %JAVA_HOME%\lib directory to %TOMCAT_HOME%\common\lib.
Then replace the jasper-compiler-jdt.jar with ant.jar in %TOMCAT_HOME%\common\lib. Make sure you have downloaded the latest version of Ant.

To enable 1.5 features in your JSP files (like generics and autoboxing for example) you need to additionally modify %TOMCAT_HOME%\conf\web.xml file.

You need to add two init parameters as shown below in bold:

```
<servlet>
  <servlet-name>jsp</servlet-name>
  <servlet-class>org.apache.jasper.servlet.JspServlet</servlet-class>
  <init-param>
    <param-name>fork</param-name>
    <param-value>false</param-value>
  </init-param>

  <!-- BEGIN new args -->
  <init-param>
    <param-name>compilerSourceVM</param-name>
    <param-value>1.5</param-value>
  </init-param>
  <init-param>
    <param-name>compilerTargetVM</param-name>
    <param-value>1.5</param-value>
  </init-param>
  <!-- END new args -->

  <init-param>
    <param-name>xpoweredBy</param-name>
    <param-value>false</param-value>
  </init-param>
  <load-on-startup>3</load-on-startup>
</servlet>
```

The compilerSourceVM and compilerTargetVM parameters indicates the compiler to assume the source is Java 1.5 compliant and the target classes generated will be Java 1.5
compliant.

Side Effect
This also enables Ant. Javac is invoked from Ant.

The procedure has been well tested and works without exception. The instructions are tailored for Windows platforms. Please adapt the instructions (minor changes)
suitably for Unix/Linux platforms.

A user added:
I needed one more thing to do to get it to work. Rename or delete jasper-compiler-jdt.jar (I just renamed it to jasper-compiler-jdt.jar.defunct) in your %catalina_home%/common/lib.
Then grab the latest ant (ant.jar is all u really need).
Then add the two parameters above, restart tomcat and BAM….works.