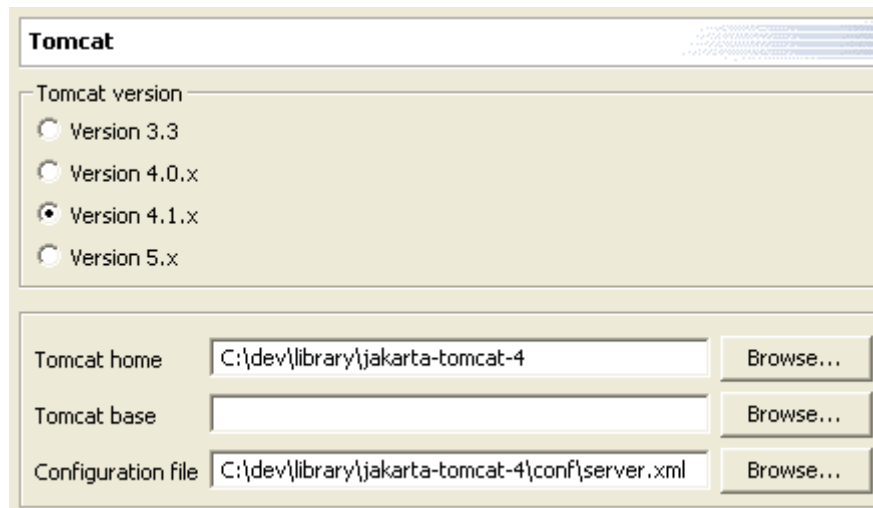


Requirements

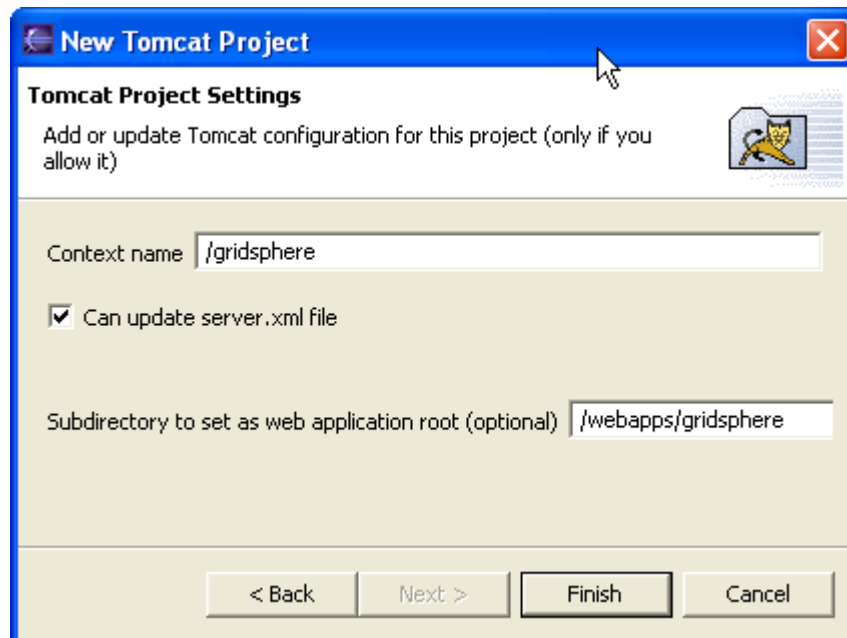
1. Eclipse Eclipse 3.0M8
2. Tomcat launcher Eclipse plugin (<http://www.sysdeo.com/eclipse/tomcatPlugin.html>)
3. Tomcat4 patch for JSP debugging (<http://www.sysdeo.com/eclipse/tomcatPlugin.html>)
4. Recent Tomcat4.1 distribution (e.g., 4.1.30)

Installation

1. Install the Eclipse plugin and the Tomcat4 patch (The patch is binary, so no recompilation of Tomcat needed)
2. Use Window -> Preferences... to activate the Tomcat plugin (see image below)

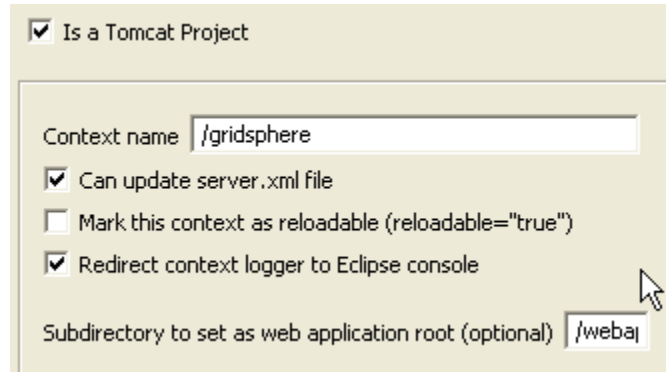


3. Create a new Tomcat Project (e. g. GSProject, context name="/gridsphere", web application root="/webapps/gridsphere", see image below).



4. In the project's settings (see image below)

- Can update server.xml
- Don't be a reloadable context (It messes up anyway)
- Redirect context logger to Eclipse

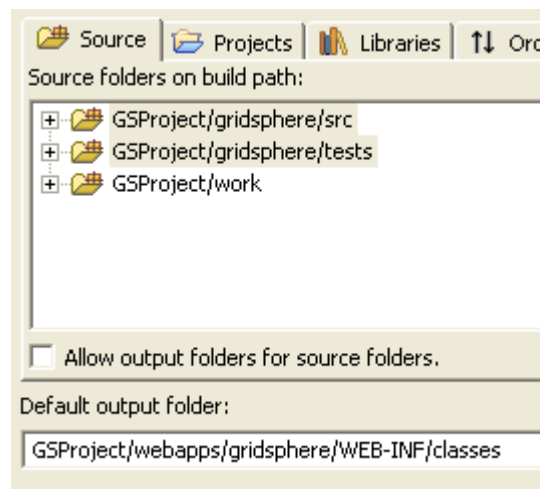


5. Check out as an existing project

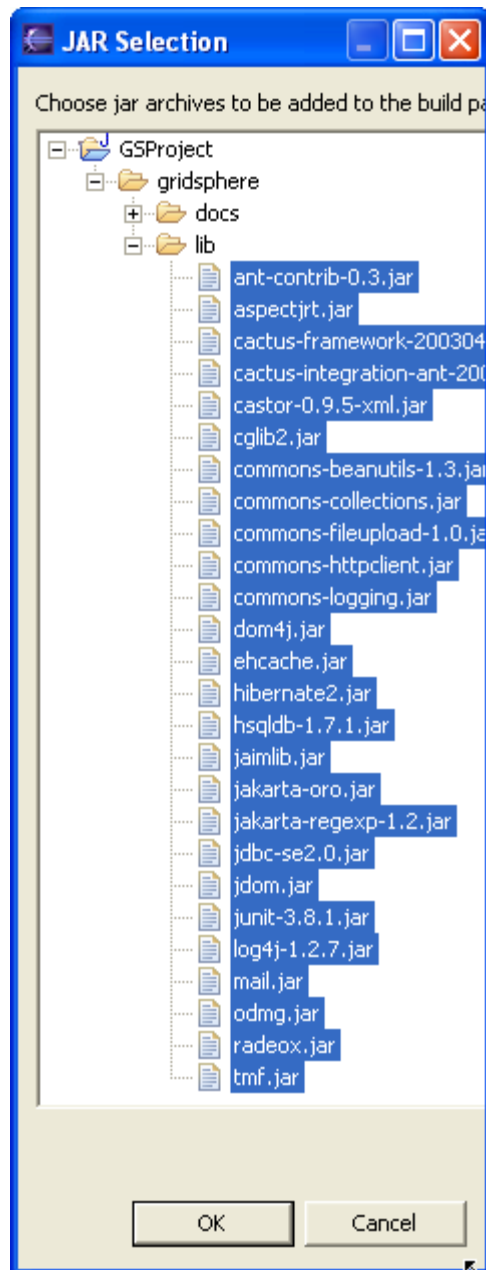
- Host: portal.aei.mpg.de
- Repository path: /home/repository
- User: anonymous
- Password: < leave blank >
- Connection type: pserver
- CVS Module: gridsphere

6. Setup Java Build Path in Project Properties

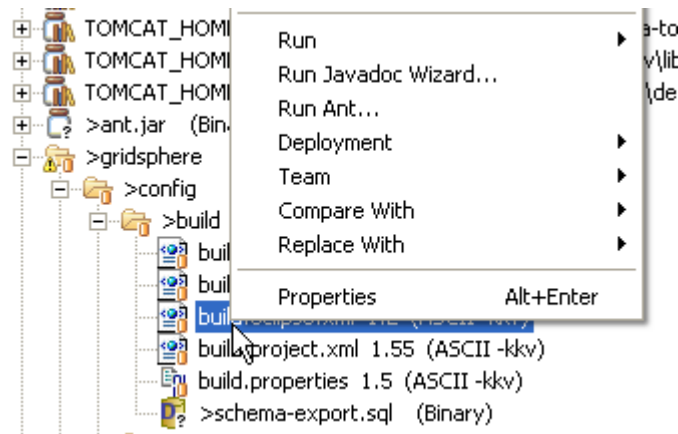
- Add source folder gridsphere/src and gridsphere/tests (see image below)



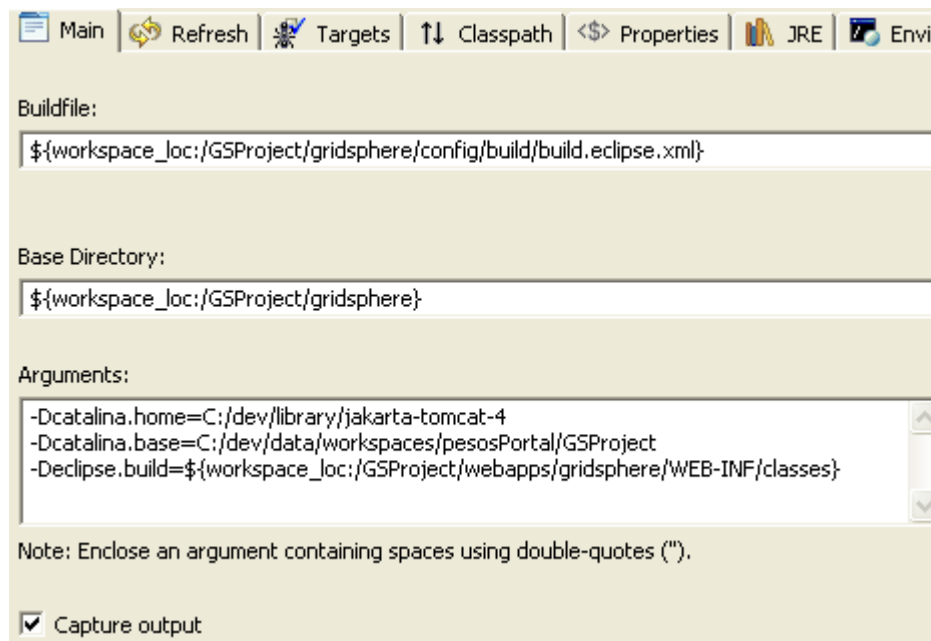
- Add the libraries in gridsphere/lib (see image below)



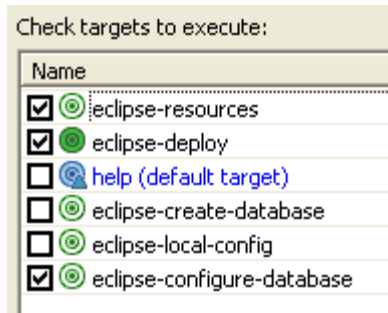
- Extend the variable TOMCAT_HOME
 - Add the activation.jar from Tomcat common/lib
 - Add the ant.jar from Tomcat common/lib
 - Add the jta.jar from Tomcat common/lib
 - Add the xercesImpl.jar from Tomcat common/endorsed
 - Add the XmlParserAPIs.jar from Tomcat common/endorsed
 - Export the libraries and the source folders (Order and Export tab, select all, Ok)
7. Right Click on GSProject/gridsphere/config/build/eclipse.build.xml and selection "Run Ant" (see images below)



- Ant resource: GSProject/gridsphere/config/build/eclipse.build.xml
- Working directory: GSProject/gridsphere
- Parameters:
 - -Dcatalina.home=/path/to/tomcat/installation
 - -catalina.base=/path/to/gridsphere project (note the use of slash "/" instead of backslash "\".)
 - -Declipse.build=\${workspace_loc:/GSProject/path/to/build/directory}



- Targets (in this order, **order matters**): eclipse-deploy, eclipse-create-database, eclipse-resources



- Click Run, you should see something in the console like below.

```
Buildfile: C:\dev\data\workspaces\pesosPortal\GSProject\gridsphere\config\build\build.eclipse.xml
eclipse-resources:
  [mkdir] Created dir: C:\dev\data\workspaces\pesosPortal\GSProject\webapps\gridsphere\WEB-INF\classes\gridsphere
  [copy] Copying 1 file to
C:\dev\data\workspaces\pesosPortal\GSProject\webapps\gridsphere\WEB-INF\classes\gridsphere
  [copy] Copying 10 files to
C:\dev\data\workspaces\pesosPortal\GSProject\webapps\gridsphere\WEB-INF\classes\gridsphere\resources
eclipse-deploy:
eclipse-configure-database:
  [mkdir] Created dir: C:\dev\data\workspaces\pesosPortal\GSProject\webapps\gridsphere\WEB-INF\persistence
  [copy] Copying 1 file to
C:\dev\data\workspaces\pesosPortal\GSProject\webapps\gridsphere\WEB-INF\persistence
  [copy] Copying 192 files to C:\dev\data\workspaces\pesosPortal\GSProject\webapps\gridsphere
eclipse-configure-database:
  [copy] Copying 1 file to
C:\dev\data\workspaces\pesosPortal\GSProject\webapps\gridsphere\WEB-INF\persistence
eclipse-create-database:

  [echo] Successfully created new database
eclipse-resources:
BUILD SUCCESSFUL
Total time: 6 seconds
```

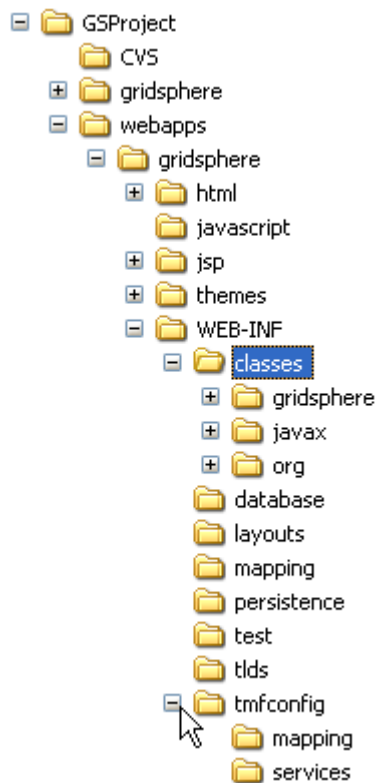
- If you add the following 4 lines to the GSProject\gridsphere\config\log4j.properties file, you see hibernate logging which tells you the specifics of the database set up. I recommend doing this.

1. log4j.logger.net.sf.hibernate=DEBUG
2. log4j.logger.net.sf.hibernate.cfg.Binder=debug
3. log4j.logger.net.sf.hibernate.cfg.Environment=debug
4. log4j.logger.net.sf.hibernate.util.DTEntityResolver=DEBUG

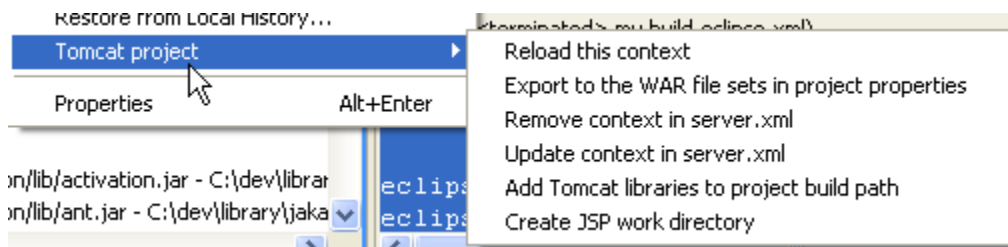
Sample Hibernate Logging:

```
SchemaExport - Running hbm2ddl schema export
SchemaExport - writing generated schema to file: schema-export.sql
SchemaExport - exporting generated schema to database
DriverManagerConnectionProvider - Using Hibernate built-in connection pool (not for production use!)
DriverManagerConnectionProvider - Hibernate connection pool size: 20
DriverManagerConnectionProvider - using driver: org.hsqldb.jdbcDriver at URL:
jdbc:hsqldb:C:/dev/data/workspaces/pesosPortal/GSProject/webapps/gridisphere/WEB-INF/database/gridisphere
DriverManagerConnectionProvider - connection properties: {poolsize=40, user=sa, password=}
DriverManagerConnectionProvider - total checked-out connections: 0
DriverManagerConnectionProvider - opening new JDBC connection
DriverManagerConnectionProvider - created connection to:
jdbc:hsqldb:C:/dev/data/workspaces/pesosPortal/GSProject/webapps/gridisphere/WEB-INF/database/gridisphere, Isolation Level: 1
```

- Check that the database is installed in the right place. You should have 2 files in the \GSProject\webapps\gridsphere\WEB-INF\database directory.
 1. gridsphere.properties
 2. gridsphere.script
- You should see a dir structure like the image below.



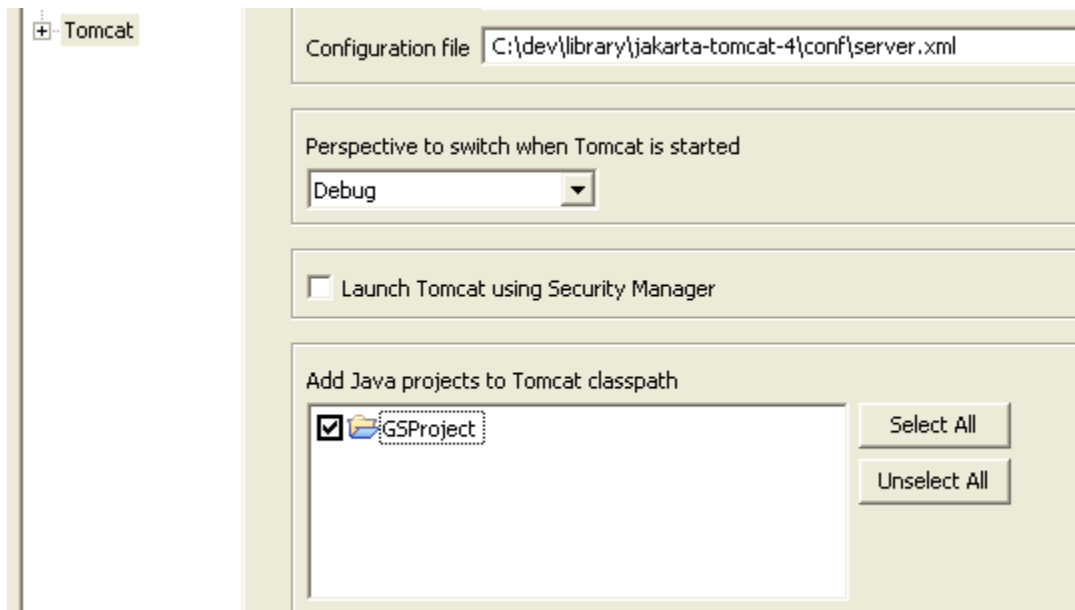
8. Refresh the Eclipse project
9. From the project context menu -> Tomcat -> update server.xml (see image below)



10. Go to server.xml (e.g., jakarta-tomcat-4\conf\server.xml) and adjust the generated Context so that it includes the crossContext="true" attribute. See sample below.

```
<Context crossContext="true" path="/gridsphere" reloadable="false"
docBase="C:\dev\data\workspaces\pesosPortal\GSProject\webapps\gridsphere"
workDir="C:\dev\data\workspaces\pesosPortal\GSProject\work\org\apache\jsp" >
```

11. In Window -> Preferences -> Tomcat add the project (here GSProject) to the Tomcat Classpath. Also change the Tomcat 4.1.x launch configuration to start in the Debug perspective (see image below)



12. Start Tomcat and enter <http://127.0.0.1:8080/gridsphere/gridsphere> in a browser

- You should see the following in your browser window.



- If you followed my advice about above the Hibernate logging, then your console will contain the following information – very useful.

instantiating session factory with properties: {

```
    hibernate.connection.username=sa,  
    hibernate.connection.poolsize=40,  
    hibernate.connection.password=,  
    hibernate.dialect=net.sf.hibernate.dialect.HSQLDialect,  
    hibernate.connection.url=jdbc:hsqldb:C:/dev/data/workspaces/pesosPortal/GSProject/webapps/gridsphere/WEB-INF/database/gridsphere,  
    hibernate.show_sql=false,  
    hibernate.connection.driver_class=org.hsqldb.jdbcDriver  
}
```