OpenGTS

How to Use Eclipse with OpenGTS project

Written by Pierluigi Bucolo

V 0.0.3

Revision History

Rev.	Date	Changed	Author
0.0.1	26.01.09	Initial release	PB
0.0.2	27.11.09	Added Windows settings and screenshots	
0.0.3	05.12.90	Added running template server inside Eclipse	ОН
		Debug remote tomcat application using Eclipse	PB

Authors: - Pierluigi Bucolo - Daniel Poplawski - Oskar Holowaty

How to Use Eclipse with OpenGTS project

It's possible to use Eclipse IDE with OpenGTS project, in this document I'll explain how. This document was written and tested for Linux and Windows environment(tested on Windows XP and Windows 7 x64).

Prerequisites

The system must be setup according OpenGTS Installation/Configuration manual (OpenGTS_Config.pdf inside OpenGTS packages) You must be able to compile correctly the package using command line before continue (ant all).

Eclipse Installation

- Download Eclipse IDE for Java EE Developers, this package has built in all plugins needed to develop Tomcat servlet. (<u>http://www.eclipse.org/downloads/</u>). Linux: *eclipse-jee-ganymede-SR1-linux-gtk.tar.gz* Windows: *eclipse-jee-ganymede-SR1-win32.zip*
- Untar or unzip the downloaded file then run **eclipse**
- When prompted select a workspace directory, then mark the checkbox to avoid to show this question every time eclipse startup.

Linux: We are assuming /home/user/ is your home directory in Linux environment

	Workspace Launcher 🛛 🛛 🗶	
Select a wo	orkspace	
Eclipse Platf Choose a wo	form stores your projects in a folder called a workspace. orkspace folder to use for this session.	
<u>W</u> orkspace:	/home/user/workspace	
☑ <u>U</u> se this a	as the default and do not ask again	
	OK Cancel	

Windows:

Workspace	Launcher	1 24	~ *	x
Select a w Eclipse SDK Choose a we	orkspace stores your projects in a folder called a workspace. orkspace folder to use for this session.			
<u>W</u> orkspace:	D:\Projects\Eclipse		•	<u>B</u> rowse
🔲 <u>U</u> se this a	s the default and do not ask again	01		Cancel

Remember to **uncheck** Automatic Build.



Create a new Project

 Click on File -> New -> Project. According your Eclipse installation this windows maybe differ sligthly



• Select Java Project then click Next button.

New Project	×
Select a wizard	>
Create a Java project	
<u>W</u> izards:	
type filter text	
🕨 🗁 General	$\hat{\frown}$
CVS	
🕨 🗁 Eclipse Modeling Framework	
🖻 🗁 EJB	
🗢 🗁 Java	μ
/ Java Project	
※ Java Project from Existing Ant Buildfile	
👂 🗁 Java EE	
N 🚘 JavaScrint	\sim
Image: Second	

- Assign a name to the project: **OpenGTS**
- In *Contents* area select **Create new project in workspace**
- In JRE area select Use a project specific JRE Be Aware!! Select ONLY SUN JDK, others doesn't works!! Fedora starting from Relase 10 uses java-1.6.0-openjdk 1.6.0-devel that works too.
- Select Create separate folder for sources and class files

E	ew Java Project	×
Create a Java Project		
Create a Java project in the workspac	e or in an external location.	
<u>P</u> roject name: OpenGTS		
Contents		
• Create new project in <u>w</u> orkspace	e	
 Create project from existing source 	ırce	
Directory: //home/bucolo/workspac	e/OpenGTS	Browse
JRE		
O Use def <u>a</u> ult JRE (Currently 'jdk1.	5.0_17')	Configure JREs
Use a project specific JRE:	jdk1.5.0_17	v
 Use an execution environment J 	RE: [J2SE-1,5	
Project layout		
 Use project folder as root for source 	rces and class files	
• <u>Create separate folders for sour</u>	ces and class files	Configure default
Working sets		
Add project to working sets		
W <u>o</u> rking sets:		Select
•		
2	< Back Next >	Finish Cancel
Ű	<u>- Dack</u>	

• Then Click Next.

• Change *Default output folder* from *OpenGTS/bin* to **OpenGTS/build**

E New Java Project	×
Java Settings	
Define the Java build settings.	
<u> </u>	
 · · · · · · · · · · · · · · ·	۲
ᢦ 🛃 OpenGTS	
👂 🍅 src	
👂 🗁 build	
👂 🗁 home	
🛛 🖒 😑 jlib	
🕨 🕞 lib	
👂 🗁 sample Data	
👂 🗁 war	
V SebContent	
RELEASE_2.0.4	
▼ Details	
Create new source folder: use this if you want to add a new source folder to project.	o your
Link additional source: use this if you have a folder in the file system that shused as additional source folder.	nould be
Add project 'OpenGTS' to build path: Add the project to the build path if the project is the root of packages and source files. Entries on the build path are to the compiler and used for building.	e visible
□ Allow output folders for sour <u>c</u> e folders	
Defaul <u>t</u> output folder:	
OpenGTS/build Bro	wse
? < <u>Back</u> <u>Mext</u> > <u>Finish</u> C	Cancel

• Then click **Finish** button

Import OpenGTS Project

• Select the project just created in the Navigator pane.



- Then click **File -> Import...**
- In the import window select **General->File System**

E Import	×
Select	
Import resources from the local file system into an existing project.	Ľ
<u>S</u> elect an import source:	
type filter text	
▽ 🗁 General	
👰 Archive File	
🖆 Existing Projects into Workspace	
📮 File System	
💷 Preferences	
👂 🗁 CVS	
👂 🗁 EJB	
👂 🗁 Java EE	
👂 🗁 Plug-in Development	
👂 🗁 Run/Debug	
? < <u>Back</u> <u>Mext</u> >	Cancel

• Then click **Next** button

- Select the directory of OpenGTS package
- Click on the Select All button
- Select Create selected folders only

E Im	port 🗶
File system Import resources from the local file system.	
From directory: /home/user/OpenGTS_2.0.4	✓ B <u>r</u> owse…
🕨 🖬 🗁 OpenGTS_2.0.4	☑ 📄 .RELEASE_2.0.4
	v w build_custom.xml
	☑ 🗟 build.properties
	☑ ♣ì build.xml
	CHANGELOG.txt
	default.conf
Filter Types Select All Deselect All	
Into folder: OpenGTS	Bro <u>w</u> se
Options	
Overwrite existing resources without warr	ning
O <u>C</u> reate complete folder structure	
 Create selected folders only 	
	Novt > Finish Concol
() < <u>B</u> a	<u>Nexc></u> <u>H</u> nish Cancel

• Click on **Finish** button

WARNING!!

Eclipse doesn't import empty folder, in OpenGTS 2.0.4 the folder **./lib/gtsopt** is empty, so we need to create it.

E		Ja	iva - Eclipse Platform
<u>F</u> ile <u>E</u> dit <u>S</u> ource R	efac <u>t</u> or <u>N</u> avigate Se <u>a</u> rch	<u>P</u> roject <u>R</u> un <u>W</u> indow	<u>H</u> elp
tì~ 🔛 💩 👼 \$ 魚~ 취~ 🏷 夺~ ব	¥ ~ ()~ (<u>4</u>~) (2) ∰ @`~] >~	'≌ © <i>^</i> /~	
🗯 Package Expl 🛿			
▽ 📂 OpenGTS			
▷ 🗁 src			
👂 🛋 JRE System Lik	prary		
Þ 🗁 bin			
🕨 🗁 jlib			
🔻 🖕 lib	New		🖄 lava Project
opendmtp	Go <u>I</u> nto		Project
👂 🗁 sample Data	Onon in Now Window		
🖻 🗁 war	Show In	Shift+Alt+W	
Duild_custom.x	5110 <u>w</u> 111	SHILLTAILTW /	
🗟 build.propertie:	<u>[]]</u> <u>С</u> ору	Ctrl+C	G Enum
🔊 build.xml	E Copy Qualified Name		@ Annotation
CHANGELOG.t	Paste	Ctrl+V	Source Folder
📄 default.conf	× <u>D</u> elete	Delete	🍐 Java Working Set
LICENSE.txt	💩 Remove from Context	Shift+Ctrl+Alt+Down	📔 Folder 🦷
ConenGTS Cont		-	Tô Fil-

• Right click on the **lib** folder then select **New -> Folder**

• In the *Folder name* field, type: **gtsopt**

E New Folder	×
Folder	
Create a new folder resource.	
Enter or select the parent folder: OpenGTS/lib	
🕨 🧀 jlib	
 ▷ IB ▷ sampleData ▷ ▷ src ▷ ▷ war)>
Folder <u>n</u> ame: gtsopt	
Image: The second se	Cancel

Setup Project Properties

- Select in the Navigator pane *OpenGTS* project
- Click on menu **Project -> Properties**



• Select **Builders** on the left pane, then click on New... button

E	Properties for OpenGTS	×
type filter text	Builders	⇔~ ⇔~ ▼
Resource	Configure the builders for the project:	
BeanInfo Path	🖬 🖬 Java Builder	<u>N</u> ew
Builders		Import
Java Build Path		_impore
▷ Java Code Style		<u>E</u> dit
Java Compiler		Remove
▷ Java Editor		
Javadoc Location		[[n
Project References		
Run/Debug Settings		<u>D</u> own
Task Repository		
Task Tags		
Validation		
0	ОК	Cancel

• Select Ant Builder, then click OK

onfiguration type	X
ool type to create:	
OK Can	cel
	onfiguration type nol type to create: OK Can

- 1. In the **Main** sheet complete the following fields:
 - a) Name: Ant
 - b) *Buildfile*: Click on Browse File System... button then select: On Linux: /home/user/workspace/OpenGTS/build.xml On Windows: D:/Projects/Eclipse/OpenGTS/build.xml
 - c) Base Directory: Click on Browse File System... button then select On Linux: home/user/workspace/OpenGTS/ On Windows: <u>D:/Projects/Eclipse/OpenGTS/</u>
 - d) Click on Apply

Edit launch configuration properties Create a configuration that will run an Ant build file during a build. Name: Ant_Builder Main Refresh & Targets Classpath Buildfile: /home/user/workspace/OpenGTS/build.xml Browse Workspace Browse File System Varjables Base Directory: /home/user/workspace/OpenGTS Browse Workspace Browse File System Varjables Arguments: Variables Variables Note: Enclose an argument containing spaces using double-quotes (*). Variables Set an Input handler Apply Reyert	Edit Configuration				
Create a configuration that will run an Ant build file during a build.	Edit launch configuration properties				
Name: AntBuilder Image: Main Refresh & Targets Classpath Properties In JRE Environment Build Options Buildfile: Image: AntBuild Options /home/user/workspace/OpenGTS/build.xml Browse Workspace Base Directgry: Image: AntBrowse Workspace /home/user/workspace/OpenGTS Browse Workspace Browse Workspace Browse File System Variables Variables Arguments: Image: Argument containing spaces using double-quotes (*). Set an Input handler Apply	Create a configuration that will run an Ant build file during a build.				
Name: Ant_Builder Image: Main Image:					
Main	Name: Ant_Builder				
Buildfije: /home/user/workspace/OpenGTS/build.xml Browse Workspace Browse File System Variables Base Directory: /home/user/workspace/OpenGTS Browse Workspace Browse File System Variables Arguments: Variables Note: Enclose an argument containing spaces using double-quotes ("). Variables Variables	Main A Refrech Targets Classnath Properties IRE Environment Ruid Options				
/home/user/workspace/OpenGTS/build.xml Browse Workspace Base Directory: /home/user/workspace/OpenGTS Browse Workspace Browse File System Variables Arguments: Variables Variables Note: Enclose an argument containing spaces using double-quotes ("). ✓ Set an Input handler Apply	Buildfile:				
Browse Workspace Browse File System Varjables Base Directory: //home/user/workspace/OpenGTS Browse Workspace Browse File System Variables Arguments:	/home/user/workspace/OpenGTS/build.xml				
Browse Workspace Browse Hie System Variables Base Directory: /home/user/workspace/OpenGTS Browse Workspace Browse File System Variables Arguments: Variables Variables Variables Variables Variables Variables Variables Variables	Durung Wedenson Druwe Ele Custern Mericker				
Base Directory: /home/user/workspace/OpenGTS Browse Workspace Browse File System Arguments: Image: Comparison of the system of the	Browse workspace Browse Hie System Varjables				
/home/user/workspace/OpenGTS Browse Workspace Browse File System Arguments: Variables	Base Directory:				
Browse Workspace Browse File System Variables Arguments: Image: Comparison of the system of	/home/user/workspace/OpenGTS				
Arguments: Variables Note: Enclose an argument containing spaces using double-quotes ("). ✓ Set an Input <u>h</u> andler Apply Revert	Browse Wor <u>k</u> space Browse File Syste <u>m</u> Varia <u>b</u> les				
Variables Variables Variables ✓ Set an Input handler Apply Revert	Arguments:				
Variables Note: Enclose an argument containing spaces using double-quotes ("). ✓ Set an Input handler Apply Revert					
Note: Enclose an argument containing spaces using double-quotes ("). Image: Set an Input handler Apply Revert	Variables				
Image: Enclose an argument containing spaces asing double quotes (). Image: Set an Input <u>h</u> andler Apply Revert	Note: Enclose an argument containing spaces using double-guotes (")				
✓ Set an Input handler Apply Revert	Note: Enclose an argument containing spaces using double quotes ().				
Apply Revert	☑ Set an Input <u>h</u> andler				
Appi <u>y</u> Re <u>v</u> ert					
	Appi <u>y</u> Re <u>v</u> ert				
⑦ OK Cancel	⑦ OK Cancel				

- 2. In the **Targets** sheet complete the following fields:
 - a) After a "Clean": Click on Set Targets... and select clean and all (WARNING!! Check the rigth order!!).
 - b) *Manual build*: Click on **Set Targets...** and select **all**.
 - c) *Auto Build:* Click on **Set Targets...** and select **all**.
 - d) *During a "Clean"*: Click on **Set Targets...** and select **clean**.
 - e) Click on **Apply** button.

Edit Configuration	×
Edit launch configuration properties	0
Create a configuration that will run an Ant build file during a build.	
Name: Ant Builder	
📔 Main 🔗 Refresh 😪 Targets 🛛 🍫 Classpath 🐵 Properties 🛋 JRE 🚾 Environment 🗁 Build	d Options
After a "Clean":	
clean, all	Set Targets
Manual Build	
all	
	Set largets
Auto Build:	
ai	Set T <u>a</u> rgets
During a "Clean":	
clean	Sot Targets
	Set largets
Apply	Re <u>v</u> ert
© OK	Cancel

3. In the **JRE** sheet complete the fields according the picture below:

ATTENTION: If you use different JDK version, select the SUN JDK, other doesn't works! (on Fedora you can use openjdk package, see note before).

E		Edit	Configuration	on		×
Edit launch co	Edit launch configuration properties O					0
Create a config	uration that wi	ll run an Ant build file	during a build.			
<u>N</u> ame: Ant_Bu	uilder					
🗐 Main 🐼 Be	fresh 📣 Targe	ts % Classpath 🗇	Properties 🛋	IRE 🖉 Environ	nment) 🚘 Build	Options
Runtime JRE:	neon va large					
O Run in the	same <u>J</u> RE as t	he workspace				
⊙ Se <u>p</u> arate	JRE:	jdk1.5.0_17			V	nstalled JREs
O Execution	Environment:					Environments
	· · ·					
argument	5.					
Working direc	tory:					Variables D
• Defa <u>u</u> lt:	/home/user/	workspace/OpenGTS				
O Ot <u>h</u> er:						
				Worksnace	File System	Variables
				m <u>o</u> nspace		
Java executa	ble:					
					Appl <u>y</u>	Revert
0					ОК	Cancel

4. In the **Environment** sheet:

- a) Click on **New...** button and insert the variables:
 - CATALINA_HOME
 - JAVA_HOME
 - GTS_HOME
 - ANT_HOME (optional)

TIPS: You don't need to create ANT_HOME, because is added by Eclipse after first build

b) Select Append environment to native environment

c) Click on **OK**

Edit Configuration				
Edit launch configuration properties 💫 🔼				
Create a configuration that will run an Ant build file during a build.				
Name: Ant_Builder				
Main 🗞 Refresh 🖑 Targets 🦑 Classpath 🐵 Properties 🎫 JRE 🖾 Environment 🕞 Build Options				
This setting can be configured on the JRE tab.	j in a separate jite.			
Environment variables to <u>s</u> et:				
Variable	Value	N <u>e</u> w		
ANT_HOME	/home/bucolo/eclipse/plugins/org.apache.ant_1.7	Select		
CATALINA_HOME	/opt/tomcat5	bejeeem		
● GTS_HOME	/home/user/workspace/OpenGTS	E <u>d</u> it		
JAVA_HOME	/usr/java/jdk1.5.0_17	Rem <u>o</u> ve		
<u>Append</u> environment to native environment	nt			
 Replace native environment with specifier 	d environment			
	Apply	Re <u>v</u> ert		
0	OK	Cancel		
Ū.	OK			

On Windows:

iaunch comiguration properties	S	()
ate a configuration that will run an Ant b	ouild file during a build.	-1
ANIt		
] Main [🚱 Refresh [🥀 Targets [🍫 Cla	asspath (🖘 Properties (🛋 JRE (🚾 Environment 🔪 🗁 Build Options)	
n environment can only be used when ru	inning in a separate JRE.	
n environment can only be used when ru nis setting can be configured on the JRE	unning in a separate JRE. tab.	
n environment can only be used when ru is setting can be configured on the JRE t nvironment variables to <u>s</u> et:	unning in a separate JRE. tab.	
n environment can only be used when ru nis setting can be configured on the JRE t nvironment variables to <u>s</u> et: Variable	unning in a separate JRE. tab. Value	N <u>e</u> w
n environment can only be used when ru is setting can be configured on the JRE to nvironment variables to <u>s</u> et: Variable ANT_HOME	value C:\Program Files (x86)\apache-ant-1.7.0	New
 environment can only be used when ruis setting can be configured on the JRE for the JRE f	Value C:\Program Files (x86)\apache-ant-1.7.0 C:\Program Files (x86)\Apache Tomcat 6.0	N <u>e</u> w Se <u>l</u> ect
 environment can only be used when ruis setting can be configured on the JRE for a set: Variable ANT_HOME CATALINA_HOME GTS_HOME 	value C:\Program Files (x86)\apache-ant-1.7.0 C:\Program Files (x86)\Apache Tomcat 6.0 D:\Rozne\Projekty\Eclipse\OpenGTS_2.1.8	N <u>e</u> w Se <u>l</u> ect E <u>d</u> it
 environment can only be used when ruis setting can be configured on the JRE for the JRE f	value C:\Program Files (x86)\apache-ant-1.7.0 C:\Program Files (x86)\Apache Tomcat 6.0 D:\Rozne\Projekty\Eclipse\OpenGTS_2.1.8 C:\Program Files\Java\jdk1.6.0_17	N <u>e</u> w Select E <u>d</u> it

• Unselsect Java Builder then click OK

e	Properties for OpenGTS	×
type filter text	Builders	⇔v ⇔v ▼
Resource	Configure the builders for the project:	
BeanInfo Path	🗆 🗟 Java Builder	<u>N</u> ew
Builders	🖬 嶽 Ant_Builder	
Java Build Path		
▷ Java Code Style		<u>E</u> dit
Java Compiler		Remove
▷ Java Editor		
Javadoc Location		
Project References		
Run/Debug Settings		<u>D</u> own
Task Repository		
Task Tags		
Validation		
k		
0	ОК	Cancel

Compile OpenGTS

• Click on **Project -> Build Project**



• In the Console pane, you must read after some printed rows: BUILD SUCCESFUL



On Windows:

```
<terminated> ANt [Ant Builder] C:\Program Files\Java\jre6\bin\javaw.exe (2009-11-27 21:20:33)
gprmc:
     [echo] 'gprmc.war' created.
gpsmapper.compile:
     [echo] Compiling 'gpsmapper.war' servlet ...
    [mkdir] Created dir: D:\Rozne\Projekty\Eclipse\OpenGTS 2.1.8\build\gpsmapper
    [mkdir] Created dir: D:\Rozne\Projekty\Eclipse\OpenGTS 2.1.8\build\gpsmapper\WEB
    [mkdir] Created dir: D:\Rozne\Projekty\Eclipse\OpenGTS 2.1.8\build\gpsmapper\WEB
    [mkdir] Created dir: D:\Rozne\Projekty\Eclipse\OpenGTS_2.1.8\build\gpsmapper\WEB
    [javac] Compiling 1 source file to D:\Rozne\Projekty\Eclipse\OpenGTS 2.1.8\build
     [copy] Copying 1 file to D:\Rozne\Projekty\Eclipse\OpenGTS 2.1.8\build\gpsmappe
     [copy] Copying 5 files to D:\Rozne\Projekty\Eclipse\OpenGTS 2.1.8\build\gpsmapp
     [copy] Copying 2 files to D:\Rozne\Projekty\Eclipse\OpenGTS_2.1.8\build\gpsmapp
gpsmapper.war:
     [echo] Creating 'gpsmapper.war' archive ...
      [war] Building war: D:\Rozne\Projekty\Eclipse\OpenGTS 2.1.8\build\gpsmapper.wa
gpsmapper:
     [echo] 'gpsmapper.war' created.
compile.servlets:
     [echo] Servlet/War file compiled ...
compile:
     [echo] Libraries compiled ...
all:
     [echo] Build 'all' complete.
BUILD SUCCESSFUL
Total time: 2 minutes 52 seconds
```

NOTE:

Remember that Eclipse don't want to build again if you didn't make any changes to source code.

Run template server inside Eclipse

• Add into your *build.xml* or *build_custom.xml* a new target like this:

- Open Run -> External Tools -> External Tools Configurations
- Select Ant Build then click on New launch configuration button



- Add a new "Ant Build Configuration" and set
 - Name: "template.xml"
 - o Buildfile: "/home/user/OpenGTS/build.xml"
 - Base Directory: "/home/user/OpenGTS"

me: template.xml
🛛 Main 🛛 🧬 Refresh 📄 Build 🎇 Targets 😽 Classpath 🖘 Properties 🛋 JRE 🌌 Environment 🔲 Commo
Buildfile:
/home/User/OpenGTS/build.xml
Browse Workspace Browse File System Variables
Base Directory:
/home/User/OpenGTS/
Browse Workspace Browse File System Variables
Argumontei

• Select under Tab "*Targets*" template.run Ant-Target

Create, manage, and run configu	rations	
Run an Ant build file.		
Ype filter text (ype filter text ▼ 兼 Ant Build ★ template.xml Program	Name: template.xml Main Refresh Main Refresh Main Seffects Name Bysmapper Image: Image: Image: Image:	Target Classpath Properties JRE Forwironment Common Description Compile/Create 'gpsmapper.war' Compile 'gpsmapper.war' source Create 'gpsmapper.war' to Tomcat Create 'Device Communication Server' template Create 'Device Communication Server' template Create (OLD) 'Device Communication Server' template Create 'Device Communication Server' template Create Miscellaneous tools Print System Properties ted for execution Apply Revert
Filter matched 3 of 3 items		
?		Close Run

• Set on Tab **"Environment**" the GTS_HOME variable like **"Base Directory**"

🖹 Main 🔗 Refresh 🔝 Build	A Targets ^{(⊕} ₀ Classpath ^(□) Properties ^(■) JRE ^[™] Environment ^(□) Control	ommor
An environment can only be us This setting can be configured	on the JRE tab.	
Environment variables to set:		
Variable	Value New.	
CTS_HOME	/home/User/OpenGTS/	
	Select.	
	Edit	\Box
	Remov	/e)
• Append environment to r	ative environment	
Replace native environme	nt with specified environment	

- "Apply" and "Close"
- Now you can Run your template server in eclipse starting from External Tools

📬 • 🔙 🚔 🗍 🕸 • 🔕 • 🍕 •] 🐯 • 🚱 😂	� •]	😭 🀉 Java 🧏 Java EE
🔓 Project Explorer 🕄 🕴 🕈 🖛 🗖	build_custom.xml	- 0
rroect Daplore 23 roect Daplore 23 roect Daplore 24 ro	<pre>2 @</pre>	
Prote Port Port	<pre></pre>	
build properties build Ami CHANELOC.txt common.conf config.conf custor.conf deservers.dtd deservers.dtd	🖹 Markers 🗇 Properties 💭 Console 😰 🔥 Servers 🎬 Data Source Explorer 🚡 Snippets 🔗 Search 🥙 Progress No consoles to display at this time.	r 9 - 13 - 7 1

• Console window show the output

💽 Markers 🔲 Properties 🚍 Console 🕱 🛛 👯 Servers 🎉 Data Source Explorer 🖺 Snippets 🔗 Search 🦉 Progre	ss 🗖 🗖
template.xml [Ant Build] /System/Library/Frameworks/JavaVM.framework/Versions/1.6.0/Home/bin/java (04.12.2009 01	^{:5} 🔳 💥 🙀 🛃 💭 🛃 🖬 🕇
template.run:	i i i i i i i i i i i i i i i i i i i
[<u>echo</u>] template run	
[java] [INF0_112/04 01:57:22 StartupInit.preInitialization:98] [Memory(K) max=83392, tota	al-81280, free-78954]
[java] [INF0_112/04 01:57:221BasicPrivateLabelLoader.printInfo:329] PrivateLabelLoader c	lass: org.opengts.war.tools.Privatel
[java] [INF0_112/04 01:57:231Main.main:177]	
[java] [INF0_112/04 01:57:231Main.main:178] Template Example Device Parsing Module Server	<pre>version 0.2.3</pre>
[java] [INF0_112/04 01:57:231Main.main:179] DeviceCode : template	
[java] [INF0_112/04 01:57:231Main.main:180] ParseFormat : 3	
[java] [INF0_ 12/04 01:57:23 Main.main:181] MinimumSpeed: 4.0	
[java] [INF0_112/04 01:57:23]Main.main:182] EstimateOdom: true	
[java] [INF0_112/04 01:57:23]Main.main:183] Copyright 2007-2009, GeoTelematic Solutions,	Inc.
[java] [INF0_112/04 01:57:23]Main.main:184]	
[java] [INF0_112/04 01:57:31 TrackServerstartTCP:243] Starting TCP listener thread on p	oort 31200 [timeout=15000ms] 🖳
[java] [INF0_112/04 01:57:31 TrackServerstartUDP:279] Starting UDP listener thread on p	oort 31200 [timeout=60000ms] 🔺
	Y
1	

Debug remote tomcat application using Eclipse

Eclipse can connect to Tomcat and give you the ability to debug your WAR applications. This document describe some basic setup to start tomcat in debug mode and use Eclipse, for more information see tomcat and Eclipse documentation.

Start tomcat in debug mode:

Default starting script is catalina.sh (or catalina.bat) under Tomcat bin directory. Use the parameter **jpda** to start tomcat, this run in debug mode and use the port 8000 (default configuration) to give to external debug program all information needed.

or in Windows OS:

> catalina.bat jpda start

TIPS: to show all starting options run: catalina.sh -h (or without parameters) You obatin something like this:

```
Found JAVA_HOME: /usr/lib/java
Please complete your /etc/tomcat5/tomcat5.conf so we won't have to look for it next time
Using CATALINA_BASE:
                      /usr
Using CATALINA_HOME:
                       /usr
Using CATALINA TMPDIR: /usr/temp
Using JRE_HOME:
Usage: dtomcat5 ( commands ... )
commands:
  debug
                    Start Catalina in a debugger
  debug -security
                   Debug Catalina with a security manager
  jpda start
                    Start Catalina under JPDA debugger
                    Start Catalina in the current window
  run
  run -security
                    Start in the current window with security manager
  start
                    Start Catalina in a separate window
  start -security
                    Start in a separate window with security manager
  stop
                    Stop Catalina
  stop -force
                    Stop Catalina (followed by kill -KILL)
                    What version of tomcat are you running?
  version
```

• Create debug profile in Eclipse

Select the OpenGTS project in the *Navigation pane* Open the *Java* perspective



Make sure that Java icon is showed in the upper right corner

Select from menu bar **Run->Debug Configurations**

Se <u>a</u> rch <u>P</u> roject	<u>R</u> un <u>W</u> indow <u>H</u> elp		
# @v @ &v	🗞 <u>R</u> un	Ctrl+F11	■ ■ 」 ava
	🎭 <u>D</u> ebug	F11	
P I in privation 100 privat	Run His <u>t</u> ory	>	=
2	Run A <u>s</u>	>	
3	Ru <u>n</u> Configurations		
5	Debug <u>H</u> istory	>	
7	Debug As	>	
opidic 1 6 1	De <u>b</u> ug Configurations		
enjuk-1.(N	Inc>

Select *Remote Java Application* than click on the new button to create a *New launch configuration*



Name: assign the *name* for the debug configuration*Project:* select the OpenGTS project*Host:* the host name where tomcat run or *localhostPort:* 8000 is the default *jpda* port

Create, manage, and run conf Ø Project does not exist	gurations
Image: Second system Image: Second system	Name: Debug OpenGTS
0	Debug

Add a new source path



Select Workspace folder

Select the type of source to A folder in the workspace	*18	
🕆 Absolute File Path		
Archive		
🗇 External Archive		
🗁 File System Directory		
Java Classpath Variable		
🛋 Java Library		
🗁 Java Project		
🖉 Path Mapping		
😂 Workspace Folder		
	R	
0	ОК	Cancel

And choice the *src* folder of OpenGTS project

Choose folders to add:		
Isettings		
Þ 🗁 bin		
🕨 🗁 build		
👂 🗁 Docs		
🕨 🗁 jlib		
🕨 🗁 lib		
👂 🗁 logs		
🕨 🗁 MotoDMTP		
👂 🗁 private		
👂 🗁 sampleData		
🕨 🗁 src		
🕨 🗁 war		
👂 🗁 RemoteSystemsTempFile	es	\sim
Search sub <u>f</u> olders		
0	OK Cancel	

Note: Probabily you must add the war folder too (I have not tested deeply).

Now press F11 on your keyboard or select Run->Debug.

Eclipse ask to you to open the Debug prospective then run you war application on the remote tomcat server and show all debug informations.