			SOSMART
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Install the org.archware.sosadl Xtext/Eclipse project

From SoSmart Wiki

Contents

How to install the development tools : org.archware.sosadl eclipse project

Currently, the development tools consist in a Xtext/Eclipse project with:

- the grammar of the SoS-ADL language (aka SoSmart);
- the Ecore model of the language, and diagrams;
- a pretty-printer: a generator to "test" the ecore model;
- a translator from SoS-ADL to IOSTS.

There is currently no Eclipse plug-in to install the development tools in your instance.

This page explains how to:

- get a clone (= a copy) of the git repository;
- install a fresh Xtext/Eclipse application;
- load the development tools currently available.

Note: We will install everything in your home directory ($HOME), for the sake of simplicity. If you don't like it, feel free to replace $HOME with whatever you prefer.

Prerequisites

This how-to has been tested on Linux Ubuntu, with Xtext-Eclipse Luna. The installation on an other OS like Windows or MacOS should be no different.

If you run it in a VM, you will need at least 2 Go RAM, or you will suffer eclipse crashes.

Latest JDK

If Java is installed, you should be able to run, and see the current version of java.

```
$ java -version
java version "1.7.0_65"
```

If not, please install the latest Java JDK:

```
$ sudo apt-get install openjdk-7-jdk
```

Git client

If needed, install the git package:

```
$ sudo apt-get install git
```

Generate an RSA ssh key pair, if you don't have one

```
$ ssh-keygen
```

This will generate two files in the $HOME/.ssh directory:

- $HOME/.ssh/id_rsa is your private key! **Keep it secret!**
- $HOME/.ssh/id_rsa.pub is your public key.

Create your account on https://gforge.inria.fr

1. Put your SSH public key on this server, see bottom of page "My Account"
2. Ask one of the project admin to give you access to the **sosadl** project.

Clone the SoS-ADL repository

We assume you'll clone the git repository in your $HOME directory. If it's not the case, replace $HOME with your own path.

If this is the first time you want to access the sosadl git repository:

```
$ cd $HOME
$ git clone git+ssh://<YOUR_LOGIN>@scm.gforge.inria.fr//gitroot/sosadl/sosadl.git
```

DONT'T FORGET to replace <YOUR_LOGIN> with your gforge.inria.fr username!

This will create a the sosadl directory in your $HOME directory.

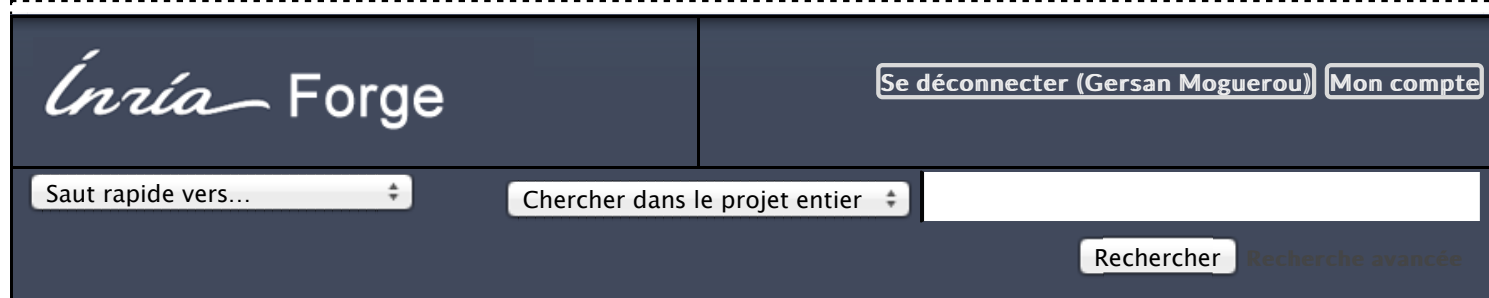### If this is not the first time you access the sosadl git repository, you just need to update your current copy:

```
```

```
$ cd $HOME/sosadl
$ git pull
```

Download and install Eclipse-Xtext

Download "Full Eclipse" for your OS from http://www.xtext.org and save the file in your `$HOME/Downloads` directory:

```
eclipse-dls-luna-R-linux-gtk-x86_64.tar.gz
```

Install xtext:

Ínría Forge

Se déconnecter (Gersan Moguerou)   Mon compte

Saut rapide vers…   ⇕   Chercher dans le projet entier   ⇕

Rechercher   Recherche avancée

```
$ $HOME/eclipse/eclipse &
```

- Accept default setting: Workspace: `/home/<your_login>/workspace`
- Click on the workbench icon.

Open the Xtext project in Xtext-Eclipse

The first time you launch Eclipse, the workbench does not show any project.

Create a new Xtext Project named org.archware.sosadl for the SosADL language

In the main menu, choose File > New > Project...

- select Xtext > Xtext Project
- uncheck "Use default location", and click Browse
- browse your local copy of the git repository until $HOME/sosadl/xtext, and click OK
- back to the "New Xtext Project", complete the information until you have:
  - "Project name": org.archware.sosadl
  - "Location": .../sosadl/xtext (= parent directory of org.archware.sosadl's project)
  - "Language Name": org.archware.sosadl.SosADL
  - "Language Extensions": sosadl
  - click Finish

Now, you should see:

- in the "Package Explorer" window, 4 new projects:
  - **org.archware.sosadl**
  - **org.archware.sosadl.sdk**
  - **org.archware.sosadl.tests**
  - **org.archware.sosadl.ui**
- in the editor window, a fake SosADL.xtext grammar.

Note: A lot of errors (red crosses) appear in project org.archware.sosadl. We'll fix that later.

As you can see, the SosADL.xtext contains a fake grammar generated by Xtext, because we have opened a **New** project instead of the git's project.

We will need to restore git's version of the SosADL.xtext, but for now, we just wait for eclipse to build the workspace.

This can take several minutes!

Restore the grammar, and regenerate the projects

We need to restore two files in the org.archware.sosadl project:

- src/org.archware.sosadl/SosADL.xtext:
- src/org.archware.sosadl/GenerateSosADL.mwe2:

For each file, do this in the "Package Explorer" window,

- open the org.archware.sosadl project
- browse to directory src/org.archware.sosadl
- right-click on the file and select "Replace With > Previous from Local History"

The git's version should have been restored!

Note: if you could not recover from the local history of Eclipse, please restore the entire src directory in a shell:

- exit eclipse (File > Exit)
- in a shell, do:

```
cd $HOME/sosadl/xtext/org.archware.sosadl
/bin/rm -rf src
git checkout -- src
```

- launch eclipse again

Now, we need to regenerate the project.

- Right-click the grammar and "Run As" > "Generate Xtext Artifacts" in order to rebuild the entire dev environment.
- This message will appear:

```
Errors exist in required project(s):
   org.archware.sosadl
   Proceed with launch?
```

- Click "Proceed".

If you see the following red message in the console, answer 'y' as expected:

```
*ATTENTION*
It is recommended to use the ANTLR 3 parser generator (BSD licence - http://www.antlr.org/license.html).
Do you agree to download it (size 1MB) from 'http://download.itemis.com/antlr-generator-3.2.0-patch.jar'
```

After that:

- The eclipse console should display:

```
29594 [main] INFO  .emf.mwe2.runtime.workflow.Workflow  - Done.
```

- Wait until eclipse has finished "Building workspace".

This can take a long time!

And now, all errors (red crosses) should have disappeared in all **org.archware.sosadl.*** projects.

Mark the main project org.archware.sosadl as managed by git

Finally, Eclipse does not see the project **org.archware.sosadl** as managed by git: "[sosadl master]" is not displayed after **org.archware.sosadl** project name.

To fix this, in the "Package Explorer":

- Right-click on the org.archware.sosadl project name
- Select "Team > Share Project..."
- In the next window, select Git and click Next>:
    - Eclipse will find the repository ../../.git: select it,
    - Click Finish

Now, "[sosadl master]" shall be displayed after org.archware.sosadl project name.

Done!

Congratulation!

You have now a working Xtext/Eclipse environment loaded with the SoS-ADL development tools!

If you want to play with it, you can install the first example now.

Retrieved from "https://gforge.inria.fr/plugins/mediawiki/wiki/sosadl/index.php?title=Install_the_org.archware.sosadl_Xtext/Eclipse_project&oldid=47"

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