

# **ModifRoundtrip Documentation**

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## **Installation**

*This document explains the steps for installing ModifRoundtrip*

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# 1. Installation

## Prerequisites

- Eclipse Modeling Tools (EMT): <http://www.eclipse.org/downloads/packages/eclipse-modeling-tools/currentEclipseVersionNamer>.
- Modeling components:
  - Xtext Modeling Component
  - Xpand Modeling Component

Help → Install Modeling Components → Check: Xtext Modeling Component and Xpand Modeling Component → Check the items to install → Next → Accept the terms of the license agreement → Finish → Restart Eclipse

- Java 7
  - SWT

ModifRoundtrip has been successfully tested by using Java 7 (32 bits), SWT (32 bits) and EMT Luna (32 bits).

It also has been tested with EMT Juno (32 bits).

## ModifRoundtrip project preparation

The ModifRoundtrip project is available at <http://lab-sticc.univ-brest.fr/~babau/modif/modif.htm>.

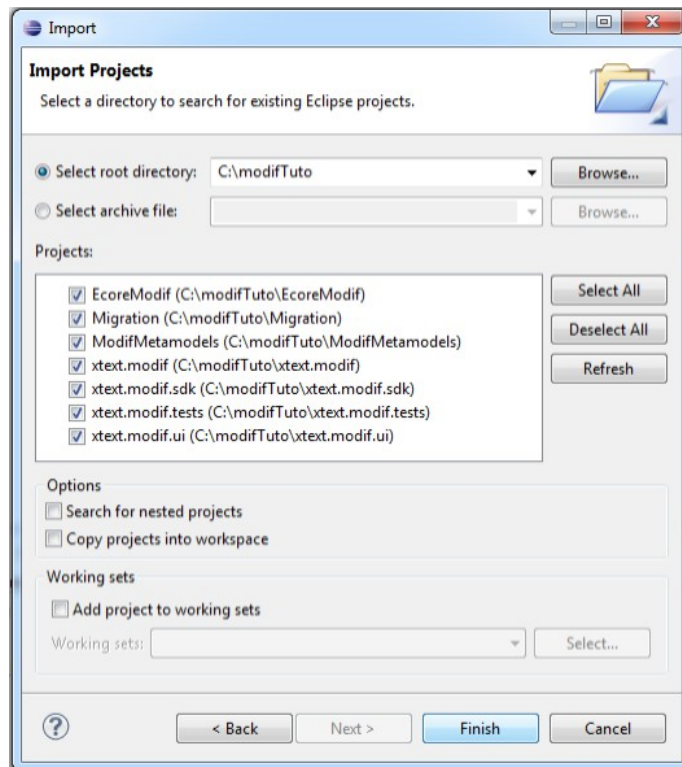
To work with *ModifRoundtrip*, you need to download and unzip the following projects in your workspace:

1. ModifMetamodels (EMF project)
2. EcoreModif (Java project)
3. Migration (EMF project)
4. xtext.modif (Xtext project)
5. xtext.modif.sdk
6. xtext.modif.tests
7. xtext.modif.ui

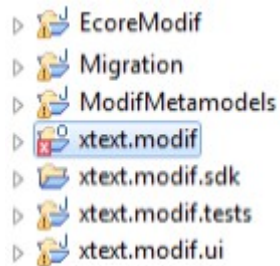
## Projects import

After downloading and unzipping the projects, import them to your workspace

File → Import → General/Existing projects to workspace → Next → [select your workspace] → [select the projects to import] → Finish



The projects will appear in the Package Explorer



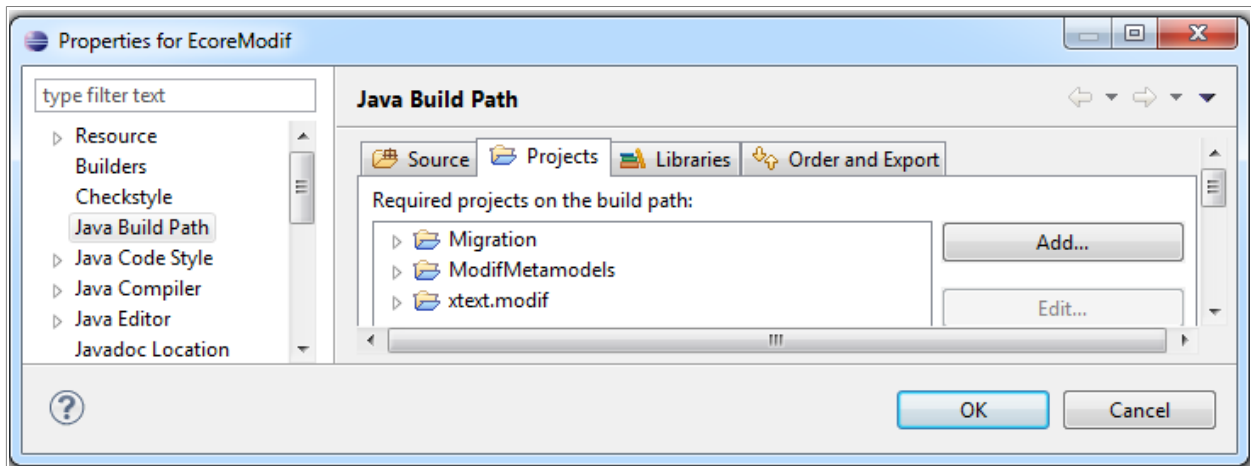
## ***Modif dependencies***

Edit (and add if necessary) the dependencies for the *EcoreModif* project, depending on your platform

Right click EcoreModif project → Build Path → Configure Build Path

Projects:

- Migration
- ModifMetamodels
- xtext.modif

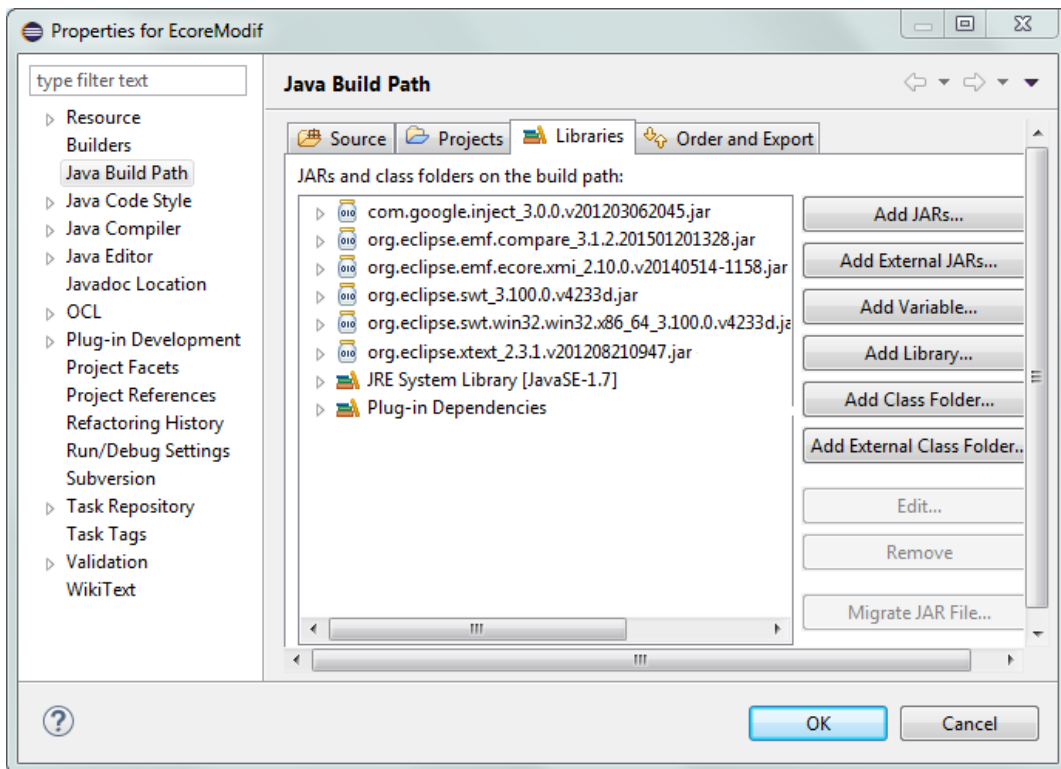


Libraries → Add External JARs... → [select the required libraries]

Libraries:

- com.google.inject
- org.eclipse.emf.compare
- org.eclipse.emf.ecore.xmi
- org.eclipse.swt
- org.eclipse.swt.PLATFORM\_specific (for Windows) or  
org.eclipse.swt.gtk.linux.PLATFORM\_specific (for Linux)
- org.eclipse.xtext

The corresponding *jar* files are in the *plugins* directory of your Eclipse installation. You need to have the above indicated dependencies (here PLATFORM\_specific is win32)



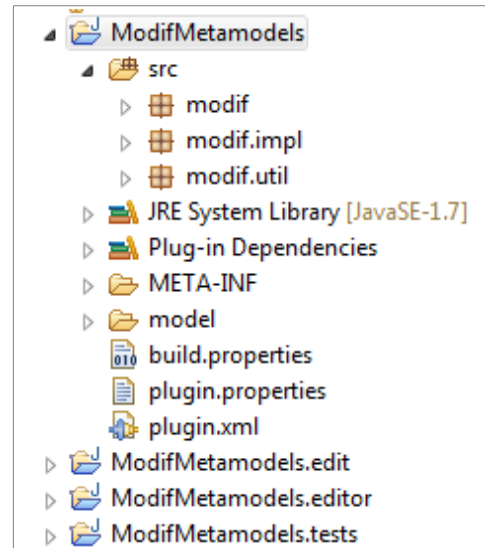
## Modif code generator

In *ModifMetamodels/model* directory, select and open *Modif.genmodel*. When the code generator is opened in the default ecore editor

Right click the Modif code generator → Generate All

This will generate code for:

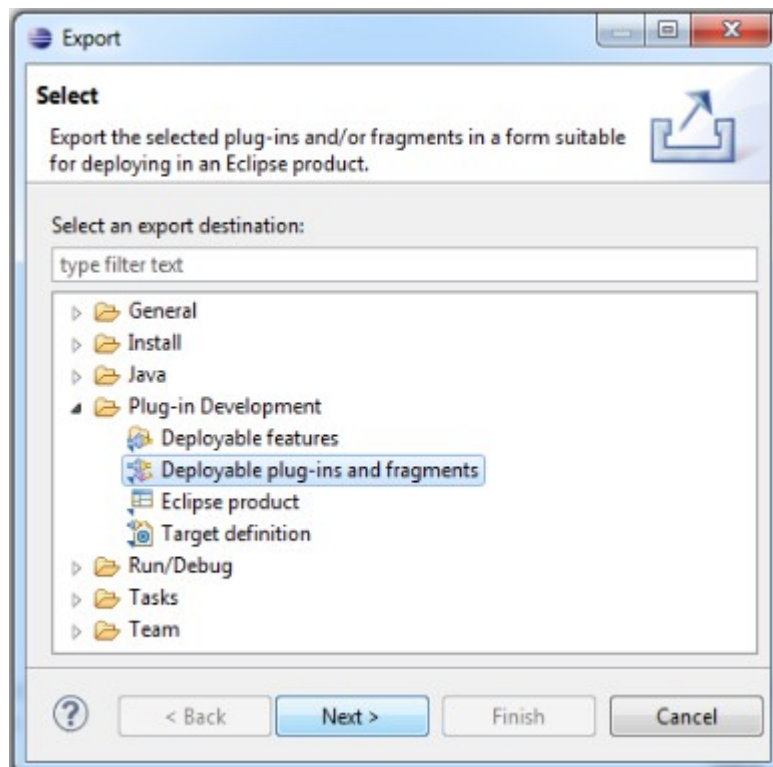
- Model Code
- Edit Code
- Editor Code
- Test Code



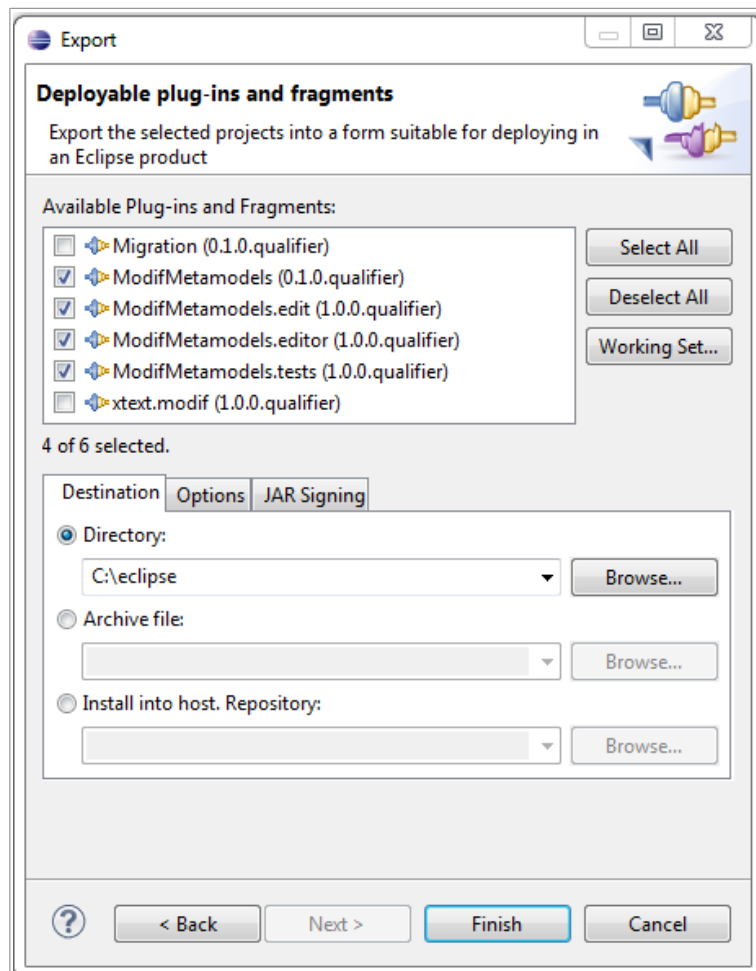
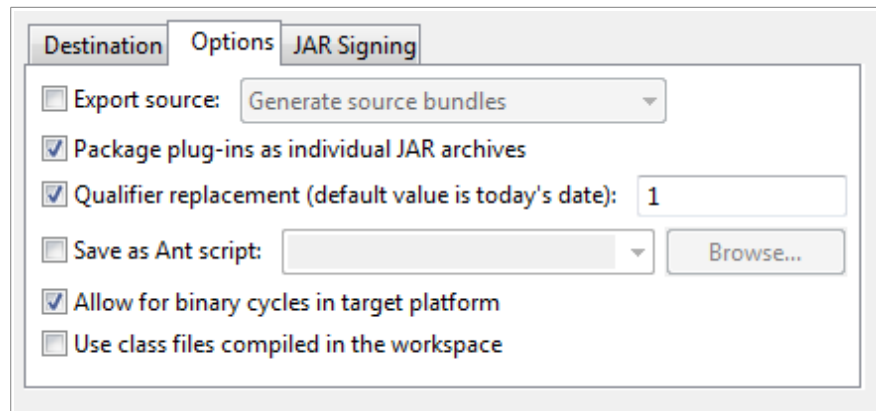
## Modif plugin export

The next step is to export the generated code as plug-in. To do it,

Select ModifMetamodels, ModifMetamodels.edit, ModifMetamodels.editor and ModifMetamodels.tests → right click on the selected projects → Export → Plug-in Development/Deployable plug-ins and fragments → Next



Then, you will be asked about the destination directory. Specify the path of Eclipse application folder (the folder that contains the *plugins* directory). Notice that if you fix in Options the Qualifier Replacement as for example 1 (instead of the default value), a new export will remove the old exported one.



PATH\_TO\_Eclipse → Finish

## Restart

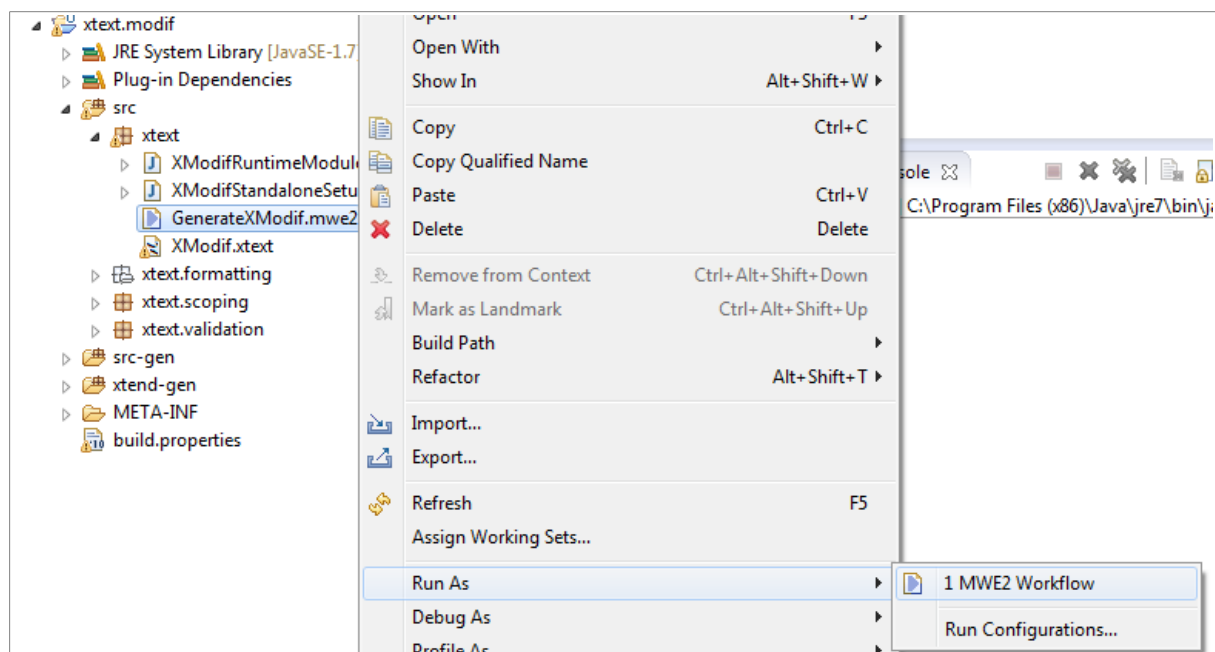
Restart Eclipse,

File → Restart

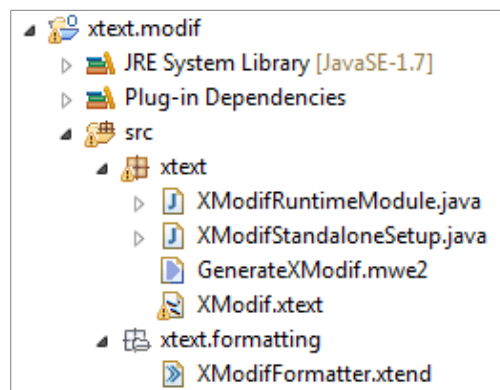
## Modif.xtext editor generation

Run the GenerateXModif.mwe2 file

xtext.modif project → src folder → xtext package → Right click on GenerateXModif.mwe2 → Run As → MWE2 Workflow



The file XmodifFormatter.xtend and XmodifFormatter.java will be generated. Please remove XmodifFormatter.java from the *xtext.formatting* package.



If you are using Linux, add the swt library for the xtext.modif.ui project



Libraries → Add External JARs... → org.eclipse.swt.gtk.linux.PLATFORM

If an error appears in the *Xmodif.xtext file*, open it and then save it.

### ***xtext plugin export***

The next step is to export the generated code as plug-in. To do it,

Select *xtext.modif*, *xtext.modif.sdk*, *xtext.modif.tests* and *xtext.modif.ui* → right click on the selected projects → Export → Plug-in Development/Deployable plug-ins and fragments → Next → [PATH to eclipse] → Finish

### ***Restart***

The last important step is to restart Eclipse

File → Restart

**ModifRoundtrip is now installed and ready to be used**

## **2. Contact**

You can report bugs to :

- [babau@univ-brest.fr](mailto:babau@univ-brest.fr)
- [vallejoco@univ-brest.fr](mailto:vallejoco@univ-brest.fr)