

Smooks Dev Tools Reference Guide



Version: 1.1.0.M1

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|--|----|
| 1. Introduction | 1 |
| 1.1. What is Smooks? | 1 |
| 1.2. What is Smooks Tools? | 2 |
| 1.3. How to install Smooks dev tools? | 2 |
| 2. Quick Start | 3 |
| 2.1. Download Smooks Java-to-Java Example | 3 |
| 2.2. Smooks Configuration File Wizard | 3 |
| 2.3. Smooks Editor | 4 |
| 2.4. Choosing the transform data | 5 |
| 2.5. Mapping | 7 |
| 3. Smooks Configuration Editor Page | 11 |
| 3.1. Smooks Parse Type | 11 |
| 3.2. Import File | 12 |
| 3.3. Date Decoder Detail Page | 12 |
| 4. Smooks Source Editor Page | 15 |
| 4.1. XML Source Editor | 15 |
| 4.2. Error Messages GUI | 15 |

Introduction

This chapter give you a short introduction to Smooks, Smooks tools and its installation

1.1. What is Smooks?

Smooks is a Java Framework/Engine for processing XML and non XML data (CSV, EDI, Java, JSON etc).

- I. **Transformation:** Perform a wide range of Data Transforms. Supports many different Source and Result types -XML/CSV/EDI/Java/JSON to XML/CSV/EDI/Java/JSON.
- II. **Java Binding:** Bind into a Java Object Model from any data source (CSV, EDI, XML, Java, JSON etc).
- III. **Huge Message Processing:** Process huge messages (GBs) - Split, Transform and Route message fragments to JMS, File, Database etc destinations. Route multiple message formats to multiple destinations in a single pass over a message.
- IV. **Message Enrichment:** Enrich a message with data from a Database, or other Datasources.
- V. **Combine:** Combine the above features in different ways e.g. add Message Enrichment as part of a Splitting and Routing process.

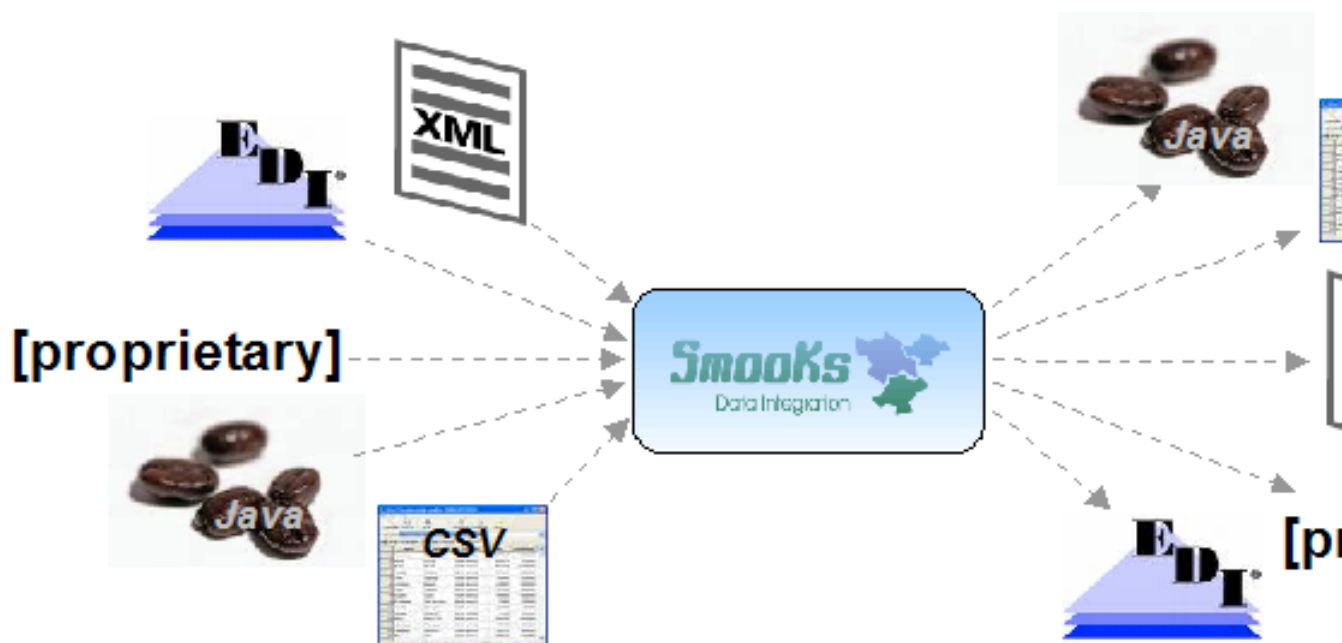


Figure 1.1. Smooks

For More informations about [Smooks](http://www.smooks.org), please visit [Smooks official site](http://www.smooks.org) [http://www.smooks.org].

1.2. What is Smooks Tools?

Smooks tools is a set of graphical tools for editing Smooks configuration file based on Eclipse.

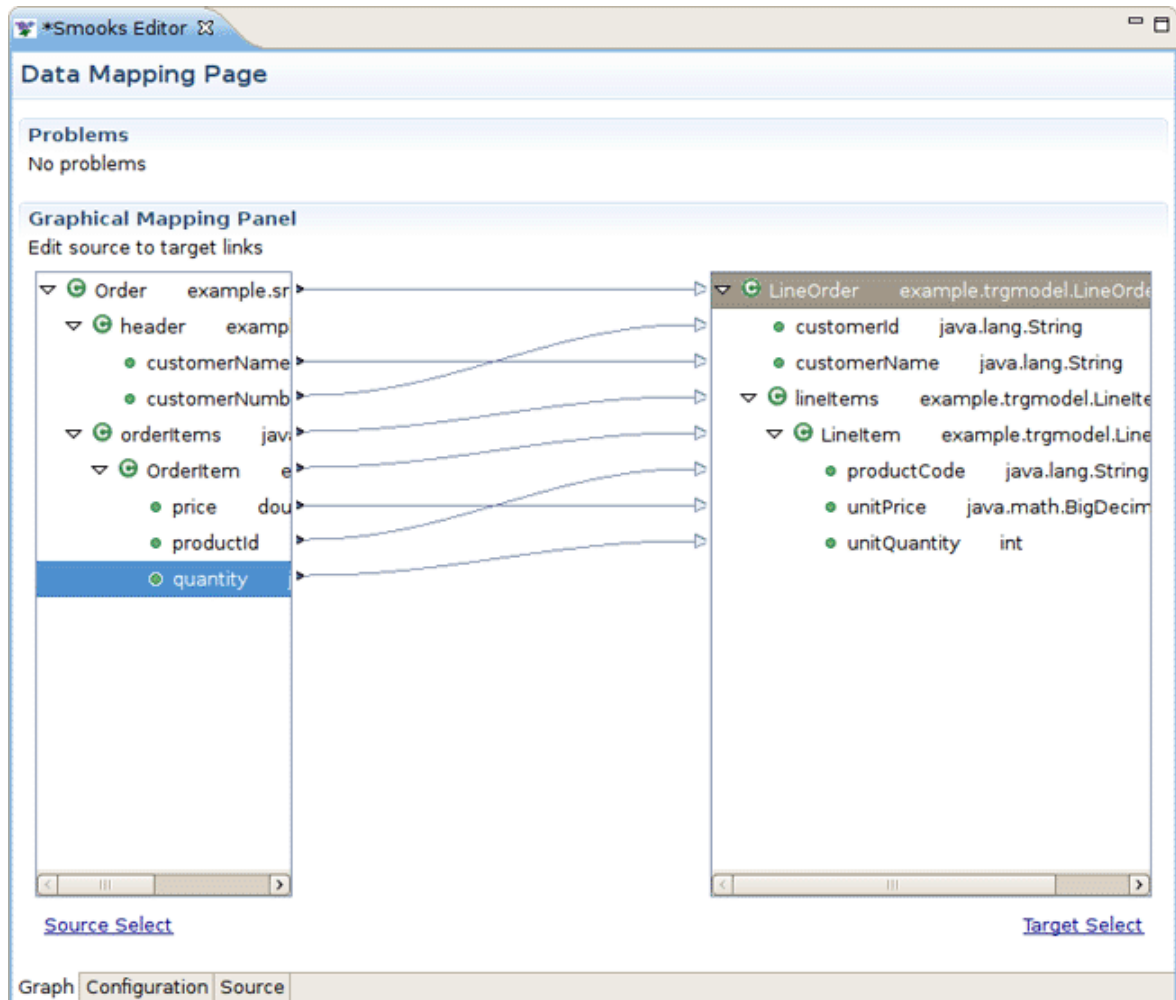


Figure 1.2. Smooks Form editor

1.3. How to install Smooks dev tools?

The Smooks tools was included by the [JBoss Tools](http://jboss.org/tools/download.html) since 3.0.0 Beta1 version. You can download the [JBoss Tools](http://jboss.org/tools/download.html) from [JBoss download site](http://jboss.org/tools/download.html) [http://jboss.org/tools/download.html].

Smooks tools ([JBoss Tools](http://jboss.org/tools/download.html)) run with the latest Eclipse and other required plug-ins (GEF, EMF, etc.).

You should download the latest IDE for Java EE developers from [Eclipse site](http://www.eclipse.org/downloads/) [http://www.eclipse.org/downloads/]. It contains many plug-ins (GEF, EMF, etc.) required by Smooks dev tools.

Now let's progress to more advanced topics.

Quick Start

This "Quick Start" will show how to use the [Smooks tools](#) to create/edit the Smooks configuration file for Java2Java data transformation.

This chapter gives you a brief understanding of the [Smooks tools](#).

2.1. Download Smooks Java-to-Java Example

Visit [here](http://www.smooks.org/documentation/documentation-smooks-1-1-x/examples/example---java-to-java) [http://www.smooks.org/documentation/documentation-smooks-1-1-x/examples/example---java-to-java] to download the "java-to-java" example project.

Tip:

The example project is based on Maven, we suggest you to create a new eclipse Java project, copy the example code and .jar files from the example project and paste them into the eclipse Java project.

2.2. Smooks Configuration File Wizard

Select the Smooks Java-to-Java example project that you created and right-click, select the menu [New > Other](#), then find [Smooks > Smooks Configuration File](#). Click the [Next](#) button.

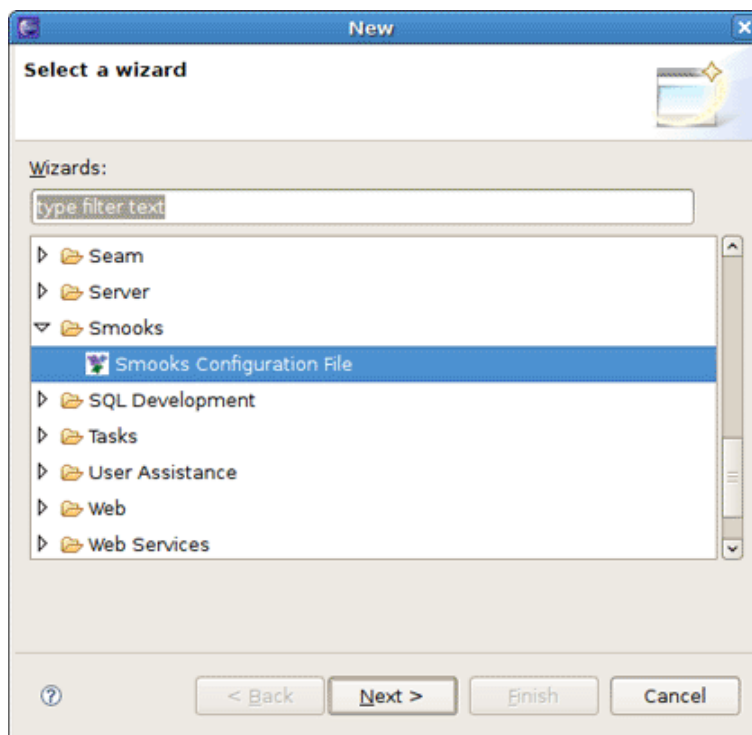


Figure 2.1. Selecting Smooks Configuration File Wizard

The first wizard page is a file path creation page. Select the `src` folder to be the files container, and input the name `newConfig.smooks`. Click *Next*.

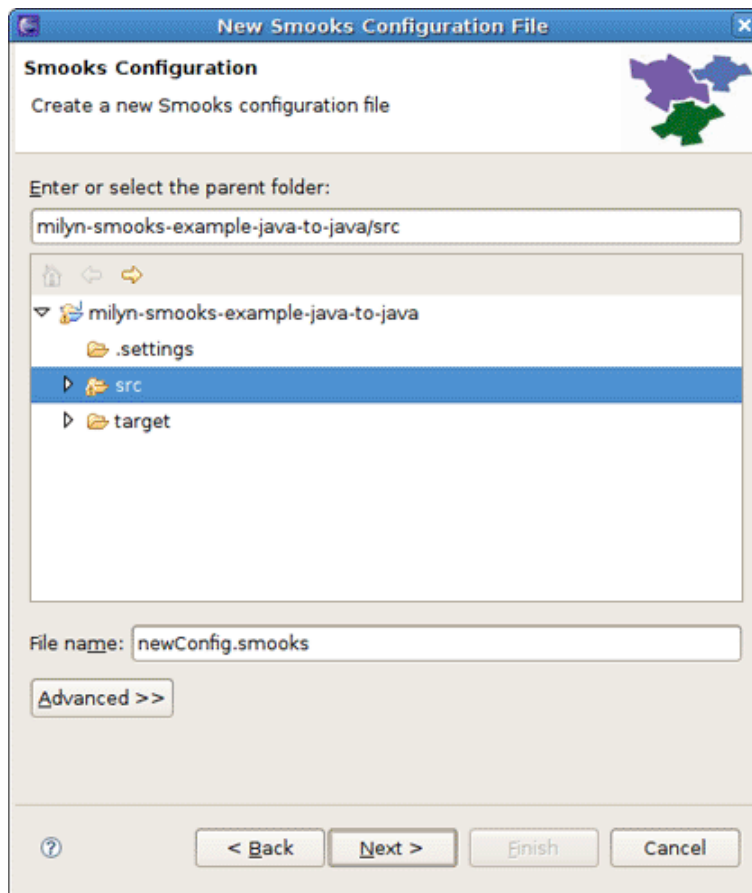


Figure 2.2. Choosing the configuration file container and the file name

The second wizard page is a Smooks configuration file version choose page. Select appropriate one and click finish.

2.3. Smooks Editor

When all the wizard steps are passed, a new Smooks Configuration file is created and the [Smooks Configuration Editor](#) will be opened automatically:

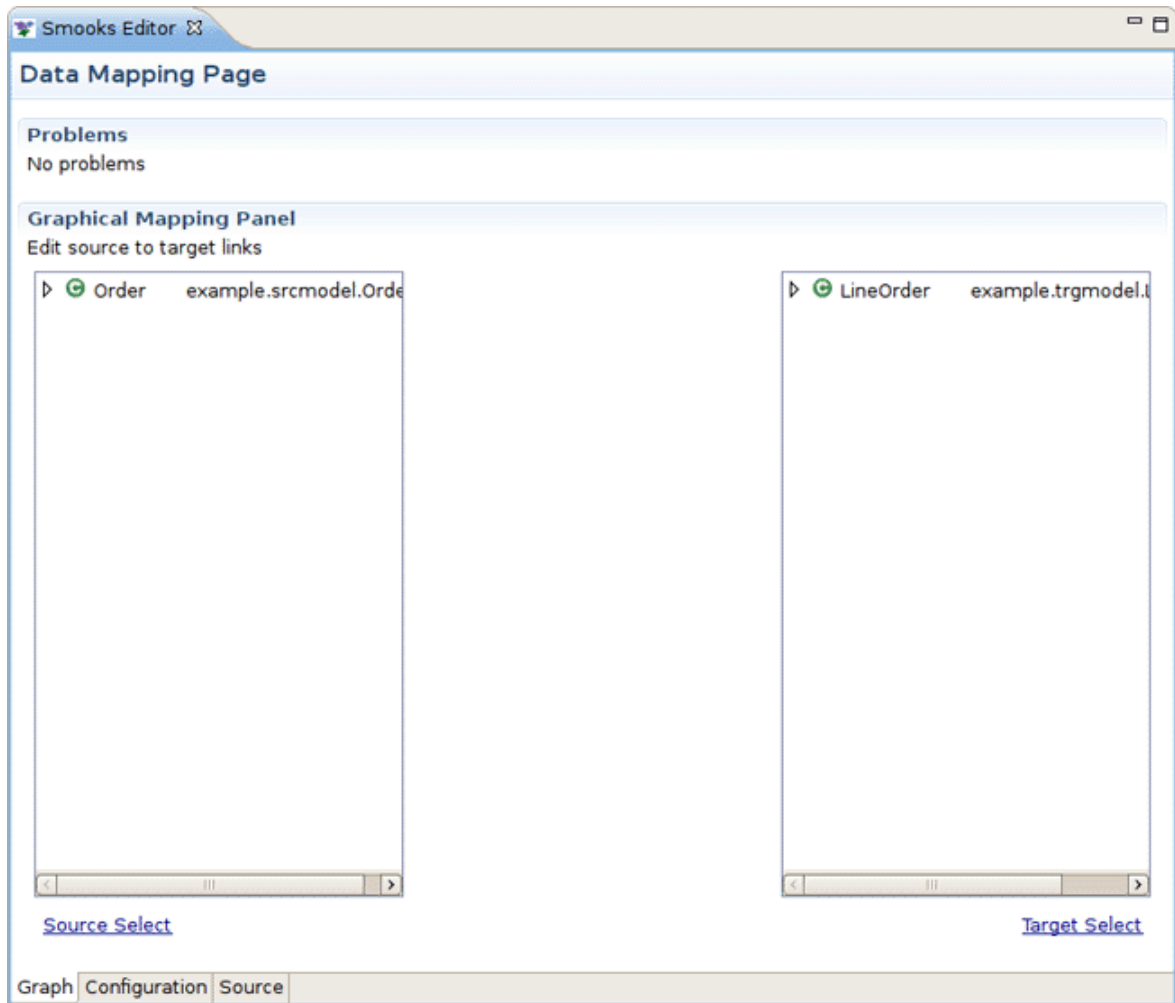


Figure 2.3. Smooks Editor

2.4. Choosing the transform data

To choose the transform data you should click add button in the Input Data section.

After clicking the button the [Data Type Selection wizard](#) is opened, and there are two data types on the list: Java and XML.

Note

There will become more and more data types on the list as the development goes on.

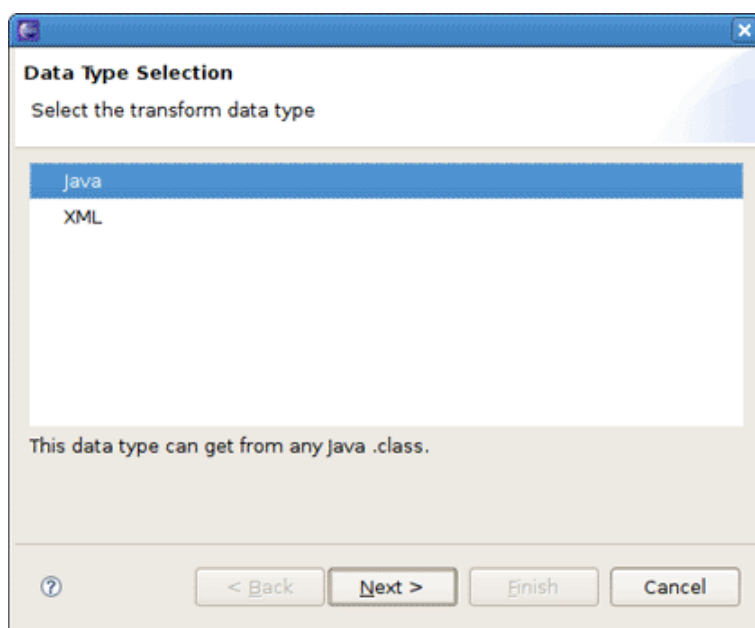


Figure 2.4. Data Type Wizard

Select the [Java](#) data type and click [Next](#), you will see the JavaBean class selection page:

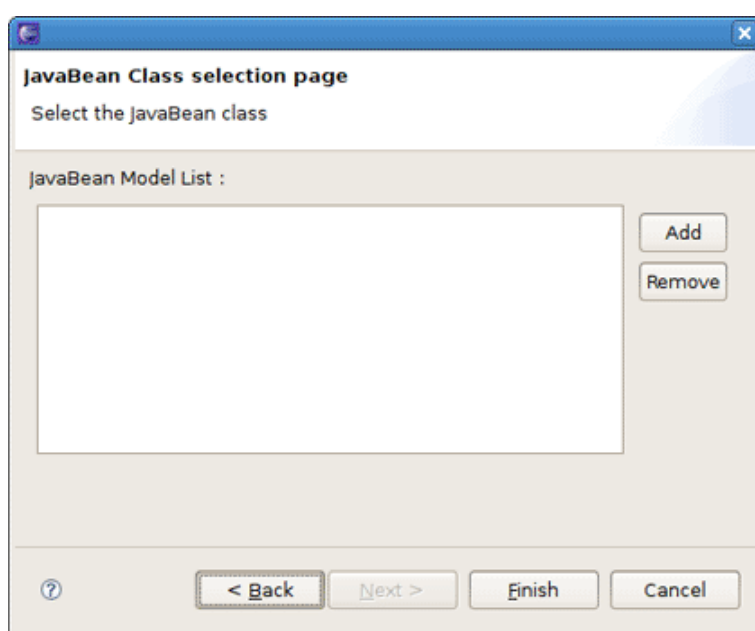


Figure 2.5. JavaBean Data Selection

Let's select the Order class from the example project as the source JavaBean class and the ListOrder class as the target JavaBean class. When you selected the necessary java classes, click [Finish](#) and you should see all added java classes displayed in the Input Data Section .

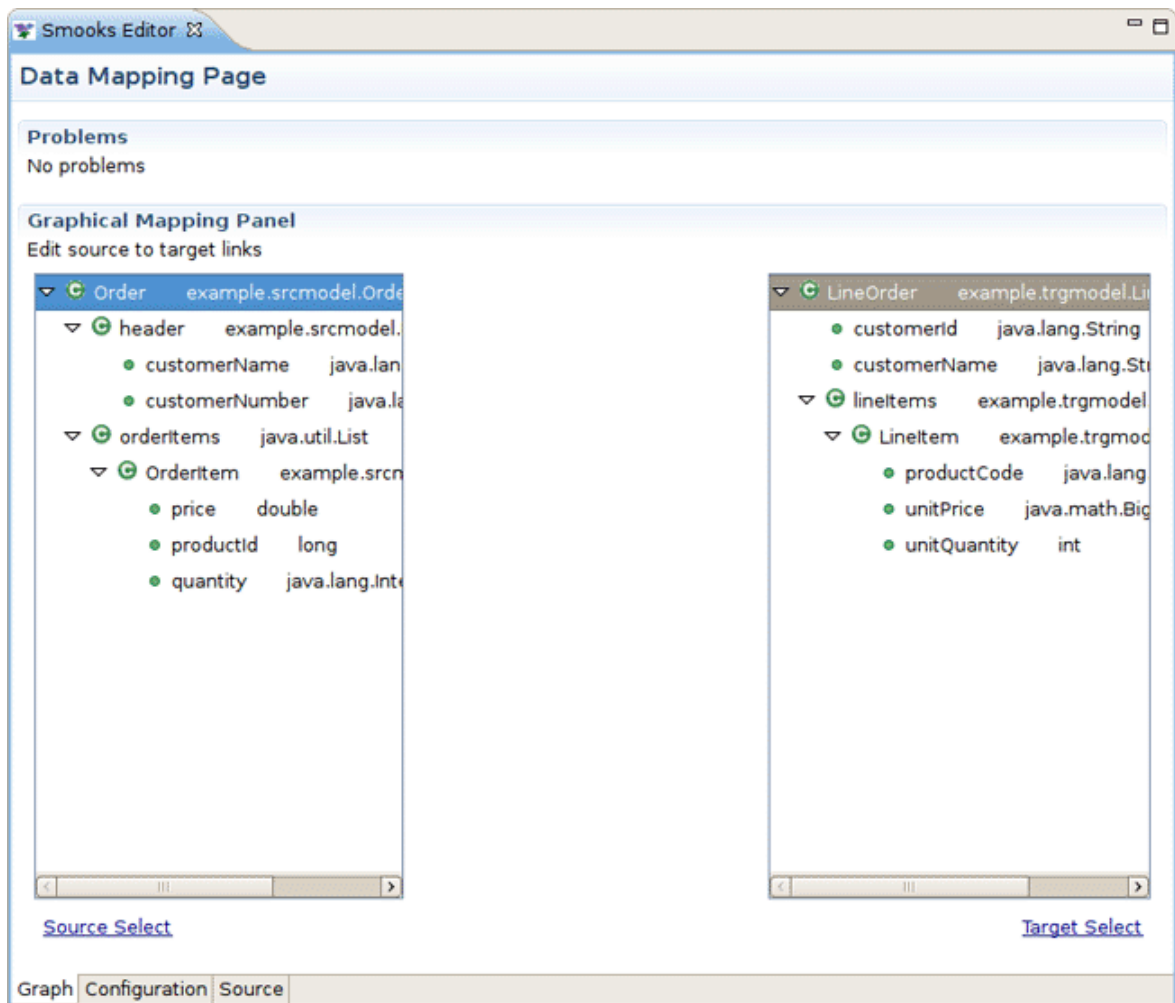


Figure 2.6. Displaying the Structure of the Transformed Data

2.5. Mapping

How to map the java class just added?

First, you should know what to transform:

- Bind the `"customerName"` property of the `Order#header` to the `"customerName"` property of `LineOrder`.
- Bind the `"customerNumber"` property of the `Order#header` to the `"customerId"` property of `LineOrder`.
- Bind the `"price"` property of the `OrderItem` to the `"unitPrice"` property of `LineItem`.
- Bind the `"productId"` property of the `OrderItem` to the `"productCode"` property of `LineItem`.
- Bind the `"quantity"` property of the `OrderItem` to the `"unitQuantity"` property of `LineItem`.

Make sense? You should right click Resource List , select Add Smooks Resource>Java Binding>Bindings

First of all, you should bind Order to LineOrder. To do this one Bindings Item should be added to the Resource List.

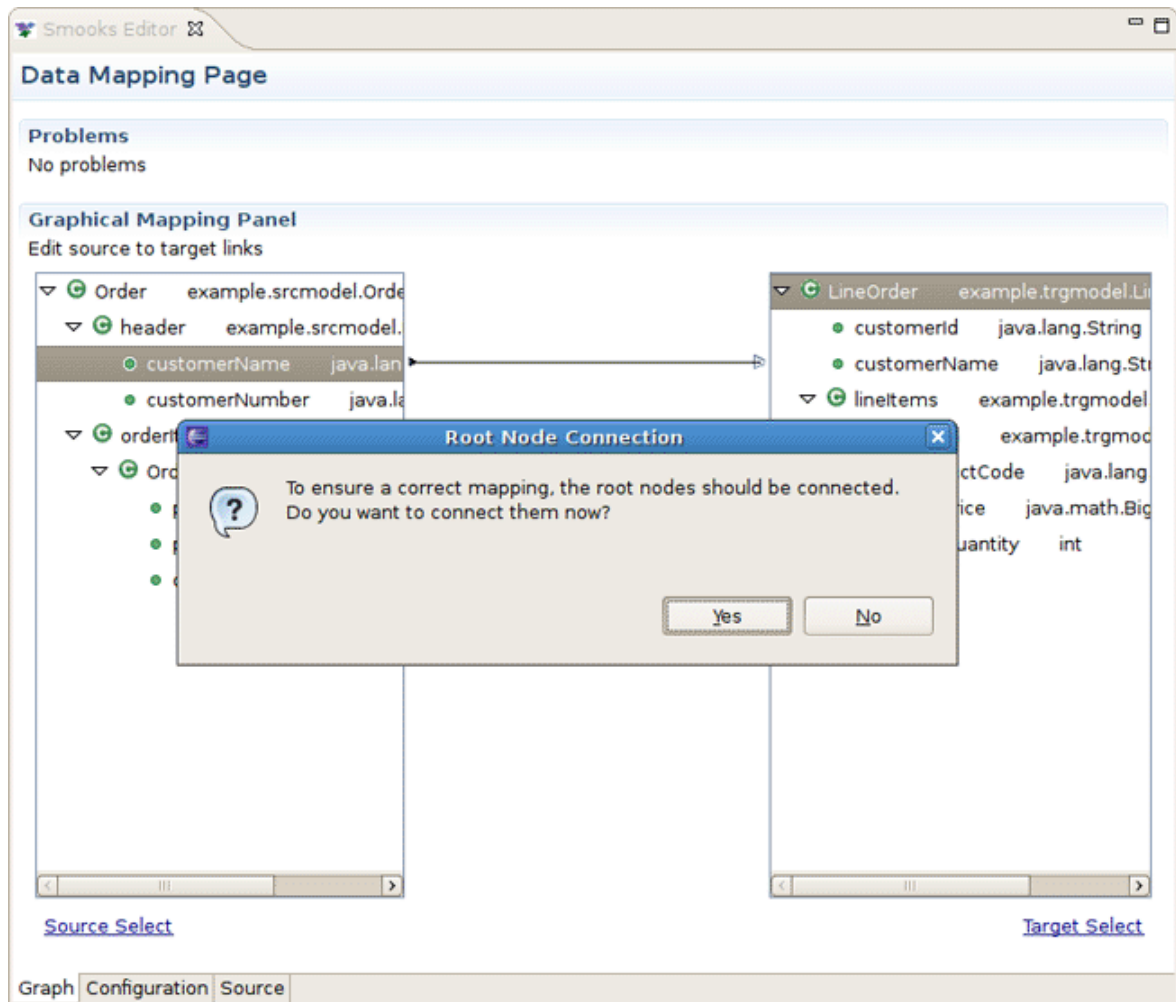


Figure 2.7. Mapping

Click on it and you should see Bindings Section to the right of Message Filtering Resources. Write [lineOrder](#) in the Bean id field.

Select example.trgmodel.LineOrder in the Class field and example.srcmodel.Order in the Name field. Your >Smooks Configuration Editor should look like this:

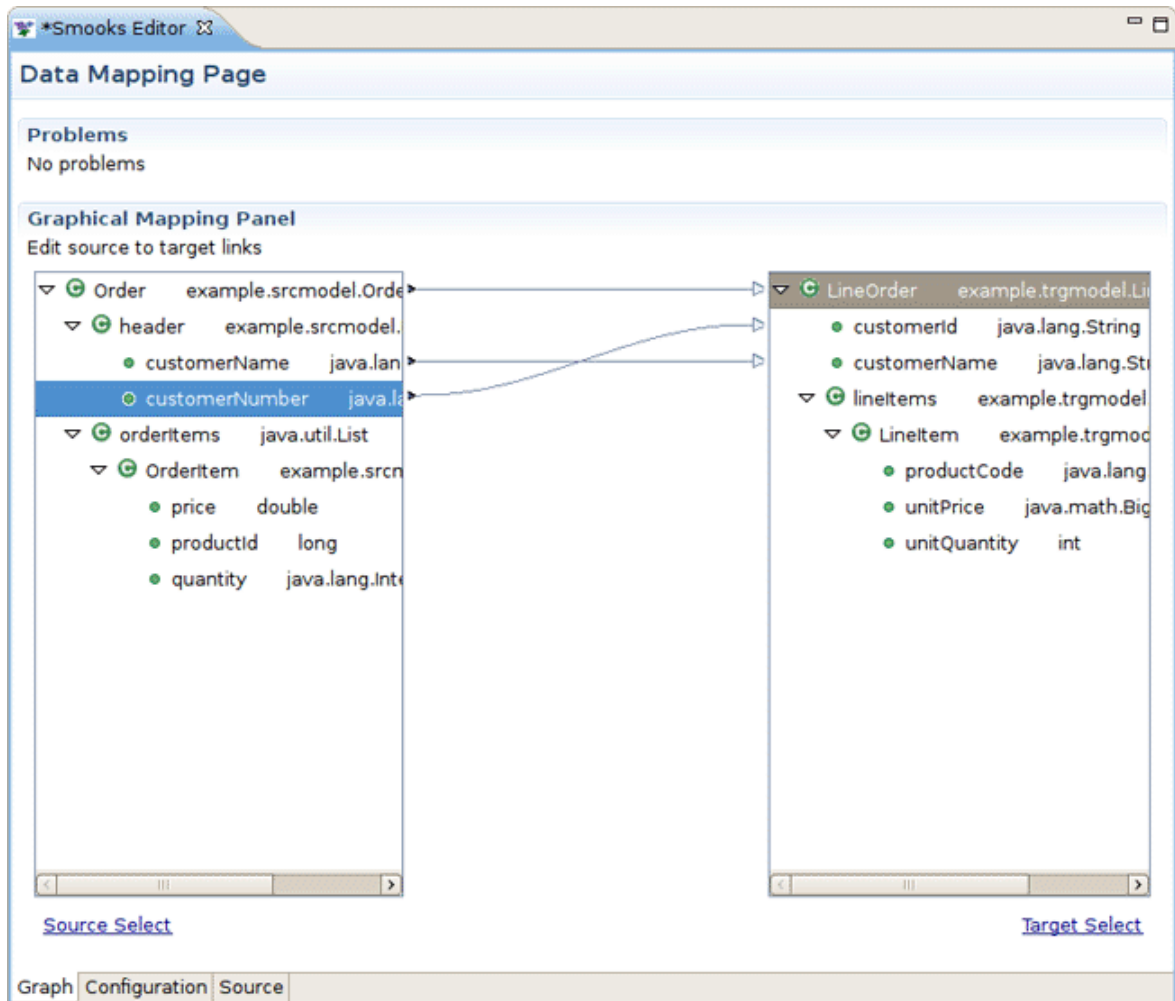


Figure 2.8. Mapping

Now you should bind two values *"customerNumber"* property of the *Order#header* to the *"customerId"* property of *LineOrder*. To do this right click your just created *Bindings Item >Add Smooks Resource>Value* .

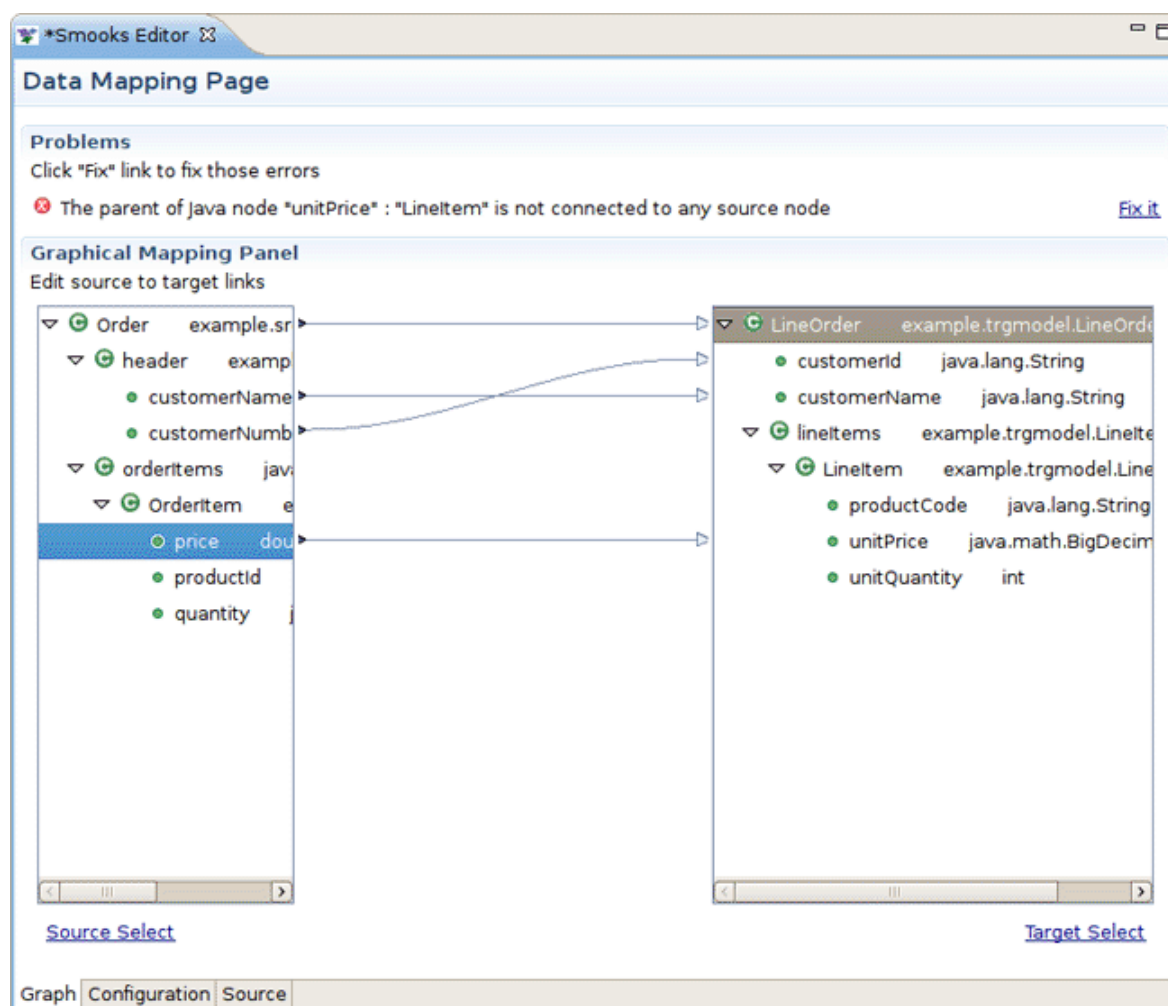


Figure 2.9. Mapping Editor

Note:

Please, remember that the root nodes of the source data and target data **MUST** be connected.

This rule is not only for Java-to-Java, but also is relevant for XML-to-Java

Do the same operation with the other properties in this and other classes.

Now, you should save the file and the [Smooks tools](#) generate the correct configuration file content.

OK, let run the test class: [example.Main](#). (Please, make sure that the Smooks engine loads the correct configuration file).

Success!

Smooks Configuration Editor Page

In this section you will explore the details of Smooks Configuration Editor usage

[Smooks Configuration Editor](#) is one tab of the [Smooks Editor](#).

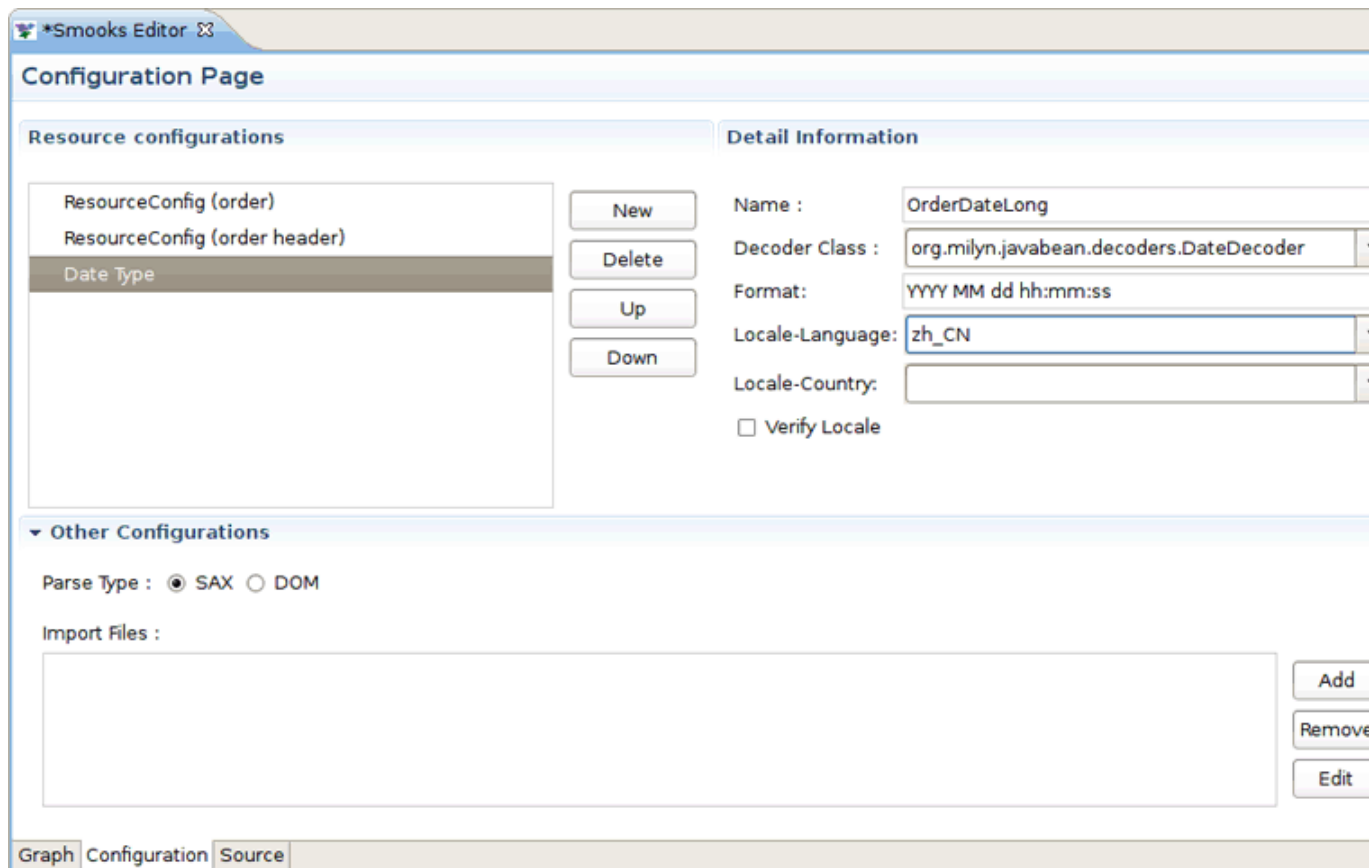


Figure 3.1. Graphical Editor

You can add/edit/remove the [Date Decoder](#) on the Configuration page of the [Smooks Editor](#).

The configuration editor also edits the [Smooks parse type](#) and manages the [Import Files](#).

3.1. Smooks Parse Type

Open the [Other Configurations](#) section, we will see there is a set of radio buttons:

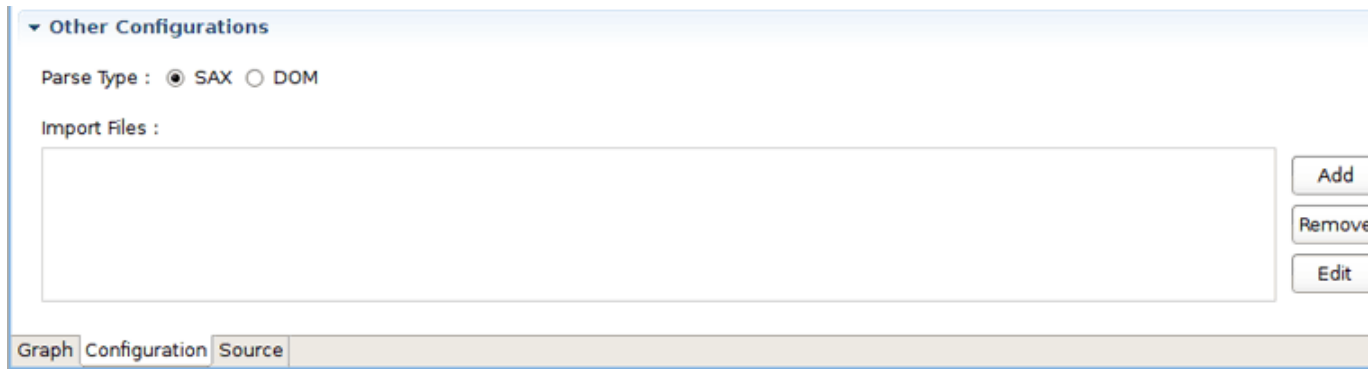


Figure 3.2. Smooks Parse Types

Select the needed radio button to change the Smooks parse type.

3.2. Import File

Open the [Other Configurations](#) section, there is an [Import Files](#) list under the Smooks parse type buttons (see the figure above).

There are three buttons on the right side of the [File Import](#) list. You can click those to add/edit/remove the import files.

Tip:

If the import file doesn't exist, the image of the import file is changed to "Error Image". If you double-click the import file in the Import File list, the file is opened with a new default editor.

3.3. Date Decoder Detail Page

Date Decoder is a resourceConfig element in the Smooks configuration file. It describes how to transform the "Date" type.

Click the [New](#) button to open the [New Resource Type wizard](#) dialog.

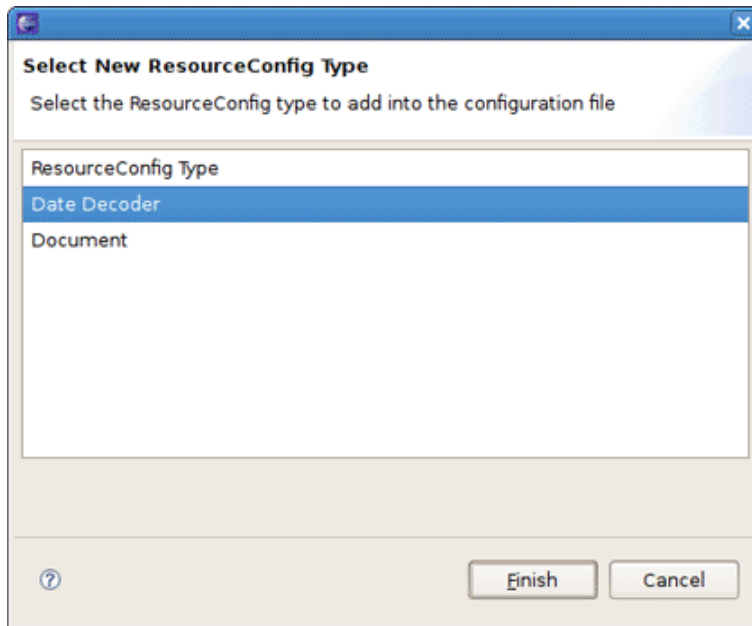


Figure 3.3. Resource Type Selection Wizard

There are several resource type on the list. Select the [Date Decoder](#) and click the [Finish](#) button, a new [Date Decoder](#) item was added and shown on the resource type list.

There are several parameters in the [Date Decoder](#) resourceConfig element:

- Format
- Locale-Language
- Locale-Country

You can modify the parameters of the [Date Decoder](#) item with the left detail page.

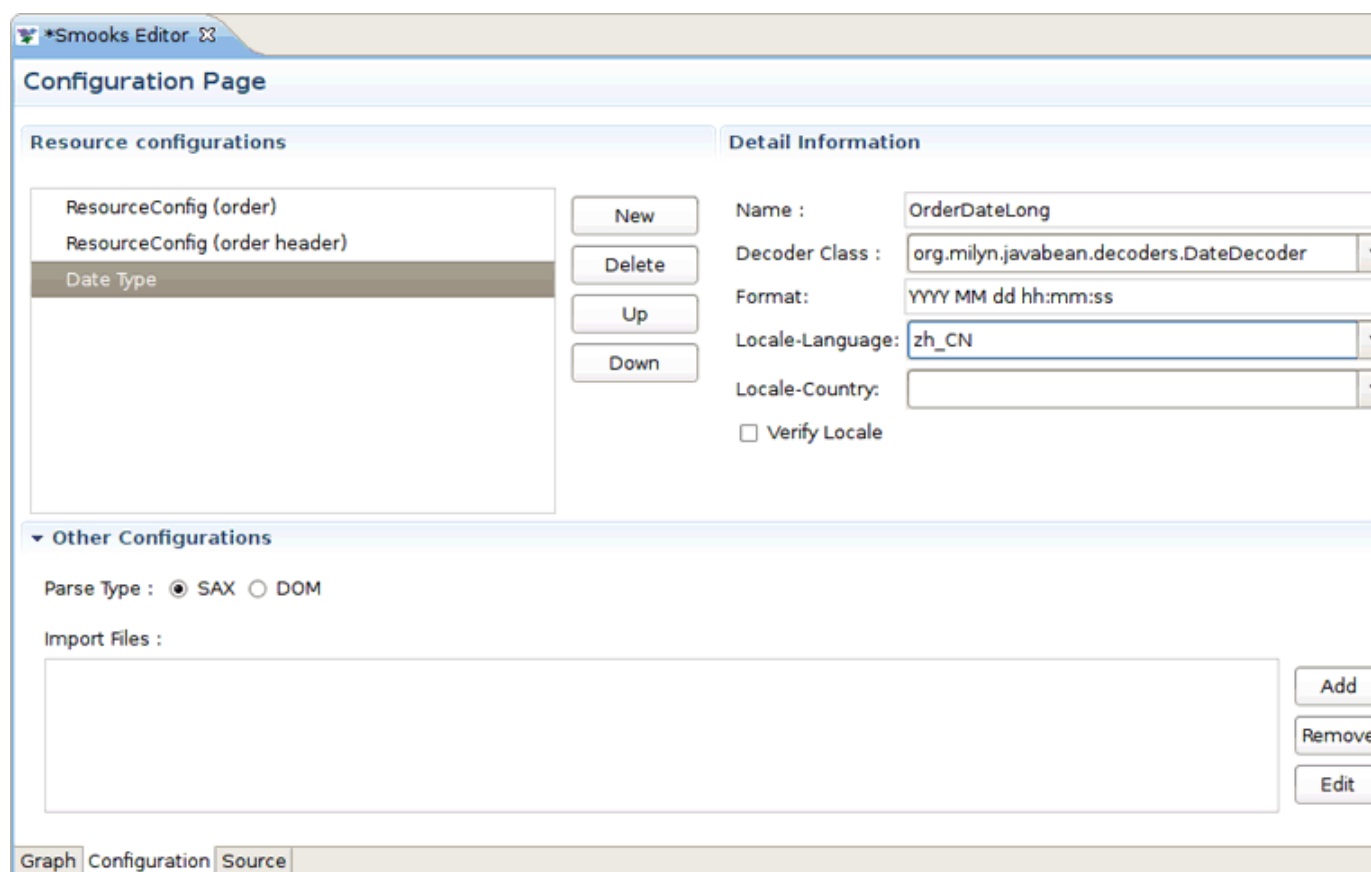


Figure 3.4. Date Decoder Detail Page

When you defined a new [Date Decoder](#), then you can use the [JavaBean Properties](#) GUI to set it to be the "Java type".

Now when we've learnt Smooks Configuration Editor Page, let's have a look at one more Smooks Editor Page - Smooks Source Editor Page and investigate its functionality

Smooks Source Editor Page

This section provides information about Smooks Source Editor Page

4.1. XML Source Editor

You can use this editor to edit the Smooks Configuration file directly.

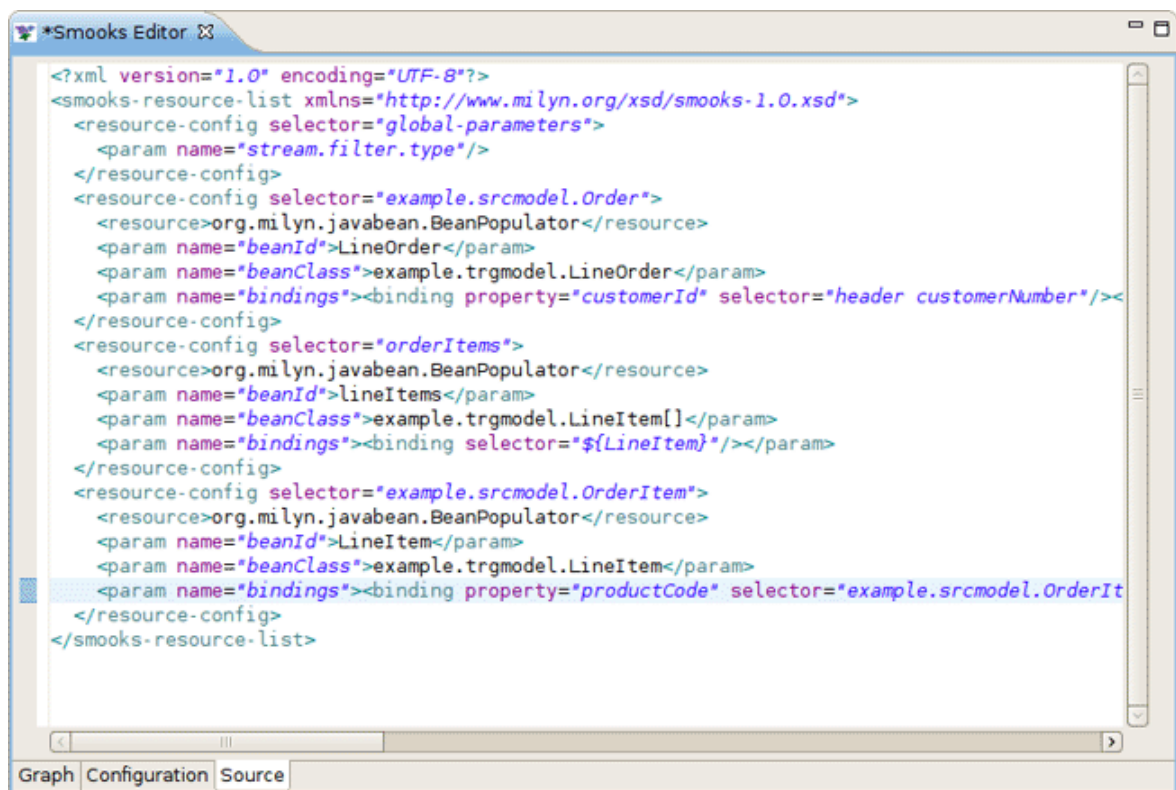


Figure 4.1. Graphical Editor

4.2. Error Messages GUI

If the [Smooks tools](#) can't understand the configuration file or the configuration file is illegal (XML structure isn't right for Smooks Configuration file, etc.), the error is underlined.

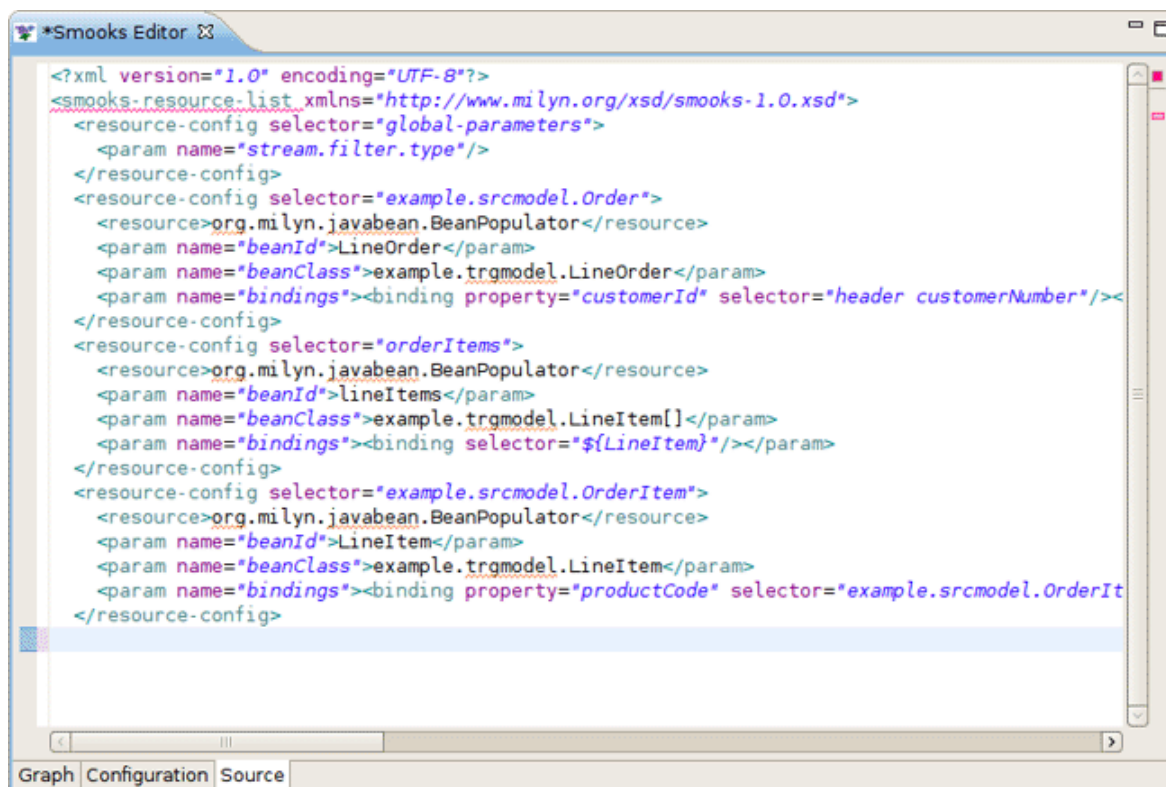


Figure 4.2. Graphical Editor

We hope, our guide will help you to get started with JBoss Smooks Tools. Besides, for additional information you are welcome on [JBoss forum](http://www.jboss.com/index.html?module=bb&op=viewforum&f=201) [http://www.jboss.com/index.html?module=bb&op=viewforum&f=201].