

ESB Tools Reference Guide

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Introduction

1.1. What is ESB?

ESB (Enterprise Service Bus) - an abstraction layer on top of an implementation of an enterprise messaging system that provides the features with which Service Oriented Architectures may be implemented.

If you want to develop applications using ESB technology JBoss ESB also meet your needs. The JBoss Tools provide ESB editor and all necessary wizards for creating ESB file.

In this guide we provide you with the information on ESB Editor which allows you to develop ESB file much faster and with far fewer errors so sparing your time.

1.2. Other relevant resources on the topic

You can find a set of benefits and other extra information on:

- [JBoss ESB](http://www.jboss.org/jbossesb) [http://www.jboss.org/jbossesb]
- [JBoss Wiki](http://wiki.jboss.org/wiki/JBossESB) [http://wiki.jboss.org/wiki/JBossESB]
- [JBoss ESB Documentation Library](http://www.jboss.org/jbossesb/docs/index.html) [http://www.jboss.org/jbossesb/docs/index.html]

The latest [JBoss Tools/JBoss Developer Studio](http://download.jboss.org/jbosstools/nightly-docs/) documentation builds are available [here](http://download.jboss.org/jbosstools/nightly-docs/) [http://download.jboss.org/jbosstools/nightly-docs/].

ESB Support

In this section we will focus on all concepts that [JBoss Tools](#) integrates for working with JBoss ESB.

2.1. ESB Tools Installation

This chapter will provide you with the information on how to install JBoss ESB plugin into Eclipse.

ESB Tools come as one module of JBoss Tools project. Since ESB Tools have a dependence on other JBoss Tools modules we recommend you to install a bundle of all [JBoss Tools plug-ins](#) [<http://labs.jboss.com/tools/download/index.html>] installation instruction on which you can find on JBoss Wiki in [Installing JBoss Tools](#) [<http://labs.jboss.com/wiki/InstallingJBossTools>] section.

2.2. Creating a ESB File

In this chapter we suggest a step-by-step walk-through of creating your own simple file. Let's try to organize a new ESB file.

We will show you how to use the Creation wizard for creating a new ESB file.

At first you should open any project. Select [File > New > Other...](#) in the main menu bar or context menu for selected project and then [ESB > ESB File](#) in the New dialog:

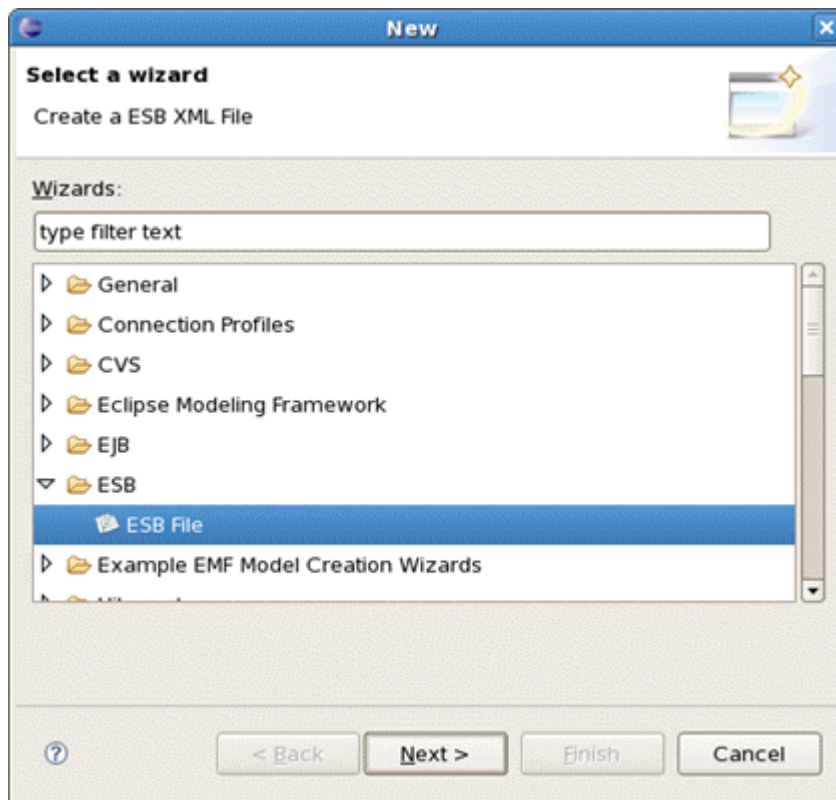


Figure 2.1. New Dialog

Clicking [Next](#) brings us to the wizard page where it's necessary to specify the folder, name and version for the file. We choose, for example, [jboss-esb.xml](#) as the name and accept the selected projects folder and default version.

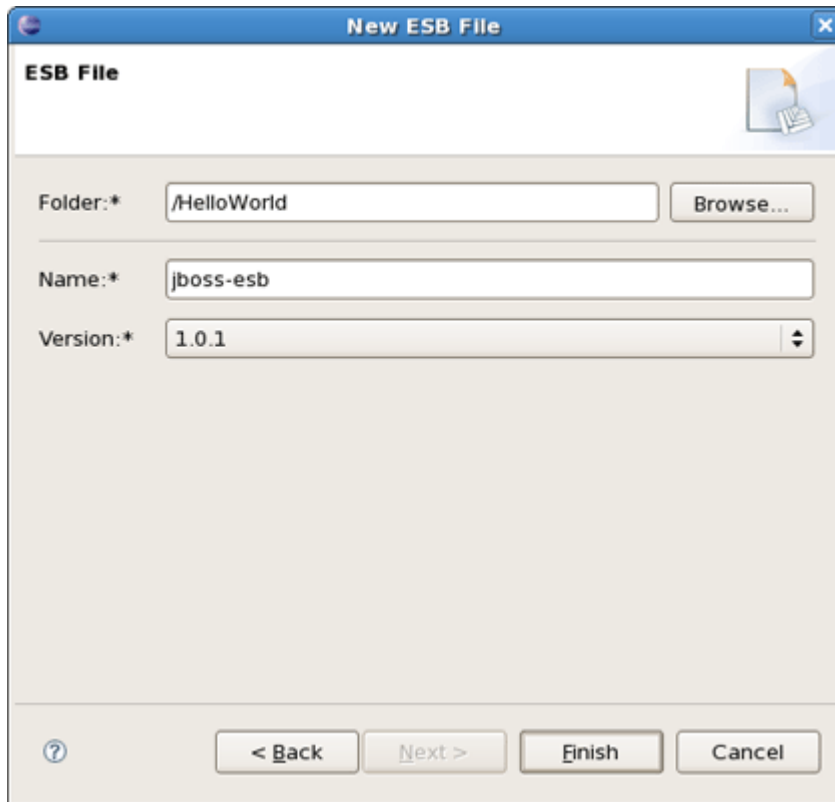


Figure 2.2. Folder, Name and Version

Thus, our file will be created in the selected projects folder by default. If you want to change the folder for your future file click [Browse...](#) button to set needed folder or simply type it.

Clicking on [Finish](#) results in the file being generated. The wizard creates one xml file.

ESB Editor

ESB editor has lots of useful features, they are described in details in this chapter. In addition you'll get to know with how [ESB Editor](#) uses combined visual and source editing of esb files.

3.1. ESB File Editor

[ESB File Editor](#) is a powerful and customizable tool. ESB File Editor allows developing an application using ESB technology.

ESB file editor has two tabs: Tree and Source.

You can switch to Tree. The Tree view for the editor displays all ESB artifacts in a tree format. By selecting any node you can see and edit its properties which will appear in the right-hand area. For example, a Provider:

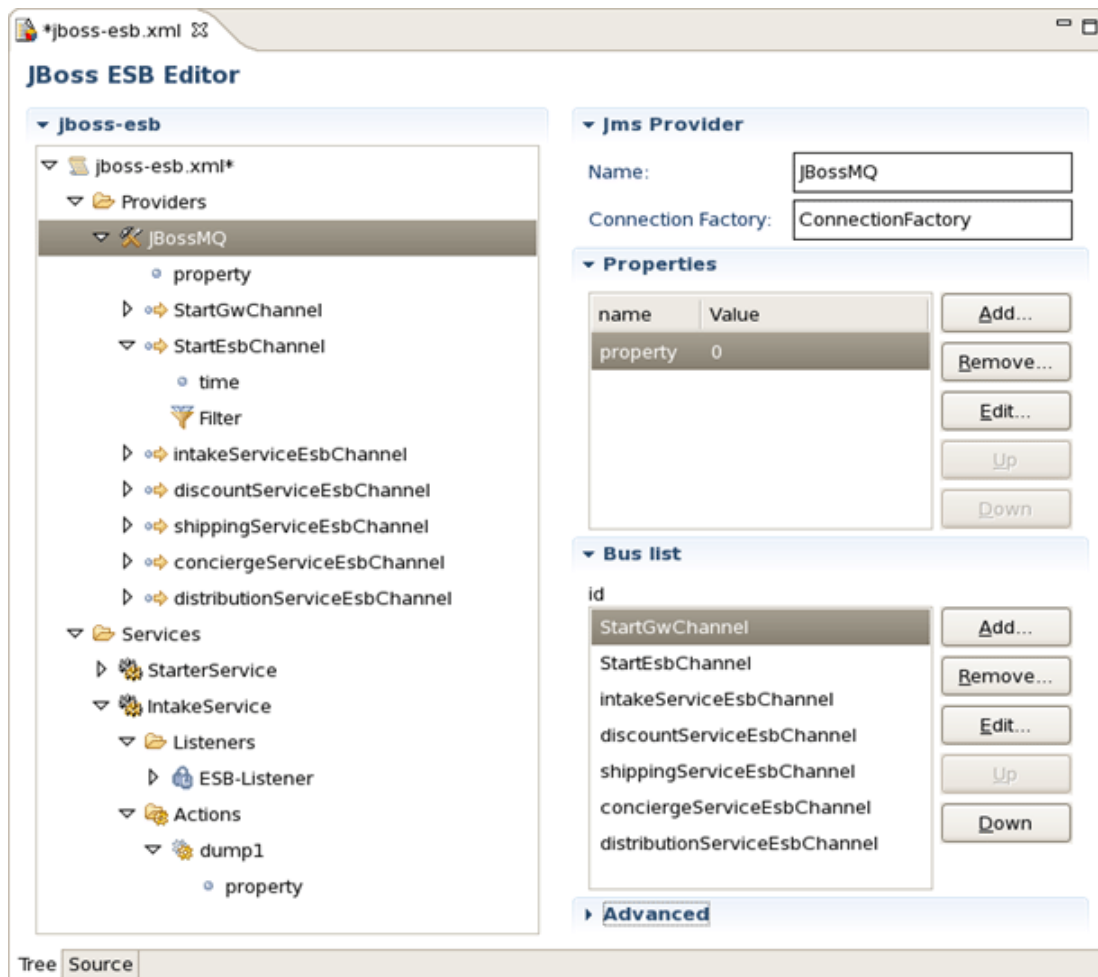
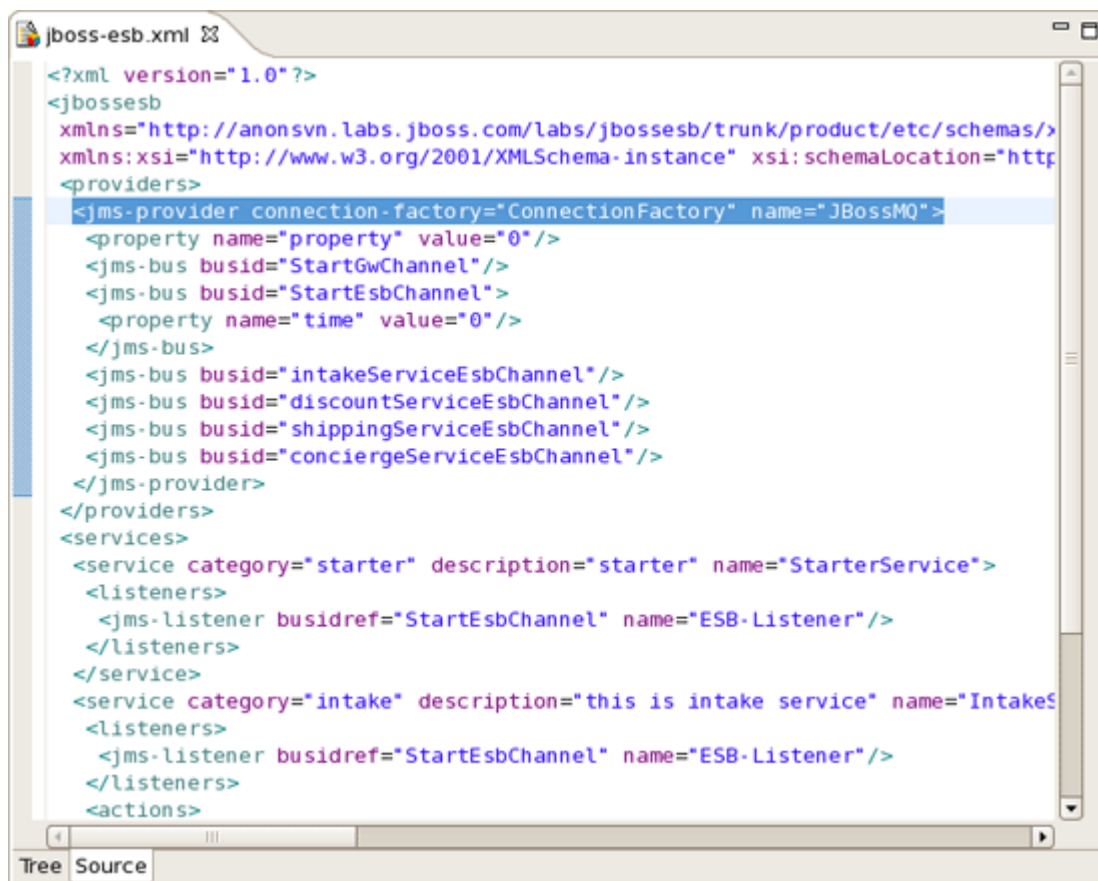


Figure 3.1. Tree View

You can easily switch from Tree to Source by selecting the Source tab at the bottom of the editor and work in [Source view](#).

**Figure 3.2. Source View**

The Source view for the editor displays a text content of the ESB file. It is always synchronized with [Tree view](#), so any changes made in one of the views will immediately appear in the other.

No matter what view you select, you get full integration with [Outline view](#). For example, you can work in the Source view with the help of the Outline view. The Outline view shows a tree structure of the ESB file. Simply select any element in the [Outline view](#) and it will jump to the same place in the Source editor, so you can navigate through the source code with Outline view.

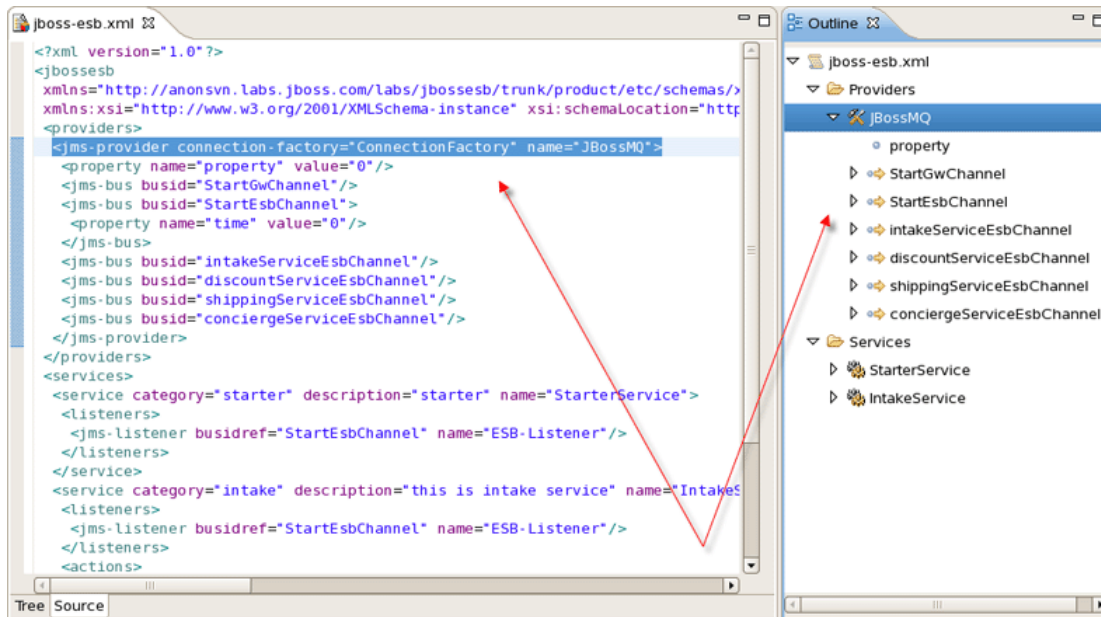


Figure 3.3. Outline View

Adding, editing or deleting of some artifacts operations are available right in the [Tree view](#). Right-click any node and select one of the available actions in the context menu. For example, you can easily add a new Provider:

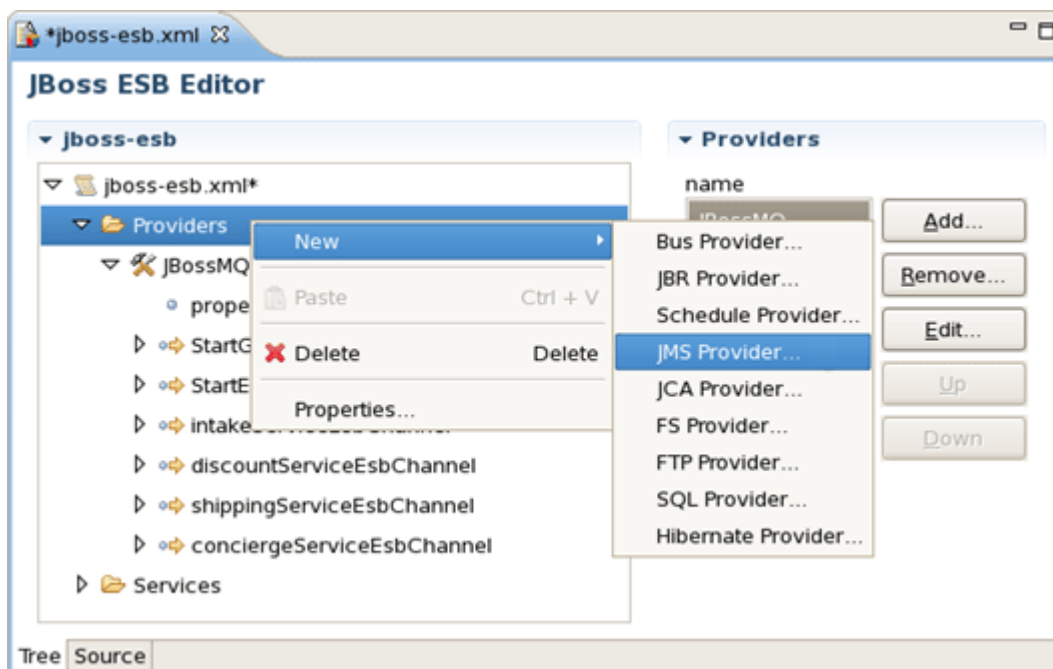
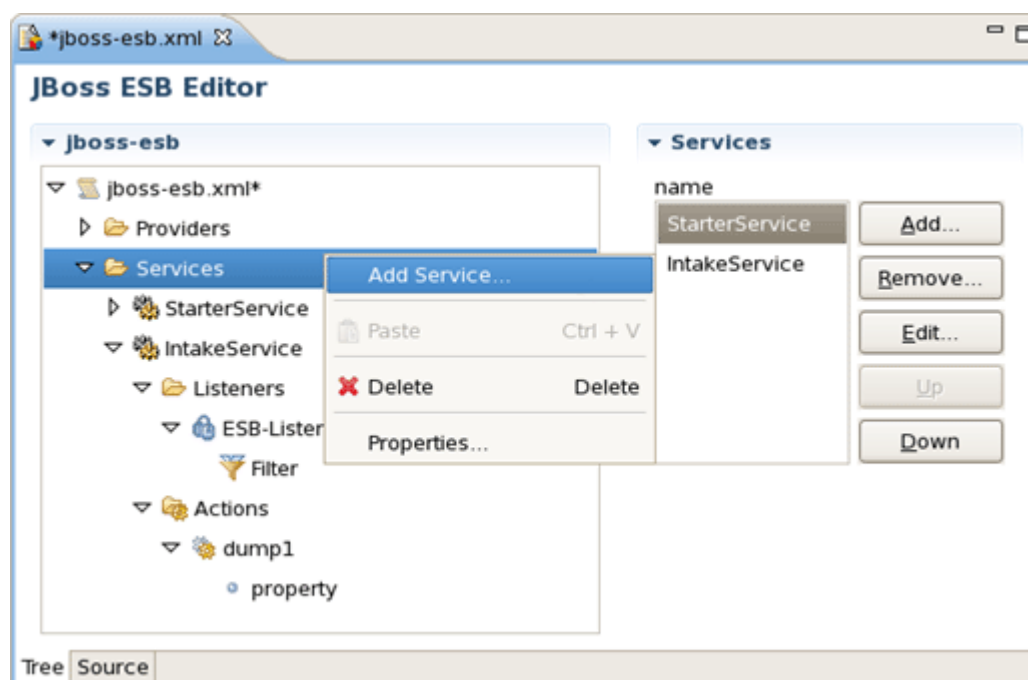
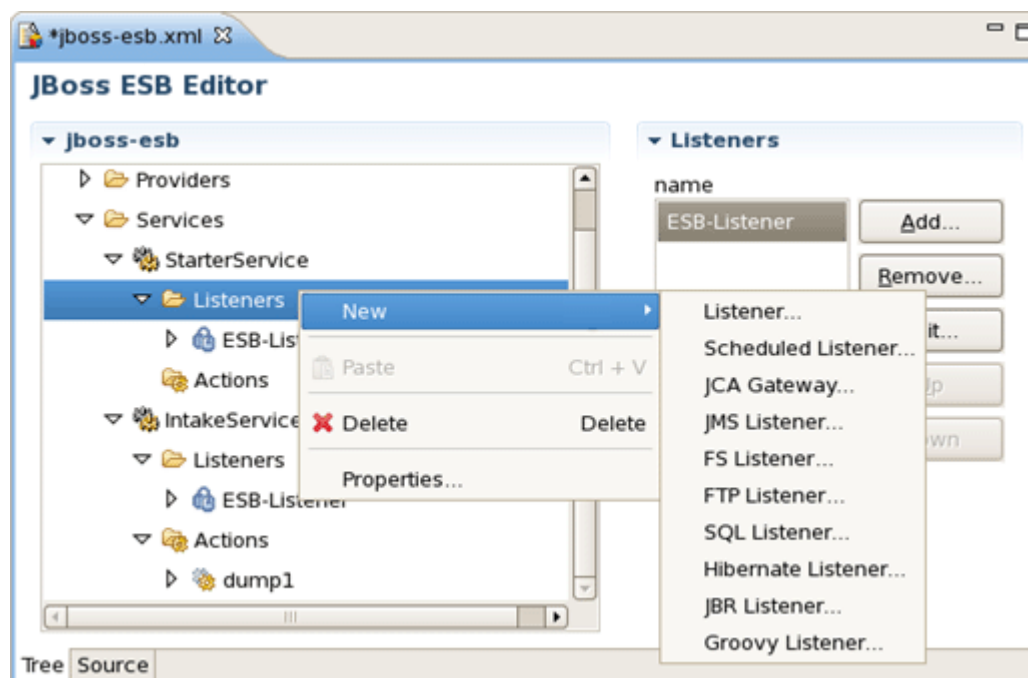


Figure 3.4. Adding New Provider

You can easily add a new Service too:

**Figure 3.5. Adding New Service**

The same way you can create a listener for service and other elements of ESB:

**Figure 3.6. Adding New Listener for Service**

The same actions can be done in the right part of [Tree view](#) tab (Form editor) using [Add](#), [Edit](#) and [Remove](#) buttons.

In order to add a new generic Action to your ESB XML file you should select the Actions node under the Services, then right-click and choose [New > Generic Action](#).

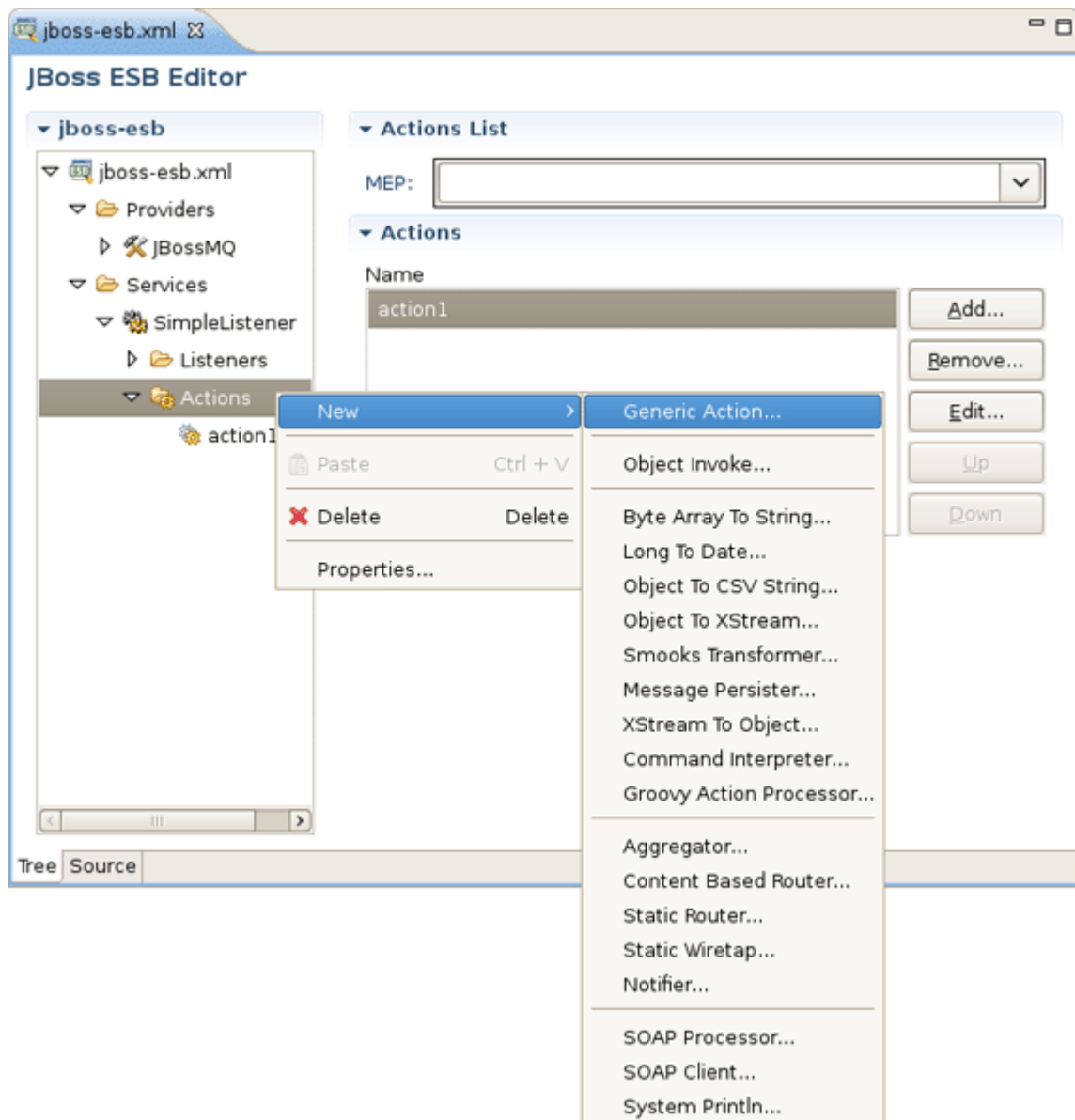


Figure 3.7. Adding New Action in the Tree View

Or instead make use of [Add...](#) button in the [Form editor](#) on the left.

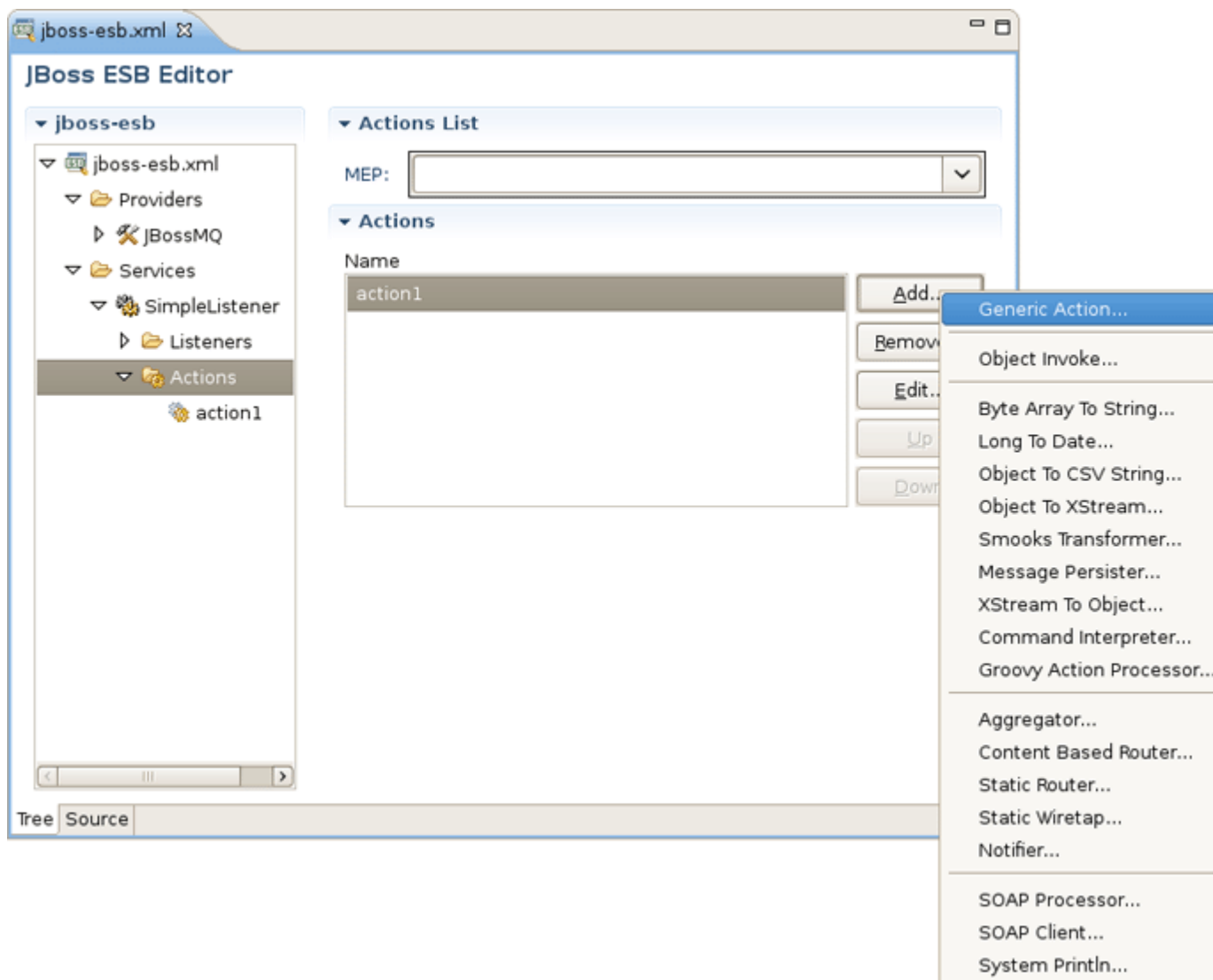


Figure 3.8. Adding New Action in the Form Editor

As you can see on the bath figures above, the context menu will also prompt you to insert one of the Actions that are supplied out-of-the-box with [JBoss ESB](#). After choosing one an appeared [New Action wizard](#) will ask you to fill out a name field and other fields specific for each Action property. For example, for [Content Based Router](#) Action the wizard looks as follows:



The image shows a dialog box titled "Add Content Based Router". It has a blue header bar with the title and a close button. Below the header, the text "ESB Content Based Router" is displayed, followed by a red circular icon with a network diagram. A message "Attribute Name must be set." is shown. The main area contains five input fields: "Name:*" (text box), "Process:" (dropdown menu), "Rule Set:*" (text box), "Rule Language:" (text box), and "Rule Reload:" (dropdown menu with "Default(false)" selected). At the bottom, there is a help icon (question mark), an "Finish" button, and a "Cancel" button.

Add Content Based Router

ESB Content Based Router

Attribute Name must be set.

Name:*

Process:

Rule Set:*

Rule Language:

Rule Reload: Default(false)

Figure 3.9. New Action Wizard

After confirming creating the Action you can see it in the Tree under the [Actions](#) node and preview as well as edit its settings in the [Form editor](#) on the left.

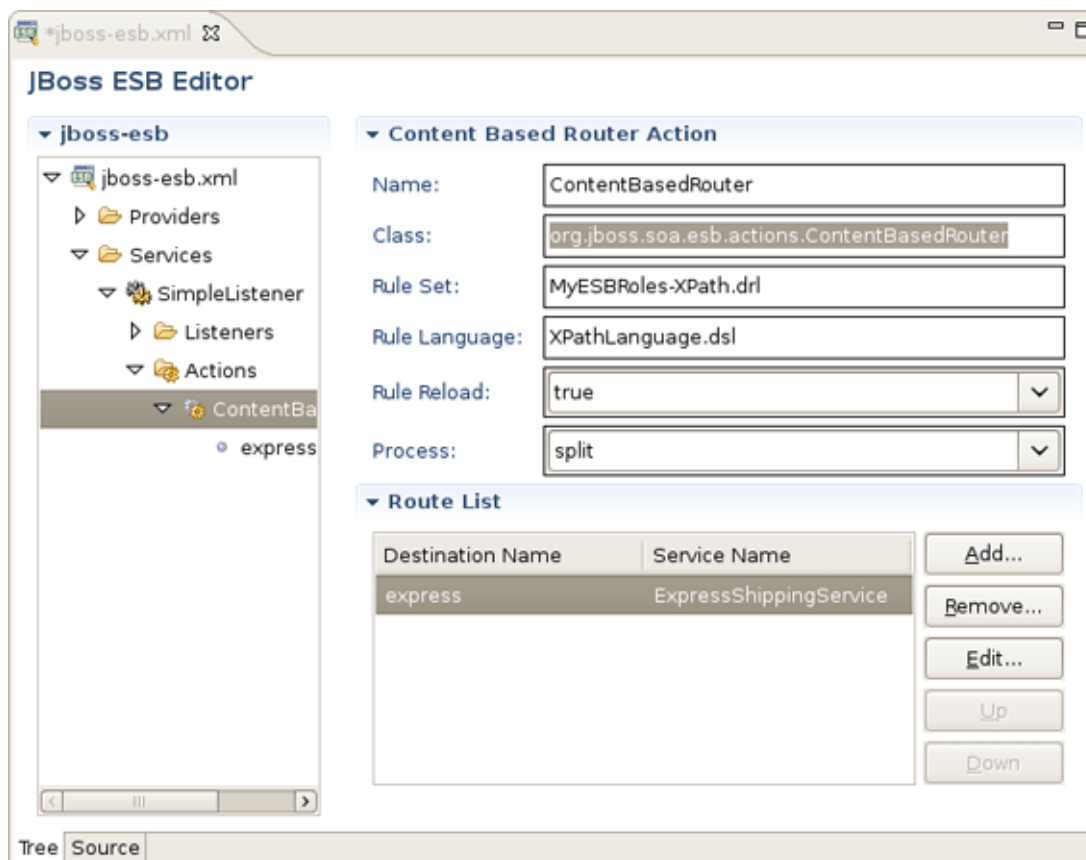


Figure 3.10. Form Editor for Content Based Router

ESB editor can recognize some specific objects. On the figure you can see `org.jboss.soa.esb.actions.ContentBasedRouter` in the `Class` section.

3.2. ESB Editors Features

JBoss ESB tooling has powerful editor features that help you easily make use of content and code assist.

3.2.1. ESB syntax validation

When working in JBoss ESB editor you are constantly provided with feedback and contextual error checking as you type. In the Source viewer, if at any point a tag is incorrect or incomplete, an error will be indicated next to the line and also in the `Problems view` below.

3.2.2. Support for XML Schema

JBoss ESB Framework fully [supports XML files based on schemas as well as DTDs](#).

3.2.3. Content Assist for ESB XML file

When you work with any ESB XML file `Content Assist` is available to help you. It provides pop-up tip to help you complete your code statements. It allows you to write your code faster and with

more accuracy. Content assist is always available in the Source mode. Simply type *Ctrl-Space* to see what is available.

Content Assist for ESB XML file:



Figure 3.11. Content Assist for ESB XML file

Content Assist for attributes:

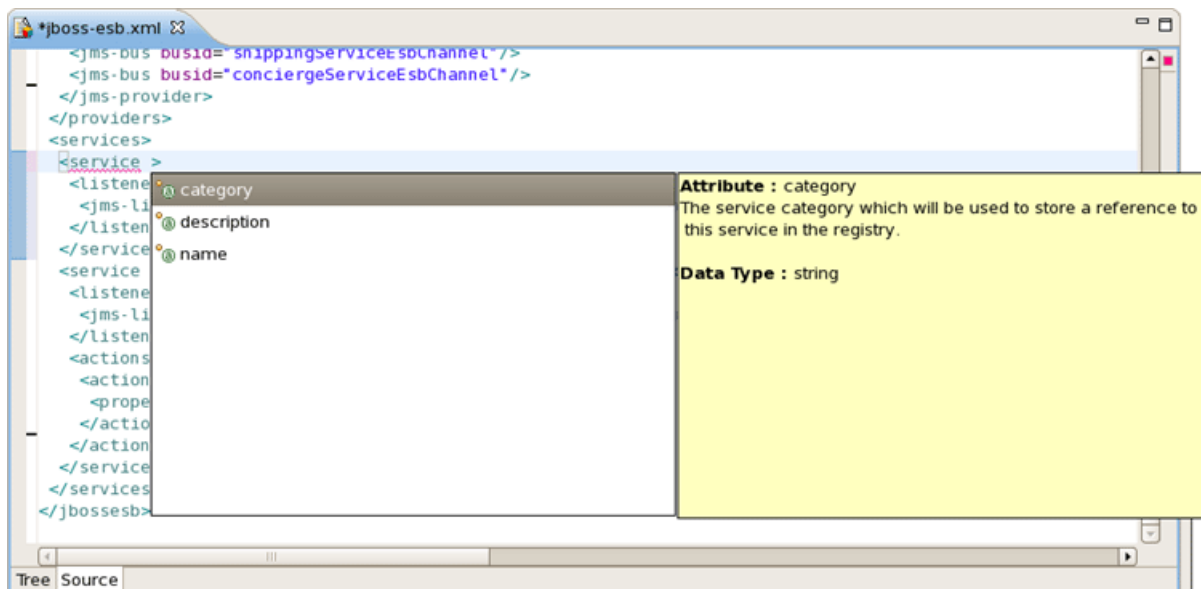


Figure 3.12. Content Assist for attributes:

3.2.4. Synchronized Source and Visual Editing

ESB file can be edited in either source or extra visual modes at the same time.

JBoss Tools provide you two different editors to speed your development: a graphical view ([Tree](#)) and source ([Source](#)). At the same time, you always have full control over esb source file. Any changes you make in the source view will immediately appear in the tree view. Both views are synchronized, you can edit the file in any view.

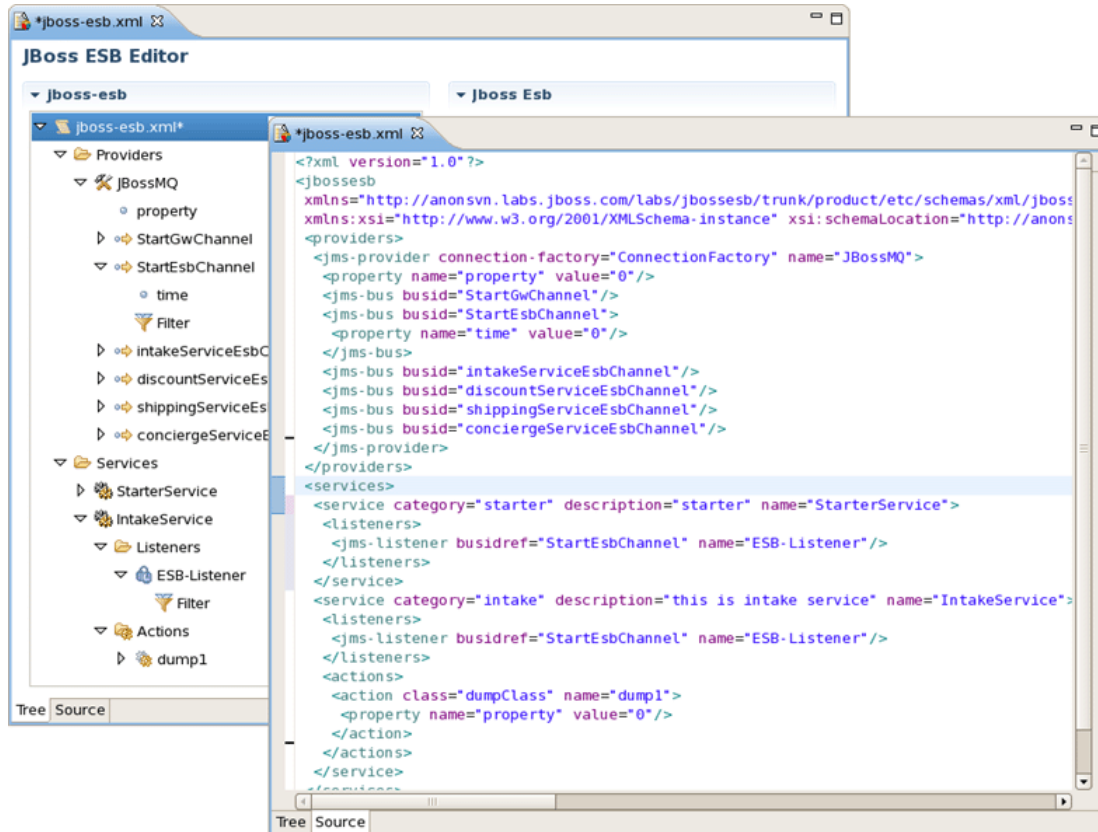


Figure 3.13. Two Views are Synchronized

The last chapter covers capabilities on how you can use ESB editor.

In summary, this reference supplies you with all necessary information on the functionality that JBoss ESB Editor provides for work with JBoss ESB.