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Chapter 1. Overview

1.1. Download and Run

You can download the Workflow Studio from http://www.activeeon.com/community-downloads You will be asked to fill-in a short form (email, name and company name). A download code will be sent to you by email. On the download page, go to the WorkflowStudio Section and choose the version corresponding to to your operating system.

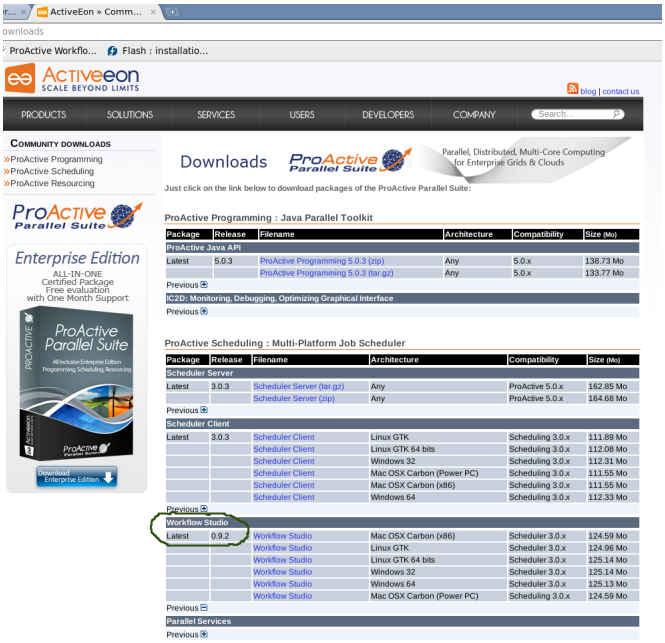

Figure 1.1. Download Page

Extract the downloaded archive in a folder of your choice. Inside the WorkflowStudio folder there is an executable called WorkflowStudio. Run it.

During the first run, you will be asked for the location of your workspace. A workspace is a folder where your workflow projects will be stored on your disk. The proposed workspace contains some workflow examples. You can chose the default workspace.

1.2. The Workbench

The Workflow Studio is a graphical environment for constructing, validating and customizing workflows. A workflow is a combination of tasks, their dependencies and control statements which can be sent for execution within a distributed environment.

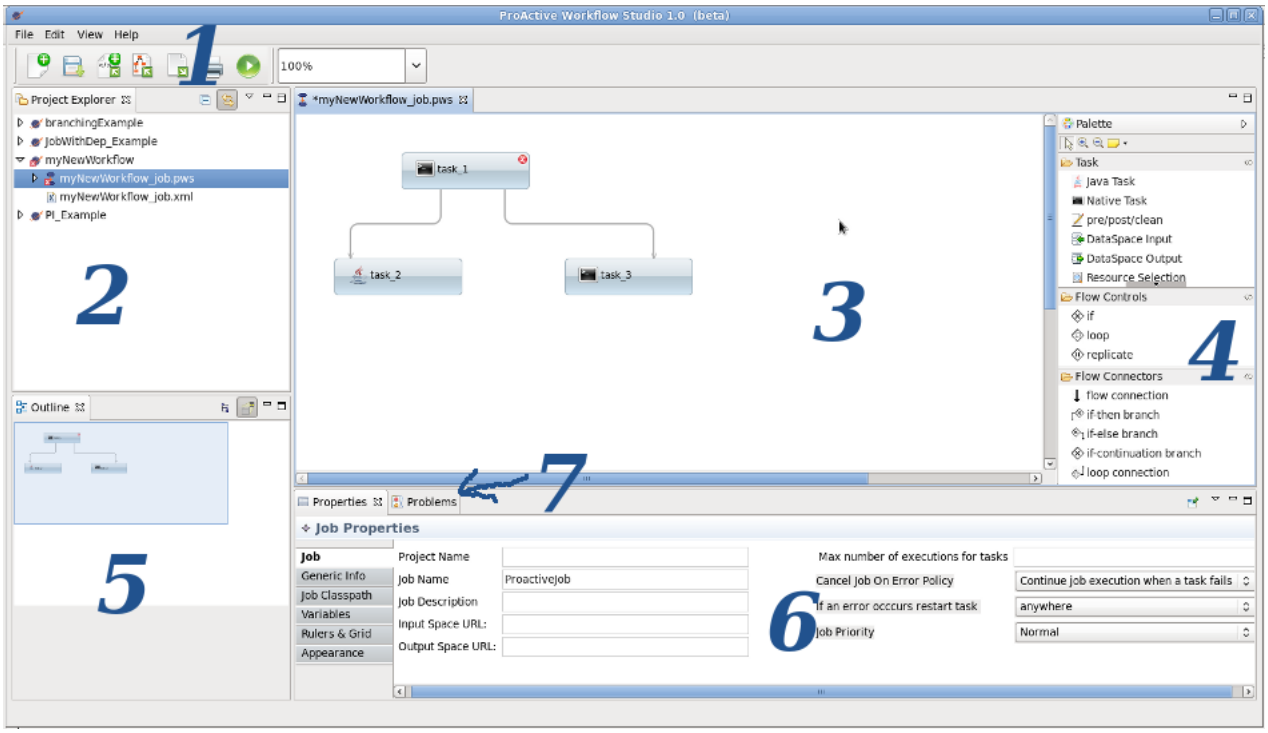

Figure 1.2. Workbench Overview

The Workflow Studio Workbench contains several views.

- **1 - The tool bar** It contains shortcut buttons for main actions like "New Workflow", "Save Workflow", "Import", etc These actions are also available from the main menu.
- **2 - The project Explorer** It displays the user projects. Each project corresponds to a workflow. A project is composed by the workflow itself and related resources.
- **3 - The white board** This is the white area where you design your workflow.
- **4 - The tools palette** It contains the tools for creating workflow elements
- **5 - The Outline View** An bird's eye view of the workflow.
- **6 - The Properties view** You can use it to edit properties of any selected element.
- **7 - The problems view** Displays the issues found in your workflow.

Chapter 2. Workflow Studio

2.1. The toolbar

Figure 2.1. Tool Bar

The toolbar contains buttons for the most common actions: new workflow project, save workflow, import external workflow, print workflow diagram, run workflow.

2.1.1. New Project

Figure 2.2. New Project Button

Pressing the "New Project" button will open a wizard for the creation of a new Workflow Project. A name has to be provided for the project. By default the project's files will be saved in the workspace folder. You have the possibility to choose an external folder. Projects can be organized in working sets. A working set may contain several projects. A project may belong to several working sets as well. This may be useful if you're working with lots of projects and need to organize them. See the project explorer section for more information about the working sets.

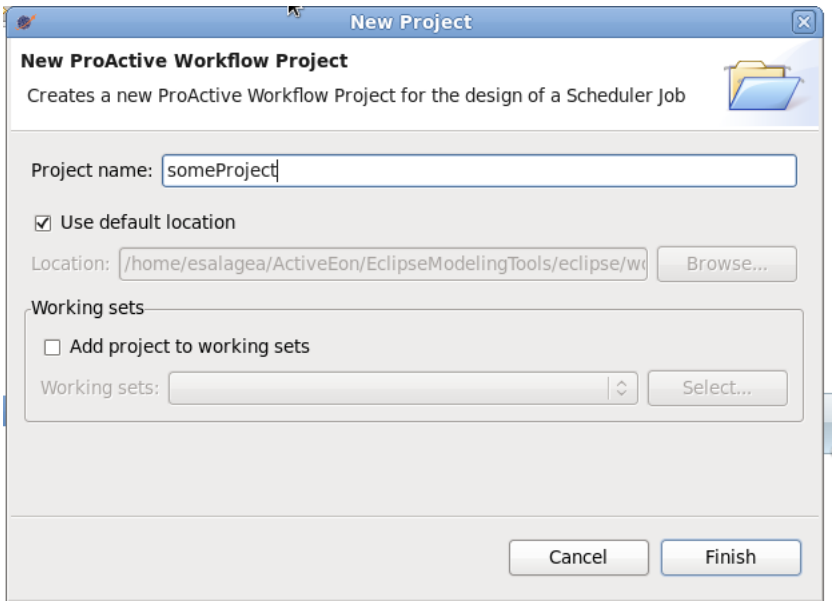

Figure 2.3. New Project Wizard

Once you press the "Finish" button, a workflow project will be created for you and you will be able to start designing your workflow using the palette. This will be treated further in Section 2.3, “Designing Workflows ”

2.1.2. Create ProActive Workflow Project from xml file

Figure 2.4. Create Project from xml file

Workflows for the ProActive Scheduler may be specified in XML format. This can be achieved by using the Workflow Studio (although you won't have to see the xml, the studio will generate it each time you save your project) or by writing the xml file by hand. The Workflow Studio can create a workflow project and generate a diagram starting from a workflow defined in the xml file. When you press the button "Create ProActive Workflow Project starting from an xml file" you will be asked to browse your local files and choose an xml file representing a workflow. Then you will have to give a name for the project to be created. That is all, press finish and you will have the new project created and your diagram generated for you. Note: this will not change your initial xml file.

2.1.3. Import External workflow Project

Figure 2.5. Create Project from xml file Button

You can use this if you have a project on your disk (a folder containing a Workflow Project) and want to make it visible in the workspace. You will be asked to navigate to your project folder.

2.1.4. External the Workflow Project as an Archive

Figure 2.6. Export the project as an archive

You can use this if you need to export the project as a workflow archive. You may need this if you need, for instance, to share your workflow with somebody else. An archive can also be sent for execution to the ProActive Scheduler using any of the available scheduler clients.

2.1.5. Run the Workflow on the ProActive Scheduler

Figure 2.7. run the Workflow on the ProActive Scheduler

When your Workflow is finished and ready to run you can send it to the ProActive Scheduler in order to be executed in a distributed environment (a local network, a grid or a could, for instance).

Note: If the job is not valid you will not be able to send it for execution. In this case take a look at the "Problems" view.

When you click on the run button, you will be asked to provide information in order to establish a connection to the ProActive Scheduler Server. You can contact the scheduler in two different ways.

- **Via the REST Interface** If the Scheduler Server exposes itself via the REST interface (TODO: see documentation on rest interface) you should use this option in order to connect to the scheduler.

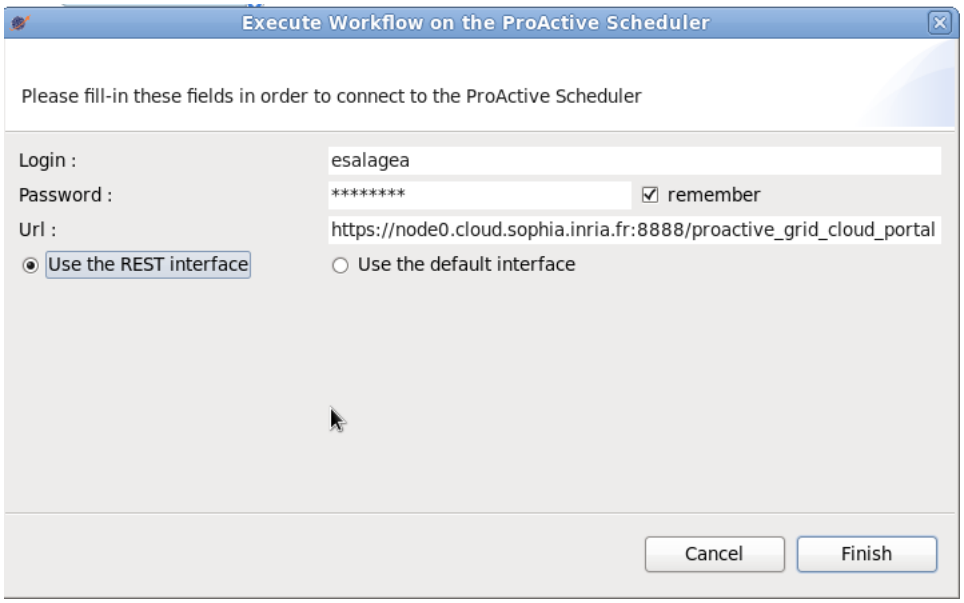

Figure 2.8. Run the Workflow on the ProActive Scheduler via the REST Interface

Once your job submitted, you can connect your browser to the ProActive Scheduler Portal in order to visualize its execution state like in figure Figure 2.9, “Visualisation of Workflow Execution on the ProActive Scheduling Portal” See the ProActive Scheduler Portal documentation for more information.

- **Via the Default Interface** If the Scheduler does not exposes itself through the REST interface (the web application "REST Scheduler Interface" has not been deployed) one can still contact the Scheduler by accessing it directly through its default (java) interface. In this case, a graphical view of the workflow will not be accessible on the portal.

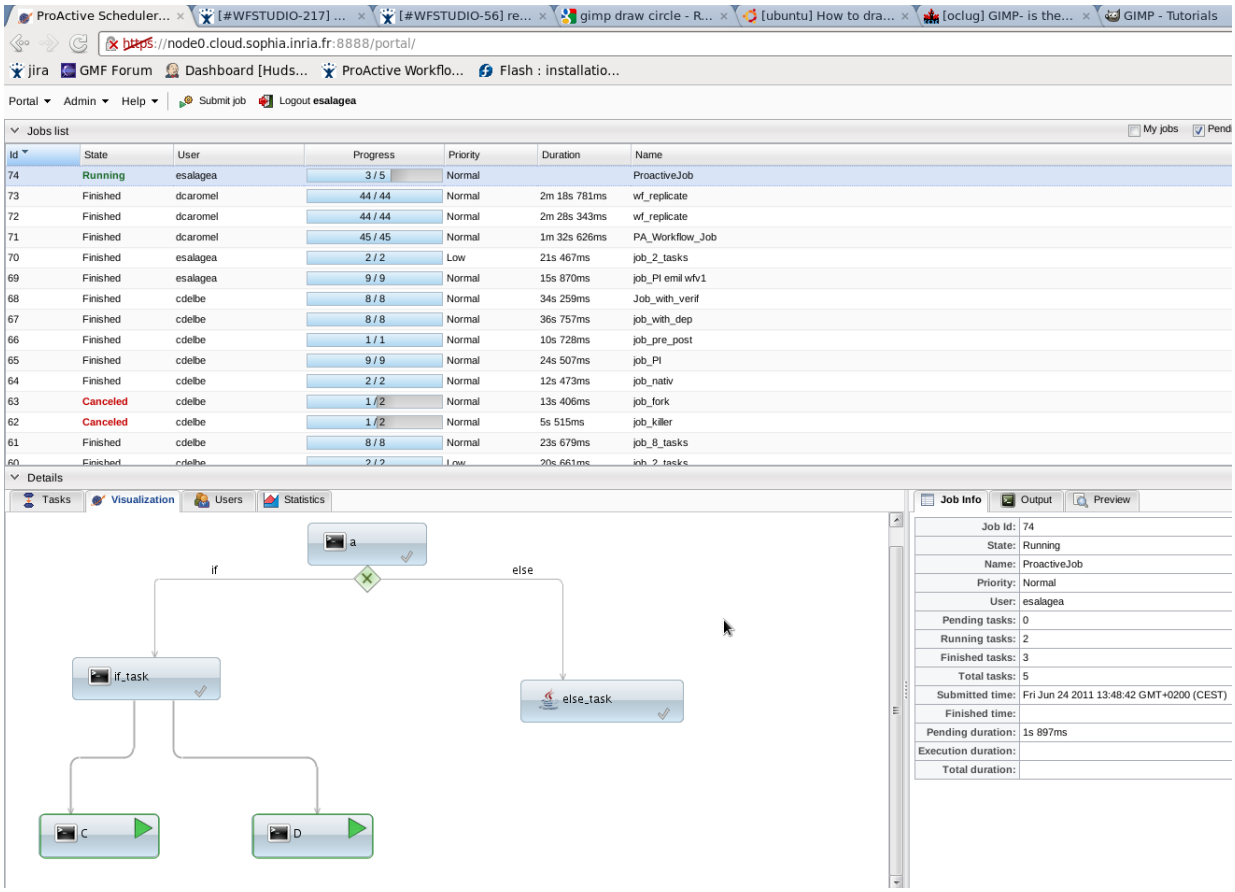

Figure 2.9. Visualisation of Workflow Execution on the ProActive Scheduling Portal

2.2. The Project Explorer View

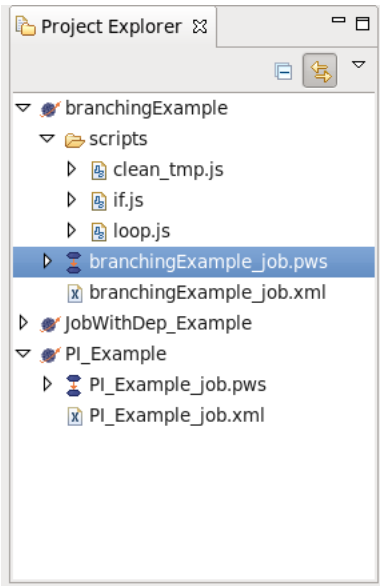

Figure 2.10. The Project Explorer

The Project Explorer view allows you to browse through the different Workflow Projects in the workspace. In the figure Figure 2.10, “The Project Explorer” we can see 3 workflow projects: branchingExample, JobWithDepExample and PI_Example. Double click on a project to expand its content.

A Workflow project is composed by:

- The Workflow Diagram. This is the the file with ".pws" extension. Double click on it ion order to see and edit the workflow.
- The xml file representing a job. This file is generated for you and contains the logic of the workflow. You don't have to modify this file. Modifying this file might result in a corrupted workflow. These 2 files should always be kept together.
- Workflow resources. These are mainly scripts used by the workflows. See (TODO) the workflow design documentation for more information.

On the bottom-up corner of the Project Explorer you have a button called "link with editor". If this button is selected the selection in the Project Explorer will be synchronized with the open diagrams: if you have more than one workflow diagram open, then, selecting one of them will automatically select the corressponding workflow file in the Project explorer.

2.3. Designing Workflows

Note: This section only shows how to use the Workflow Studio features in order to design a Workflow. For advanced information about ProActive workflow designing please reffere to the (TODO) Workflow Design documentation.

2.3.1. The Tools Palette and the Witheboard

Once you created a new project, or double click on a workflow file in the project explorer, you will be able to see a withe board and a tools palette.

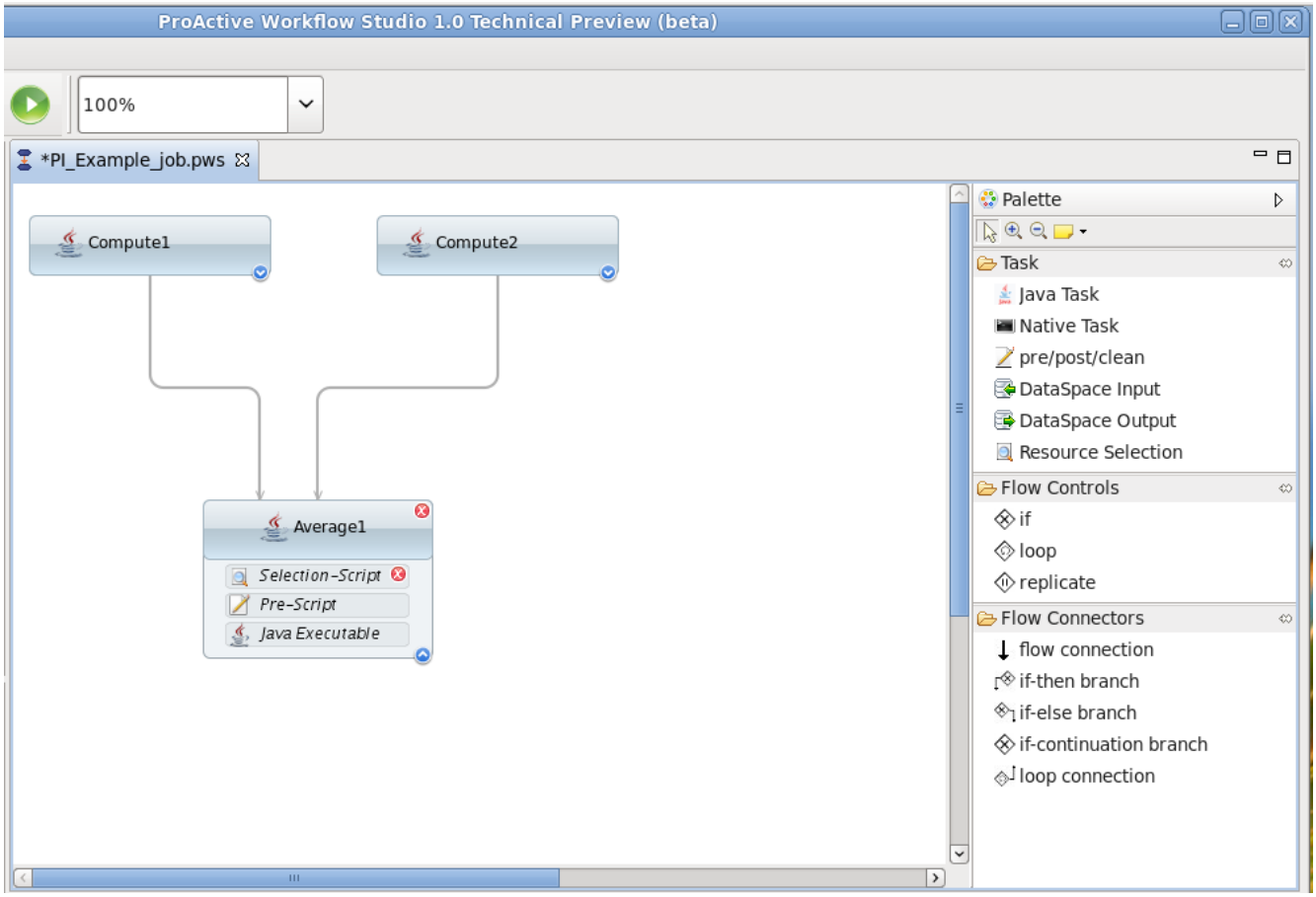

Figure 2.11. The Palette and the White Board

In order to put an element on the white board just click on it on the palette and then click on the white area.

You can only put task elements and connections directly on the white area. The other elements on the palete are to be put inside tasks.

You can double-click on a task or click on the white-blue arrow at the bottom-right in order to expand or collapse it.

In order to draw a connection, click on it on the palete, then click on the desired connection tool (flow connection, for instance). Then, click on one task and drag the connection to another task.

Modeling Assistant

Figure 2.12. The Modeling Assistant

When clicking on a task, 2 graphical elements appear around it:

- **A flow connection icon** - you can drag it onto another task in order to create a flow connection between the two tasks.
- **A tools panel** - you can click on elements in the panel in order to add them as sub-components of the task.

All elements proposed by the modeling Assistant are also available in the Palette.

2.3.2. Editting Properties - The Properties View

When an element is selected, the Properties View will allow the editting of its properties. You can browse the different properties of an element by selecting the tabs in the left of the view.

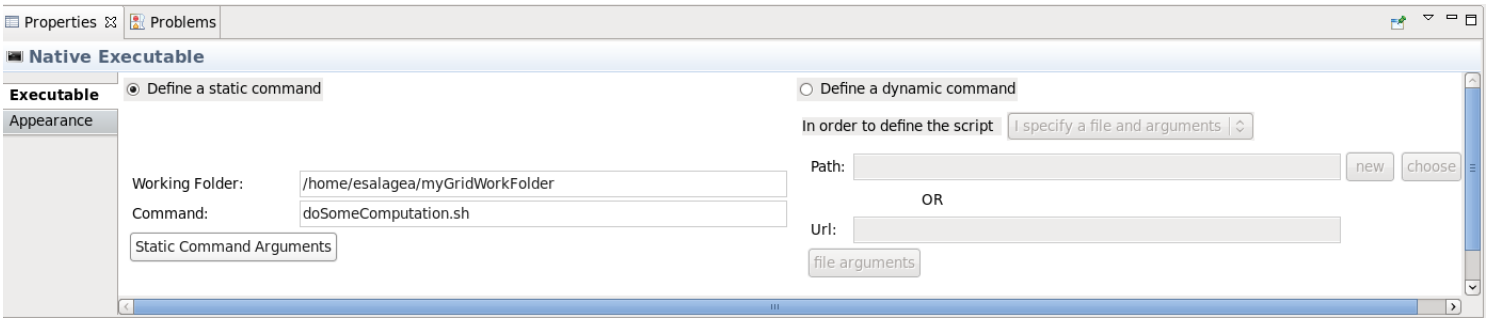

Figure 2.13. Properties of a Native Executable Element

In order to see the properties of the Workflow itself, click on the white area.

2.3.3. Workflow Validation and Problems View

Each time you save the workflow (by clicking on the save button or Ctr-S) a validation is performed on the workflow. You can also trigger a validation by selecting the Edit -> Validation from the main menu.

If, during the validation, some problems are detected in your workflow, a red cross will be put on the element concerned by the problem. For instance, in the Figure 2.11, “The Palette and the White Board” we can see red crosses on the "Average1" task and its Selection-Script sub-component.

If you drag the mouse over the red cross you will see a message explaining the problem.

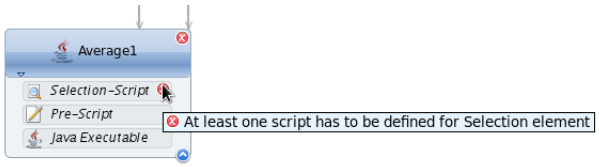

Figure 2.14. Problem Message

In the Problems view (see figure bellow) you can find a line corresponing for each red cross en all projects. Double click on a line in order to navigate to the element concerned by the respective problem.

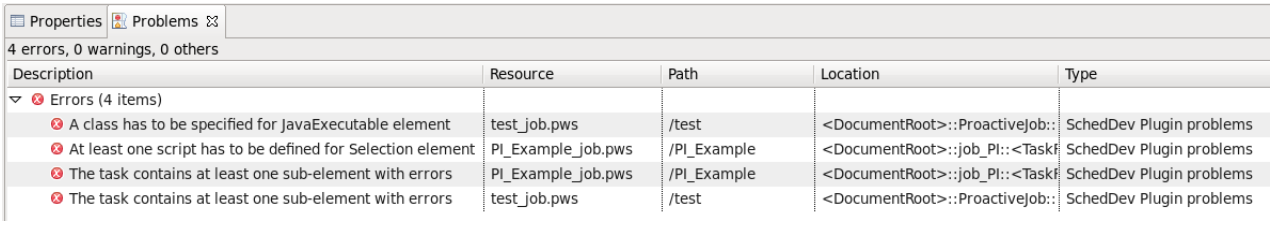

Figure 2.15. Problems View