SupportPac LA71: IBM Operational Decision Manager Integration for WebSphere Process Server

Getting started with IBM Business Process Manager

Task 5 – Integration Designer assembles an SCA Decision Component from a Managed Decision RuleApp with SupportPac LA71

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Overview

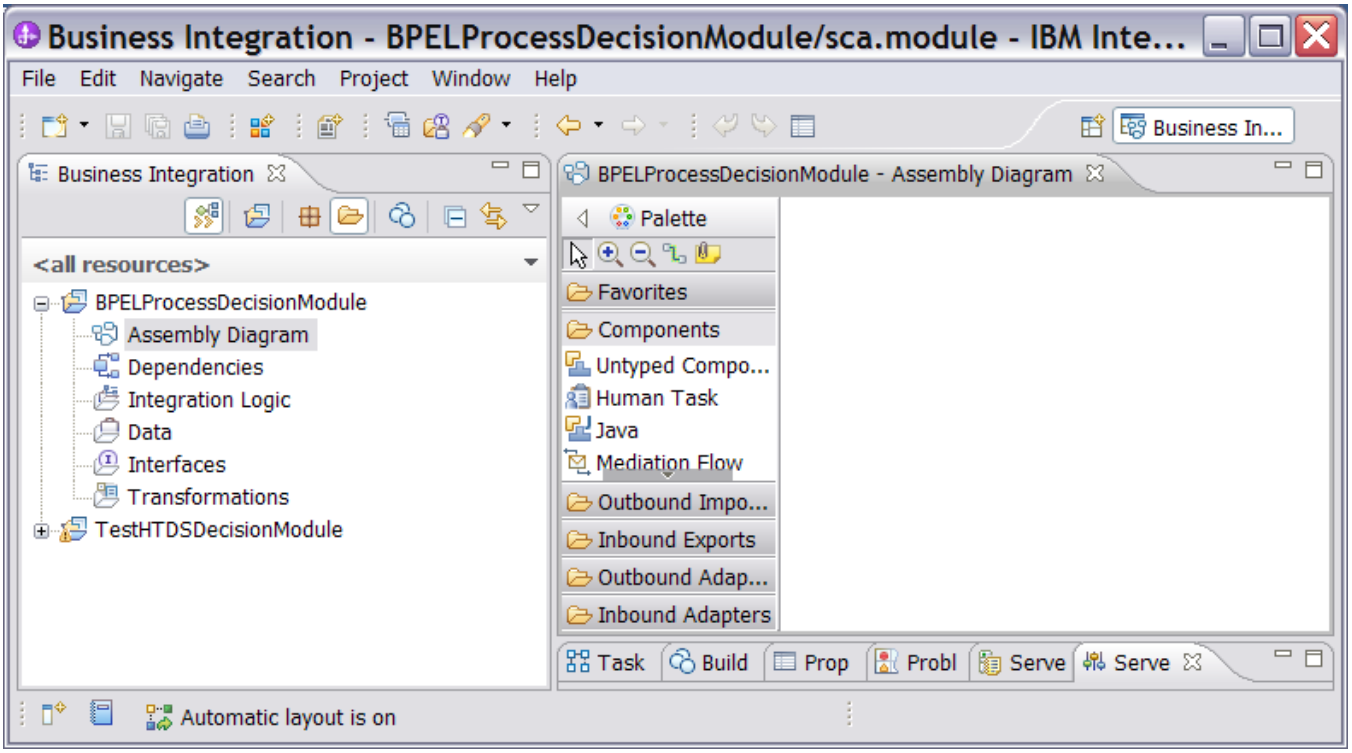
In this task you are going to use the LA71 wizard to create an SCA Managed Decision component from the RuleApp archive you exported earlier. You will then test the decision service using the Integrated Test Component. Two implementations are described: The POJO Implementation has the best performance when the Rule Execution Server deployed to the Process Server Application server. The EJB implementation supports the same interfaces but allows rules to be deployed on a separate Application server.

Readers who want to skip the exercise should import the solution into IID **[SupportPac LA71 Path]\BPMTutorial\task5\BPELProcessDecisionModule.zip** and continue at Step 3 to test the POJO SCA Decision Component in the Process Server. You can also test the EJB SCA Decision Component as described in Step4.

Step 1. Create the BPEL Process Module.

In this step we will create a module that contains the SCA Decision Component and will eventually contain the BPEL Process that uses it.

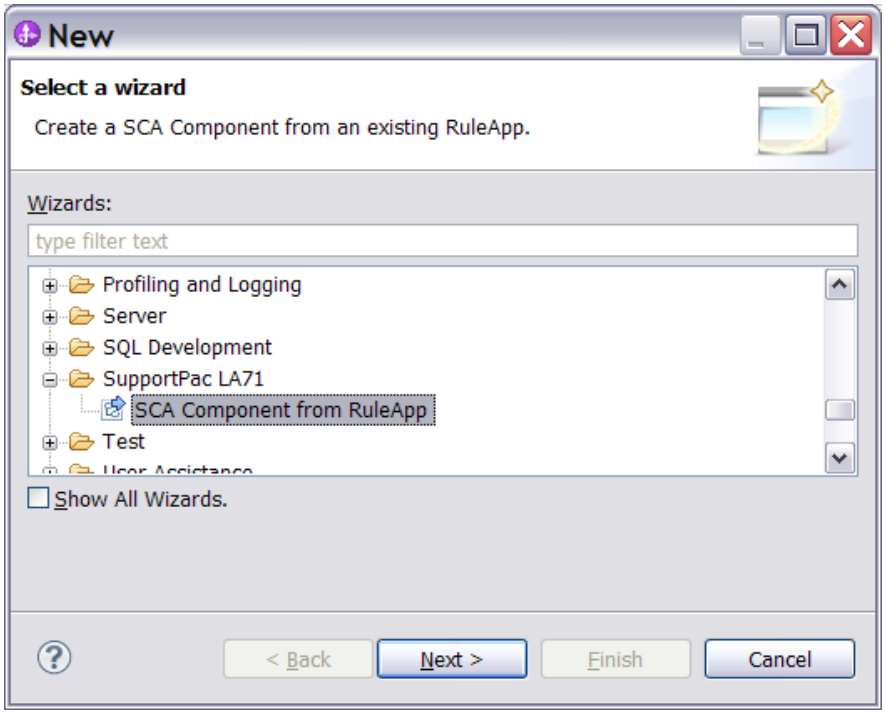
Open Integration Designer.
Click **File → New → Module** from the menu.
Give the module the following name: **BPELProcessDecisionModule**.
Click **Finish**.



Step 2. Use LA71 wizard to create the Decision Component using POJO implementation.

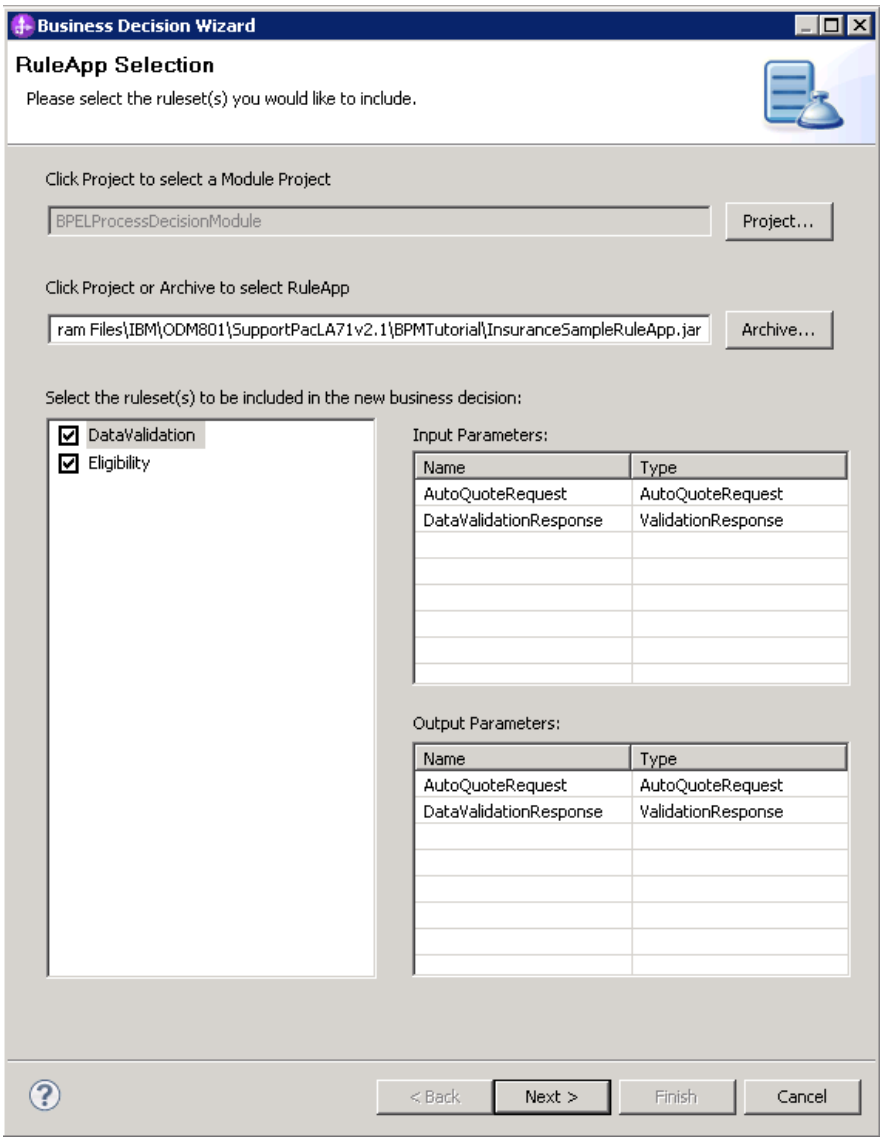
Select **File > New > Other...**

In the wizard that opens Expand **SupportPac LA71** and select **SCA Component from RuleApp**.

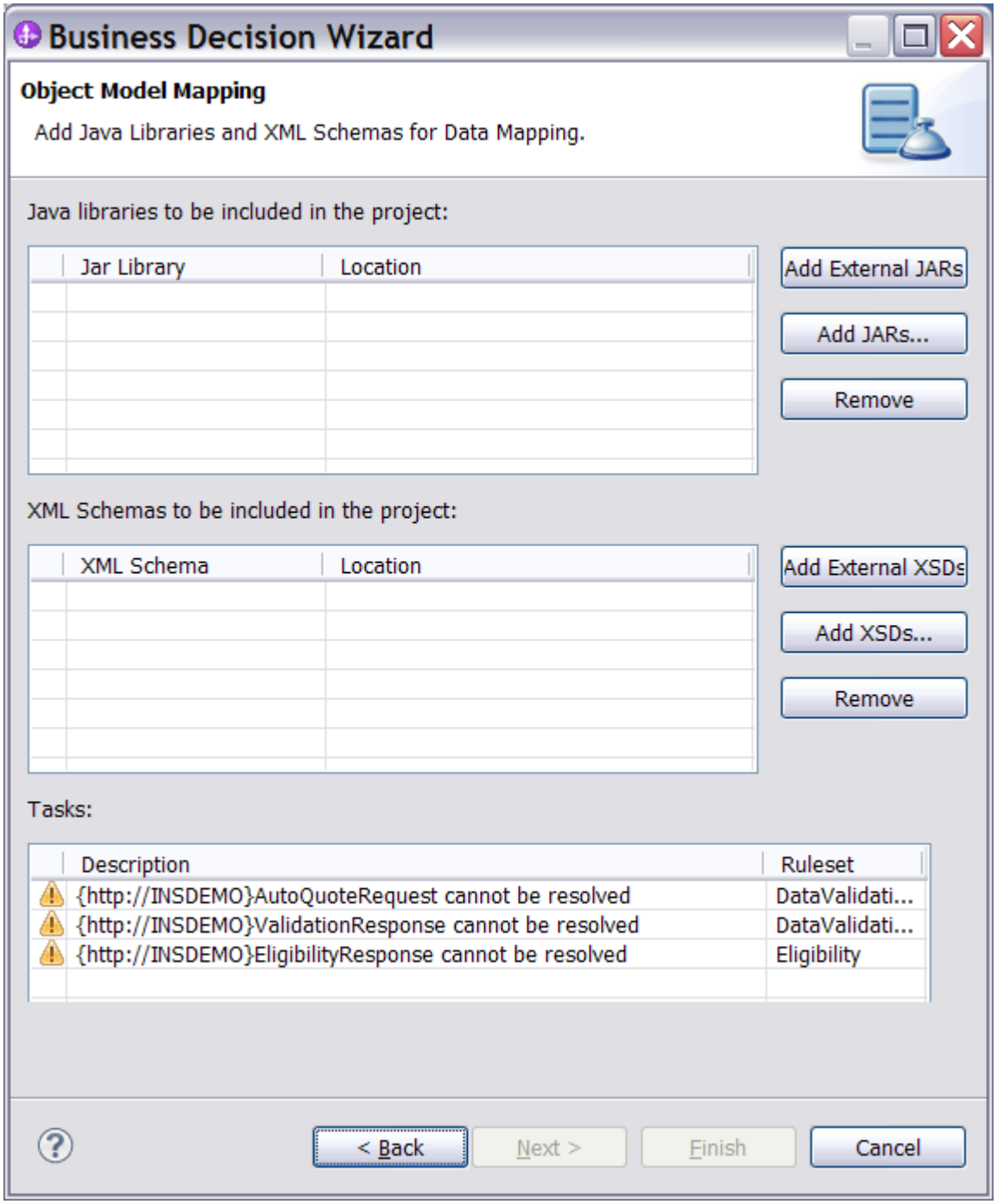


Click **Next.**
Alternatively you can right-click the module and select **SupportPac LA71 > Create SCA Component from RuleApp**.

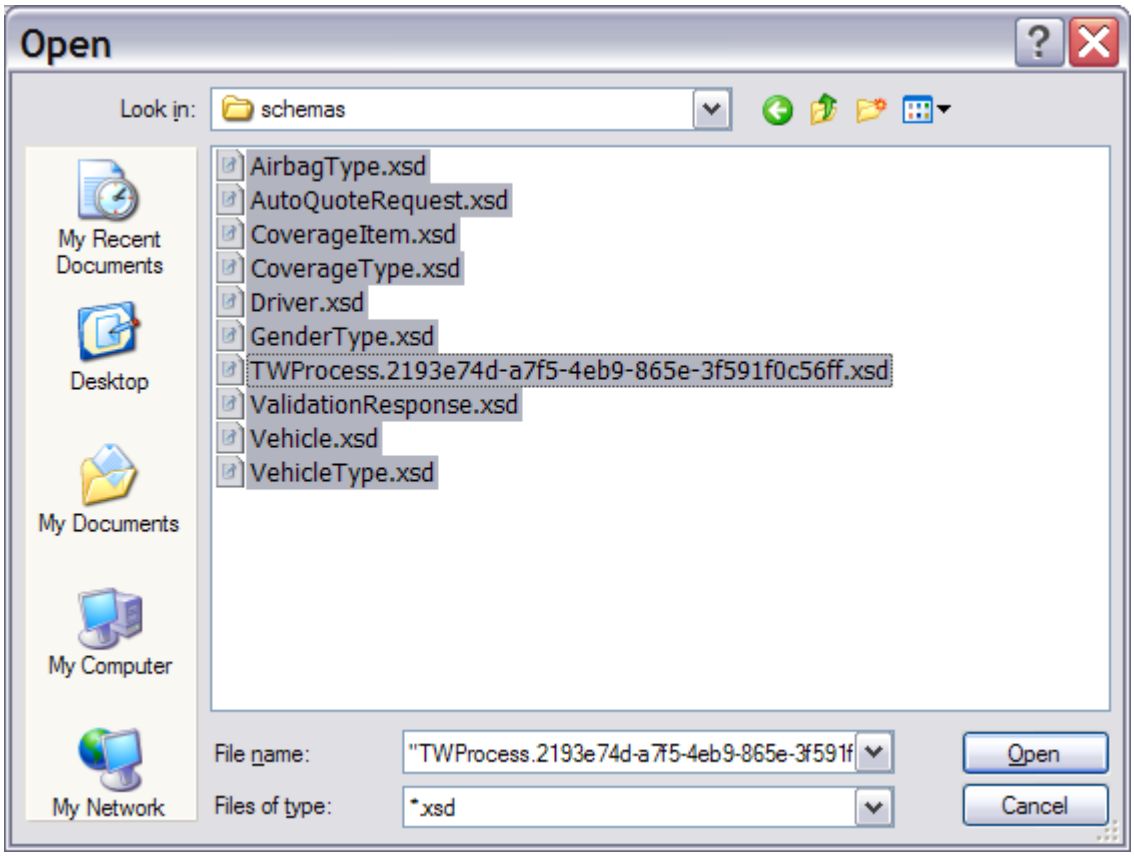
In the panel that appears:
In the Project Field select BPELProcessDecisionModule
Click the **Archive** button to browse to the folder where you saved the RuleApp archive or the completed **[SupportPac LA71 Path]\BPMTutorial\task2** directory and select **InsuranceSampleRuleApp.jar**, and then press **Open**.
Ensure that the checkboxes next to the **DataValidation** and **Eligibility** rulesets are checked and then click **Next >**.



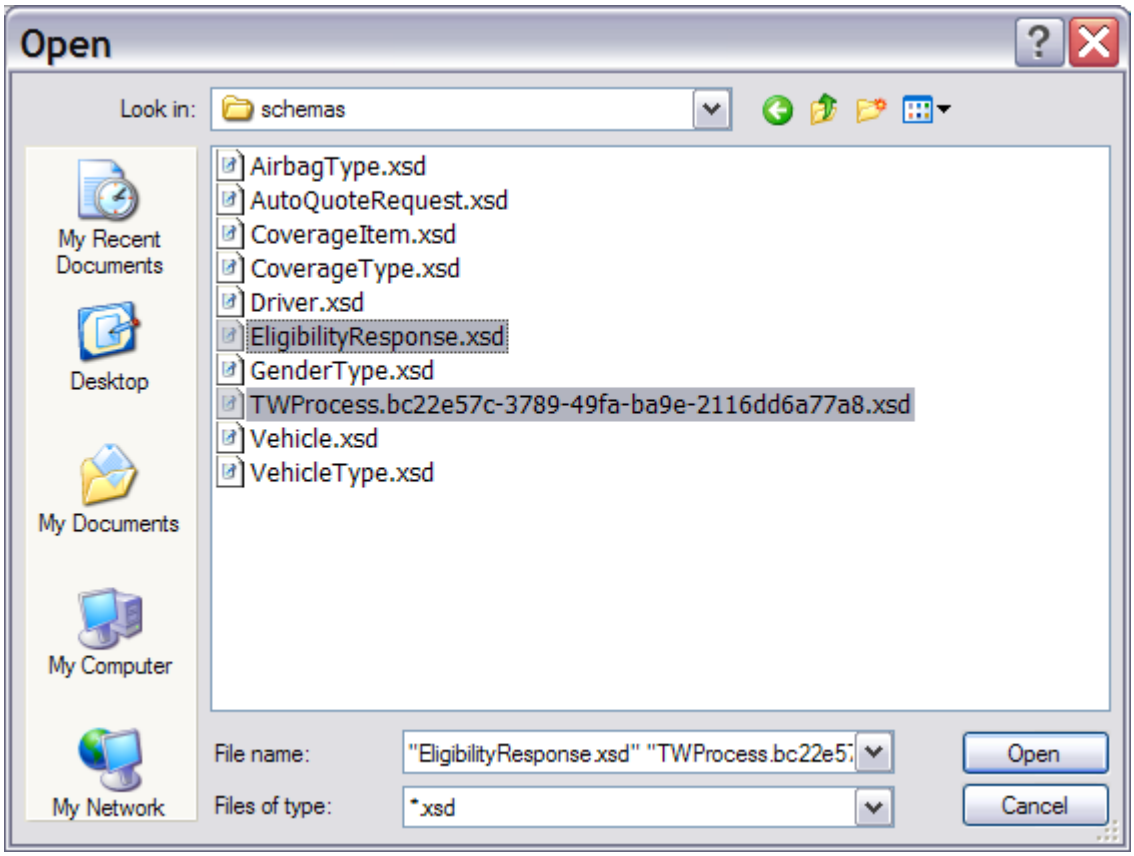
In this page of the wizard, there are some warnings in the bottom Task List due to unresolved types in the ruleset signatures. In some cases you need to provide java libraries as well as XML schemas used in the Rule Projects.
You will need to identify the schemas that define the business objects and BOM from the RuleWorkspace.



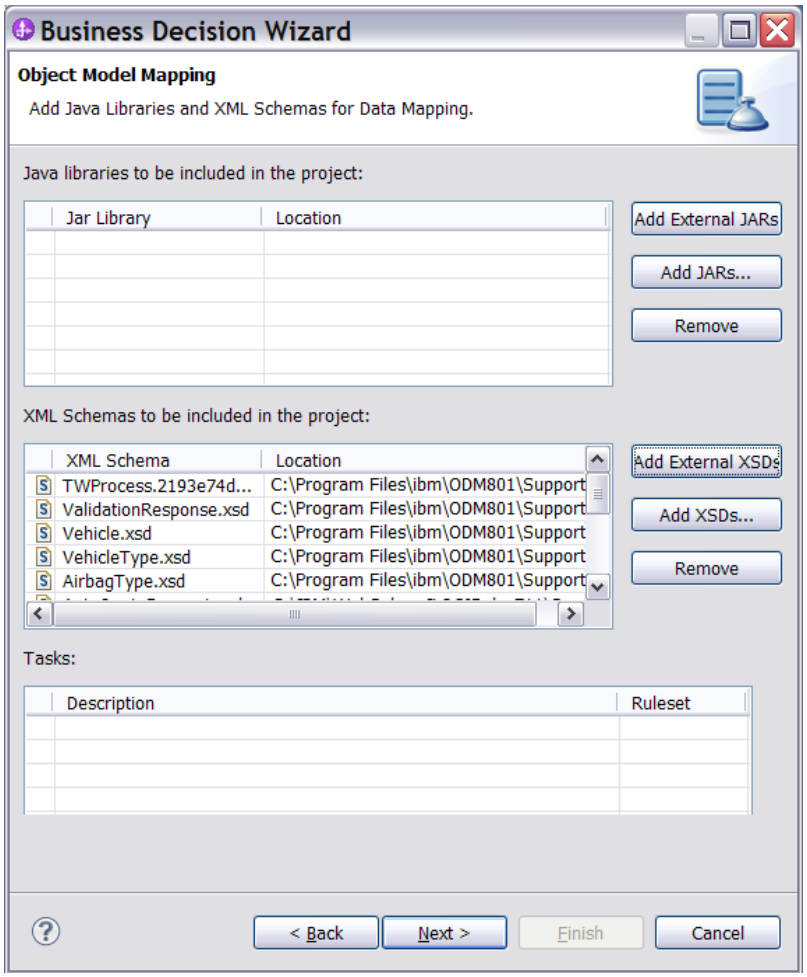
Click the **Add External XSDs** button and browse first to the the **[SupportPac LA71 Path]\BPMTutorial\RuleWorkspace\DataValidation\schemas** directory.. Select all schemas in this directory as shown.



Click **Open** and then click the **Add External XSDs** button again. Browse to the **[SupportPac LA71 Path]\BPMTutorial\RuleWorkspace\Eligibility\schemas** directory. Select only the root schema and those schemas unique to the Eligibility decision.



Click **Open** and check that the warnings have all been resolved and that the **Next** button has appeared.



Click **Next** and In the next panel :
Set the **Package** field to **bpelprocess**.

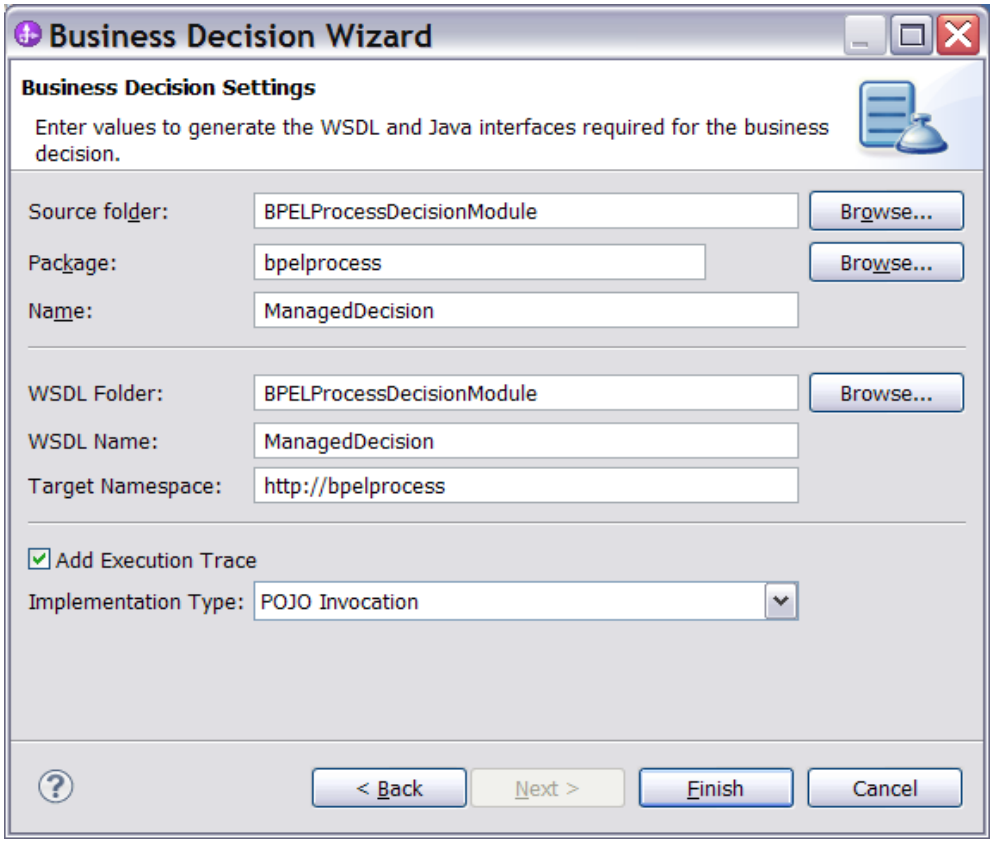
Set the **Name** field to **ManagedDecision**.

Check **Add Execution Trace** -With this option enabled when the rulesets are executed, detailed audit trails are logged through Common Event Infrastructure (CEI).

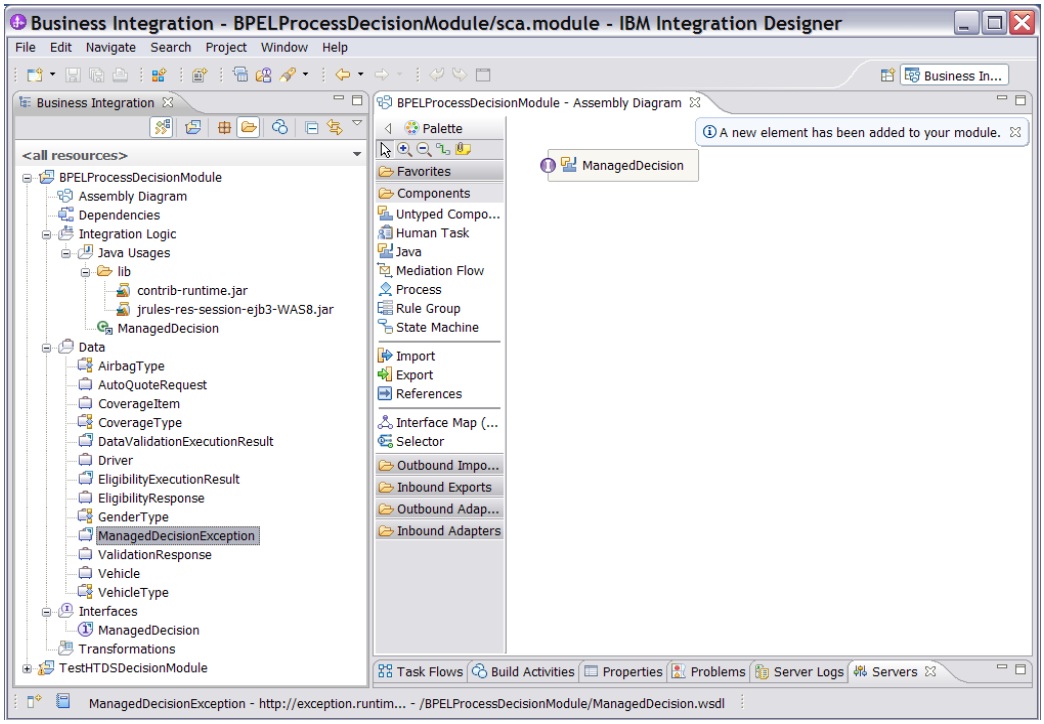
Set the **Implementation Type** to **POJO Invocation**. It is recommended to use the POJO invocation approach for this component since we have the Rule Execution Server installed on Business Process Manager and can take advantage of the proximity to make a direct Java call rather than going through the EJB Container.

Other fields should be set automatically.

The wizard will generate Java code to invoke the latest version of the identified ruleset using the J2EE POJO interface. This invokes the Rule Execution Server eXecution Unit (XU) Resource Adapter providing scalable rule execution within the Application server.

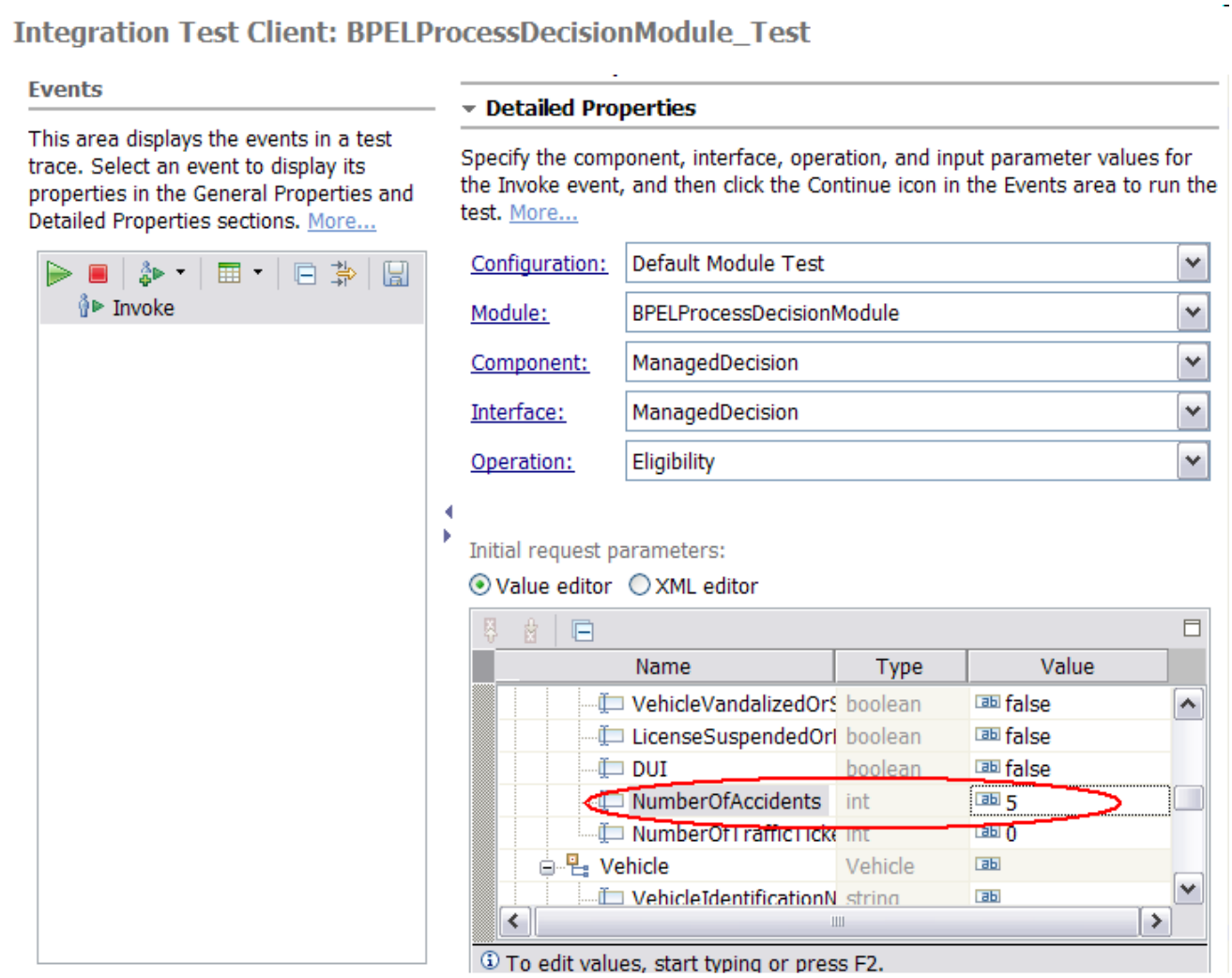


Click **Finish**.
The workspace should now show the Module Assembly Diagram with the new ManagedDecision interface available.



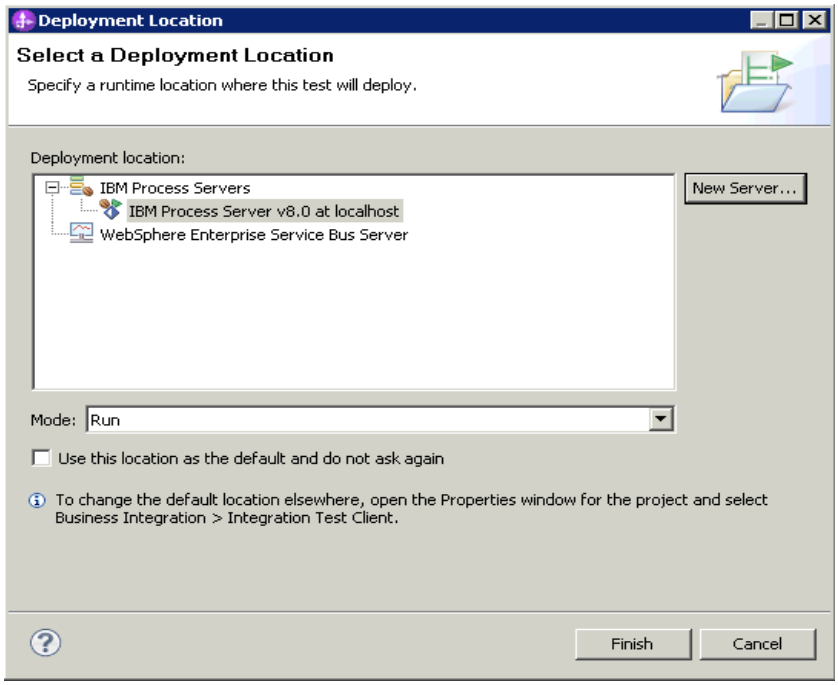
Step 3. Test the POJO Decision Component

With the **ManagedDecision** SCA Component created, you can now test the calls to the RuleApp.
Open the Assembly Diagram if it is not open already.
Right-click on the **ManagedDecision** and select **Test Component**.
For the **Operation:**, select **Eligibility**.
In the **Value editor**, navigate to the **NumberOfAccidents** property and and set the value to **5** which should cause the rules to indicate that the quote is not eligible.

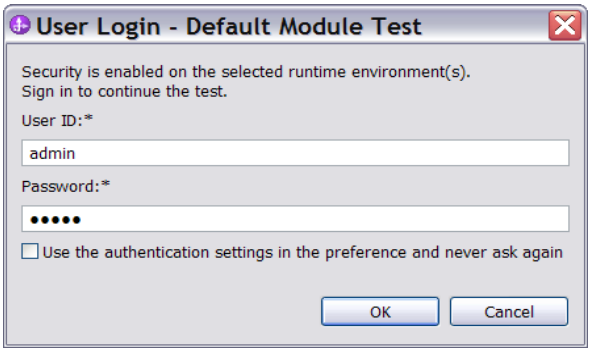


Select the continue icon.

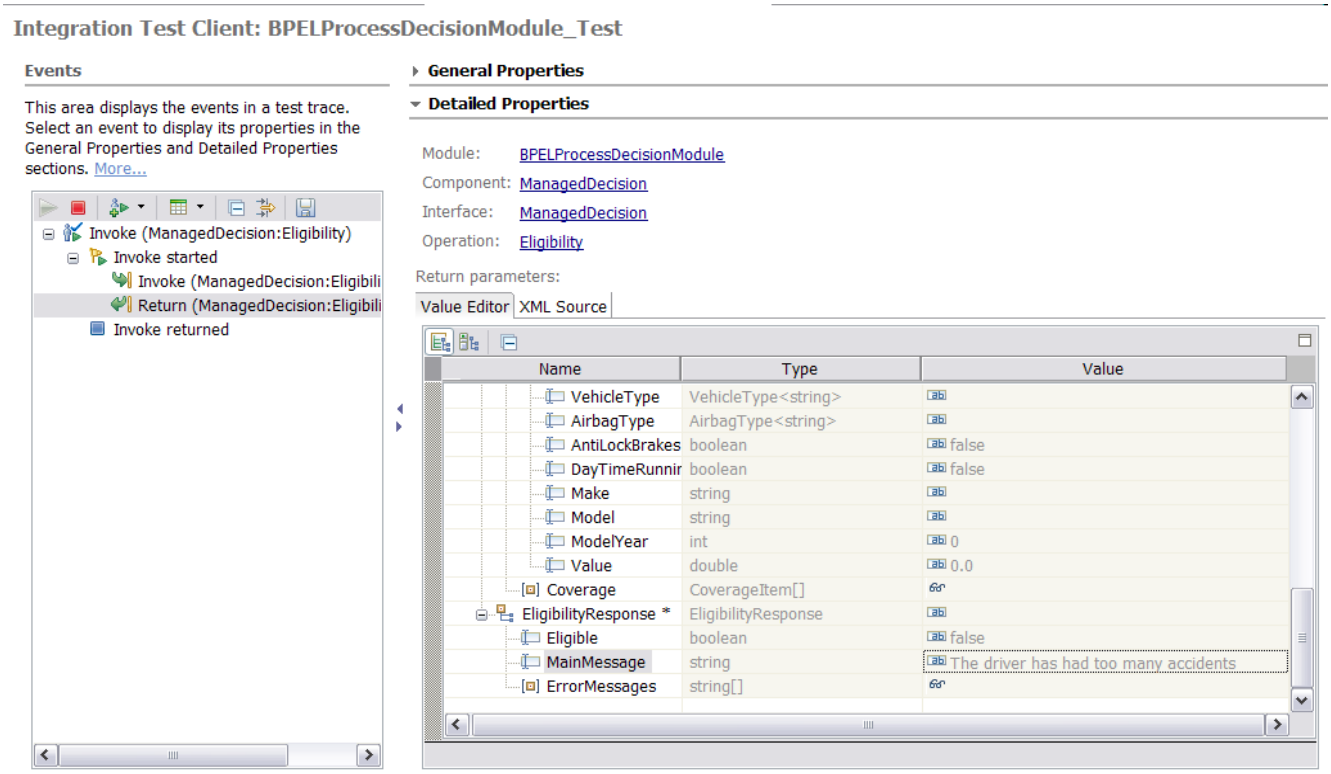
In the **Select a Deployment Location** screen select your **IBM Process Server** and click **Finish**.



In the User Login screen, enter the administrator name and password for the environment
For **User ID**: type **admin**
For **Password**: type **admin**



The module is published to the server, and the request data sent to the module. The module then invokes the Eligibility Decision Service and gets the response back which is then made available as the return business object. The rules have executed and indicated that the quote is not eligible because the number of accidents was too high.



You have now successfully created and tested an SCA Managed Decision Component using a POJO session interface.

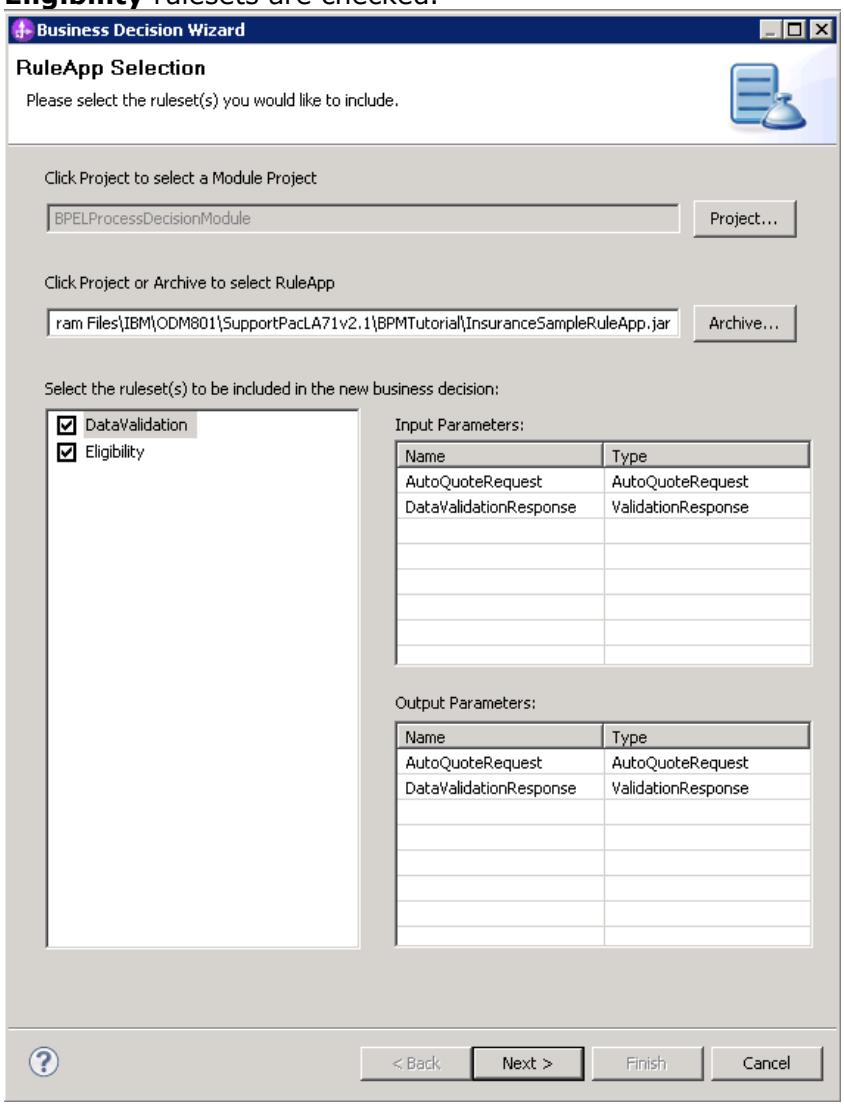
Step 4. Use LA71 wizard to create the Decision Component using EJB interface.

In this optional step you will repeat the exercise undertaken in steps 2 and 3 but will generate the module using an EJB implementation to connect to the Rule Execution Server. Instead of interacting with the XU Resource adapter, the LA71 code generated will invoke a stateless session bean that has been deployed on the server.

Note that the stateless session bean must be deployed **manually**. Please ensure that the RES EJB Session Jar has been installed into WAS according to the instructions in **BPM Tutorial Overview**, otherwise the module using EJB implementation won't work property.

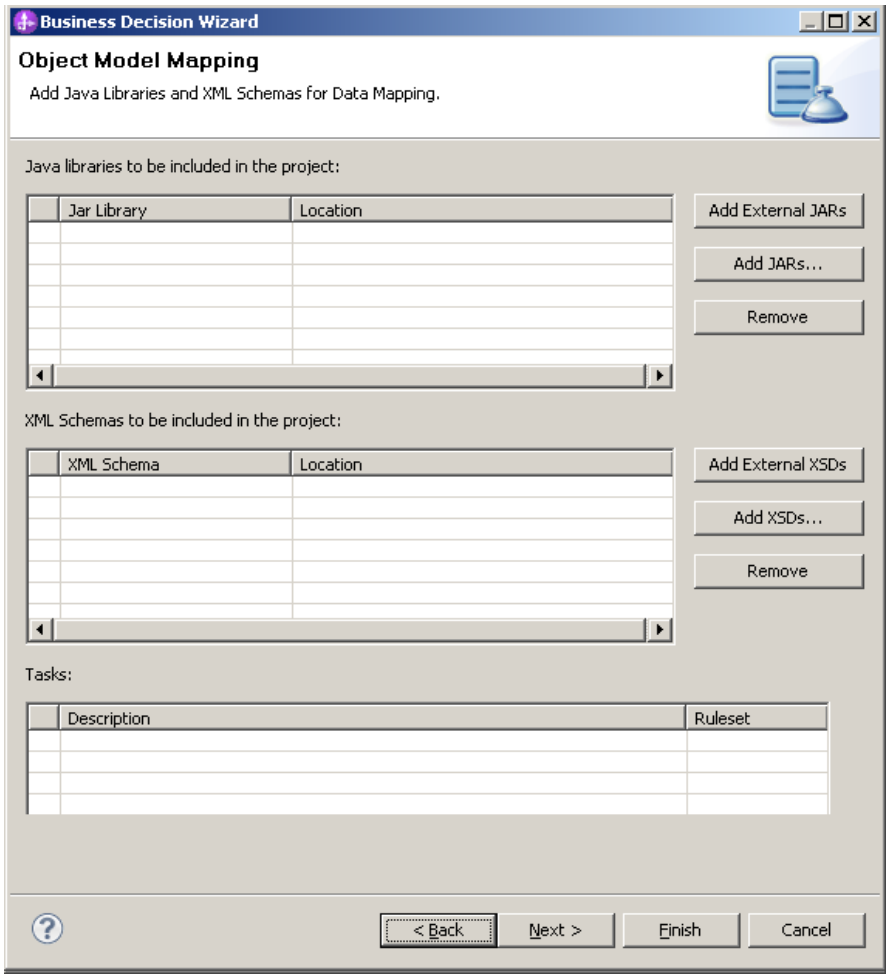
Right click the **BPELProcessDecisionModule** Module.
Select **SupportPac LA71 > Create SCA Component from RuleApp**
In the panel that appears:
In the Project Field ensure **BPELProcessDecisionModule** is selected
Click the **Archive...** button to browse to the directory where you saved the RuleApp archive or the completed **[SupportPac LA71 Path]\BPMTutorial\task2** directory and select

InsuranceSampleRuleApp.jar. Ensure that the checkboxes next to the **DataValidation** and **Eligibility** rulesets are checked.



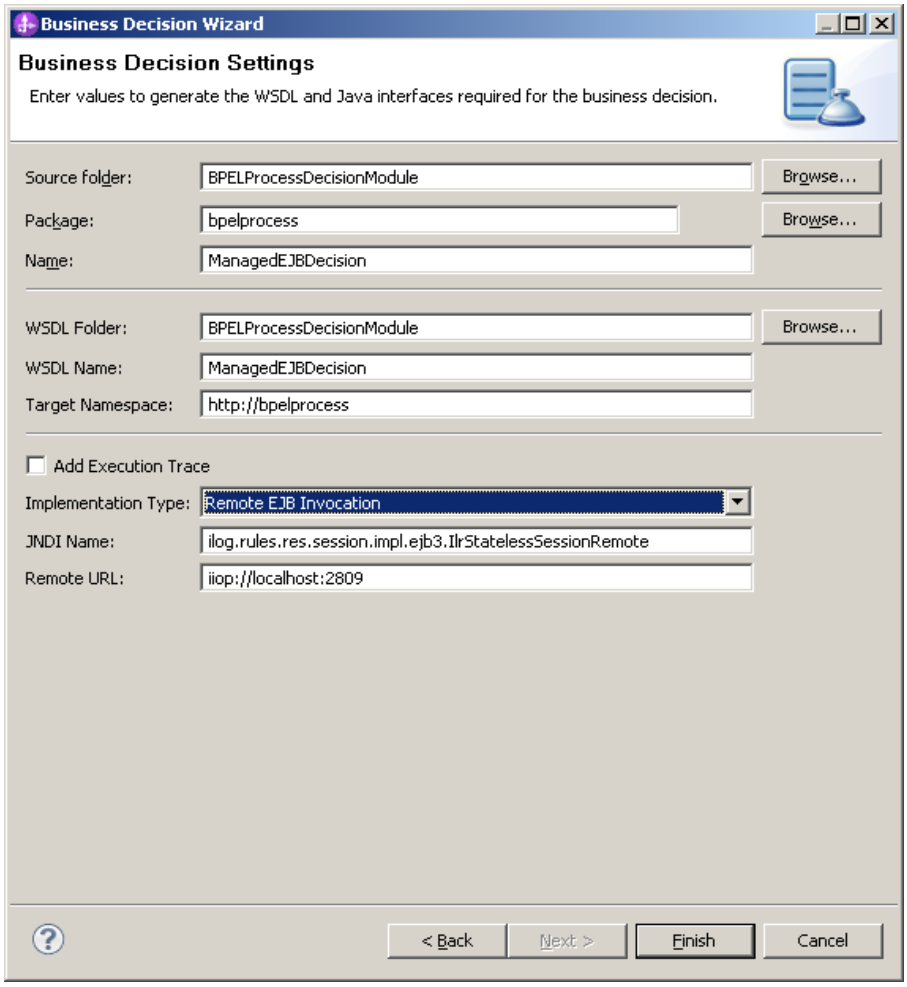
Click **Next**.

The schemas required should already be resolved from the import for the POJO implementation. Check that there are no warnings and that the **Next** button has appeared.

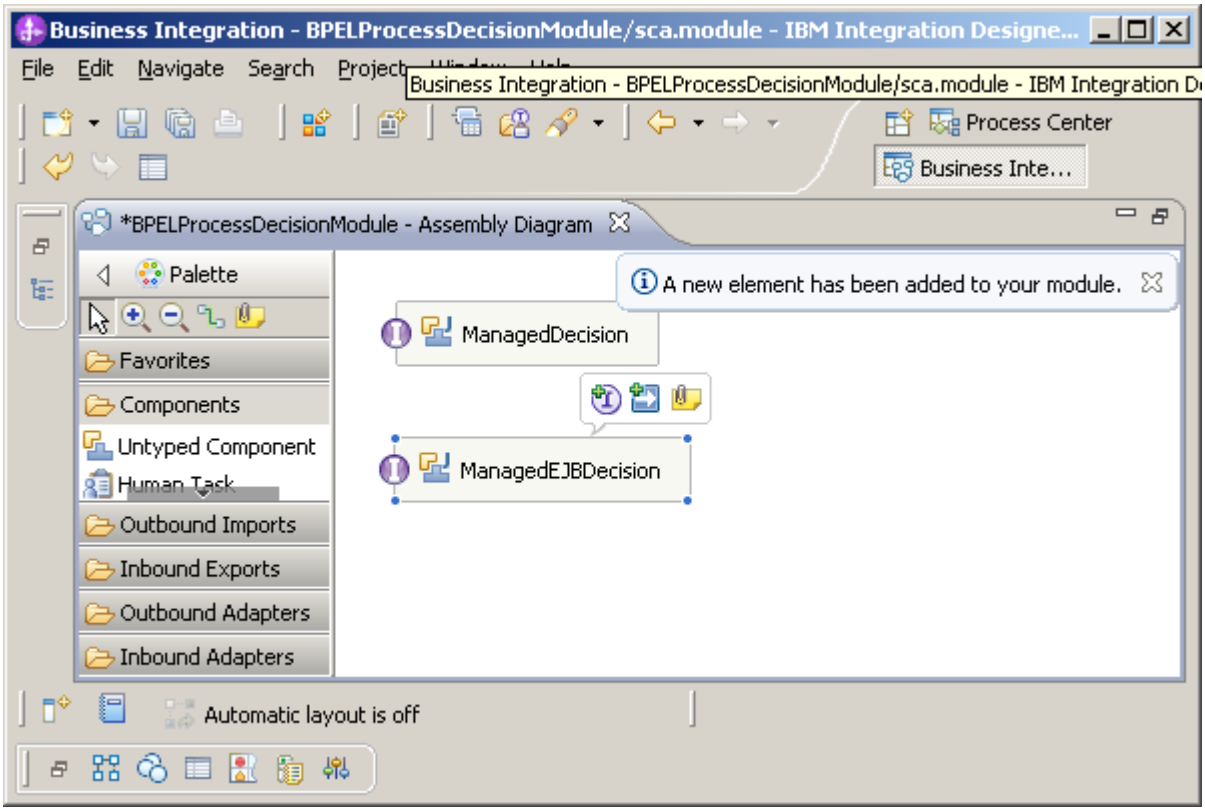


Click **Next** and in the **Business Decisions Settings** panel :
Set the **Package** field to **bpelprocess**.
Set the **Name** field to **ManagedEJBDecision**.
Set the **Implementation Type** to **Remote EJB Invocation**.
Leave the **JNDI Name** field as it is to connect to the default JRules Session bean.
Set the **Remote Url** to the IIOP Url of the server hosting the JRules Session bean – **iiop://localhost:2809** for this tutorial by default**.**

The wizard will generate Java code to invoke the latest version of the identified ruleset using the J2EE Remote EJB interface. This invokes the Rule Execution Server stateless session EJB providing scalable rule execution on a remote or local Application server.



Click **Finish**.
The workspace should now show the Module Assembly Diagram with the new **ManagedEJBDecision** interface available.



The EJB Session Bean that this connects to should have been installed as described in BPM Tutorial Overview so this component can be tested in the same manner as the POJO implementation in step 3.