



# **SupportPac LA71: IBM WebSphere Operational Decision Management Integration for WebSphere Process Server**

## **Getting started with IBM Business Process Manager**

### **Task 4 – Integration Designer assembles an SCA Decision Component from the HTDS Managed Decision**

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## Overview

This task is to generate and test an SCA component from the decisions using web services. The test will be undertaken within the BPM Integration Designer (IID) tooling using the Hosted Transparent Decision Services (HTDS) running on Rule Execution Server (RES) created in task 2.

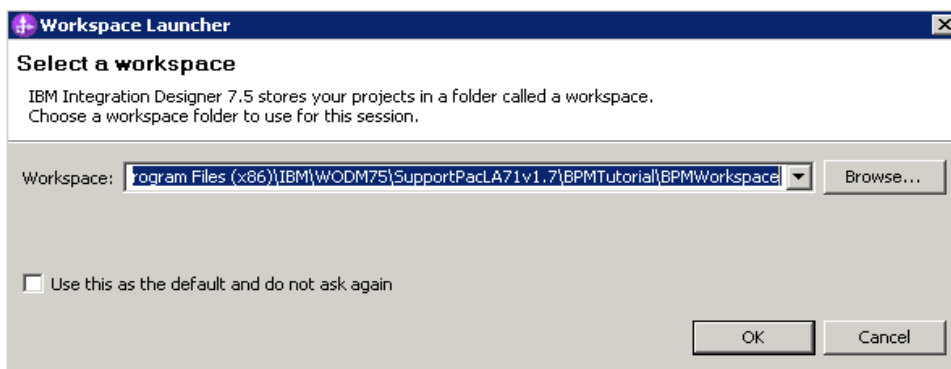
Readers who want to skip the exercise should import the solution into IID

**[SupportPac LA71 Path]\BPMTutorial\task4\TestHTDSDecisionModule.zip** and continue at Step 6 to test the HTDS SCA Component in the Process Server.

### Step 1. Open Integration Designer

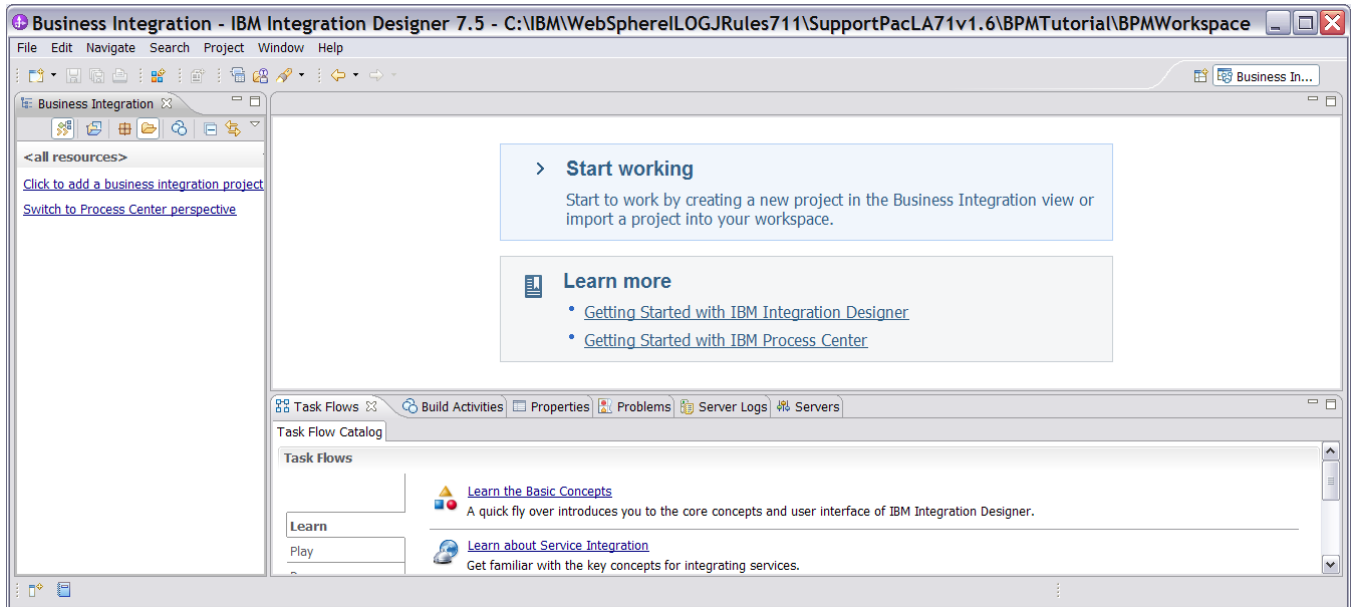
Integration Designer is the BPM tooling used by IT (specifically Integration Developers) to define and integrate Components that implement the Business Processes required by the business.

On launching Integration Designer select the tutorial workspace in **[SupportPac LA71 Path]\BPMTutorial\BPMWorkspace**.



If this is the first time you have used this workspace you should setup the Process Center links and the Test Environment Process Server as described in the overview and environment section of the tutorial.

Ensure that the Business Integration perspective is selected resulting in a blank workspace as shown below.

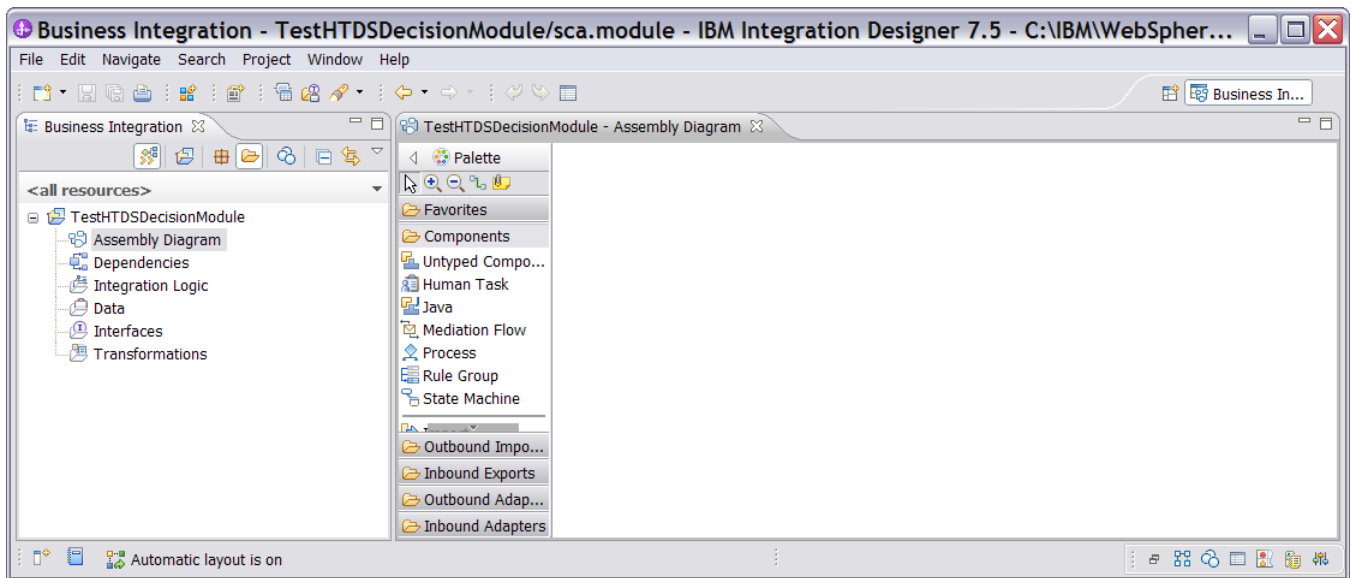


## Step 2. Create a Test module for DataValidation.

Click **File > New > Module** from the menu.

Give the module the following name: **TestHTDSDDecisionModule**.

Click **Finish**.

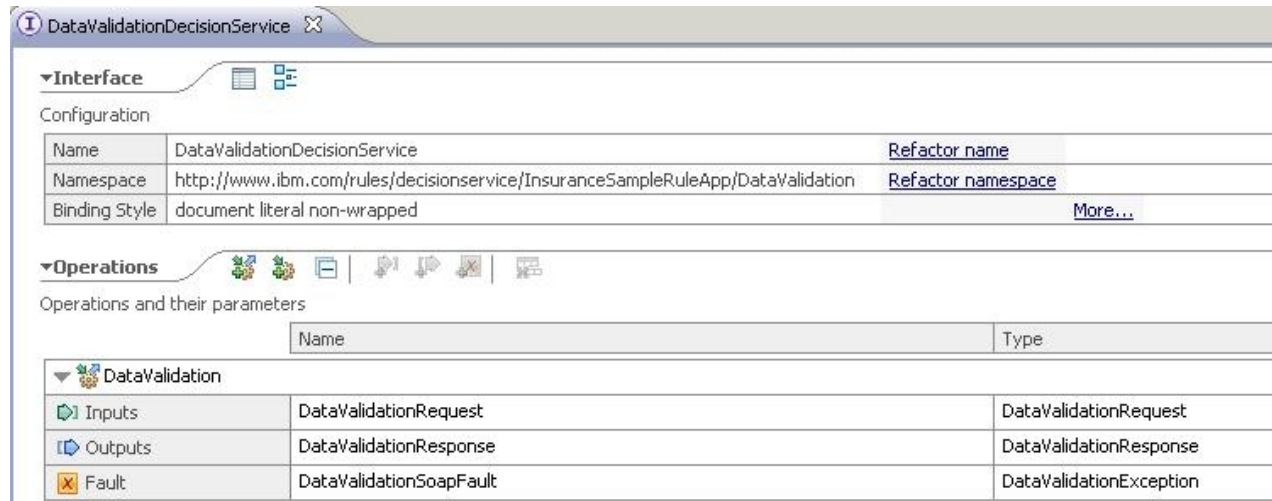


The SCA module is created and the Assembly diagram is shown to allow the implementation of the module to be defined.

### Step 3. Obtaining the HTDS Web Service Definitions using WODM 7.5.0.1.

The default WSDL generated for the HTDS web services in task 2 uses a fixed namespace (<http://www.ibm.com/rule/decisionservice>) and identical names ( DecisionServiceRequest, DecisionServiceResponse, DecisionServiceException ) which means that any solution that generates Java client classes based on the WSDL (including Integration Designer) will only be able to invoke one decision service in any given classloader.

The interface that is generated using this default WSDL is shown below.



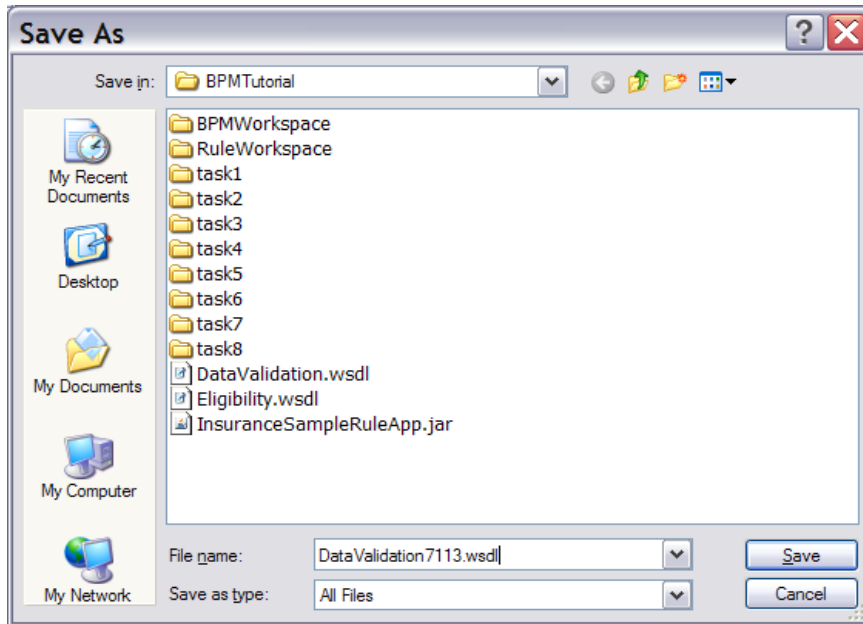
In WODM 7.5.0.1 and later, it is possible to generate unique namespace and parameter names.

When you generate the WSDL for a decision service you select a url in the form:  
<http://localhost:9080/DecisionService/ws/InsuranceSampleRuleApp/1.0/DataValidation/1.0?WSDL>

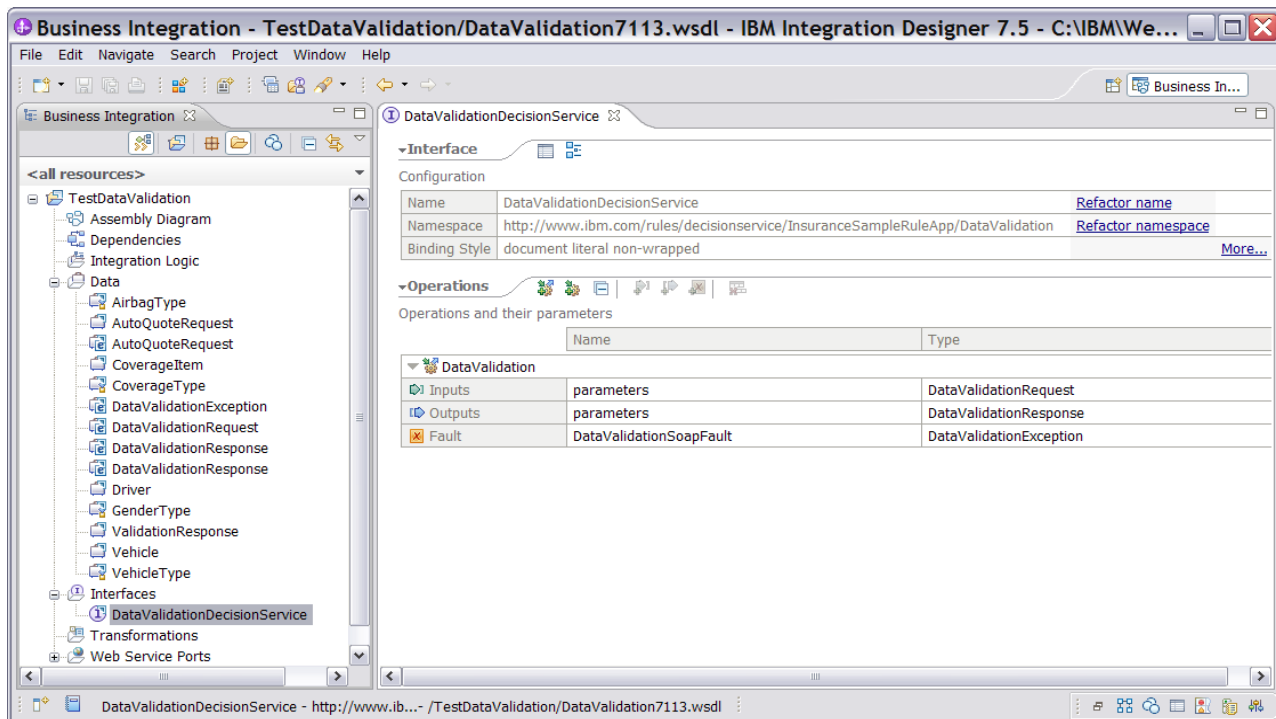
Note that this URL will make the component reference a specific RuleApp version (1.0). To obtain the WSDL that uses the latest RuleApp version, you select a URL of the form:  
<http://localhost:9080/DecisionService/ws/InsuranceSampleRuleApp/DataValidation?WSDL>

You can add a compatibility parameter in the form **&compatibility=v75** I.e. a url of the form  
<http://localhost:9080/DecisionService/ws/InsuranceSampleRuleApp/1.0/DataValidation?WSDL&compatibility=v75>

Insert this modified url into your browser and save the resulting WSDL to the BPM Tutorial root directory [**SupportPac LA71 Path**]\**BPMTutorial** as DataValidation75.wsdl.



This then modifies the signature and the Business Objects generated to be unique to that service as shown below:

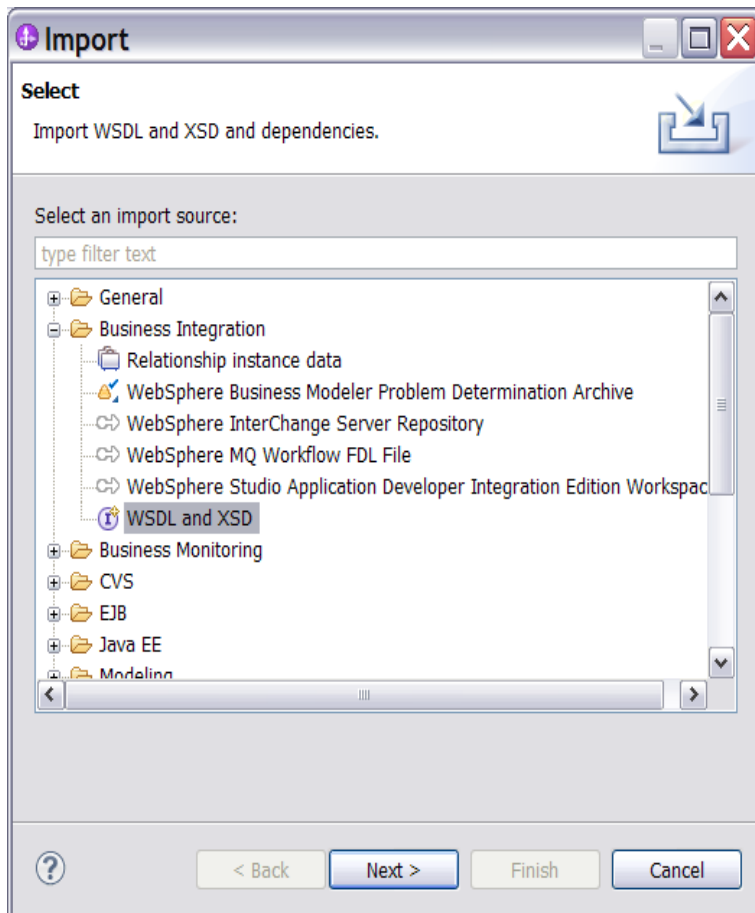


Repeat this for the Eligibility service. You will use these unique WSDLs in this task.

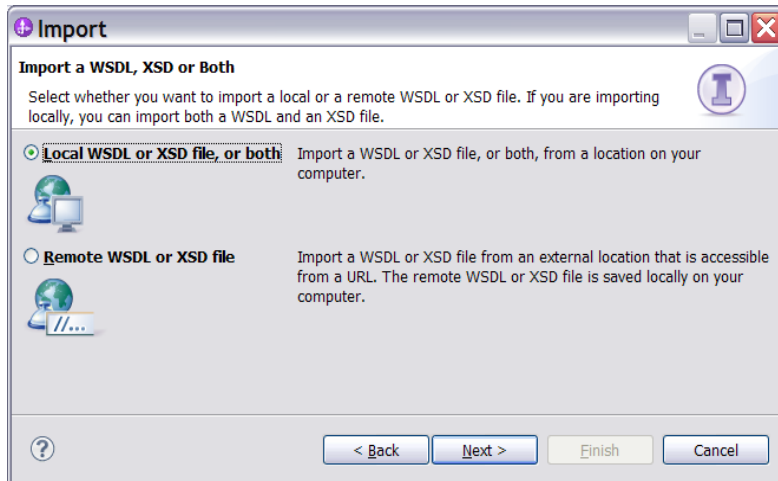
#### Step 4. Import the Decision Service WSDL files to create an implementation.

In this step you will import the decision service WSDL to generate an interface for the SCA Component and also import the endpoint to be invoked to implement the decision.

From the top menu click **File > Import**

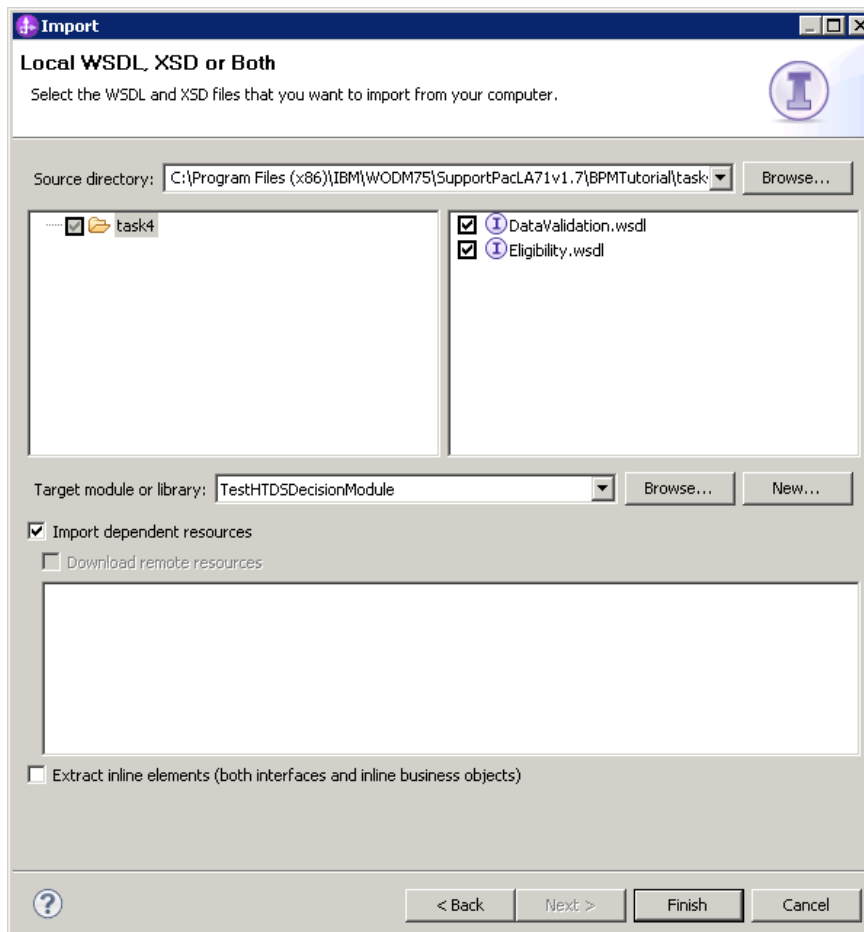


Select **Business Integration > WSDL and XSD** and click **Next** to import an interface defined by the WSDL.



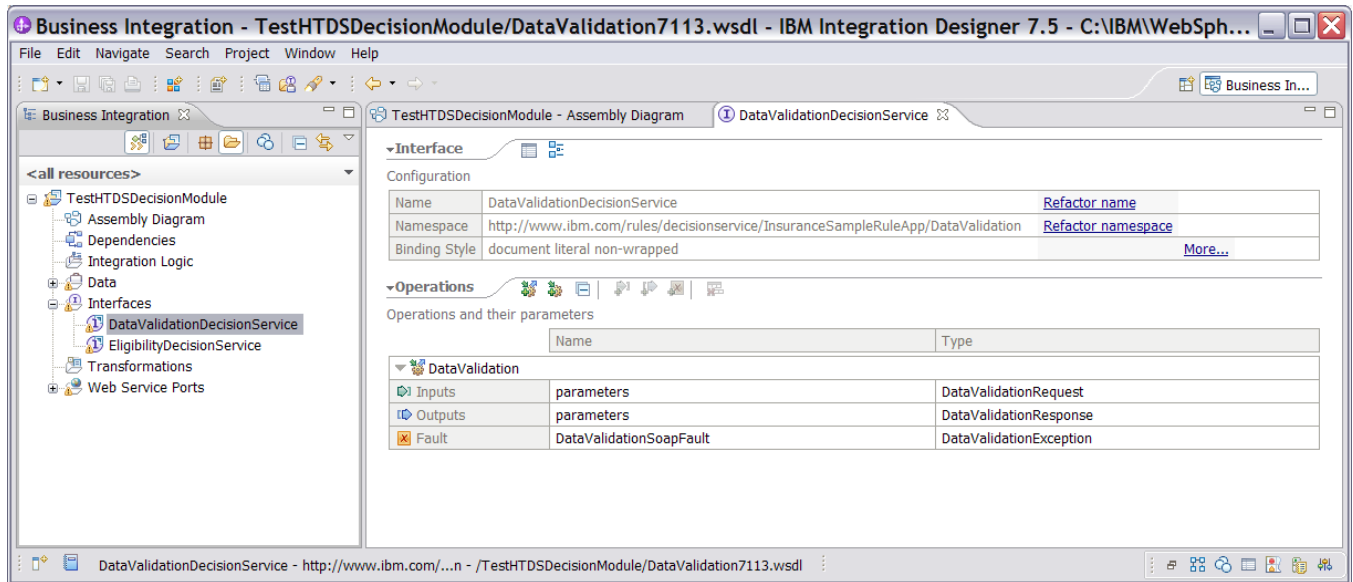
Select **Local WSDL or XSD file**, or both and select **Next**.

Provide the path to the directory containing the WSDL files that you saved earlier or use the version provided with the tutorial in the task4 folder.





Click **Finish** and the interfaces and all associated Business Objects are created in the Module.

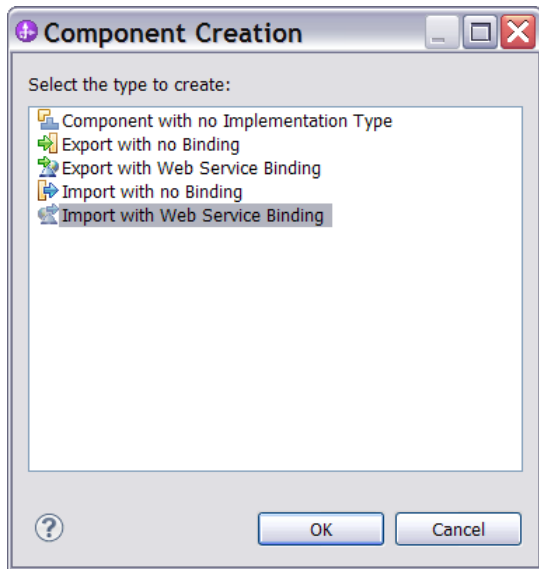


It is important to point out that if the WODM V75 compatibility mode has not been used for the web services generation, there will be errors in the interfaces and Business Objects due to duplicates having different structures. If the same business objects are imported from different WSDLs, you may see warnings due to duplicated Business Objects.

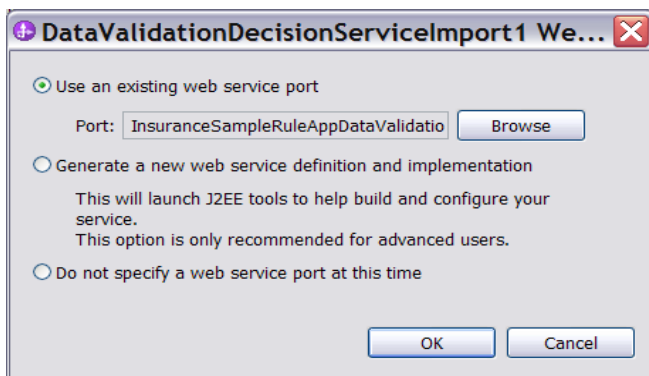
## Step 5. Implement the Web Service Import.

In this step you will create an interface for the SCA Module and link it to the endpoint defined in the WSDL.

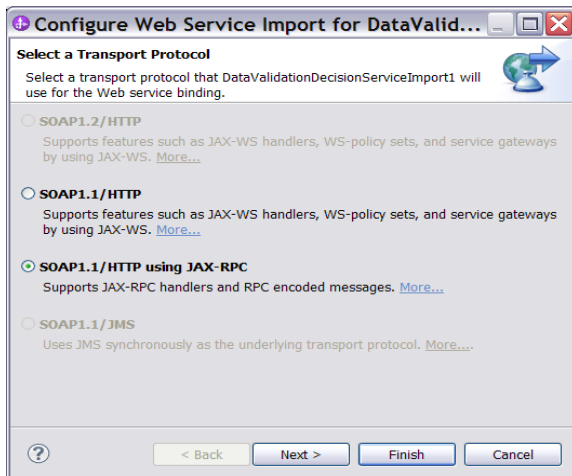
Drag the **DataValidationDecisionService** interface onto the assembly diagram (you may need to expand the tree to see it) and select **Import with Web Service Binding** in the dialog box:



Click **OK** and in the next panel click **Browse** to select the existing endpoint.

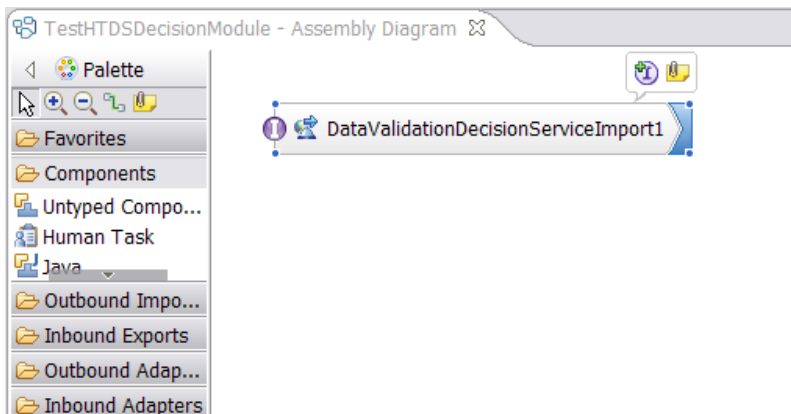


Click **OK**.



Select the **SOAP1.1/HTTP using JAX-RPC** option and click **Finish**.

Click **OK** in the Web Service Import panel that is still open and the import appears in the Assembly Diagram.



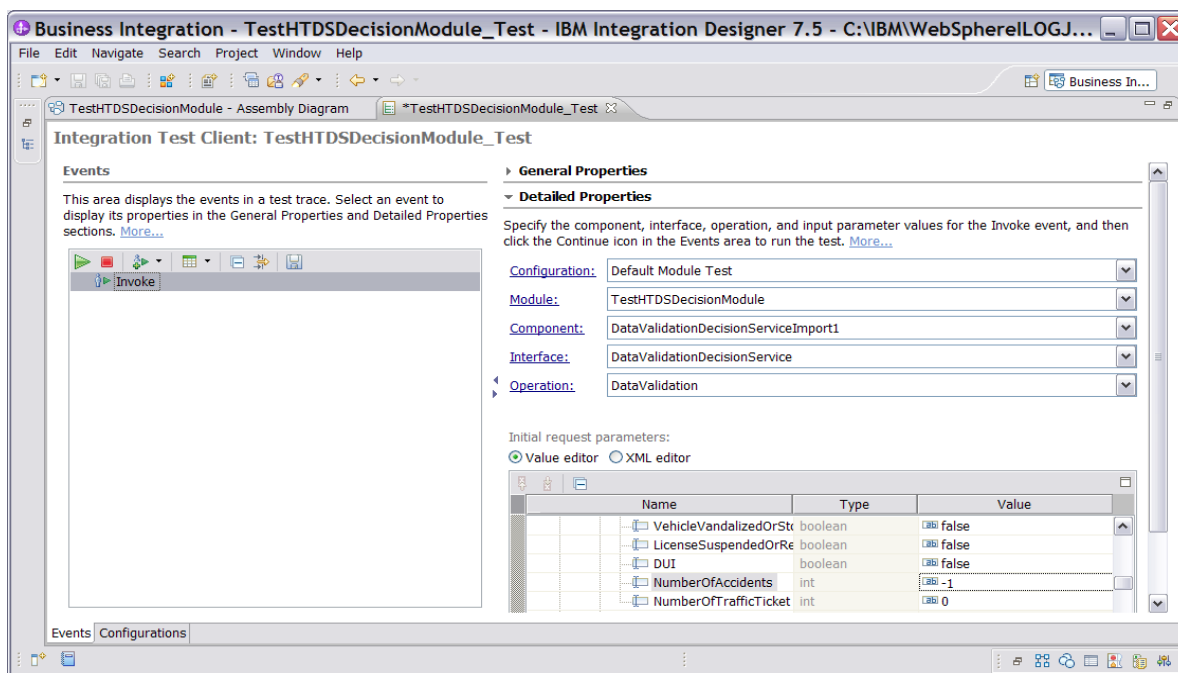
It is left as an exercise for the reader to repeat this for the Eligibility decision.

## Step 6. Test the HTDS Decision Module.

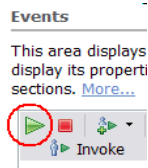
To test the HTDS Decision Module you must make sure you have a Process Server Environment configured. See the overview and environment setup section of the tutorial for further details.

Right click on the module **TestHTDSDecisionModule** and click on **Test > Test Modules**. You can also right click on the **DataValidationDecisionServiceImport1** component in the Assembly diagram and select **Test Component**.

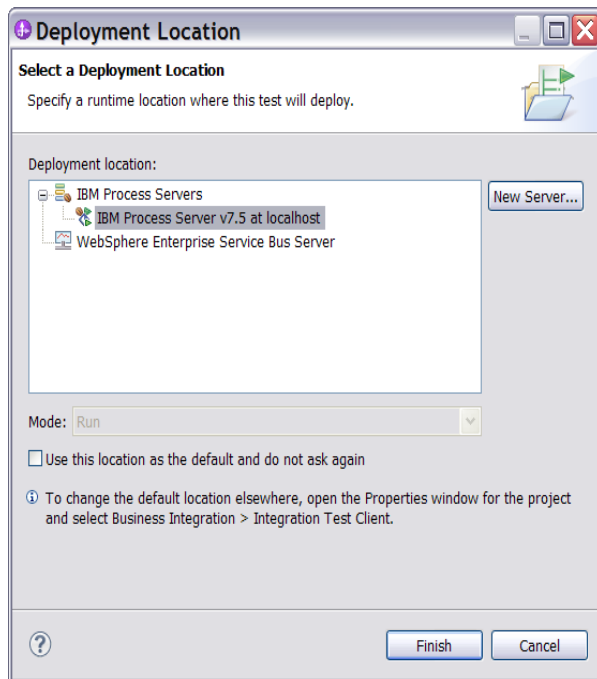
The Integration Test Client opens. In the Value Editor, navigate to the **NumberOfAccidents** field and set the value to **-1**.



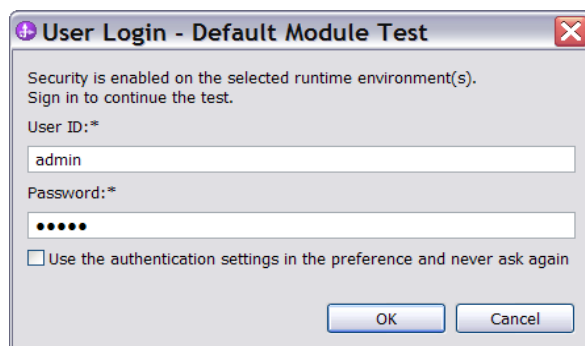
Press the Continue symbol.



In the **Select a Deployment Location** screen, select the Process Server environment that you configured Rules to run on and click **Finish**.



When prompted enter the administrator name and password for the environment usually admin/admin.



The module is published to the server, and the request data sent to the module. The module then invokes the HTDS 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 data is not valid because the number of accidents was negative.

**Business Integration - TestHTDSDDecisionModule\_Test - IBM Integration Designer 7.5 - C:\IBM\WebSphere\LOGJ...**

File Edit Navigate Search Project Window Help

TestHTDSDDecisionModule - Assembly Diagram \*TestHTDSDDecisionModule\_Test

### Integration Test Client: TestHTDSDDecisionModule\_Test

**Events**

This area displays the events in a test trace. Select an event to display its properties in the General Properties and Detailed Properties sections. [More...](#)

- Invoke (DataValidationDecisionServiceImport1)
- Invoke started
- Invoke (DataValidationDecisionServiceIn)
- Return (DataValidationDecisionServiceIr)
- Invoke returned

**Detailed Properties**

Module: [TestHTDSDDecisionModule](#)  
Component: [DataValidationDecisionServiceImport1](#)  
Interface: [DataValidationDecisionService](#)  
Operation: [DataValidation](#)

Return parameters:

Value Editor XML Source

Name	Type	Value
ModelYear	int	0
Value	double	0.0
Coverage	CoverageItem[]	
DataValidationRespor	DataValidationResponse	
DataValidationRes	ValidationResponse	
Validated	boolean	false
MainMessage	string	The number of accidents should not be negative
ErrorMessages	string[]	

The number of accidents should not be negative  
Press 'F3' for focus

Events Configurations

It is left as an exercise for the reader to repeat this for the Eligibility decision.

You have now successfully used an HTDS Managed Decision Service from an SCA Component within Process Server.