

SeeBeyond ICAN Suite

eGate Tutorial

Release 5.0.1



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Introduction

Welcome to the *eGate Tutorial*. The Tutorial must be run on a Windows system.

This document includes an overview of the Enterprise Designer graphical user interface (GUI) and tutorial to help you learn how to create and run a Project in eGate Integrator.

This chapter includes

- [“Organization of Information” on page 5](#)
- [“Supporting Documents” on page 5](#)
- [“eGate Installation Requirements” on page 6](#)
- [“The SeeBeyond Web Site” on page 7](#)

1.1 Organization of Information

This document includes the following chapters:

- **Chapter 1 “Introduction”** overviews the contents of the *eGate Tutorial*, describes the writing conventions used in this document, and provides a complete list of related eGate Integrator documentation.
- **Chapter 2 “Features of the Enterprise Designer”** identifies the components (menu bar, toolbar, Enterprise Explorer, and Project Editor) of the Enterprise Designer GUI.
- **Chapter 3 “Building a Simple Project”** takes you through the process necessary to set up and run a basic Project.

1.2 Supporting Documents

The following SeeBeyond documents provide additional information about eGate Integrator:

- *eGate Integrator Installation Guide*
- *eGate Integrator Release Notes*
- *eGate Integrator User’s Guide*

- *Message Server Reference Guide*
- *SeeBeyond ICAN Suite Deployment Guide*
- *SeeBeyond ICAN Suite Primer*

See the *SeeBeyond ICAN Suite Primer* for a complete list of eGate Integrator documentation. You can also refer to the appropriate Windows or UNIX documents, if necessary.

1.3 Writing Conventions

The following writing conventions are observed throughout this document.

Table 1 Writing Conventions

Text	Convention	Example
Button, file, icon, parameter, variable, method, menu, and object names.	Bold text	<ul style="list-style-type: none"> ▪ Click OK to save and close. ▪ From the File menu, select Exit. ▪ Select the logicalhost.exe file. ▪ Enter the timeout value. ▪ Use the getClassname() method. ▪ Configure the Inbound File eWay.
Command line arguments and code samples	Fixed font. Variables are shown in bold italic .	<code>bootstrap -p password</code>
Hypertext links	Blue text	For more information, see "Writing Conventions" on page 6.

Additional Conventions

Windows Systems

For the purposes of this guide, references to "Windows" will apply to Microsoft Windows Server 2003, Windows XP, and Windows 2000.

Path Name Separator

This guide uses the backslash ("\<") as the separator within path names. If you are working on a UNIX system, please make the appropriate substitutions.

1.4 eGate Installation Requirements

To simplify these examples, this tutorial assumes you have all of the following eGate components installed on a single Windows system:

- eGate Repository
- Logical Host
- Enterprise Designer
- eGate product
- File eWay product

Refer to the *eGate Integrator Installation Guide* for system requirements and installation instructions.

1.5 The SeeBeyond Web Site

The SeeBeyond Web site is your best source for up-to-the-minute product news and technical support information. The site's URL is:

<http://www.seebeyond.com>

Features of the Enterprise Designer

The Enterprise Designer is the graphical user interface (GUI) used to design and implement ICAN 5.0 projects. This chapter overviews the features and interface of the Enterprise Designer window.

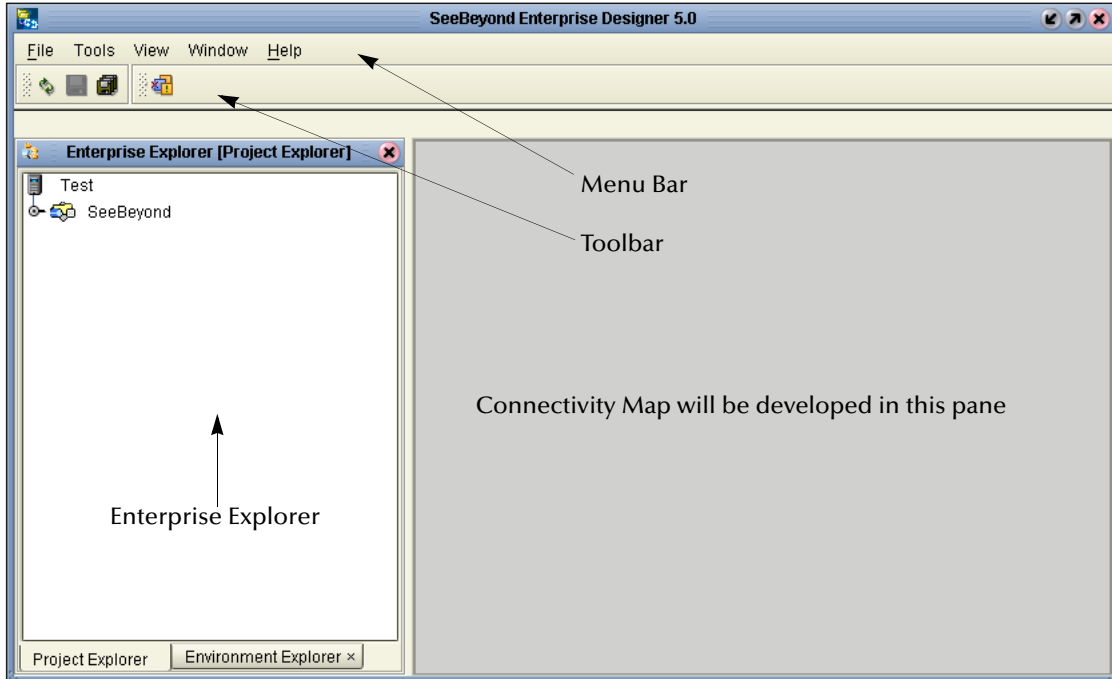
This chapter includes

- “Enterprise Designer Components” on page 8
- “Menu Bar” on page 9
- “Enterprise Explorer” on page 10
- “Project Editor” on page 10

2.1 Enterprise Designer Components

The Enterprise Designer is used to create and configure the components of an eGate Project. Each component of this interface is identified in Figure 1.

Figure 1 SeeBeyond Enterprise Designer Window



Note: This chapter provides a high-level overview of the Enterprise Designer GUI. Refer to the eGate Integrator User's Guide for a more detailed description of the menu bar, toolbar, Enterprise Explorer, and Enterprise Designer.

2.2 Menu Bar

The menu bar shown below in Figure 2 provides access to a series of menu commands used to build and manage a Project.

Figure 2 Enterprise Designer Menu Bar

File Tools View Window Help

The function of each menu is briefly described below:

- **File**—Lists options for save, save all, and exit.
- **Tools**—Lists options for Impact Analyzer, Update Center and Setup Options.
- **View**—Lists options to view the Environment Explorer and Project Explorer.
- **Window**—Lists options for the various window displays, cascade, tile, etc.
- **Help**—online help for all installed modules

2.3 Enterprise Explorer

The Enterprise Explorer organizes all of the components of a Project into a series of folders and contains the following two tabs:

- **Project Explorer**—Logical configurations designed to help solve a business problem. This branch includes all the components of an Enterprise Designer Project, including Connectivity Maps, Services, Object Type Definitions (OTD), and Deployment Profiles.
- **Environment Explorer**—Collections of logical hosts and external systems capable of hosting eGate components and information about external systems, which may be involved with an eGate configuration.

2.4 Project Editor

The Project Editor contains the “nuts-and-bolts” of a Project. This part of the Enterprise Designer is empty when you start a new Project. However, as you work through the tutorial, the Project Editor will quickly fill with components and graphical structures representing the various stages of the Project. The types of windows in the Project Editor area include:

- **Connectivity Map**—Contains business logic components, such as Services, Topics, queues, and eWays, that you include in the structure of a Project.
- **Java Collaboration Editor**—Contains the business rules defined in Java.
- **XSLT Collaboration Editor**—Contains the business rules defined in XSLT.
- **OTD Editor**—Edits and tests the OTDs (Object Type Definitions)
- **Deployment Profile Editor**—Edits the deployment profile
- **Environment**—Collection of physical resources (logical hosts and external systems)

Building a Simple Project

This tutorial provides step-by-step procedures for creating and testing an eGate Project with Java Collaboration rules. This Project addresses a business challenge in which a company uses two systems to handle time tracking and payroll distribution. As the systems use different formats, one system must use data from the other system to accomplish its tasks. This chapter explains how to structure your Project to allow the two systems to work together effectively.

This chapter includes

- [“Business Challenge” on page 11](#)
- [“Project Overview” on page 12](#)
- [“Create the Sample Data” on page 15](#)
- [“Create a New Project” on page 16](#)
- [“Create a Connectivity Map” on page 18](#)
- [“Add Components to the Connectivity Map” on page 19](#)
- [“Create a New Object Type Definition” on page 21](#)
- [“Configure the Services” on page 26](#)
- [“Apply the Collaborations” on page 46](#)
- [“Link Components in the Connectivity Map” on page 47](#)
- [“Configure the eWays and JMS Connections” on page 49](#)
- [“Create an Environment and Activate the Deployment Profile” on page 52](#)
- [“Run the Bootstrap and Management Agent” on page 57](#)
- [“Verify the Output Data” on page 58](#)

3.1 Business Challenge

The Project described in this chapter provides a solution to the following business challenge:

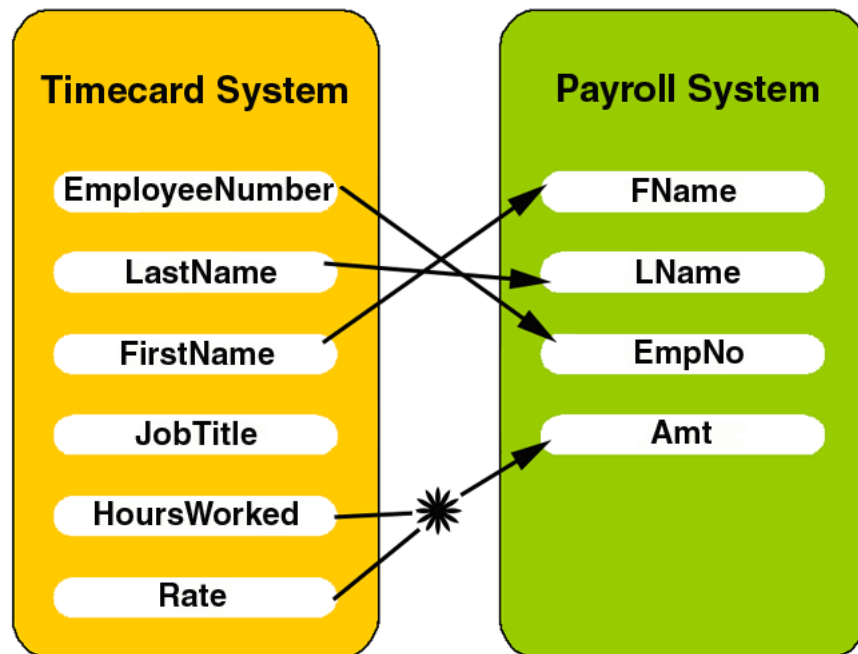
- A timecard system tracks the weekly hours worked by employees. The data in this system is in XML format with six fields: **EmployeeNumber**, **LastName**, **FirstName**, **JobTitle**, **HoursWorked**, and **Rate**.

- A Payroll system is responsible for employee payment. The data in this system is in XML format with four fields: **FName**, **LName**, **EmpNo**, and **Amt**. The last element, **Amt**, is calculated by multiplying the **HoursWorked** by the **Rate**.

As shown in Figure 3 below, the following issues must be addressed to successfully integrate the systems:

- The value for the **Amt** field in the Payroll system must be calculated from data in the Timecard system.
- The timecard data must be formatted in such a way that it is recognized by the Payroll system.

Figure 3 The Relationship Between the Two Systems



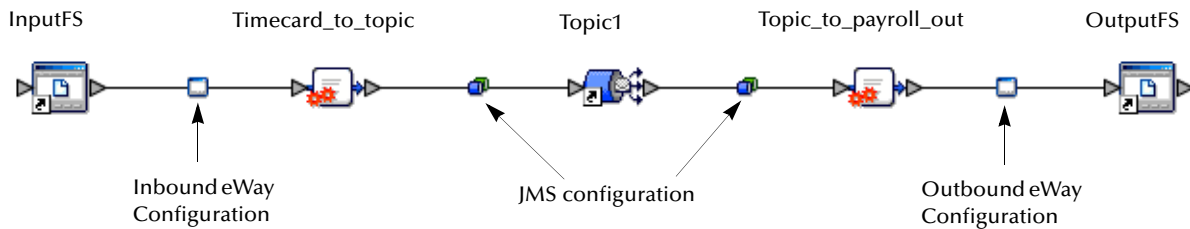
3.2 Project Overview

You will create a basic eGate Project to meet the business challenge described in [“Business Challenge” on page 11](#).

3.2.1 Project Description

The finished eGate Project will contain components used to move the data throughout the Project and publish the data in the appropriate format for the Payroll system.

Figure 4 Project Connectivity Map



These components perform the following functions:

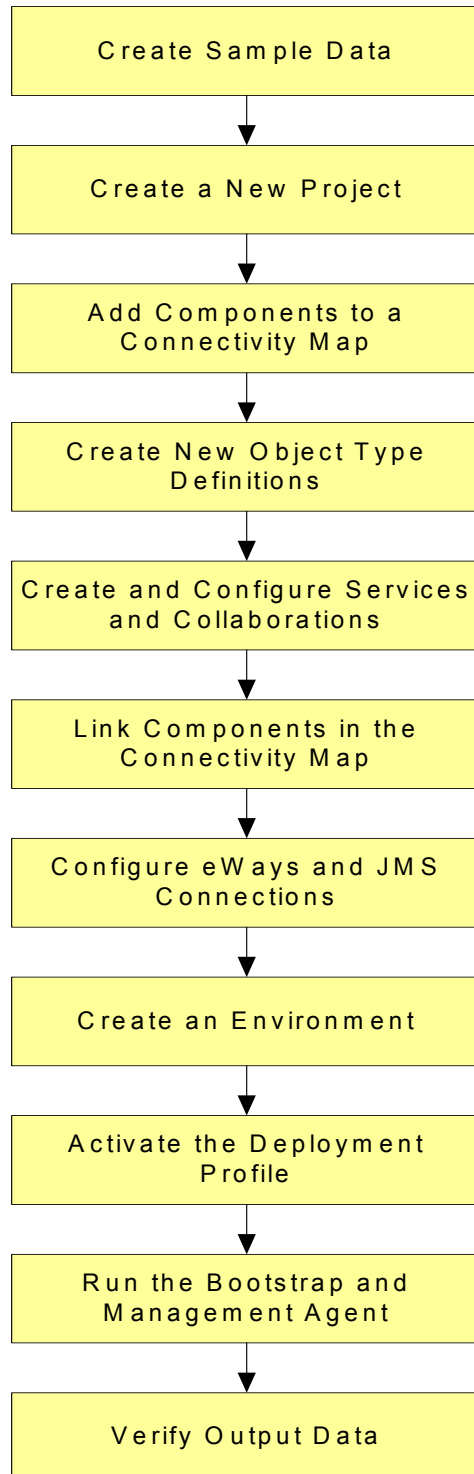
- **InputFS:** The InputFS *External Application* represents the Timecard system containing the Input XML data file. (InputFS stands for Input File System.)
- **Inbound eWay:** The inbound eWay polls a specified location on the file system for the input XML data file.
- **Timecard_to_topic:** This Service copies the input data to the **Topic1** without making any changes to the data.
- **Topic1:** This topic publishes the message from the Service **Timecard_to_topic** to **Topic_to_Payroll_out**.
- **Topic_to_Payroll_out:** This Service copies the input timecard elements to the appropriate output Payroll system elements. It also calculates the payroll amount.
- **Outbound eWay:** This eWay publishes the finished output data to the file system in the format appropriate for the Payroll system.
- **OutputFS:** This represents the Payroll system—the output data file.

3.2.2 Process Overview

Complete the following general steps:

- 1 [“Create the Sample Data” on page 15](#)
- 2 [“Create a New Project” on page 16](#)
- 3 [“Create a Connectivity Map” on page 18](#)
- 4 [“Add Components to the Connectivity Map” on page 19](#)
- 5 [“Create a New Object Type Definition” on page 21](#)
- 6 [“Configure the Services” on page 26](#)
- 7 [“Apply the Collaborations” on page 46](#)
- 8 [“Link Components in the Connectivity Map” on page 47](#)
- 9 [“Configure the eWays and JMS Connections” on page 49](#)
- 10 [“Create an Environment and Activate the Deployment Profile” on page 52](#)
- 11 [“Run the Bootstrap and Management Agent” on page 57](#)
- 12 [“Verify the Output Data” on page 58](#)

Figure 5 Project Diagram



3.3 Create the Sample Data

This Project requires you to create sample XML data as well as sample XML Document Type Definition files (.dtd) to represent the Timecard and Payroll systems. The input and output.dtd files are used to represent the data in the Timecard and Payroll systems. The input XML file represents a timecard record from the Timecard system.

3.3.1 Create the Sample Input XML File

Use a text editor such as Microsoft Notepad to create the input XML file. You can also copy and paste from this document (PDF) using the text select tool from within Adobe Acrobat.

Create the XML file

- 1 In Windows Explorer, create a directory for the data files. For this sample scenario, use **c:\eGateData\Project1**.
- 2 In Notepad, create an XML file containing the following information:

```
<?xml version="1.0" encoding="UTF-8"?>
  <Employee>
    <EmployeeNumber>100</EmployeeNumber>
    <LastName>Smith</LastName>
    <FirstName>Jane</FirstName>
    <JobTitle>Manager</JobTitle>
    <HoursWorked>40</HoursWorked>
    <Rate>50</Rate>
  </Employee>
```

- 3 Save the file as **Timecard.xml** in the **c:\eGateData\Project1** directory.

3.3.2 Create the Input.dtd File

The **input.dtd** file is used as a representation of the data in the Timecard system.

The **input.dtd** file uses the following elements:

- **EmployeeNumber**
- **LastName**
- **FirstName**
- **JobTitle**
- **HoursWorked**
- **Rate**

Create the input.dtd File

- 1 In Notepad, create an XML file containing the following information:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT Employee (EmployeeNumber, LastName, FirstName, JobTitle,
HoursWorked, Rate)>
<!ELEMENT EmployeeNumber (#PCDATA)>
<!ELEMENT LastName (#PCDATA)>
```

```
<!ELEMENT FirstName(#PCDATA)>  
<!ELEMENT JobTitle(#PCDATA)>  
<!ELEMENT HoursWorked(#PCDATA)>  
<!ELEMENT Rate(#PCDATA)>
```

- 2 Save the file as **input.dtd** in the **c:\eGateData\Project1** directory.

3.3.3 Create the Output.dtd File

The **output.dtd** file is used as a representation of the data in the Payroll system.

The **output.dtd** file uses the following elements:

- **FName**
- **LName**
- **EmpNo**
- **Amt**

Create the output.dtd file

- 1 In Notepad, create an XML file containing the following information:

```
<?xml version="1.0" encoding="UTF-8"?>  
<!ELEMENT Employee (FName, LName, EmpNo, Amt)>  
<!ELEMENT FName(#PCDATA)>  
<!ELEMENT LName(#PCDATA)>  
<!ELEMENT EmpNo(#PCDATA)>  
<!ELEMENT Amt(#PCDATA)>
```

- 2 Save the file as **output.dtd** in the **c:\eGateData\Project1** directory.

3.4 Create a New Project

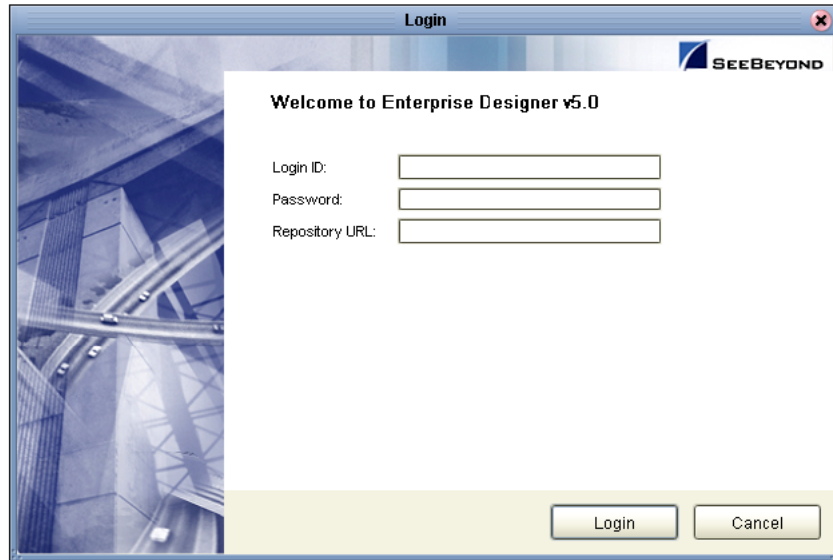
There are many ways to create a Project and link the modules. This tutorial presents one scenario. Begin by creating and naming a Project in the Enterprise Designer.

Start the Enterprise Designer

- 1 Start the Enterprise Designer by executing **runed.bat** in your **ican50** folder (**c:\ican50\edesigner\bin**).

The Enterprise Designer Login dialog box appears.

Figure 6 Enterprise Designer Login



- 2 Type your **Username** and **Password**. Click **Login** to start the Enterprise Designer.

Note: If your login window doesn't appear or if you get an invalid Username or Password error, make sure your repository is running. Also, be aware that the Username and Password are case sensitive.

Create and name a Project


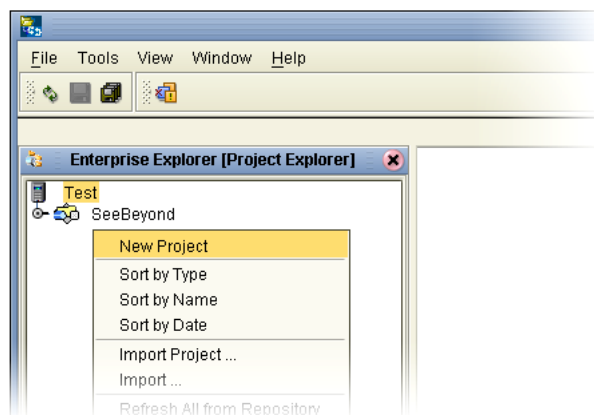
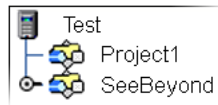
- 1 In the Enterprise Explorer pane of the Enterprise Designer, right-click the Repository name (computer icon ). Click **New Project**.

Figure 7 Create a Project



- 2 Accept the default **Project1** as the file name and press **Enter**.
- 3 The **Project1** structure appears in the Explorer pane on the left side of the window.

Figure 8 Project Folder: Project1



3.5 Create a Connectivity Map

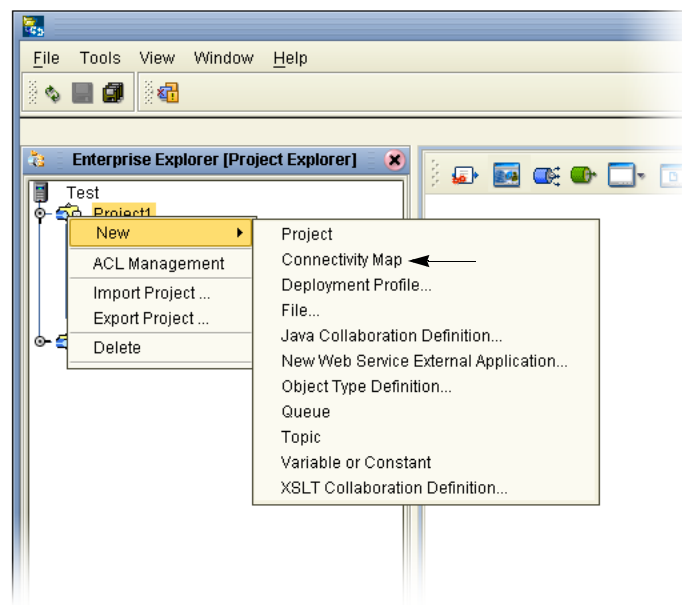
Project1 needs a Connectivity Map to define the flow between the Timecard system and the Payroll system.

This section describes how to create the Connectivity Map for **Project1**.

Create the Connectivity Map

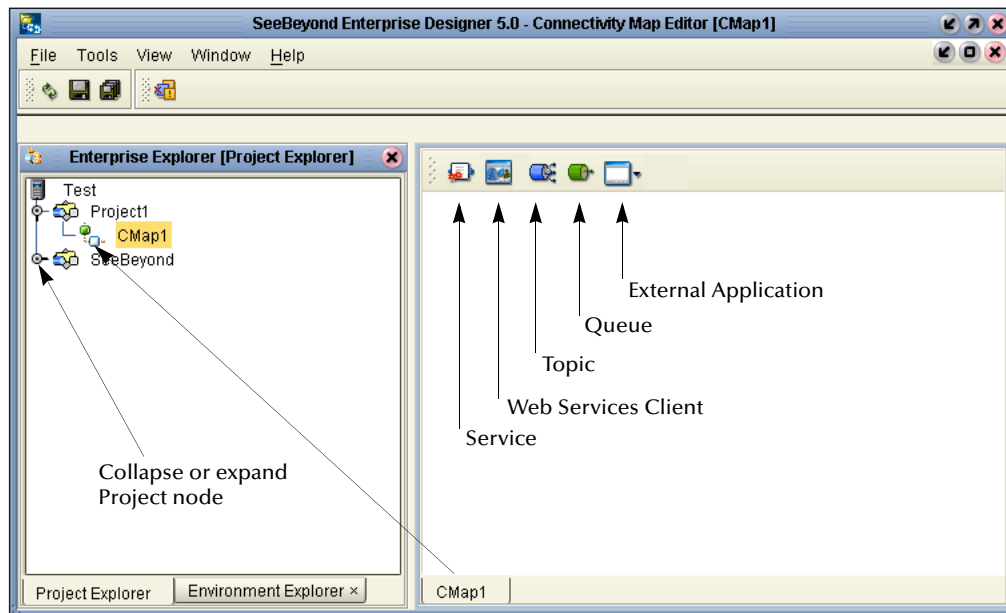
- 1 In the Enterprise Explorer, right-click the **Project1** icon. Click **New** and **Connectivity Map**.

Figure 9 Create a Connectivity Map



- 2 You may give your Connectivity Map a name. In this tutorial, accept the default name, **CMap1**.
- 3 **CMap1** is added to your **Project1**, as shown in the following figure.

Figure 10 Project1 with a Connectivity Map (CMap1)



Note: The CMap1 Connectivity Map appears as an icon in the Project Explorer. A CMap1 tab is also added at the bottom of the Connectivity Map.

3.6 Add Components to the Connectivity Map

In this section, you will add the components to the Connectivity Map. Later you will link the components as shown in [Figure 4 on page 13](#).

3.6.1 Add Components to the Connectivity Map

In this section, you will add the following components to the Connectivity Map:

- **InputFS** (File External Application)
- **Timecard_to_topic**
- **Topic1**
- **Topic_to_Payroll_out**
- **OutputFS** (File External Application)

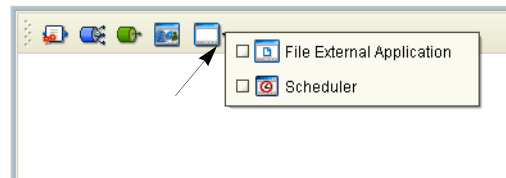
Create the InputFS

- 1 On the Connectivity Map toolbar, click the External Application arrow (shown in [Figure 11](#)) to display the list. Click **File External Application**.

Note: If the file option doesn't display in the drop-down list, you may need to install *FileWay.sar*.

This adds a new **File** icon to the toolbar.

Figure 11 External Application Selection



- 2 Drag the **File** icon from the toolbar into the left side of the Connectivity Map.
This creates a new File External Application called **File1**.
- 3 Type a new file name, **InputFS** (Input File System). You have the option to rename files by Right-clicking on the label.
- 4 Press **Enter**.

Note: Do not type a space between Input and FS.

Create the Service, Timecard_to_topic

- 1 On the Connectivity Map toolbar, drag the **Service** icon into the Connectivity Map to the right of the **InputFS** icon.
This creates a new Service called **Service1**.
- 2 Right-click the Service1 label and rename **Timecard_to_topic**.
- 3 Press **Enter**.

Note: To reposition a component in the Connectivity Map, click the icon and drag to a new location while holding down the mouse button.

Create a Topic

- 1 On the Connectivity Map toolbar, drag the **Topic** icon into the Connectivity Map to the right of the **Timecard_to_topic** icon.
This creates a new topic called **Topic1**.

Create the Service, Topic_to_payroll_out

- 1 On the Connectivity Map toolbar, drag another **Service** icon into the Connectivity Map to the right of the **Topic1** icon.
- 2 Type a new file name, **Topic_to_payroll_out**.
- 3 Press **Enter**.

Create the OutputFS

- 1 Drag the **File** icon into the Connectivity Map, and place it to the right of the **Topic_to_payroll_out** icon.
This creates a new External Application file.
- 2 Right-click the **File** label and rename **OutputFS**.

- 3 Press **Enter**.

Figure 12 Connectivity Map



Note: These objects will first be configured, and later they will be linked.

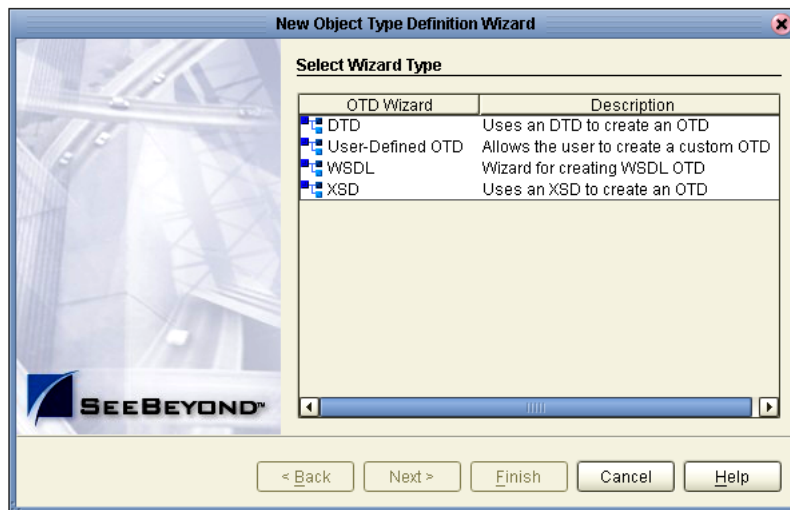
3.7 Create a New Object Type Definition

You must create an object type definition before you can configure your Services.

Create an Object Type Definition

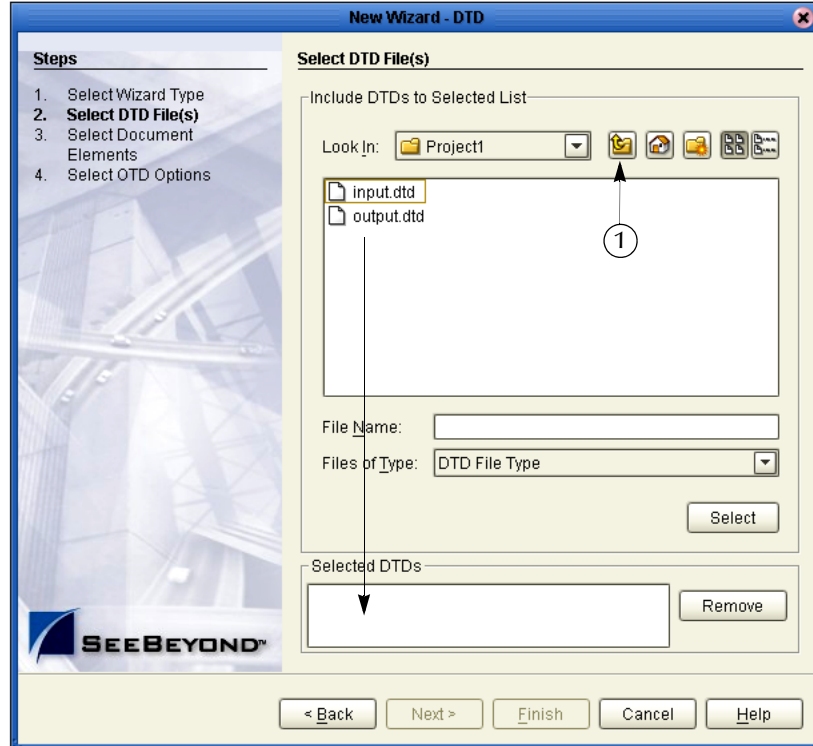
- 1 Right-click **Project1**.
- 2 Click **New** and **Object Type Definition**.

Figure 13 OTD Wizard Selection



- 3 Click the **DTD** item. Click **Next**.
- 4 Navigate to the sample data folder. For example, `c:\eGateData\Project1`.

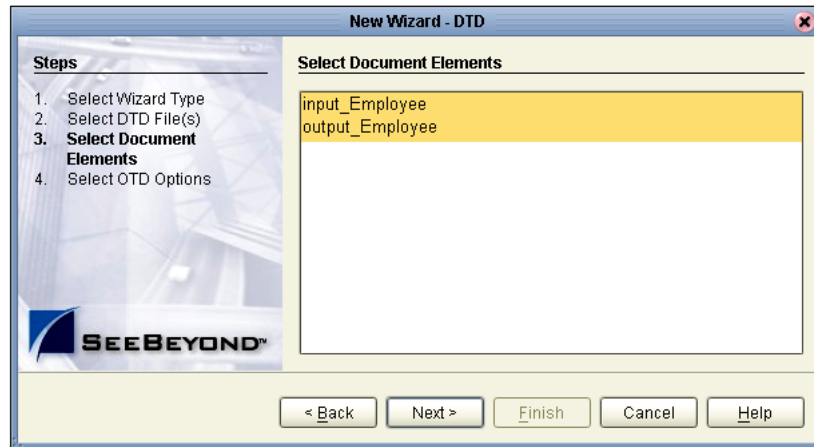
Figure 14 Select DTD Files



- 5 Highlight **input.dtd**. Click **Select** (or double-click).
- 6 Highlight **output.dtd**. Click **Select** (or double-click).
The **input.dtd** and **output.dtd** should appear in the Selected DTDs.
(You can also select both at the same time by holding down the shift key.)
- 7 When both **input.dtd** and **output.dtd** appear in the Selected DTDs, click **Next**.

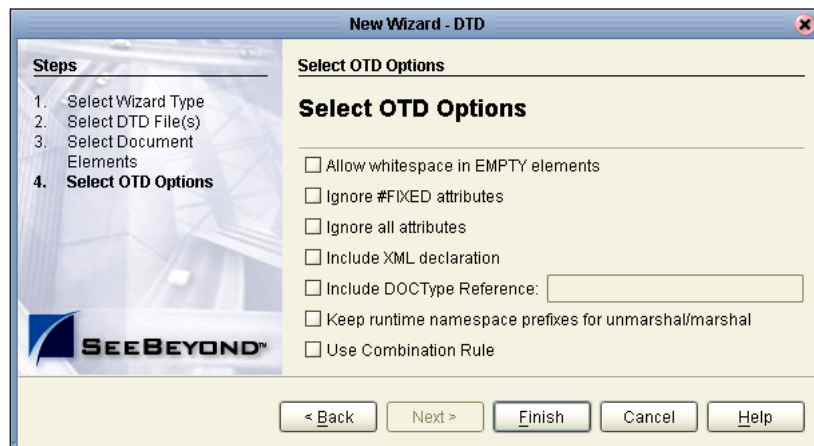
*Note: The **Up one Level** icon (number 1 in Figure 14 above) is used to navigate to a previous screen; this is useful if you have made an incorrect selection.*

Figure 15 Select Document Elements



- 8 Select both **input_Employee** and **output_Employee** (hold down the CTRL key while selecting). Click **Next**.

Figure 16 Select OTD Options



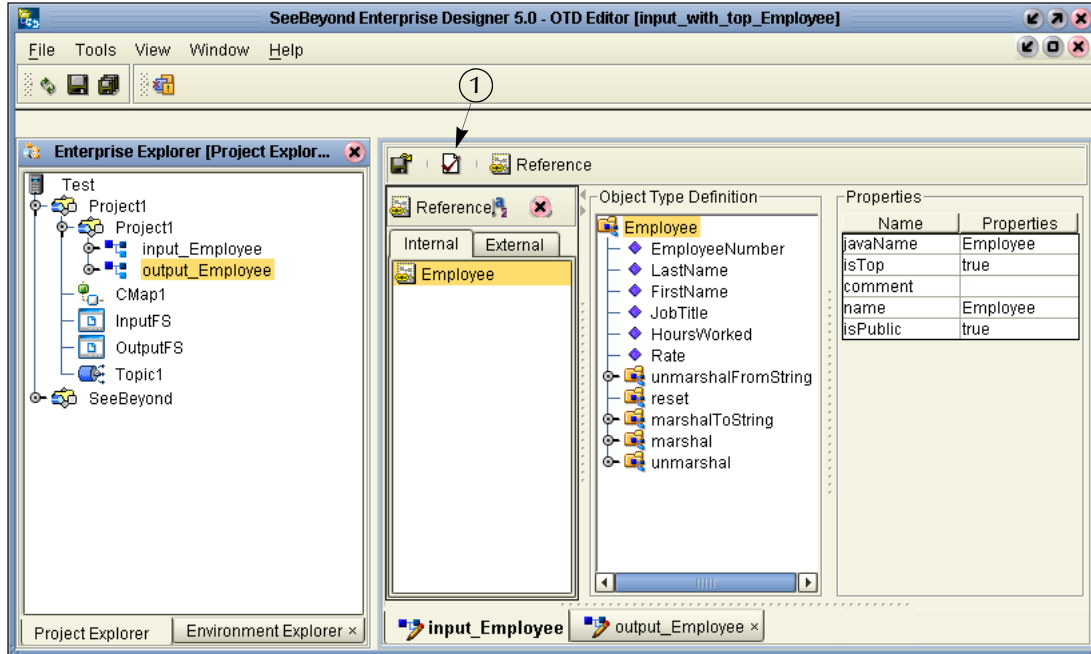
- 9 Click **Finish** (accept the defaults).

The OTD Editor window opens. See the following Figure 17.

- 10 On the **File** menu, click **Save**.

Note: *Save* saves all your changes in your current open editor while *Save All* saves all changes across all editors, including changes in the environments.

Figure 17 OTD Editor Input



Important: Make sure the input tab is selected for the window.

In these steps you will run the **Tester** to verify that your input file matches the DTD.

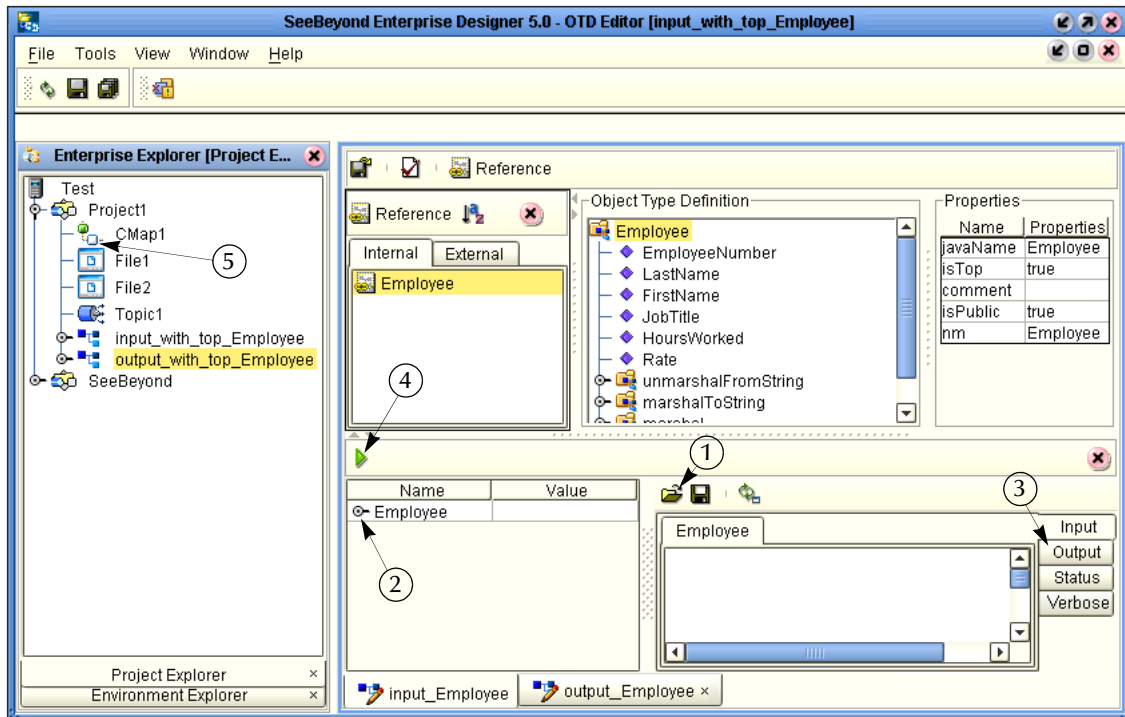
Test the Input Data

Use the following “tester” steps to check for valid format and data in the DTD files. In the following steps you will test the input **Timecard.xml** file.

- 1 Click the **input_Employee** tab, if it is not already selected.
- 2 Click the **Tester** icon (number 1 in Figure 17 above).

An expanded window appears. See the following Figure 18.

Figure 18 Test Input Data File



- 3 Click the **Open File** icon (number 1 in Figure 18 above) and navigate to your input data (**Timecard.xml**).
- 4 Double-click your sample data file (**Timecard.xml**) to display the XML data in the window.
- 5 Click the expand view icon (number 2 in Figure 18) to expand the view of the **Employee** file.
- 6 Click the **Output** button (number 3 in Figure 18). Output is empty before the test is run.
- 7 Click the green **Tester** icon (number 4 in Figure 18) to execute the test.
- 8 Click the **Output** button again to display the DTD file.

If your sample data is OK, the correct output DTD will display in the output window, since the data is passed through. If there are any errors in your file, the Status tab will be populated with error messages.

- 9 Double-click the **CMap1** icon (number 5 in Figure 18) to redisplay the Connectivity Map.

3.8 Configure the Services

You will use Service wizards in the following steps to configure your Collaborations.

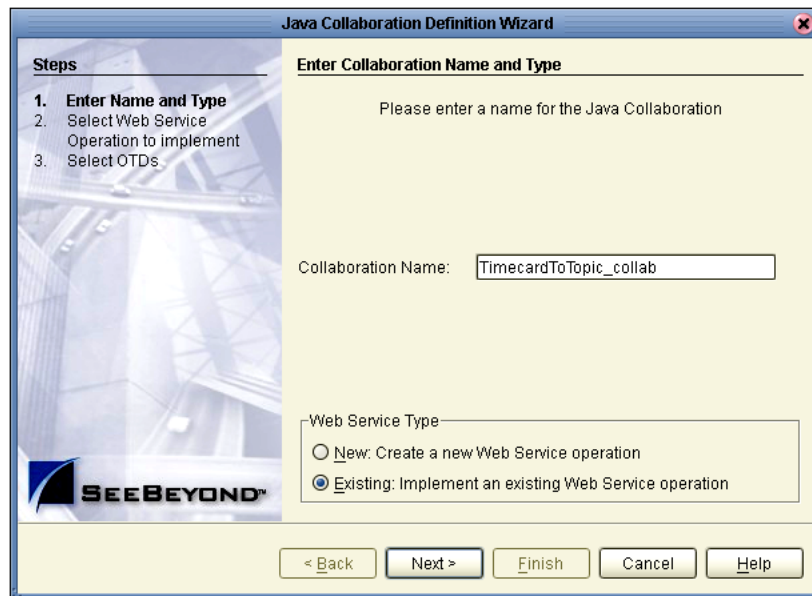
3.8.1 Configure Timecard_to_topic

Select Web Service Interface

- 1 Right-click **Project1**.
- 2 Click **New** and **Java Collaboration Definition**.

The Java Collaboration Definition Wizard appears.

Figure 19 New Java Collaboration Definition Name

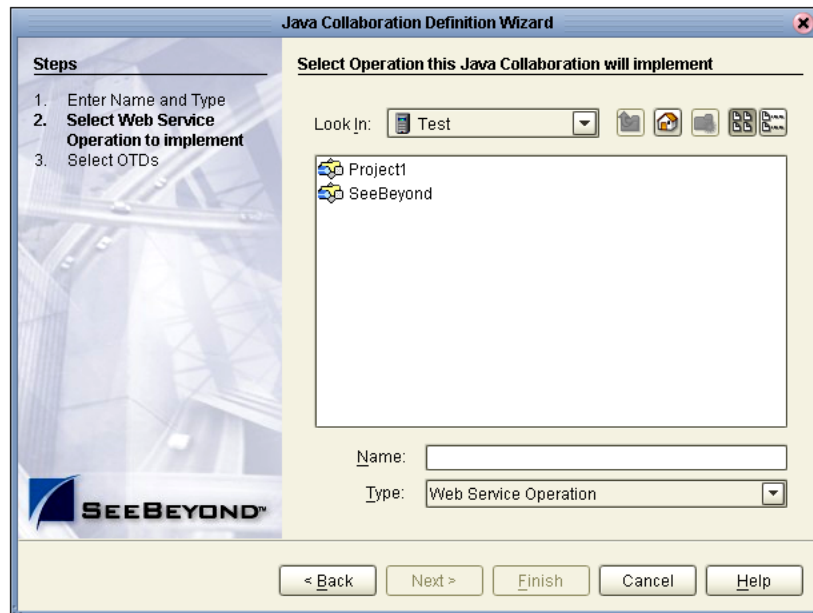


Note: Accept the default radio button, *Existing Web Service*, for this Tutorial.

- 3 Type **TimecardToTopic_collab** as the name for the Java Collaboration. Click **Next**.

Note: You must give the collaboration a unique name (not **Timecard_to_topic** which will be the Service name) even though the Service and the collaboration refer to the same object in the Connectivity Map.

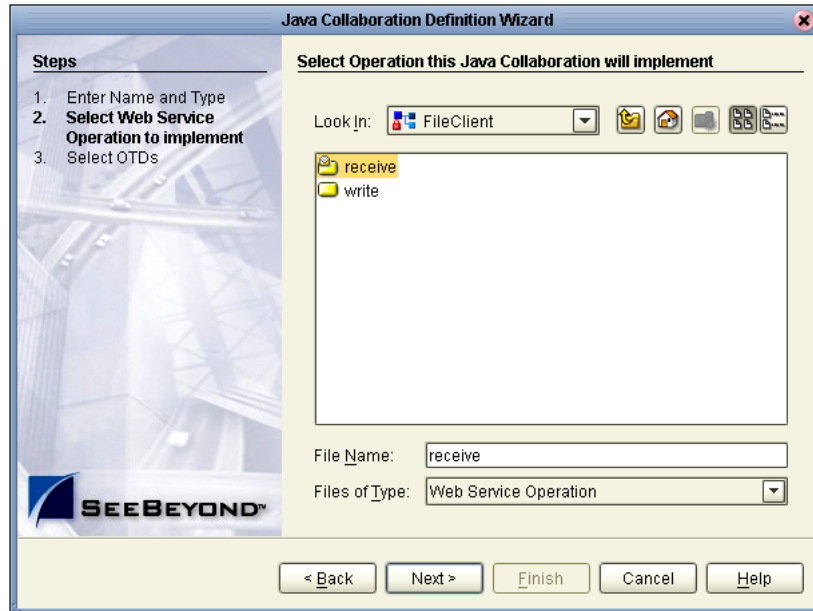
Figure 20 New Java Collaboration Definition Wizard



Your selection will “implement” a file-read Service. Then you will select OTDs.

- 4 Double-click **SeeBeyond**.
- 5 Double-click **eWays**.
- 6 Double-click **File**.
- 7 Double-click **FileClient**.
- 8 Click **receive**. Notice that **receive** appears in the Name field as shown in the following Figure 21.

Figure 21 New Java Collaboration Web Service Interface



- 9 Click **Next** when “receive” appears in the File Name field.

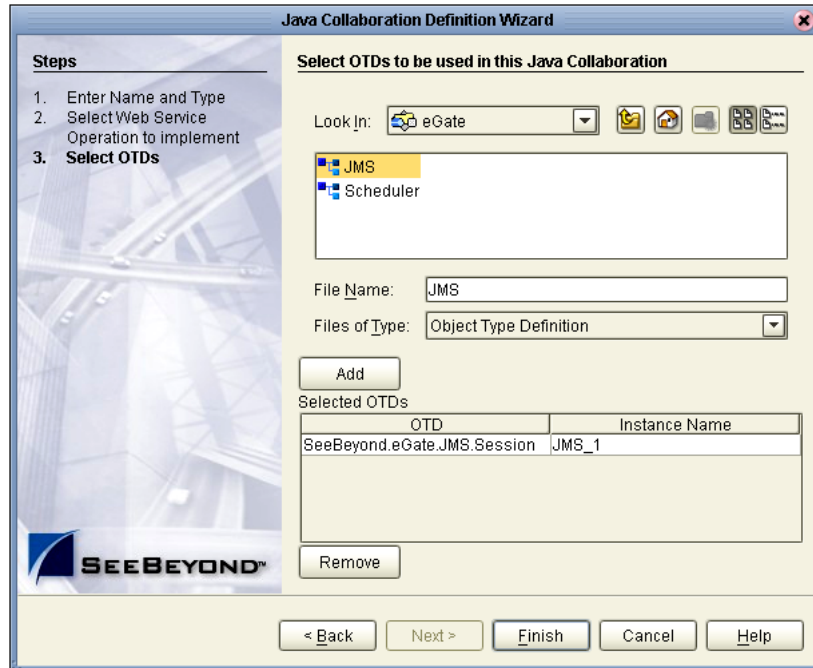
The New Java Collaboration Definition Wizard refreshes, and you can select OTDs.

Select OTDs

The following steps are for the Service to write to JMS.

- 1 Double-click **SeeBeyond**.
- 2 Double-click **eGate**.
- 3 Click **JMS**. Click **Add** (or double-click). **JMS** will appear in the **Selected OTDs** field as shown in the following Figure 22.

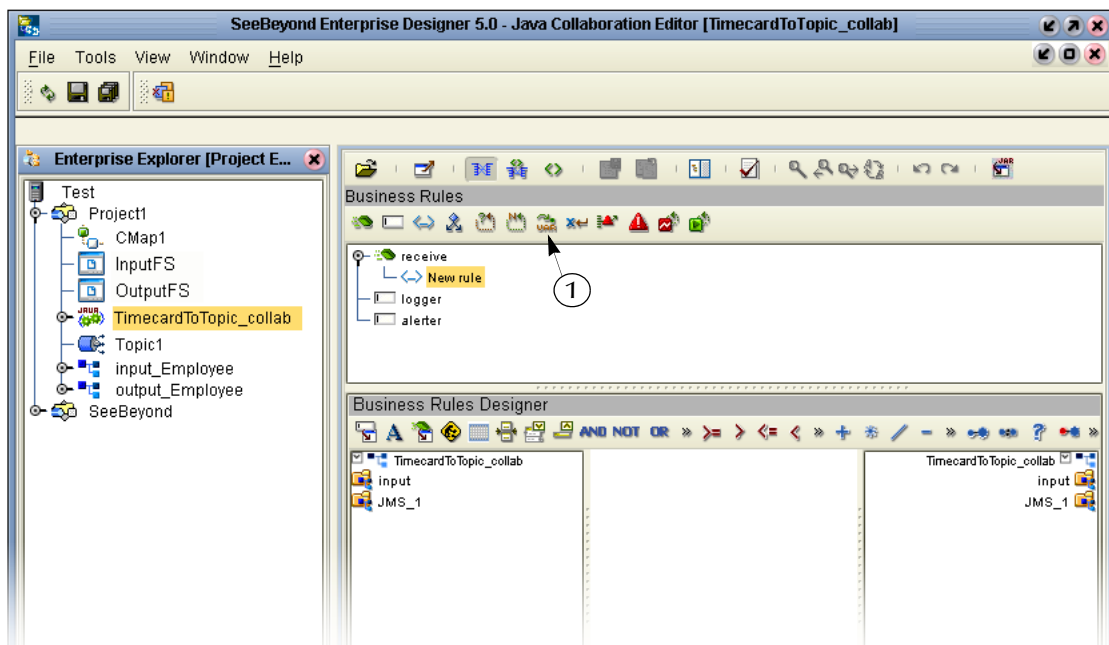
Figure 22 New Java Collaboration Select OTD



4 Click **Finish**.

After a few seconds, the **TimecardToTopic_collab** icon appears in the Project Explorer tree in the left pane. The Business Rules Designer window appears in the right pane. See the following Figure 23.

Figure 23 Business Rules Designer



3.8.2 Apply Business Rules for TimecardToTopic_collab

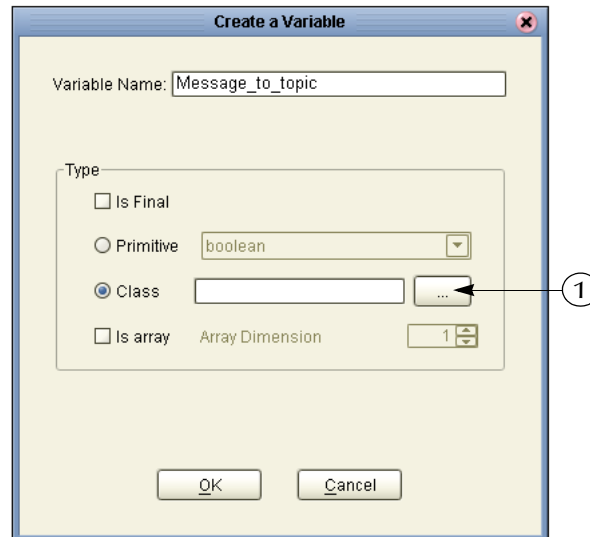
In **TimecardToTopic_collab** you will connect the input from the Timecard to the JMS OTD.

Create a Message variable

In the following steps you will create a Message variable for “message to topic.” A Message object contains the content that you want to send, and can include any additional user properties that will accompany the message. User properties are key/value pairs that may be used to describe the content of the message.

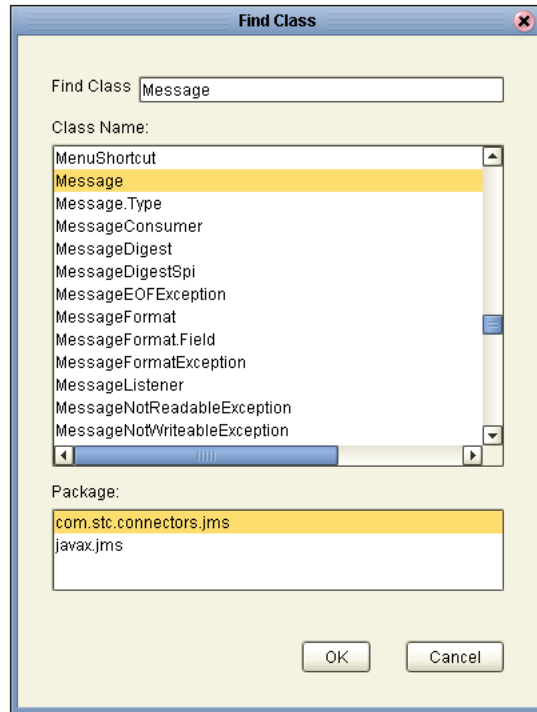
- 1 Click the **Local Variable** icon (number 1 in Figure 23).
- 2 Type the name **Message_to_topic**.
- 3 Check the **Class** radio button.

Figure 24 Create a Variable



- 4 Click on the ellipsis button (number 1 in the Figure 24) to display a list of class names.
A window listing class names appears.
- 5 Select **Message** from the scroll down list and press **Enter**.

Figure 25 Class Names



- 6 Click **OK** when “Message” is highlighted.

The class message name will appear in the **Class** field of the **Create a Variable** window.

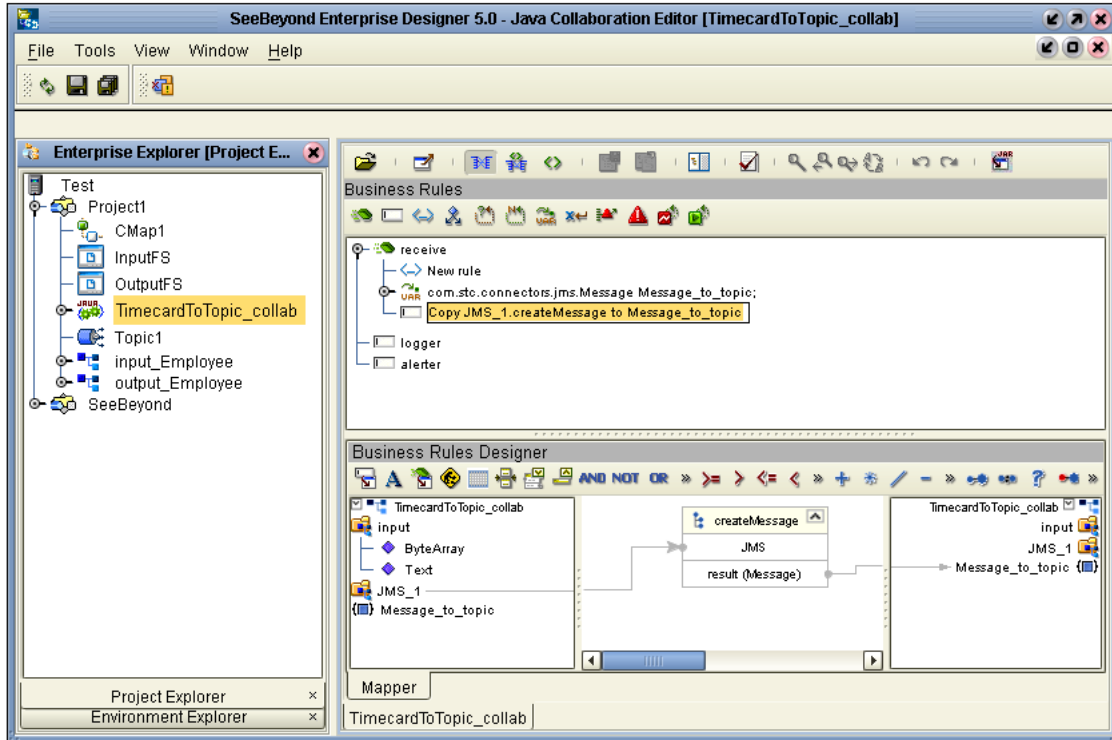
- 7 Click **OK** to accept the name (com.stc.connectors.jms.Message) and close the **Create a Variable** window.

Initialize the variable

- 1 Right-click **JMS_1** in the left pane. Click **Select a method to call**.
- 2 Click **createMessage()** from the list.

The **createMessage** box appears in the center pane of the Business Rules Designer.

Figure 26 Create Message



- 3 Connect **result (Message)** from the box to the variable **Message_to_topic** in the right pane (as shown in Figure 26 above).

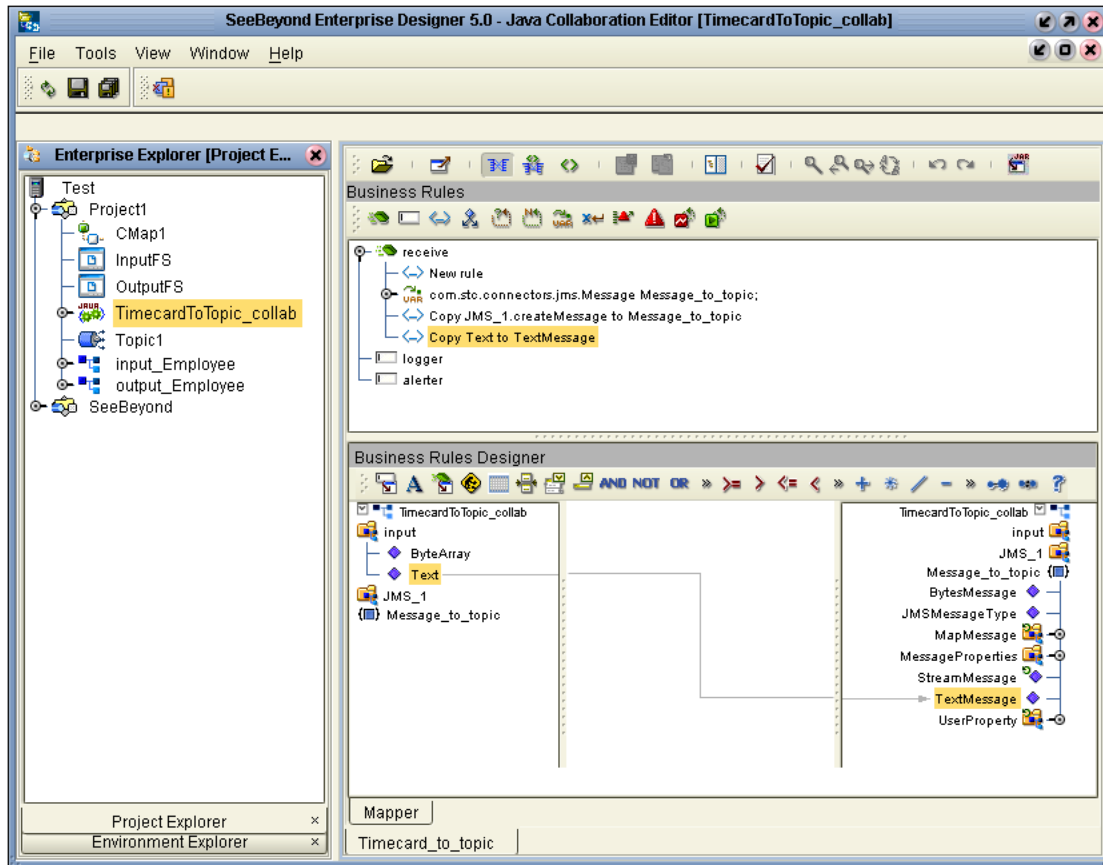
Note: Click slightly inside the box.

The variable is now initialized and you can start mapping.

Map and Send the Text Message

- 1 Double-click **Input** in the left pane of the Business Rules Designer window to expand the view.
- 2 Double-click **Message_to_topic** in the right pane to expand the view.
- 3 Connect **Text** in the left pane to **TextMessage** in the right pane.

Figure 27 Connect Text to Text Message



There is one more step to complete the **TimecardToTopic_collab**. JMS has to send this input to the next Service.

Send Input to Next Service

- 1 Right-click **JMS_1** in the left pane.
- 2 Click **Select a method to call**. Click **send**. (Select the **send** that has only one argument.)

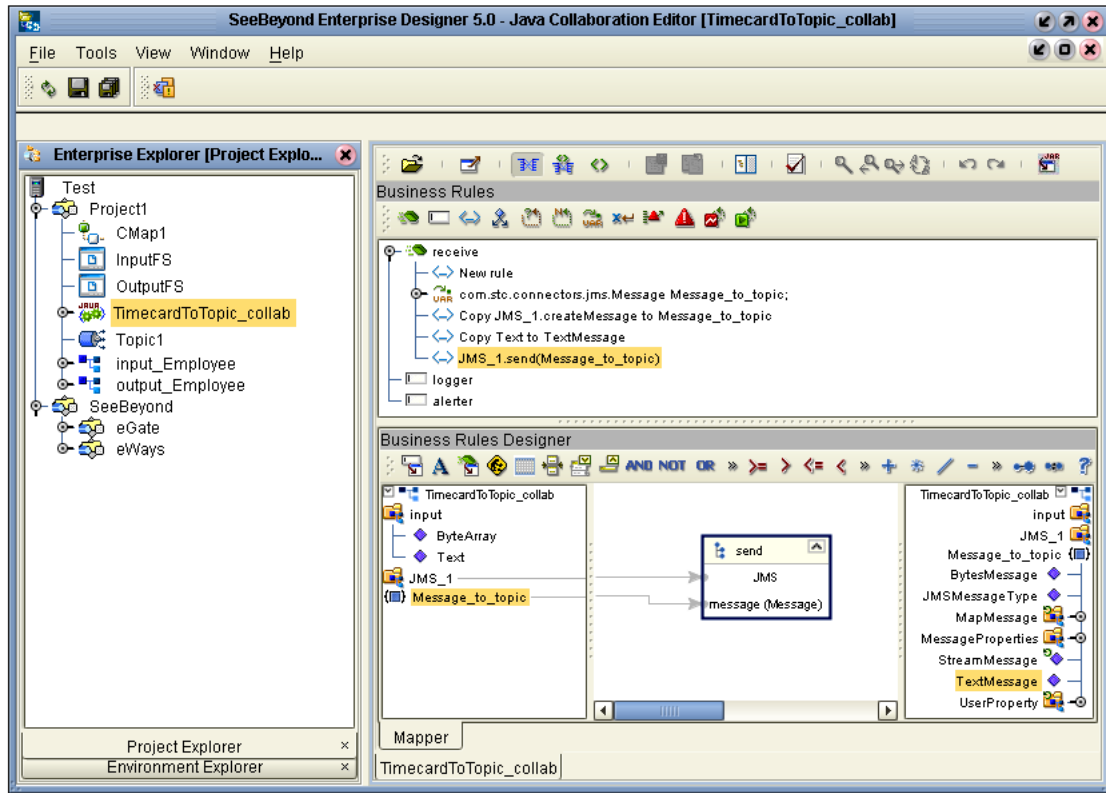
A send message box appears in the center pane.

- 3 Connect **Message_to_topic** in the left pane to **(Message)** in the box.

See the following Figure 28.

Note: In the steps beginning with “**Apply Business Rules for TimecardToTopic_collab**” on page 30 you created and initialized a Message variable. Creating the Message variable allows you to specify user properties. Alternatively, you could select one of the **sendText** methods. With **sendText**, you can’t specify user properties, but there are fewer steps involved.

Figure 28 Send Method Box



Note: Notice that the objects in Figure 27 and Figure 28 reside in both the right and left pane of the Business Rules Designer window. Keep in mind that the GUIs (JMS_1 for example) refer to the same object.

Note: The business rules appear in the top pane. To redisplay a graphical representation of a business rule, click that business rule.

- 4 On the **File** menu, click **Save All**.
- 5 Click the **Window** menu. Click **Close All**.
- 6 Double-click **CMap1** to redisplay the Connectivity Map.

This completes the setup for the **TimecardToTopic_collab** collaboration definition. You are now ready to drag-and-drop the Service configuration into your Collaboration Map, but first you will configure **Topic_to_payroll_out**.

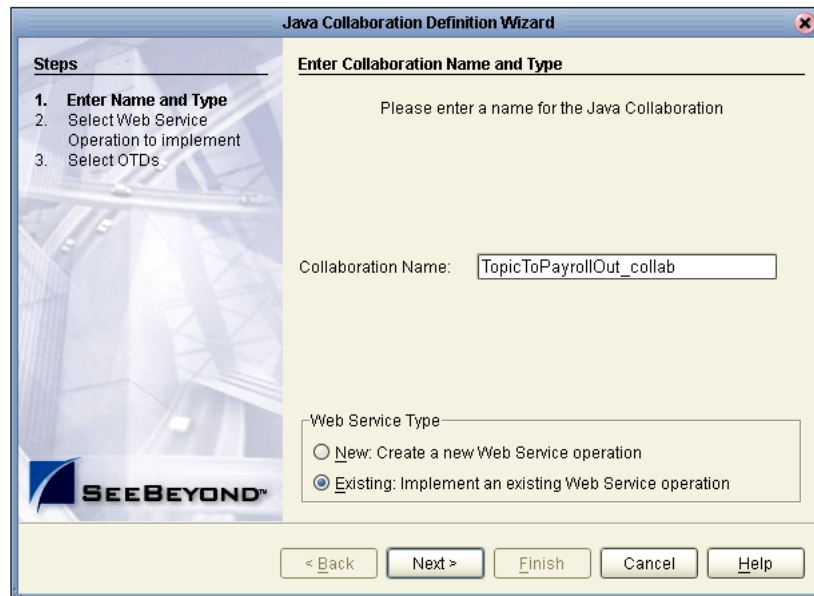
3.8.3 Configure Topic_to_payroll_out

Select a Web Service Operation

First you will configure your Web Service interface.

- 1 Right-click **Project1**.
- 2 Click **New** and **Java Collaboration Definition**.

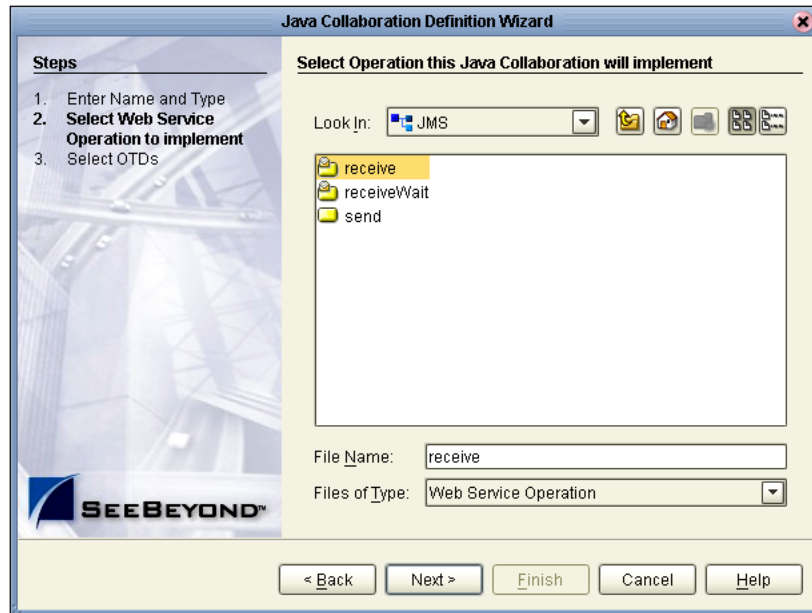
Figure 29 New Java Collaboration Definition Editor



Note: Accept the default radio button **Existing Web Service** for this Tutorial.

- 3 Type **TopicToPayrollOut_collab** as the name for the Java Collaboration Definition. Click **Next**.
- 4 From the New Java Collaboration Definition Wizard, double-click **SeeBeyond**.
- 5 Double-click **eGate**.
- 6 Double-click **JMS**. This is your source for this Collaboration.
- 7 Click **receive**. (receive is a method/Web Service used to read a message from a topic that your collaboration will implement.)

Figure 30 Receive from Topic



8 Click **Next**.

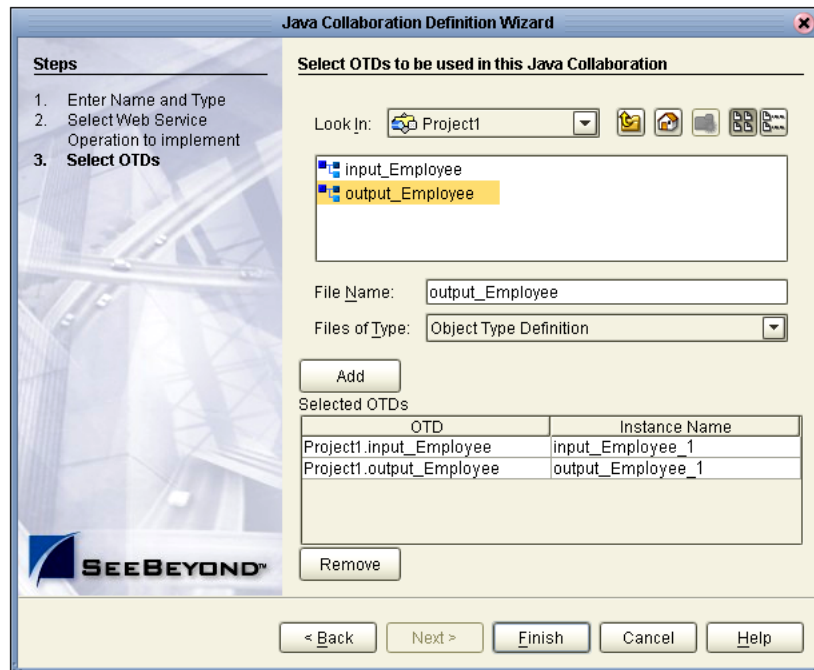
The Java Collaboration Definition Wizard refreshes. Now you will select input and output OTDs.

Select OTDs

1 Double-click **Project1** in the Java Collaboration Definition Wizard.

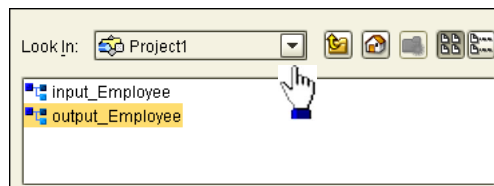
The Java Collaboration Definition Wizard refreshes, showing the input and output options.

Figure 31 Input/Output OTDs for TopicToPayrollOut_collab



- 2 Double-click **input_Employee**. Double-click **output_Employee** to move these selections to the list of Selected OTDs.
Before clicking Finish, you must first select FileClient which represents your output to an external file.
- 3 Click the **drop-down arrow** icon for the Look In list.

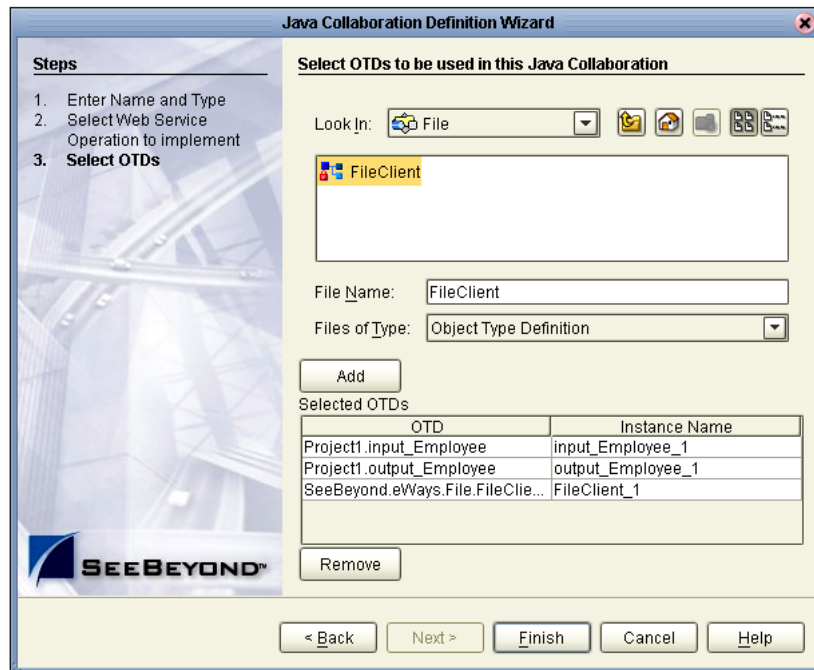
Figure 32 Drop Down Arrow button



- 4 Click **SeeBeyond**.
- 5 Double-click **eWays**.
- 6 Double-click **File**.
- 7 Double-click **FileClient**.

Notice that the **FileClient_1** has been added to the list of **Selected OTDs**. See the following Figure 33.

Figure 33 OTDs for TopicToPayrollOut_collab



8 Click **Finish**.

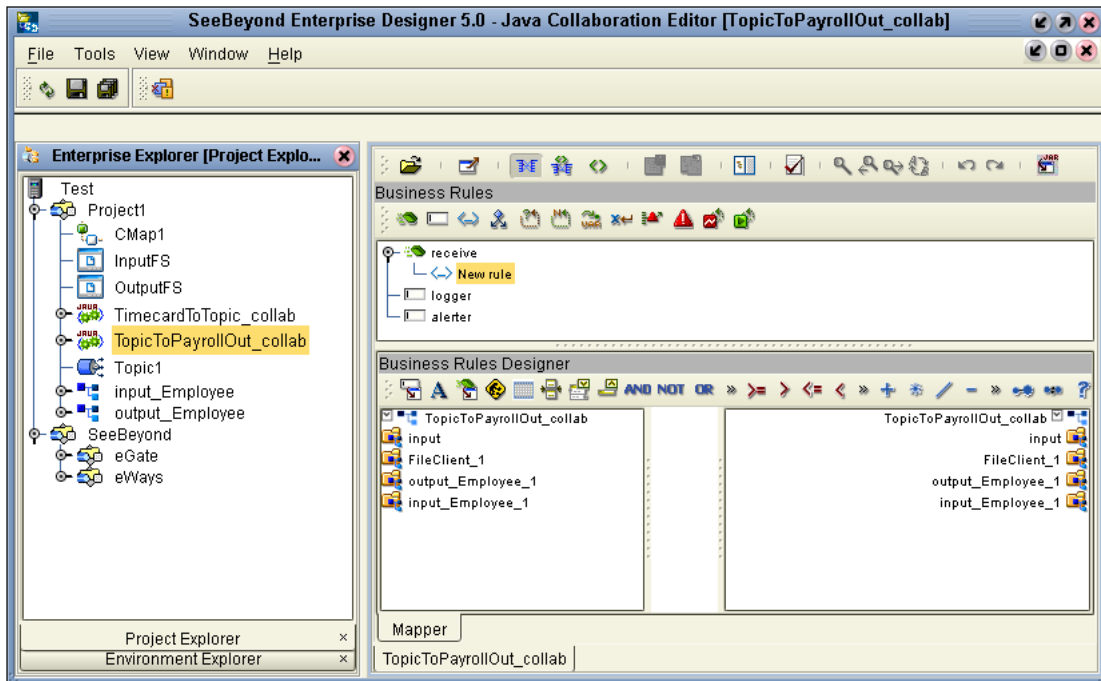
After a few seconds, the **TopicToPayrollOut_collab** appears in the Enterprise Explorer tree in the left pane. The Business Rules Designer window also appears, with the Business Rules window above. (See the following Figure 34.)

3.8.4 Apply Business Rules for TopicToPayrollOut_collab

In the following section you will receive a message from **JMS_1** and unmarshal the string into OTD **input_Employee_1**. You will then copy data from the nodes, **EmployeeNumber**, **LastName** and **FirstName** to the corresponding nodes in **output_Employee_1** OTD. Then you will set up the multiplication logic (business rules) for execution, to obtain an amount (**Amt**) for **output_Employee_1**, requiring the conversion from string to integer. Finally, you will marshal the data from **output_Employee_1** to a string and write it to a file.

See the following Figure 34.

Figure 34 Business Rules Designer for TopicToPayrollOut_collab



Unmarshal Text

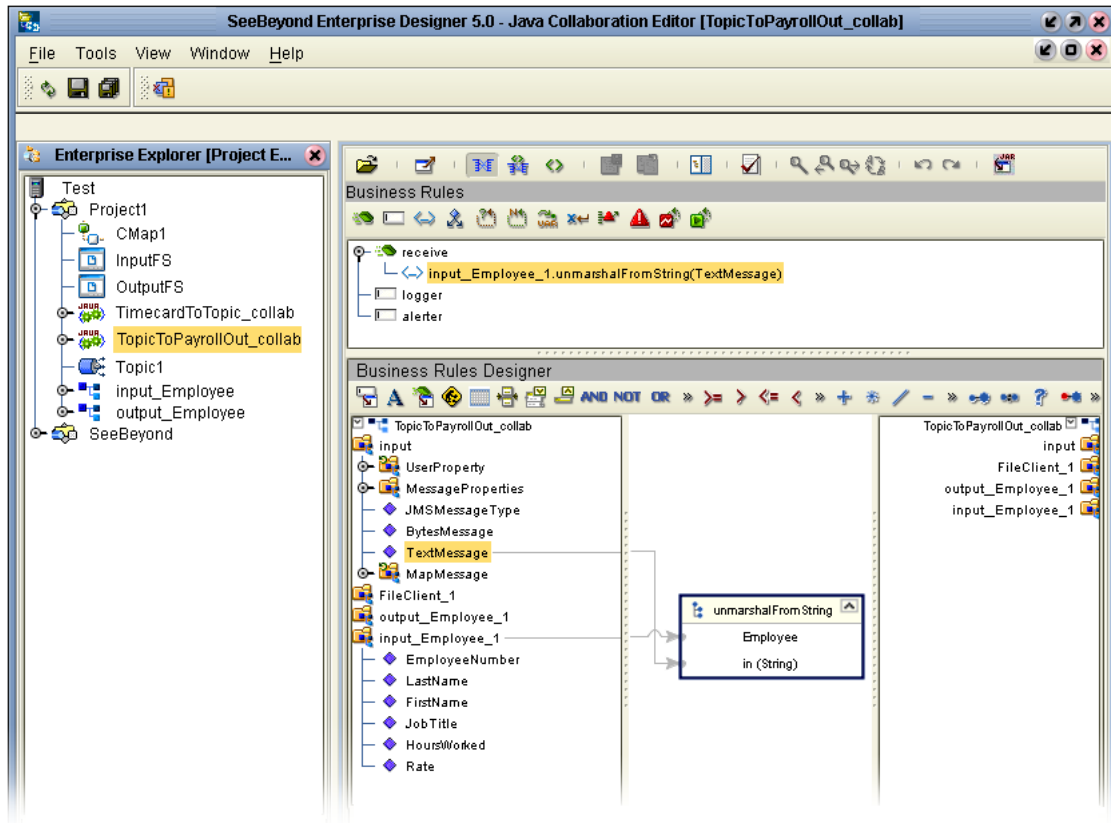
You must first unmarshal the text input from the topic into the input OTD.

- 1 Double-click **input** in the left pane of the Business Rules Designer to expand the view.
- 2 Double-click **input_Employee_1** in the left pane of the Business Rules Designer to expand the view.
- 3 Right-click **input_Employee_1** in the left pane of the Business Rules Designer.
- 4 Click **Select a method to call**.
- 5 Click the method **unmarshalFromString**.

This action places a method box into the center pane of the Business Rules Designer window.

- 6 Drag **TextMessage** from **input** into **in (String)**. See the following Figure 35.

Figure 35 Java Collaboration Editor - Unmarshal From String



Connect Input and Output OTD Nodes

Make sure the views of **input_Employee_1** in the left pane and **output_Employee_1** in the right pane of the Business Rules Designer are expanded.

- 1 Double-click **output_Employee_1** in the right pane to expand the view.
- 2 Connect the nodes between the **input_Employee_1** OTD in the left pane with the **output_Employee_1** OTD in the right pane of the Business Rules Designer:

Note: When you begin to connect the nodes, the previously displayed rule will disappear but the record of your action appears in the Business Rules pane which is just above the Business Rules Designer pane.

Note: You can delete a rule, method box or other GUI objects by right-clicking on the object and selecting Delete, or by selecting the item and pressing the Delete key.

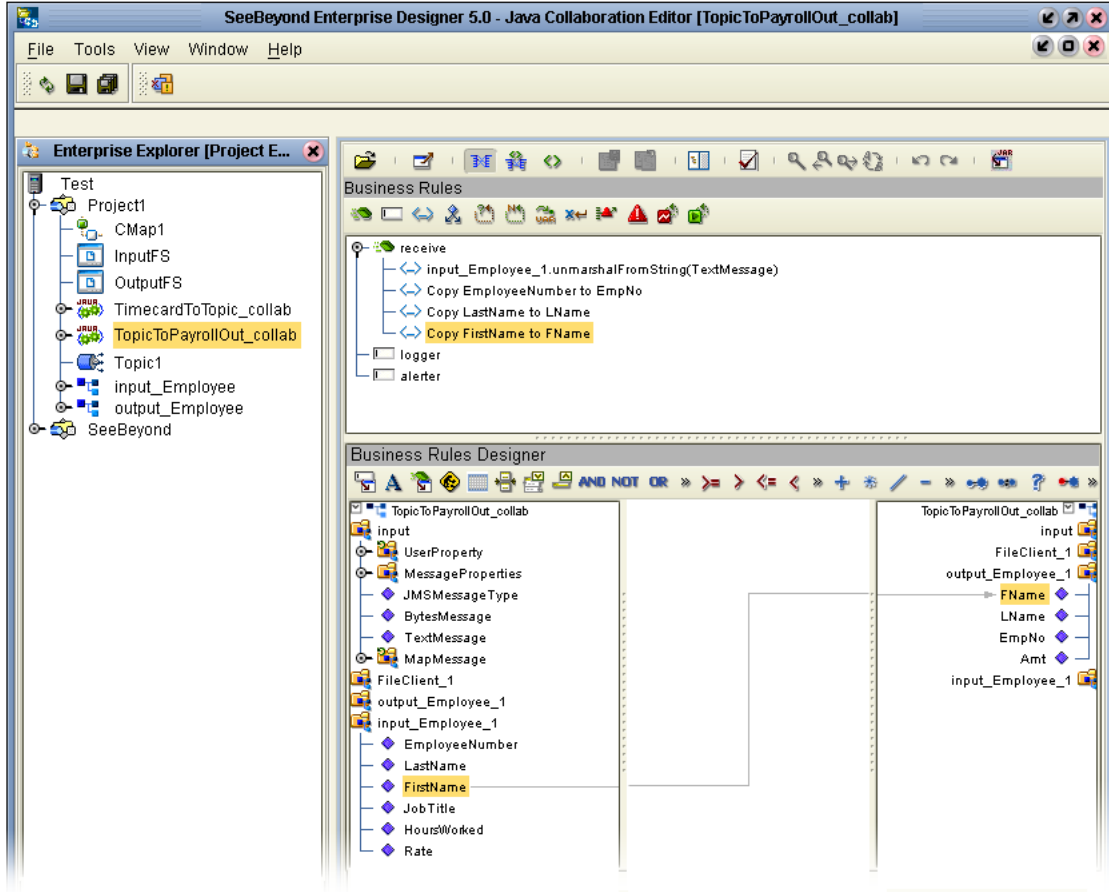
Connect the following nodes:

Connect **EmployeeNumber** to **EmpNo**.

Connect **LastName** to **LName**.

Connect **FirstName** to **FName**.

Figure 36 Connect Input/Output OTD Nodes



Prepare for the Multiplication Operation

In the following steps, convert string values to Integer so the values can be used in the multiplication operation.


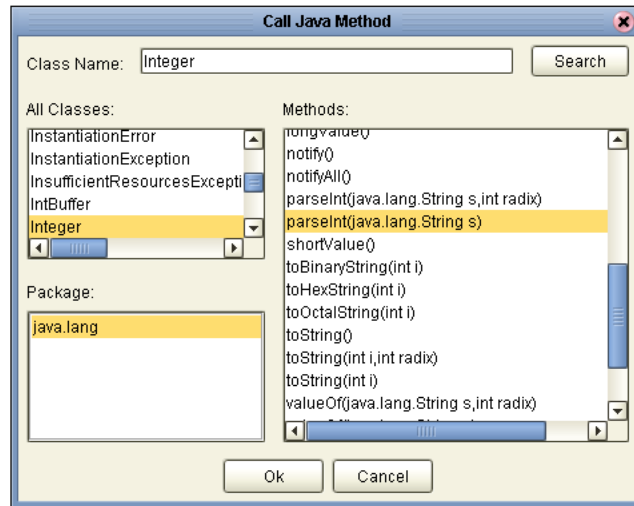
- 1 Click the **Call Java Method** icon  to display a method box.
The method box will appear in your center pane. See the following Figure 37.
- 2 Type **Integer** (be sure to use capital I) into the Class Name box. Click **Search**.
- 3 Scroll down. Click **parseInt(java.lang.String s)** from the methods list. Click **OK**.

Figure 37 Integer Java Method



- 4 Repeat the previous steps because you will need two method boxes.

Notice that as you drag methods to your workspace, the boxes will overlap. Be sure to locate these boxes and drag them to a location where they do not overlap. See the positioning of the boxes in Figure 39.

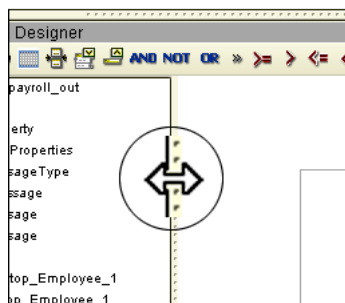
Place these two boxes on the left side of the workspace in the center pane.

- 5 Click the Multiplication Operator \ast on the toolbar and drag the method box to the right of the two parsing boxes.

The Multiplication Method box appears.

Note: You can adjust the size of the window panes by clicking on the frame and adjusting. Refer to the following Figure 38.

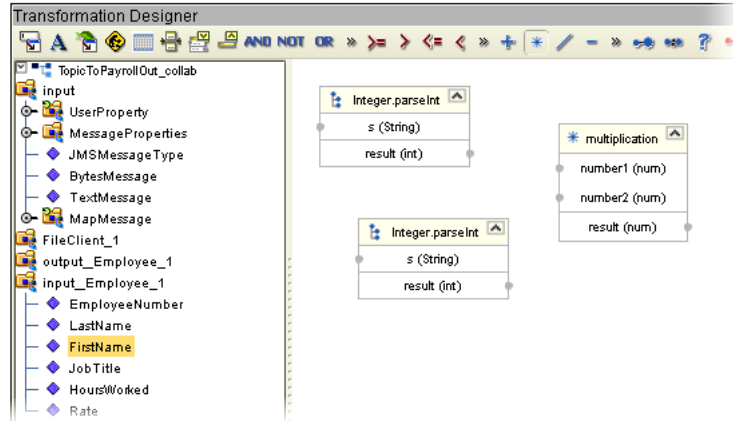
Figure 38 Window Adjust




Use Methods to Prepare the Data for String to Integer Conversion


Convert int primitive to Integer Object.

Figure 39 Prepare for Multiplication



- 1 Click the **Call New Constructor**  icon.
- 2 Type **Integer** (be sure to use capital I) and press **Enter**.
- 3 Click **java.lang.Integer(int value)** in the list. Click **OK**.

A new method box appears. Place this method box under, or to the right of the Multiplication Method box. This method is necessary to convert the int primitive to an Integer Object.

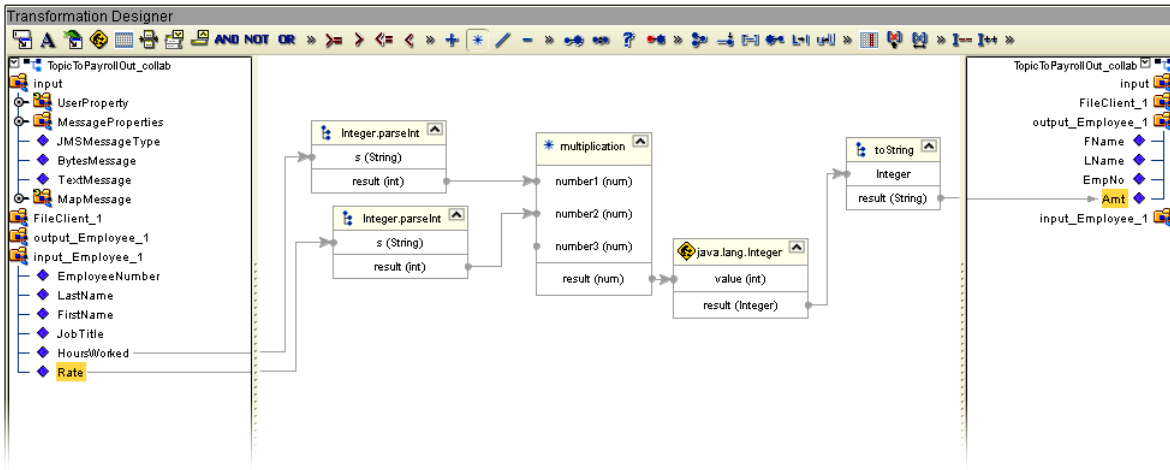
- 4 Click the **Call Java Method** icon  once more to display a method box.
- 5 Type **Integer** (if not already displayed). Click **toString()** in the list.
- 6 Click **OK**. (Place this method to the right and slightly above the **java.lang.Integer**.)
This method will convert the Integer Object to a String.

Connect the Nodes

- 1 Connect **HoursWorked** in the **input_Employee_1** OTD to **s(string)** in the first **Integer.parseInt** method box.
- 2 Connect **Rate** in the **input_Employee_1** OTD to **s(string)** in the second **Integer.parseInt** method box.
The numbers are now set for conversion to int and ready for multiplication as integers.
- 3 Connect **HoursWorked** from result to **number1** in the Multiplication method box.
- 4 Connect **Rate** from result to **number2** in the Multiplication method box.
- 5 Connect result from the multiplication to **value(int)** in the **java.lang.Integer**.
- 6 Connect the **result(integer)** to **Integer** in the **toString** method box.
- 7 Connect the **result(String)** to **Amt** in **output_Employee_1** in the right pane.

This completes the multiplication. See the following Figure 40.

Figure 40 Multiplication Operation



Marshal Text

Since you began the data manipulation process by unmarshaling data from string, you must now marshal the data from output into a string.

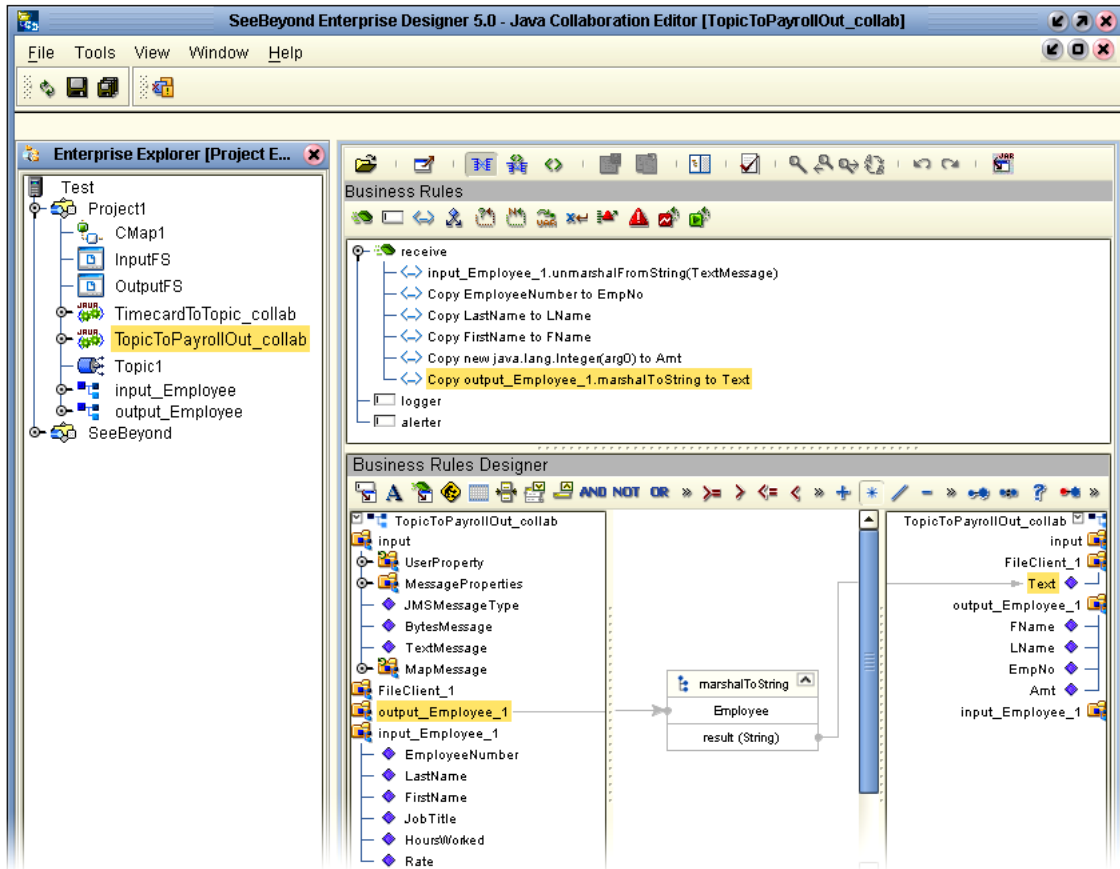
Make sure the view of **FileClient_1** in the right pane is expanded.

- 1 Right-click **output_Employee_1** in the left pane. Click **Select a method to call**.
- 2 Click **marshalToString**.

The **marshalToString** method box appears.

- 3 Connect a node from **result (String)** to Text under **FileClient_1** in the right pane. See the following Figure 41.

Figure 41 Marshal Text

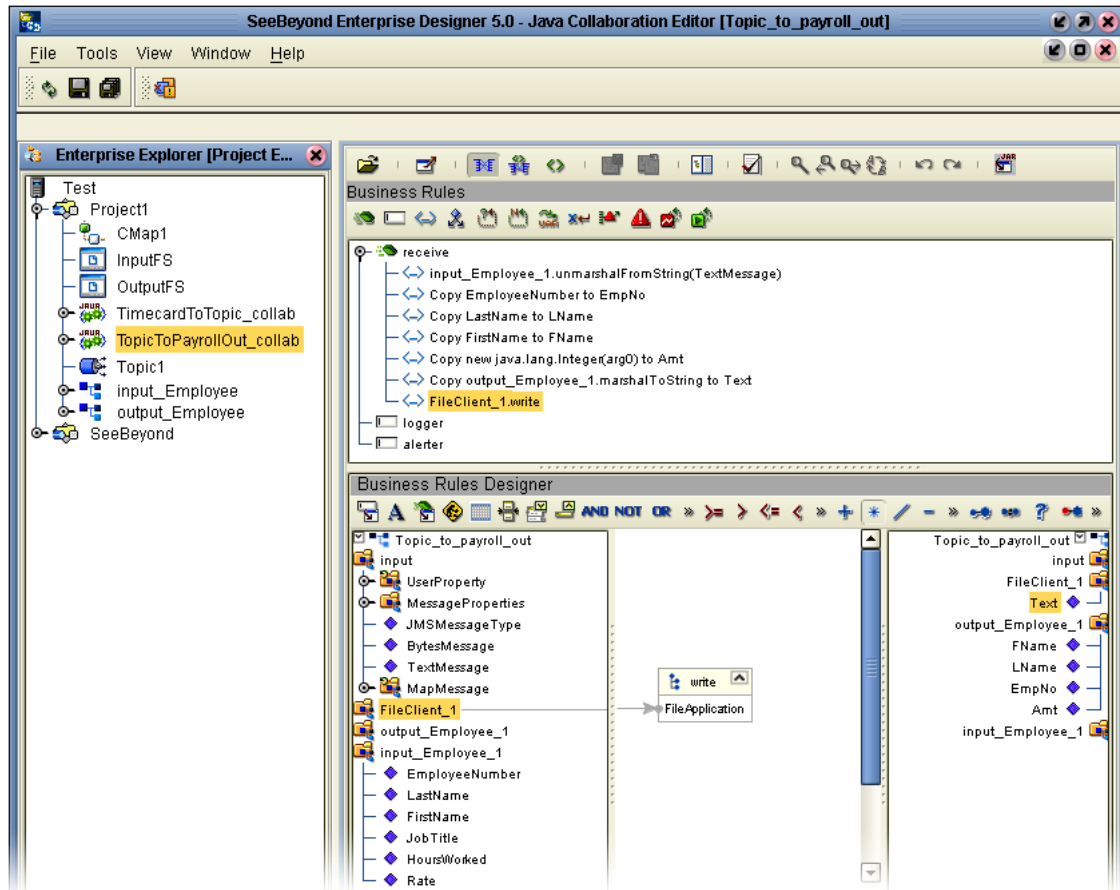


Write FileClient_1

- 1 Right-click **FileClient_1** in the left pane. Click **Select a method to call...**
- 2 Click **write ()**.

See the following Figure 42.

Figure 42 Write File Application



A write method box appears with an arrow pointing to FileApplication. This instructs the system to write to the output file.

- 3 On the **File** menu, click **Save All**.

This completes **TopicToPayrollOut_collab** using the Business Rules Designer window.

You will use the drag-and-drop technique to move the configurations into your Services.

- 4 Navigate back to the Connectivity Map if it is not already displayed. You can close the current window or you can double-click the Connectivity Map name, **CMap1**.

3.9 Apply the Collaborations

You have configured your Collaboration Definitions (business rules) in the previous sections. You are now ready to associate your Collaboration Definitions with Services using a simple drag-and-drop technique.

Drag-and-drop TimecardToTopic_collab

Refer to Figure 44 for the following steps.

- 1 Double-click your Connectivity Map icon (if the Connectivity Map is not already displayed) to return to the Connectivity Map.

3.9.1 Link Components in the Connectivity Map

Linking the components creates the logical flow of data throughout the Project. Additionally, creating a link between an External Application and a Service adds an eWay to the Connectivity Map.

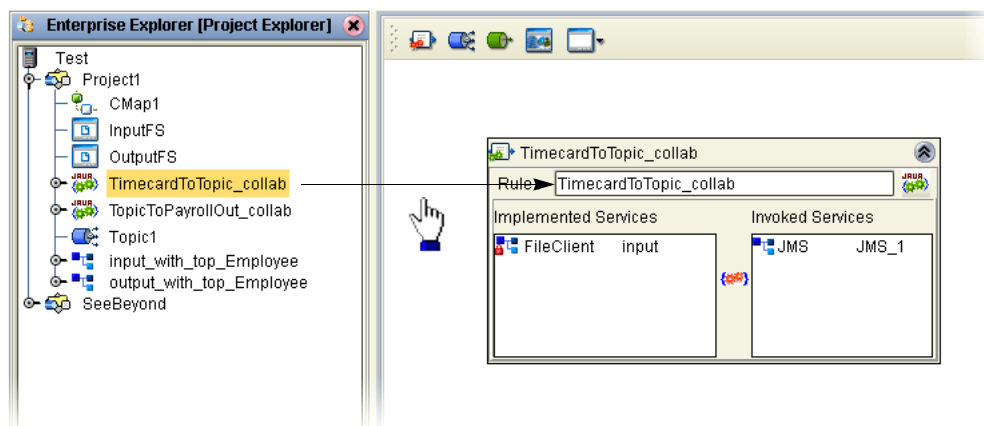
At this point, the Connectivity Map contains five unlinked objects. You are now ready to link them.

Figure 43 Unlinked Objects in Connectivity Map



- 1 Double-click **Timecard_to_topic** in the Connectivity Map to open the Service Window.
- 2 Drag the **TimecardToTopic_collab** Collaboration Definition from the Project Explorer pane to the **Rule** field in the open window as shown in the following Figure 44.

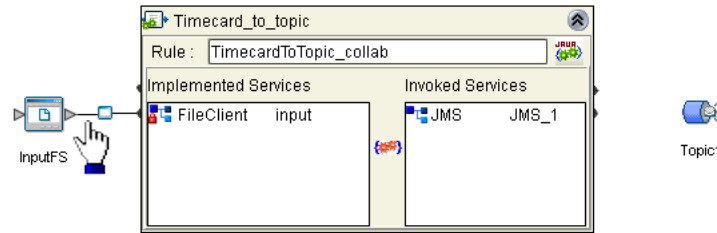
Figure 44 Using the Drag and Drop Technique



Notice that the gear icons change from red to green to signify that the Collaboration is complete.

Note: You may also drag *TimecardToTopic_collab* into the icon without opening the Collaboration window.

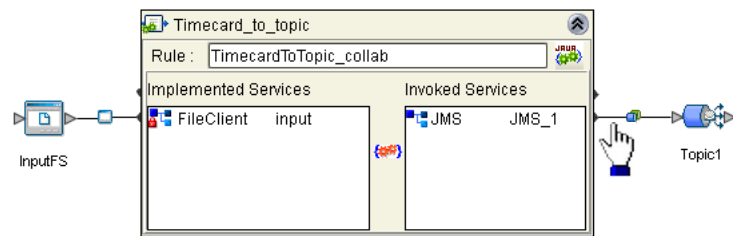
Figure 45 Connect Input to Client



3 Connect the **InputFS** to **FileClient**.

Note: You may connect nodes forward or backward. As long as the connection is made, it makes no difference; however, it may be easier to connect from the Service dialog box backward to the module icon, especially where there are multiple Services.

Figure 46 Connect JMS to Topic



4 Connect **JMS_1** to **Topic1**. (Reposition binding box as necessary.)

5 Click the **close** button (⌵) to close the binding box.

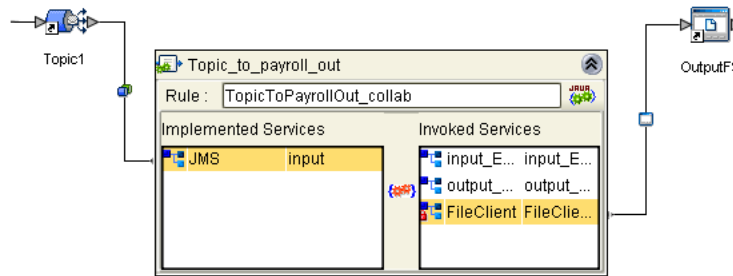
Figure 47 Timecard_to_topic Linked



Drag-and-drop TopicToPayrollOut_collab

- 1 Drag the **TopicToPayrollOut_collab** Collaboration Definition from the Project Explorer pane into the **Topic_to_payroll_out** Service icon.

Figure 48 Connect Topic to Output



- 2 Double-click the **Topic_to_payroll_out** Service icon to open the binding box.
- 3 Connect **Topic1** to **JMS**.
- 4 Connect **FileClient_1** to **OutputFS**.
- 5 Click the **close** button (⌵) to close the binding box.

Figure 49 Linked Connectivity Map



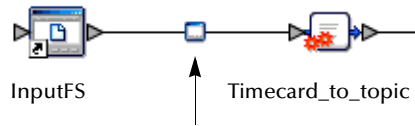
3.10 Configure the eWays and JMS Connections

Your Connectivity Map contains two eWays and JMS connections. These components must be configured for deployment. Each of these components performs a different function:

- **Input eWay:** The input eWay polls a directory on the local file system, **c:\eGateData\Project1**, for any XML file (*.xml).
- **Timecard_to_topic:** This Java Collaboration Service copies the input XML data without making any changes to it.
- **Topic_to_payroll_out:** This Java Collaboration Service performs the calculation and data mapping function.
- **Output eWay:** The Output eWay writes the results to an output file (.dat) on the local file system, **c:\eGateData\Project1**.

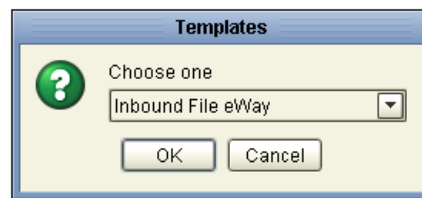
Configure the Inbound eWay

Figure 50 Inbound eWay



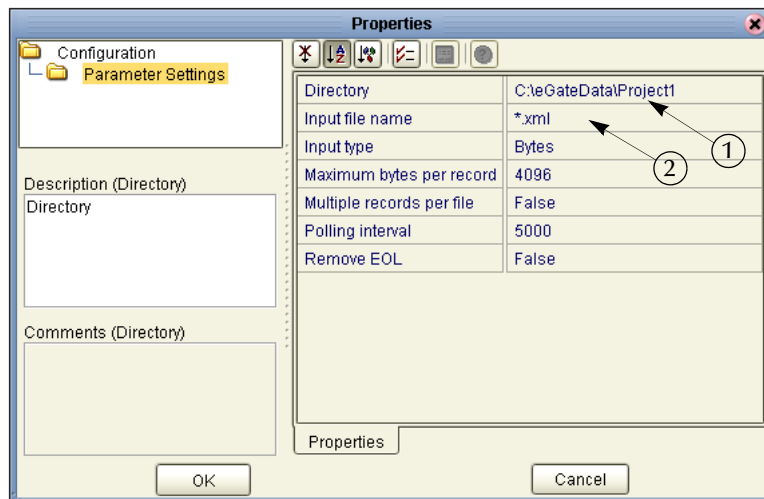
- 1 Double-click the first eWay . Click **Inbound File eWay** from the drop-down list, click **OK**.

Figure 51 External Type Dialog Box



This creates a new inbound eWay and the Properties Dialog Box appears.

Figure 52 Properties Configuration (Inbound eWay)



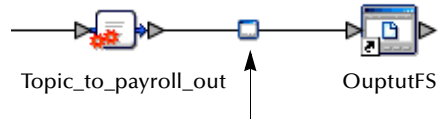
Refer to the arrows in the previous Figure 52. These are the fields you will modify.

- 2 Click once on the current path to select and type a correct directory path. In this tutorial the path is `c:\eGateData\Project1` (number 1 in Figure 52 above).
- 3 Click once on the current **Input File Name** field and enter `*.xml`. The eWay will read any files with the `.xml` extension (number 2 in Figure 52 above).
- 4 Click **OK** to close the Properties Dialog Box for the inbound eWay.

Note: If the **Polling interval** value is left unchanged, the eWay polls the directory location every five seconds (5000 milliseconds).

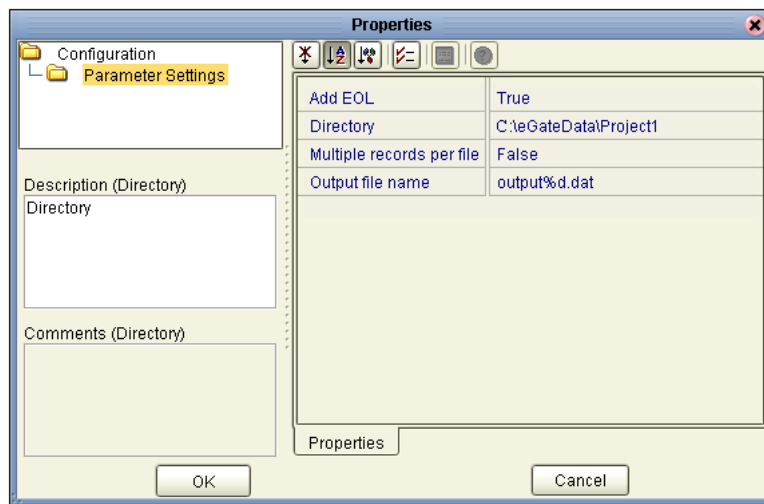
Configure the Outbound eWay

Figure 53 Outbound eWay



- 1 Double-click the second eWay. Click **Outbound File eWay**. Click **OK**.
The Properties dialog box appears.
Use the same path you used for the inbound eWay (`c:\eGateData\Project1`).
Accept the default output file name: **Output%d.dat**.
- 2 Click **OK** to close the Properties Dialog Box for the outbound eWay.

Figure 54 Properties Configuration (Outbound eWay)



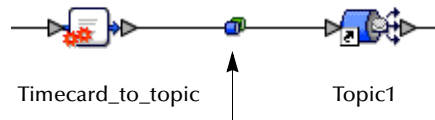
Note: The **Multiple records per file** setting determines whether records will be concatenated in a file. A **True** setting (default) means that multiple records will be written in the same file. A **False** setting, as shown in Figure 54 above, means that only one record will be written to one file. A **False** setting creates multiple files with each reload of the data, i.e., `output1.dat`, `output2.dat`, etc.

You have now configured both the input and output eWays.

JMS Client Configuration

The JMS Client Configuration icons appear on both sides of the **Topic1** icon.

Figure 55 JMS Client Properties Icon



Select JMS Client Configuration

Accept default configurations.


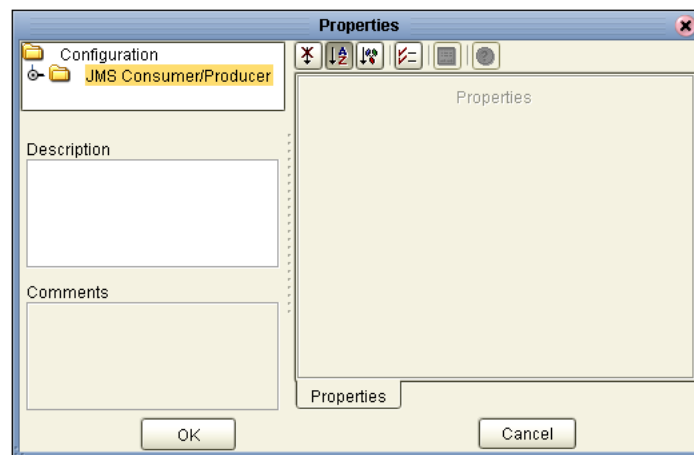
- 1 Double-click the first of the two JMS icons  (see previous Figure 55).
The Message Server properties dialog box appears.

Figure 56 Message Server Configuration




- 2 Click **OK** to accept the defaults.
- 3 Repeat this step for the other Message Server connection.
You are now ready to deploy your Project components in an Environment containing a Logical Host and External Applications.
- 4 On the **File** menu, click **Save All**.
Your project is now complete and ready for deployment.

3.11 Create an Environment and Activate the Deployment Profile

In this section, you will create and activate the Deployment Profile. Before you can create the profile, you must create an Environment.

Create an Environment and Logical Host

An Environment is a collection of physical resources and their configurations that are used to host Project components. An Environment contains logical hosts and external systems.

- 1 Click **View** from the Menu bar. Click **Environment Explorer**.
- 2 Right-click the Repository name (). Click **New Environment**.
- 3 Right-click **Environment1** and rename **Tutorial1**. Press **Enter**.
- 4 Right-click **Tutorial1**. Click **New Logical Host**.
- 5 Accept the default name **LogicalHost1**.

This creates a **LogicalHost1** window in the right pane.

Create an Integration Server

- 1 Right-click **LogicalHost1** in the **Enterprise Explorer** window. Click **New SeeBeyond Integration Server**.

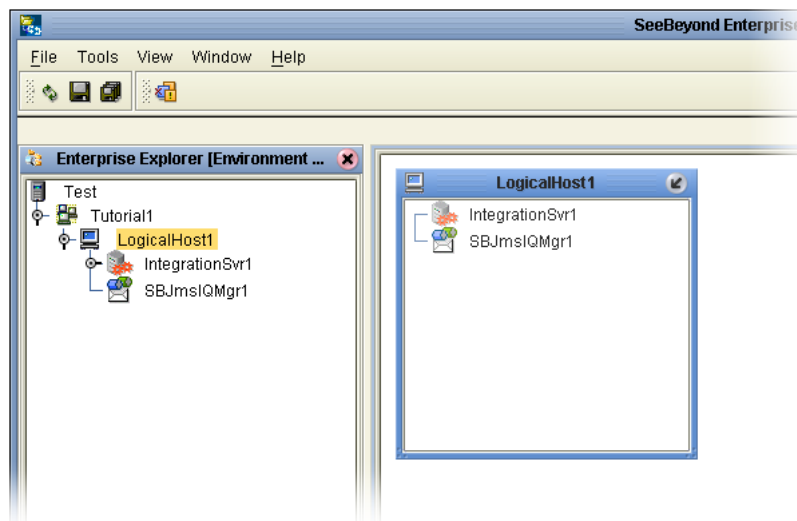
IntegrationSvr1 will appear in the **LogicalHost1** window.

Create a JMS IQ Manager

- 1 Right-click **LogicalHost1** in the **Enterprise Explorer** window. Click **New SeeBeyond JMS IQ Manager**.

SBJmsIQMgr1 will appear in the **LogicalHost1** window.

Figure 57 Create Logical Host Servers

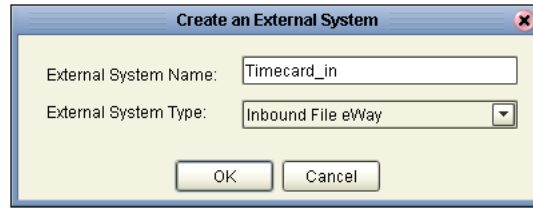


These servers automatically appear in the **LogicalHost1** dialog box.

Create an External File System for the Inbound eWay

- 1 Right-click **Tutorial1**. Click **New File External System**.

Figure 58 External File Inbound



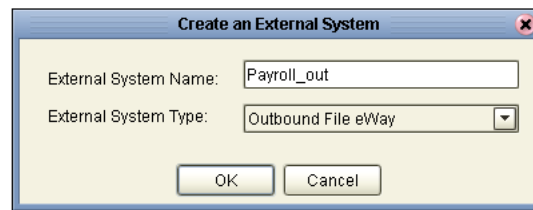
- 2 Type **Timecard_in** in the name field.
- 3 Select **Inbound File eWay**. Click **OK**.

This places the inbound external system, **Timecard_in** in the Environment Editor pane.

Create an External File System for the Outbound eWay

- 1 Right-click **Tutorial1**. Click **New File External System**.

Figure 59 External File Outbound



- 2 Type **Payroll_out** in the name field.
- 3 Select **Outbound File eWay**. Click **OK**.

This places the outbound external system, **Payroll_out** in the Environment Editor pane.

3.11.1 Create a New Deployment Profile

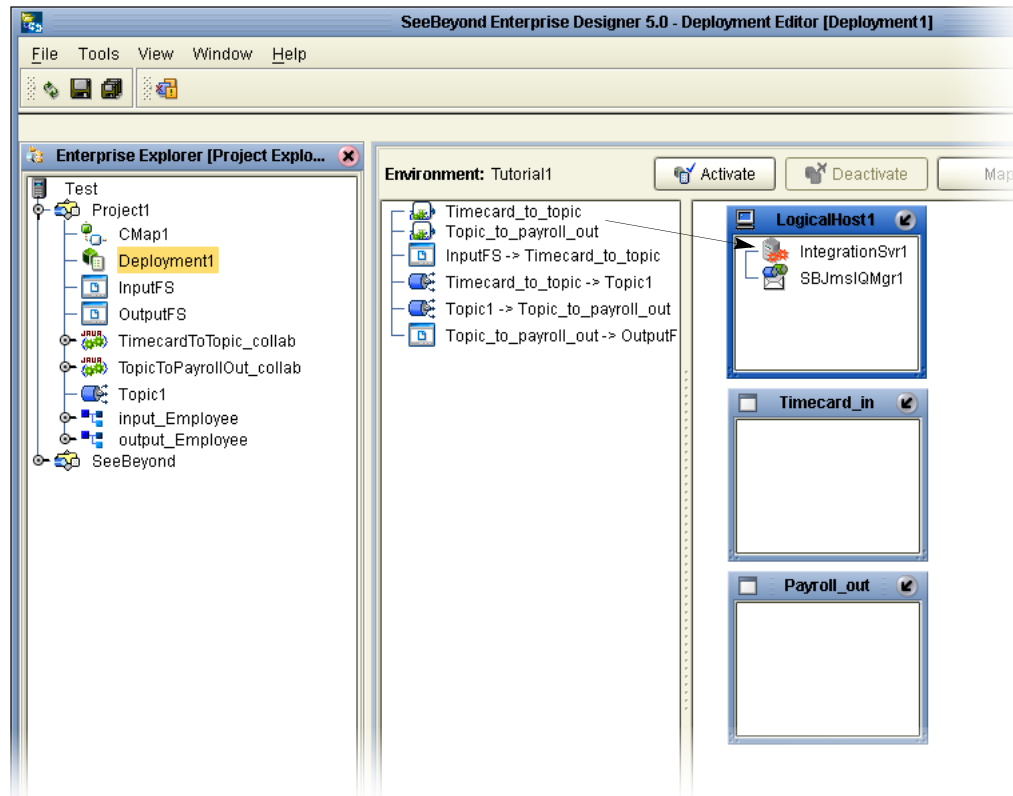
Before you can map components, you must first create a Deployment Profile.

Deployment Profile

A Deployment Profile contains information about how Project components will be deployed in an Environment, and it also maps components to the Environment.

- 1 Click the Project Explorer tab to return to the Project Explorer pane of your Project.
- 2 Right-click **Project1**. Click **New** and **Deployment Profile**.
- 3 Accept the default name **Deployment1** (and Tutorial1). Click **OK**.

Figure 60 Environment, Drag and Drop Components

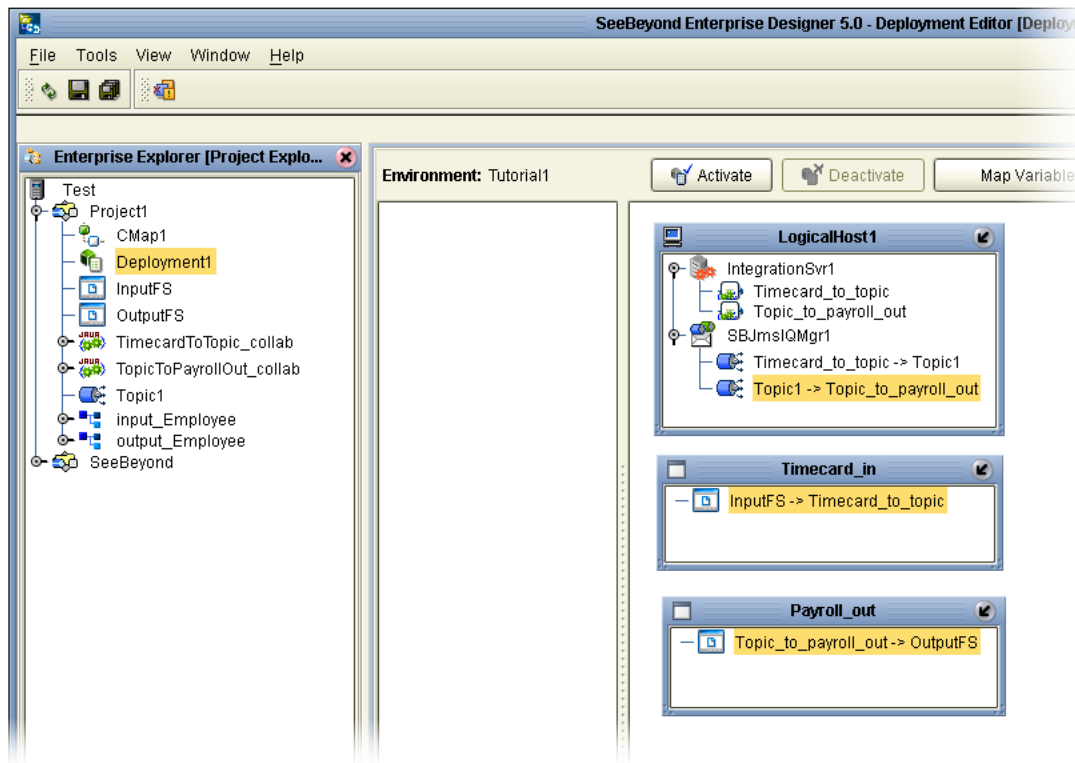


After creating your deployment profile, you will drag and drop components into the server dialog boxes.

Drag and Drop Collaborations

- 1 Drag-and-drop your Services, **Timecard_to_topic** and **Topic_to_payroll_out**, into your Integration Server, **IntegrationSvr1**. (See the previous Figure 60.)
- 2 Drag-and-drop your topics into your Message Server, **SBJmslQMgr1**.
- 3 Drag-and-drop your external files into your External File Servers, as shown in the following Figure 61.

Figure 61 Populated Environment



After populating your Environment with all the available components, there are no components listed in the middle pane. All your components reside in the servers, as shown in Figure 61 above.

3.11.2 Deploy your Project

When you activate **Project1**, a deployment file will be created that will later be picked up by the Logical Host. The Project you created with Enterprise Designer will be “code generated” into a package that will be passed to the Repository. The Logical Host will pick up this package from the Repository.

If you want to do a “hot deploy,” which means that the Logical Host will pick up the current package in real time while it is running, you could click **YES** in the Activate Dialog box when prompted “Do you wish to apply Logical host(s) immediately?” (See below).

Activate Environment

- 1 On the **File** menu, click **Save All**.
- 2 Click the **Activate** button. The Activation in Progress message appears.

Figure 62 Activation in Progress Message

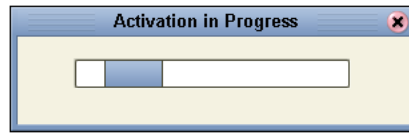
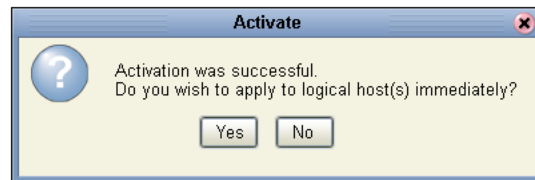


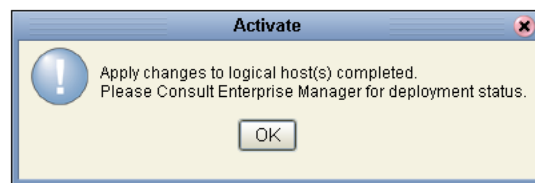
Figure 63 Successful Activation



Activating the Deployment Profile may take a few minutes. When the activation is complete, the message above appears.

- 3 Click **No** to Finish. (If your bootstrap is already running, click **Yes**.)

Figure 64 Changes Applied to Logical Host



When you click **Yes** in step 3 above, this message verifies that changes were applied to the Logical Host.

- 4 Click **OK**.

3.12 Run the Bootstrap and Management Agent

The Bootstrap process executes your **Project1** and begins the process of polling your input data. The Bootstrap process is performed from a command prompt. Bootstrap will pick up the deployment profile the first time it runs; after that you would redeploy and click **Yes** (in Figure 63) to apply the most recent changes to the logical host(s).

Note: The Bootstrap command is case sensitive on Windows.

Run the Bootstrap

You can edit the configuration file: *Logical-host.properties* located in the folder `Logicalhost\bootstrap\config`. After you have configured this file you can run

the bootstrap. You can also enter the commands in a **cmd** shell as explained in the following steps.

- 1 Open a Windows command prompt as shown in the following Figure 65. (Click **Start**; click **Run**; type **cmd**.)
- 2 Navigate to where you installed the logicalhost; for example, **ican50\logicalhost\bootstrap\bin**. Then type the following command:

```
CD \ican50\logicalhost\bootstrap\bin
```

- 3 To start the Bootstrap process, type the following command:

```
bootstrap -e environment_name -l logicalhost_name  
-r repository_URL -i username -p password
```

environment_name is the name of your environment (for example, *Tutorial1*),

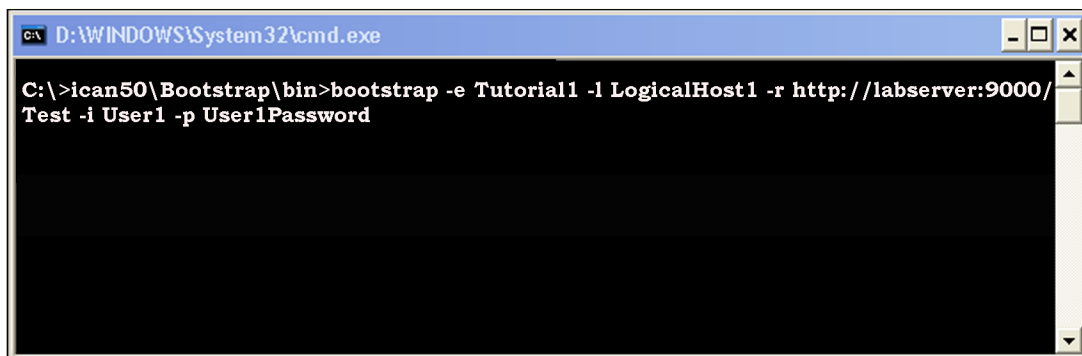
logicalhost_name is the name of your Logical Host (for example, *LogicalHost1*),

repository_URL is the full URL of your Repository including the Repository name (for example, *http://labserver:9000/Test*),

username is your user name, and

password is your password.

Figure 65 Bootstrap Command Example



- 4 Press **Enter**.

The Bootstrap process takes a few minutes to execute. The Management Agent starts the components in the Project; the Input eWay processes the input XML message.

3.13 Verify the Output Data

In “[Create the Sample Input XML File](#)” on page 15, you created a sample XML file. The Management Agent processes this input file, **Timecard.xml**, and writes the results to **Output1.dat**.

View the output

- 1 Use Windows Explorer to navigate to **c:\eGateData\Project1**.
- 2 See that the Input eWay, after processing the input file, renamed the input file to **Timecard.~in**.
- 3 See that the Output eWay generated the output file, **Output1.dat**.
- 4 Use Windows Wordpad or a similar text edit application to view the contents of the output file.

Figure 66 Output File

```
<?xml version="1.0" encoding="UTF-8"?>
<Employee>
  <FName>Jane</FName>
  <LName>Smith</LName>
  <EmpNo>100</EmpNo>
  <Amt>2000 </Amt>
</Employee>
```

In this sample, the amount is 2000 because hours worked was 40 and rate of pay was 50. See input file, Figure 67.

Figure 67 Input File

```
<?xml version="1.0" encoding="UTF-8" ?>
- <Employee>
  <EmployeeNumber>100</EmployeeNumber>
  <LastName>Smith</LastName>
  <FirstName>Jane</FirstName>
  <JobTitle>Manager</JobTitle>
  <HoursWorked>40</HoursWorked>
  <Rate>50</Rate>
</Employee>
```

To process the input file again, rename **Timecard.~in** to **Timecard.xml**. The File eWay picks up the input file, **Timecard.xml**, and writes the results to **Output1.dat** or **Output%d.dat** (where "d" is incremented with each write), depending on your Multiple Records per File setting (see Figure 54).

3.14 Enterprise Manager Overview

The Enterprise Manager is a powerful monitoring tool that is useful for troubleshooting problems and viewing system activity at run-time.

Enterprise Manager interactive, browser-based monitor console

- Monitor, start, and stop Services
- Monitor JMS topics and queries
- View and edit messages
- Monitor system logs
- Monitor and manage system alerts
- Monitor eInsight Business Processes (if licensed)

3.14.1 When to Use the Monitor

Enterprise Manager will notify you by flashing the affected component node structure when:

- There is a problem within the Project
- You have stopped a server within a Project or Environment, or stopped an object in a Connectivity map

3.14.2 Using Project View

Project view allows you to perform run-time monitoring and management of Deployments and Connectivity Maps.

3.14.3 Using Environment View

Environment view allows you to perform run-time monitoring and management of eGate and eInsight System components.

3.14.4 Locating the Problem Node

When a problem occurs, the Project node is decorated with a flashing highlight, which is propagated upward from the problem node. When you expand the tree, the problem node will be highlighted and will also have a flashing exclamation point appended to it. The exclamation point association visually calls out the target node (or nodes) for troubleshooting the problem.

3.15 Starting and Using Enterprise Manager

Start Enterprise Manager

Use Internet Explorer to point to the URL, used by your installation, to access the Enterprise Manager. Refer to the *eGate Integrator Installation Guide*.

- 1 Start Enterprise Manager and type your username and password.
- 2 Click **Login**.
- 3 Click the **Home** tab.
- 4 Double-click **Monitor**.

You can click the Project tab or the Environment tab to monitor the state of the Logical Host(s) and the Project components deployed in them. You can also view the logs and change the log levels of the Logical Host.

It is beyond the scope of this tutorial to explain all the capabilities of the Enterprise Manager. The following examples demonstrate a few of its capabilities.

3.15.1 Monitor a Collaboration in your Connectivity Map

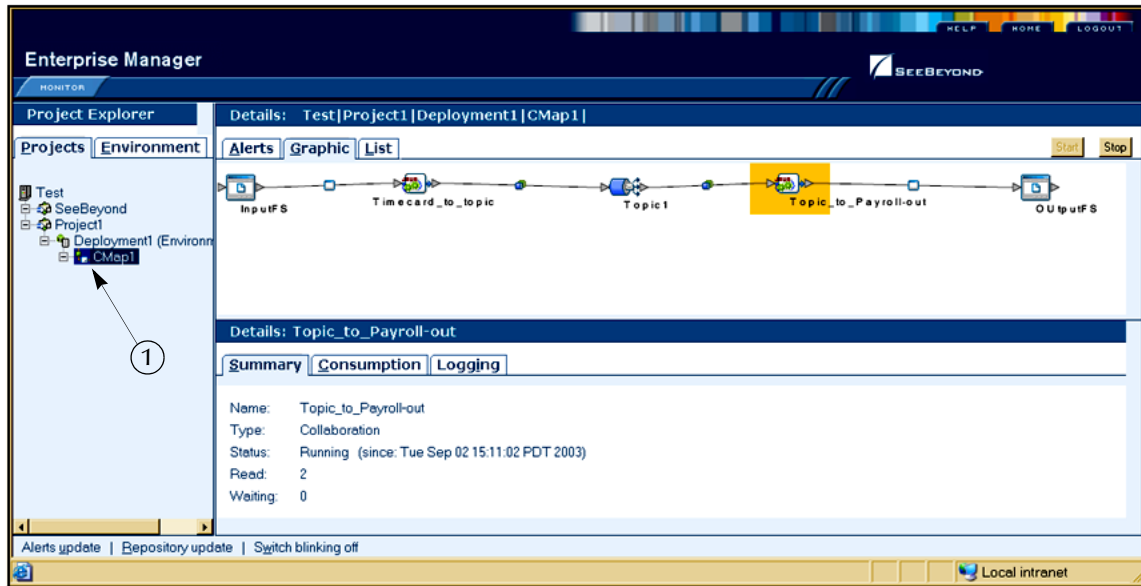
Enterprise Manager Graphic Tab

With the Enterprise Manager open, perform the following steps:

- 1 Click on the Project tab.
- 2 Click on one of the tabs to display information.
 - ♦ **List** shows deployment status
 - ♦ **Graphic** shows the Connectivity Map
 - ♦ **Alerts** shows message types and severity of the message
- 3 Click on the Graphic tab. (If this tab is not available, you may need to download and install the SVG Viewer.)
- 4 Expand all the views by double-clicking the repository name (Test).
- 5 Click on the CMap1 icon (number 1 in Figure 68).
(The Connectivity Map will appear.)
- 6 Double-click on **Topic_to_payroll_out**.

Refer to the following Figure 68.

Figure 68 Enterprise Manager CMap1



The Enterprise Manager shows that the collaboration Service is open for **Topic_to_payroll_out**. The status shows that the application is running and there have been two reads of the file.

3.15.2 Stop Service

Using the example above, illustrated in Figure 68, you can also start and stop services. For example, if you want to stop the **Topic_to_payroll_out** Service (stop processing the messages coming from Topic1 and instead hold them in a queue) you would perform the following steps:

Stop Topic_to_payroll_out Service

- 1 Click the **Topic_to_payroll_out** Service (icon)

Figure 69 Stop Service Button



- 2 Click the **Stop** button

A red disk appears over the icon to indicate that the Service is stopped.

Figure 70 Stop Service Indicator



Keep in mind that although the **Topic_to_payroll_out** Service will not process messages, those messages will be held in a queue and will be processed immediately when the Service is started, by clicking on the Start button.

3.15.3 Monitor Alerts

Enterprise Manager Project Tab

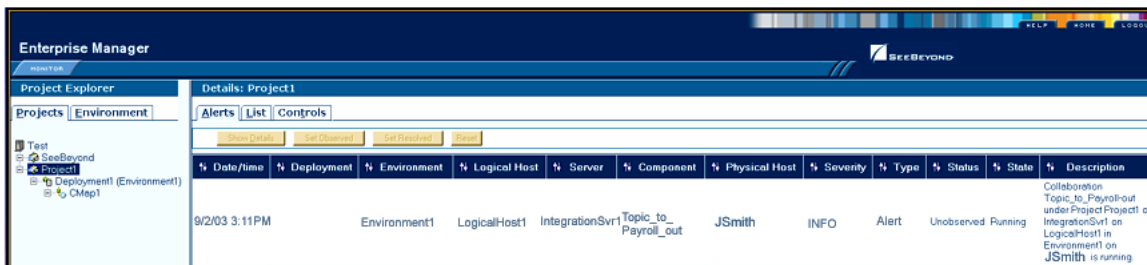
With the Enterprise Manager open and **Topic_to_payroll_out** stopped (causes alert), perform the following steps:

- 1 Click on the Project tab.
- 2 Expand all the views by double-clicking the repository name (Test).
- 3 Click on the word Project (will be underlined) next to the Project1 icon.
- 4 Click on the Alerts tab.

(The alert messages will display with a description in the far right column.)

Refer to the following Figure 71.

Figure 71 Enterprise Manager CMap1



3.15.4 Check Log Messages

You can troubleshoot errors by viewing the Logged messages.

In this tutorial, for example, the input timecard is designed for integers. The business rules are set up to handle integers only. If a data entry person wanted to correctly type a pay rate of \$42.50, he or she would have to input the integer as 4250, assuming two decimal places. (The decimal places would have to be reformatted through additional processing.)

If a data entry person incorrectly entered a pay rate as 42.50 (timecard input), the decimal would generate an error message and the output file would not be updated.

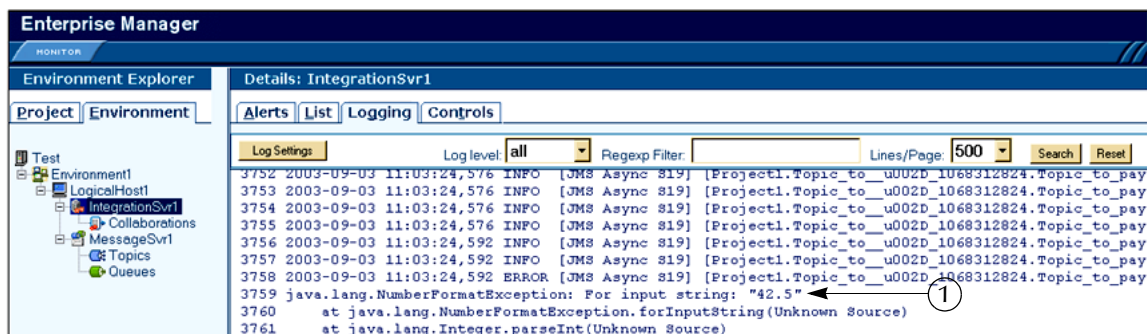
View Logged Messages

With the Enterprise Manager open, perform the following steps to check logged messages:

- 1 Click **Environment**.
- 2 Expand all the views by double-clicking the repository name (Test).
- 3 Click **IntegrationSvr1**.
- 4 Click the **Logging** tab.
- 5 Click the **Search** button.
- 6 Scroll down to find error messages.

The error, **NumberFormatException** is recorded in the log (number 1 in the following Figure 72). Use the “search on page for” feature to find “exception.”

Figure 72 Check Logged Messages



Glossary

BI

Business integration (also Business Intelligence).

Collaboration

See “**Service**” and “**Collaboration Definition**”.

Collaboration Definition

The encoding of business rules, in Java or XSLT format. Typically, the encoding consists of operations on OTDs (see “**OTD**” on page 68). Several Collaborations can have the same Collaboration Definition.

Connection

Consists of the configuration information that enables an eWay to connect to an external system.

Connectivity Map

Contains business logic and routing information about the data transmission. A Connectivity Map usually includes one or more Collaborations, Passthrough Collaborations, topics, queues, and eWays. A Connectivity Map is created under a Project. A Project may have multiple Connectivity Maps.

Constants

A name or value pair that is visible across a Project.

CRM

Customer Relations Management

Data Cleansing

Data must be cleansed of errors in structure and content before it is useful in data warehousing and integration; this means transforming data for accurate and effective use in a database or data management system by cleansing “dirty” or redundant data.

Data Dictionary

Defines the organization of a database and lists all files in the database, the number of records in each file, and the names and types of each field. The data dictionary is often hidden from end users. Although the dictionary doesn’t contain actual data, it does contain essential information for managing the database.

Data Integrity

Refers to the accuracy and validity of data. Data integrity can be compromised in many ways, including human error through data entry, or through faulty logic in programming. Computer viruses, software bugs and many other factors can also compromise data integrity.

Data Mapping

In relational databases (RDBMSs) data mapping is the relationship and data flow between source and target objects. Mapping involves structuring the relationship between source and target objects.

Data Mart

A smaller, focused, database designed to help managers make business decisions. (A data warehouse is a larger, enterprise, database(s).)

Data Mining

Used to synthesize or isolate unique data patterns to predict future behaviors or to filter data to select patterns that help discover previously unknown relationships among data. Commonly used by marketers who acquire and distill consumer information.

Data Transformation

Data transformation is necessary after extracting data from legacy data formats, or any format that requires cleansing. Data is transformed for efficient use for Business-to-Business Enterprise Data Integration.

Data Warehouse

A copy or view of enterprise transaction data (sometimes non-transaction data) that is used for reporting. The data is often summarized and always structured for queries and analysis.

Deployment Profile

Contains the information about how the Project components will be deployed in an Environment. A Project can have multiple Deployment Profiles, but only one Deployment Profile can be activated for a Project in any one Environment.

Derived Collaboration

Collaboration that inherits operations from another, according to standard object-oriented practice.

Dimension Table

Dimension tables describe the business entities of an enterprise; also called lookup or reference tables.

Dirty Data

Dirty data contains, but is not limited to, incorrect data including spelling errors, punctuation errors, incorrect data referencing, incomplete, inconsistent, outdated, and redundant data.

Drill Down

To move from summary to more detailed data by “drilling down” to get it. In database terminology this might mean starting with a general category and drilling down to a specific field in a record.

eGate System

See “Project”.

Environment

A collection of physical resources and their configurations that are used to host Project components. An Environment contains logical hosts and external systems.

EPR

Enterprise Resource Management

ETL

Extract, Transform, Load. Extract is the process of reading data from a source database and extracting the desired subset of data. Transform is the process of converting the extracted data from its previous form into the desired form. Load is the process of writing the data into a larger database.

eWay

A link between a Collaboration and an external connection including the message server connection (topic or queue) or external application.

External Application

A logical representation in an eGate Project of an external application.

External System

A representation in an eGate Project of an external application system.

Extraction

Data are extracted from a source using software tools. This first step in ETL initially “gets” the data.

Fact Table

A fact table typically contains two types of columns: those containing facts and those that contain foreign keys to dimension tables. Fact tables contain detail facts and/or summary facts.

ICAN Suite

The SeeBeyond Integrated Composite Application Network Suite.

Integration Server

J2EE software platform that houses the business logic container used to run Collaborations and JCA connectors (eWays). Provides transaction services, persistence, and external connectivity.

JMS IQ Manager

JMS-compliant, guaranteed delivery store, forwarding, and queueing service.

Join

Matches records, which are joined by a common field, in two tables in a relational database. Often part of a Select query.

Link

The JMS Connection between a Collaboration and a topic or queue in a JMS-compliant message server.

Linked Message Destination

A reference to a Message Destination defined in another Connectivity Map.

Logical Host

An instance of the eGate runtime Environment that is installed on a machine. A Logical Host contains the software and other installed components that are required at runtime, such as application and message servers.

Management Agent

Uses J2EE technology to manage and monitor an eGate 5.0 deployment that may contain other application servers in addition to the SeeBeyond Integration Server. Defines management interfaces and services designed for distributed environments, focusing on providing functionality for managing networks, systems, and applications.

Message Destination

A general term for a topic or queue. Two or more Projects can share a message destination that has the same name and is deployed on the same message server. A single Project may also have a single message destination referenced in multiple Connectivity Maps.

Metadata

“Data about data.” Metadata describes “how,” “when,” and “who” about structure and format, of a particular set of data. ETL tools are used to generate and maintain a central metadata repository.

Non-normalized Data

Non-normalized data cannot be cross-referenced accurately, if at all, and causes manageability issues. Non-normalized data may be converted to normalized data.

Normalized Data

Normalization is a common database design process used to remove redundant or incorrect organization and data. The design and normalization of the database will create a maintainable data set that can be cross-referenced.

Normalized data is not only easier to analyze but also easier to expand. Normalization involves removing redundancy and correcting incorrect data structure and organization.

OLAP

Online analytical processing.

OTD

An acronym for Object Type Definition. OTDs contain the data structure and rules that define an object. An OTD is used in Java Collaboration Definitions for creating data transformations and interfacing with external systems.

Project

Contains a collection of logical components, configurations, and files that are used to solve business problems. A Project organizes the files and packages and maintains the settings that comprise an eGate system in SeeBeyond’s Enterprise Designer.

Query

A request for information from a database. There are three query methods:

Choose – With this easy-to-use method, the database system presents a list of parameters from which you can choose. This method is not as flexible as other methods.

Query by example (QBE) – With this method, the system lets you specify fields and values to define a query.

Query language – With this method, you have the flexibility and power to make requests for information in the form of a stylized query using a query language. This is the most complex and powerful method.

Queue

A JMS queue is a shareable object that conforms to the *point-to-point* (p2p, or PTP) messaging domain, where one sender delivers a message to exactly one receiver. When the SeeBeyond JMS IQ Manager sends a message to a queue, it ensures it is received once and only once, even though there may be many receivers “listening” to the queue. This is equivalent to the subscriber pooling in other queue implementations. You can reference a queue that exists in another Connectivity Map or Project.

Raw Data

Data that has not been turned into “information,” through processing. Although factual and “real,” raw data is unorganized.

Relational Database (RDBMS)

Short for Relational Database Management System, most often referred to as RDBMS. Data is stored in related tables. Relational databases can be viewed in many different ways.

In this system a single database can be spread across several tables. (RDBMS differs from flat-file databases where each database is self-contained as a single file or table.)

Repository

Stores and manages the setup, component, and configuration information for eGate Projects. The Repository also provides monitoring services for Projects, which include version control and impact analysis.

Schema Runtime Environment

An add-on in eGate 5.0 that provides the upgrade path for e*Gate 4.x users to upgrade to eGate 5.0. Also known as the SRE.

Service

Contains the information about executing a set of business rules. These business rules can be defined in a Java Collaboration Definition, XSLT Collaboration Definition, Business Process, eTL Definition, or other service. A Service also contains binding information for connecting to JMS Topics, Queues, eWays, and other services.

Staging Data

Data that is to be processed before entering the warehouse.

Subproject

An independent Project that is included as part of another Project and listed on the Enterprise Explorer tree beneath the main Project icon.

Table

Refers to data arranged in rows and columns, like a spreadsheet. In relational database management systems, all information is stored in tables.

Topic

A JMS topic is a shareable object that conforms to the *publish-and-subscribe* (pub/sub) messaging domain, where one publisher broadcasts messages to potentially many subscribers. When the SeeBeyond JMS IQ Manager publishes a message on a topic, it ensures that all subscribers receive the message.

Transformation

Data that are extracted from databases are transformed into a desired form, using various tools that cleanse, merge, purge, aggregate, calculate, audit, remove redundancy, standardize, etc.

XSLT

An acronym for Extensible Stylesheet Language Transformations. A file format used in eGate to generate Collaboration Definitions.

Warehouse

See “Data Warehouse”.

e*Gate 4.x Terms in eGate 5.0

Table 2 provides definitions for the terms that are new with eGate release 5.0, as well as equivalent terms from eGate release 4.x.

Table 2 eGate 5.0 Terms

5.0 Term	4.x Equivalent Term
Collaboration	Collaboration
Collaboration Definition	Collaboration Definition
Connection	eWay Connection
Connectivity Map	Closest: Network View of an entire Schema
Deploy	Run the Control Broker
Deployment	<none>
Deployment Profile	Closest: Schema
Enterprise Designer	Enterprise Manager
Enterprise Manager	Enterprise Monitor
Environment	Schema (except only includes physical information, not business logic)
eWay	eWay Connection eWay
eWay Configuration	eWay Connection Configuration
External Application	eWay Connection
External System	eWay Connection
JMS Connection	eWay Connection
Integration Server	<none>
Link	JMS eWay Connection
Linked Message Destination	<none>
Logical Host	Participating Host
Message Destination	Topic or queue
Message Server	JMS IQ Manager
Object Type Definition (OTD)	Event Type Definition (ETD)
Process Manager	Control Broker
Project	Schema (except not including physical layer)
Queue	JMS queue
Repository	Registry
Subproject	Schema

Table 2 eGate 5.0 Terms (Continued)

5.0 Term	4.x Equivalent Term
Topic	JMS topic
XSLT	<none>

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