

SeeBeyond ICAN Suite

File eWay Intelligent Adapter User's Guide

Release 5.0



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Introducing the File eWay

This guide explains how to install, set properties for, and operate the SeeBeyond Technology Corporation's (SeeBeyond) File eWay Intelligent Adapter, referred to as the File eWay throughout this document.

This chapter provides a brief overview of the operations, the components, the general features, and the system requirements of the File eWay.

Chapter Topics

- [“Overview” on page 5](#)
- [“Supported Operating Systems” on page 6](#)
- [“System Requirements” on page 6](#)
- [“External System Requirements” on page 7](#)

1.1 Overview

The File eWay exchanges data between an external file system and the eGate Integrator system. You can use this eWay for:

- Reading information from an external file into eGate.
- Writing information from eGate into an external file.

The eWay is provided as part of eGate and operates as follows:

- As an inbound eWay, the File eWay polls an input directory for files based on a file name matching a specified regular expression. When the eWay detects a matching file, it opens the file and publishes the data to a Collaboration or Business Process Service. The original data file is then renamed to the same file name with a **.~in** extension.

For example, **input1.txt** is renamed to **input1.~in**.

- As an outbound eWay, the eWay appends processed data to a file in an output directory.

The default file name is **output%d.dat**, for example, **output1.dat**, **output2.dat**, and so on.

You can set configuration properties for the eWay, including names and locations of source and destination files, in the eWay **Properties** dialog box interface, which is part of the eGate Enterprise Designer. See [Chapter 3](#) for more information about using the eWay **Properties** dialog box.

For a description of a complete end-to-end scenario using the File eWay, inbound and outbound, see the *eGate Tutorial*.

1.1.1 Alerting and Logging

eGate provides an alerting and logging feature. This allows monitoring of messages and captures any adverse messages in order of severity based on configured severity level and higher. To enable Logging, please see the *eGate Integrator User's Guide*.

This feature provides general notifications indicating when the eWay is started, running (ready to process), stopped, or suspended. Alerts are generated when a file cannot be renamed during inbound processing.

1.2 Supported Operating Systems

The File eWay is available for the following operating systems:

- Windows XP SP1a
- Windows 2000 SP3
- Windows Server 2003
- HP Tru64 V5.1A
- HP-UX 11.0 and 11i (RISC)
- IBM AIX 5.1 and 5.2
- Red Hat Linux 8 (Intel)
- Red Hat Linux Advanced Server 2.1 (Intel)
- Sun Solaris 8 and 9

1.3 System Requirements

To use the File eWay, you need:

- eGate Logical Host, version 5.0.

Logical Host requirements

The eWay must have its properties set and be administered using the Enterprise Designer. For complete information on the Enterprise Designer system requirements, see the *eGate Integrator Installation Guide*.

eInsight interface

To enable the eWay's eInsight interface, you must also install and set properties for SeeBeyond's eInsight Business Process Manager. See the *eInsight Business Process Manager User's Guide* for details.

1.4 External System Requirements

There are no external system requirements.

Installing the File eWay

This chapter explains how to install the File eWay.

Chapter Topics

- [“Installing on Windows and UNIX Operating Systems” on page 8](#)

2.1 Installing on Windows and UNIX Operating Systems

During the eGate Integrator installation process, the Enterprise Manager, a Web-based application, is used to select and upload eWays (.sar files for eWays) from the eGate installation CD-ROM to the Repository.

When the Repository is running on a UNIX operating system, eGate and the eWays are installed using the Enterprise Manager on a computer running Windows connected to the Repository server.

2.1.1 Installing eGate

The eGate installation process includes the following operations:

- Installing the eGate Repository
- Uploading products to the Repository
- Downloading components (such as eGate Enterprise Designer and Logical Host)
- Viewing product information home pages

2.1.2. Installing the File eWay on an eGate-supported System

The File eWay is installed during the installation of eGate Integrator. Follow the instructions in the *eGate Integrator Installation Guide* for installing eGate and include the following steps:

- 1 During the procedures for uploading files to the eGate Repository using the Enterprise Manager, after uploading the **eGate.sar** file, select and upload the following file:
 - ◆ **FileeWay.sar**
- 2 Continue installing eGate Integrator as instructed in the *eGate Integrator Installation Guide*.

2.1.3. After Installation

Once you have installed and set properties for the eWay, you must then incorporate it into a Project before it can perform its intended functions. See the *eGate Integrator User's Guide* for more information on incorporating the eWay into an eGate Project.

Setting File eWay Properties

This chapter explains how to set the properties for the File eWay.

Chapter Topics

- “File eWay Properties Sheet” on page 10
- “Setting Properties” on page 11

3.1 File eWay Properties Sheet

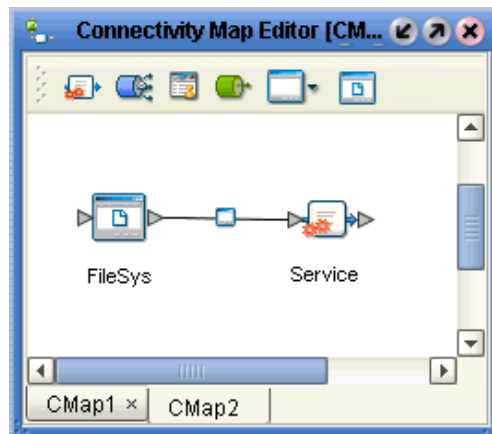
When you install the File eWay, a default properties template for the eWay is also installed. The template’s default properties are accessible via the eGate Enterprise Designer. These default settings apply to all File eWays you use within your current Project or Business Process.

You can set properties for each individual eWay using the Enterprise Designer’s eWay **Properties** sheet. This section describes general procedures on how to change these default properties for the eWay. For details on these steps, see the *eGate Integrator User’s Guide*.

To set properties for the VSAM eWay using the Project Explorer

- 1 From the eGate Enterprise Designer’s **Project Explorer** create at least one Connectivity Map.
- 2 Create the desired external systems for your one or more Connectivity Maps.
- 3 Select the external application whose default eWay properties you want to change by clicking the **eWay** icon. This icon is located on the link between an **External Application** icon and a **Service** icon on the Connectivity Map canvas. See **Figure 1 on page 11**.

Figure 1 eWay Icon



The eWay **Properties** sheet appears. [Figure 2 on page 12](#), and [Figure 3 on page 15](#) show the eWay's default properties available from the **Project Explorer** and Connectivity Map. You can use this sheet to modify the current eWay's properties settings.

- 4 Click **OK** then **Save All** to save your changes.

To use the eWay Properties sheet

- The File eWay's properties are set using the eGate Enterprise Designer's eWay **Properties** sheet. The default properties is automatically provided.
- Clicking the **Property Settings** folder in the left pane displays the eWay's editable properties in the right pane.
- Many of the entries allow you to enter text. Click the desired text box, then click the ellipsis (...) that appears, to open a sheet for this purpose.

Note: *Even if you do not change the eWay's properties, you must open each **Properties** sheet for every eWay and click **OK** to activate the eWay.*

The rest of this chapter explains all of the eWay's properties in detail.

3.2 Setting Properties

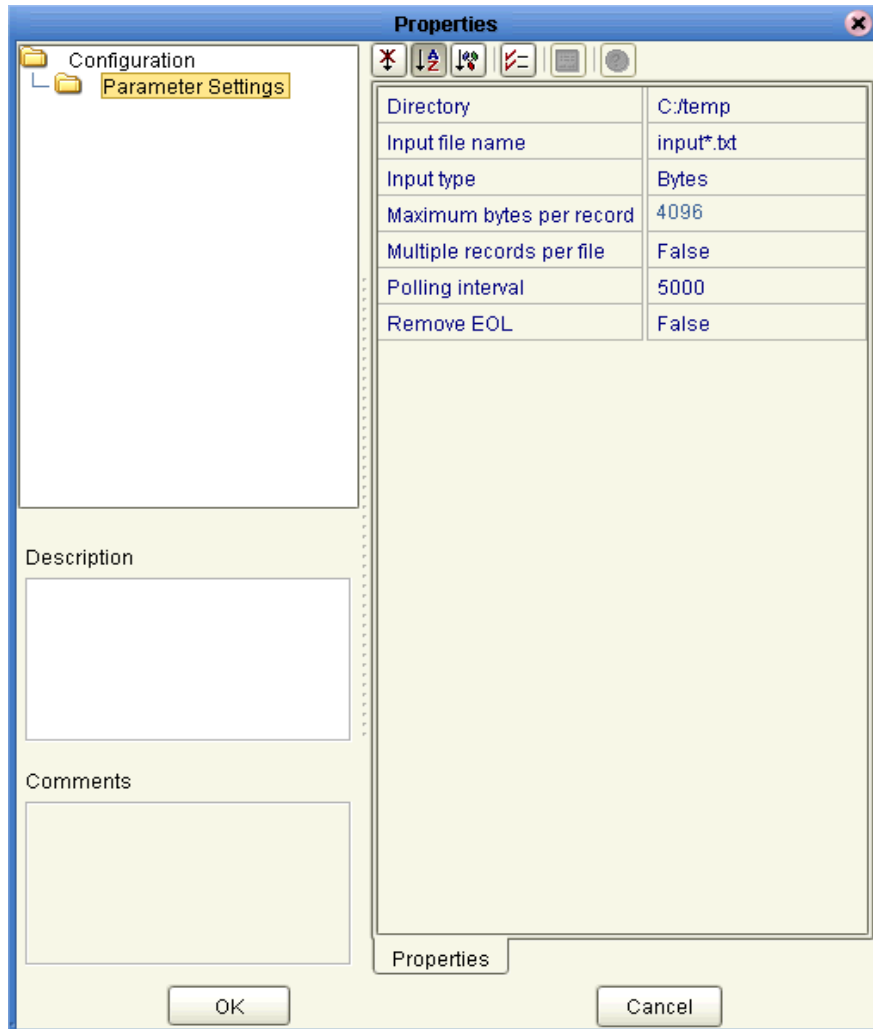
The File eWay's properties are set using the eGate Enterprise Designer's eWay **Properties** sheet. The default properties is automatically provided. The eWay's properties are organized as follows:

- ["Setting eWay Properties in Inbound Mode" on page 12](#)
- ["Setting eWay Properties in Outbound Mode" on page 14](#)

3.2.1 Setting eWay Properties in Inbound Mode

The inbound (poller) properties settings determine the eWay’s behavior for input operations. See Figure 2.

Figure 2 File eWay: eWay Properties Sheet (Inbound)



Directory

Description

The folder or directory the eWay polls for input files.

Required Values

A valid folder or directory name; you must use the absolute path; specify paths using the (forward) / slash mark. The default is **C:/temp**.

Input file name

Description

Specifies the file mask for input data files.

Required Values

A valid file mask. The default is **input*.txt**. You can provide only an extension with an asterisk (*), for example, ***.txt**, to allow all files with that extension.

Input type

Description

Specifies the type of input file, for example, bytes.

Required Values

A valid file type. The default is **Bytes**, the only valid value.

Maximum bytes per record

Description

Specifies the maximum number of bytes per record (message) sent to a subscriber. This property only applies if the **Multiple records per file** property is set to **True**.

Required Values

An integer; the acceptable range is an integer from 2 to 99999, inclusive, and the default is 4096.

Caution: There is no error message if you enter an incorrect value.

Multiple records per file

Description

Specifies whether multiple records are obtained per file. If this property is set to **True**, multiple records (messages) are generated per line up to the number specified in the **Maximum bytes per record** property. Any data exceeding the maximum bytes per record size is sent in subsequent messages.

Required Values

True enables the feature; **False** disables it. The default is **False**.

Polling interval

Description

The number of milliseconds the eWay waits between poll attempts of the input directory.

Required Values

An integer; the acceptable range is an integer from **2** to **99999**, inclusive, and the default is **5000** (5000 milliseconds or 5 seconds). It is not advised to enter a value less than 5 seconds.

Caution: There is **no** error message if you enter an incorrect value.

Remove EOL

Description

Specifies whether the eWay excludes the terminating end-of-line (EOL) characters from records (messages) sent to a subscriber. This property only applies if the **Multiple records per file** property is set to **True**.

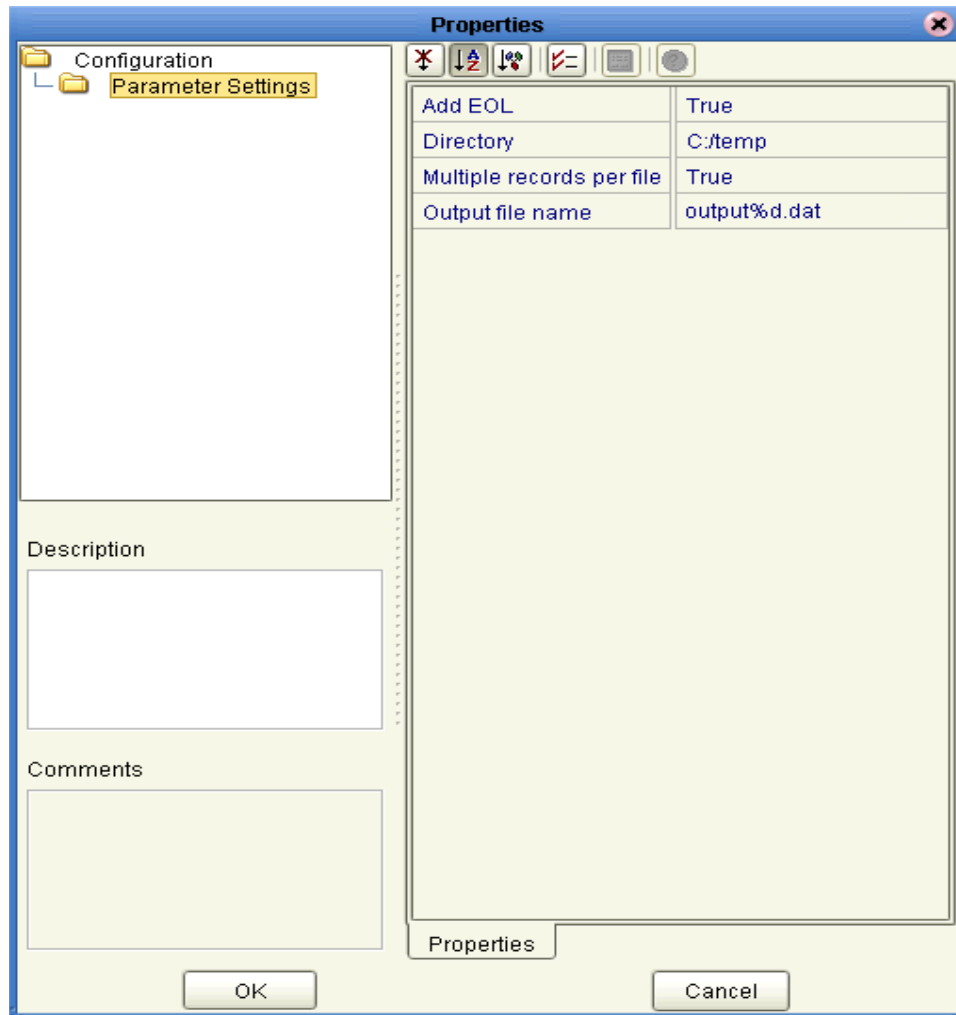
Required Values

True enables the feature; **False** disables it. The default is **False**.

3.2.2 Setting eWay Properties in Outbound Mode

The outbound (send) properties settings determine the eWay's behavior for output operations. See [Figure 3 on page 15](#).

Figure 3 File eWay: eWay Properties Sheet (Outbound)



Add EOL

Description

Specifies whether the system adds an end-of-line character to each record the eWay sends to the output file.

Required Values

True means yes; **False** means no. The default is **True**.

Directory

Description

The directory to which output files are written.

Required Values

A valid directory name with an absolute path (including the drive letter). The default is **C:/temp** (use “/” as a path separator).

Multiple records per file

Description

Specifies whether multiple records can be written to the output file. New messages are appended to the output file.

Required Values

True indicates that the input files contain multiple records; **False** indicates that each input file contains a single record. The default is **True**.

Output file name

Description

The name of the file to which the output is written.

Required Values

A valid file name. The default is **output%d.dat**. The **%d** in the file name is a counter and increments for each new file.

Instead of **%d**, you can use any other **printf** style that takes an integer or long value. For example, you can specify **1%d** or **%012d**.

***Note:** For more information on the **printf** feature, see the appropriate C language documentation.*

Additional Information

In cases when **Multiple records per file** is set to **False**:

- If no output file exists at the time of the first execution, a new output file is created for each record.
- If an output file already exists at the time of the first execution, messages are appended to it.

Using the File eWay With eInsight

This chapter describes how to use the File eWay with SeeBeyond ICAN Suite's eInsight Business Process Manager.

Chapter Topics

- [“eInsight Engine and Components” on page 17](#)
- [“File eWay With eInsight” on page 17](#)

4.1 eInsight Engine and Components

You can set up and deploy an eGate component using eInsight. Once you have associated the desired component with a Business Process, the eInsight engine can automatically invoke that component during run time, using a Business Process Execution Language (BPEL) interface.

Examples of eGate components that can interface with eInsight in this way are:

- Java Messaging Service (JMS)
- Object Type Definitions (OTDs)
- An eWay
- eGate Service

Using the eGate Enterprise Designer and its eInsight canvas, you can add a desired operation to a Business Process, then associate that process with an eGate component, for example, an eWay or a Service. In the Enterprise Designer, associate the Business Process and Service icons using drag-and-drop operations.

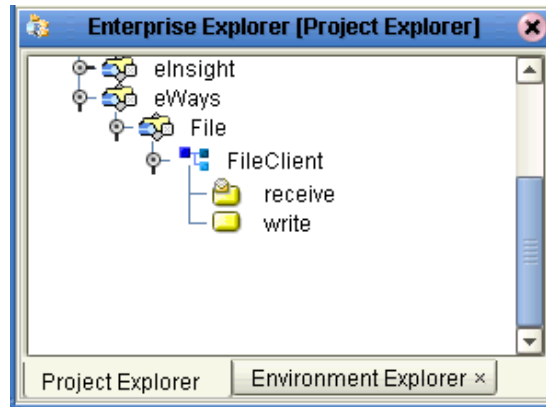
See the *eInsight Business Process Manager User's Guide* for details.

4.2 File eWay With eInsight

You can add File eWay objects to an eInsight Business Process during the system design phase. To make this association, select the desired **receive** or **write** operation under the eWay in the Enterprise Explorer and drag it onto the eInsight Business Process canvas. In turn, you can activate a Business Process in eGate by dragging it onto a Service or directly onto the canvas.

Figure 4 on page 18 shows the Enterprise Designer's **Project Explorer** with the File eWay Business Process operations exposed under the OTD icon.

Figure 4 Project Explorer with Business Process Operations



At run time, the eInsight Engine is able to invoke each of the steps in order as set up in the Business Process. Using the engine's BPEL interface, eInsight in turn invokes the File eWay operations, as well as any other eWays in the current Project.

Note: The *write* (output) Business Process operation has an additional input function provided to receive and handle incoming error exception messages. For more information on this feature, see the *eInsight Business Process Manager User's Guide*.

4.2.1 Sample Scenario

For example, a Business Process with the File eWay can model a simple series of actions that accept or reject credit approvals. In this sample scenario, a system uses three types of "triggers" to determine what kind of letter is sent to an applicant who requests credit. In this system there are three possibilities: *credit approved*, *credit not approved*, and *may need more information*.

An approval trigger sends an activity command to mail out a form letter to the applicant stating the credit is approved. A disapproval trigger mandates a letter giving the opposite news. A "may need more information" trigger tells the system to wait 48 hours. In this case, if no approval or disapproval is received, a command is sent, which flags the application for manual intervention.

The text orders are received, read, and sent out to the appropriate destinations for handling.

4.2.2 Setting Up a Business Process

Table 1 shows the Business Processes involved in this scenario.

Table 1 Sample Scenario Business Process

Case	Activity	Result
Case 1: Credit approved	Send "approval" order.	Order sent to office for processing and mailing.
Case 2: Credit not approved	Send "disapproval" order.	Order sent to office for processing and mailing.
Case 3: May need more information	Wait 48 hours then send "need information" order.	Order sent to office for further handling.

4.2.3 Using the Business Process Canvas

Once you have designed your Business Process for this scenario, you can use the eGate Enterprise Designer to create it.

To create a Business Process

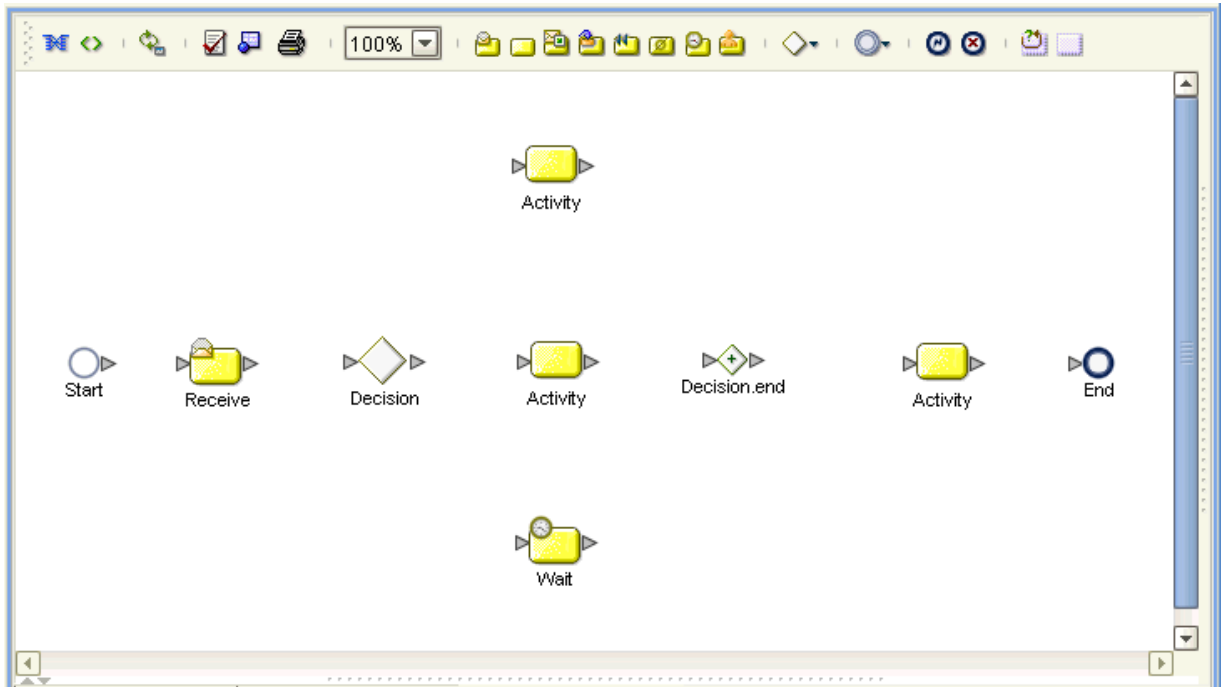
- 1 Right-click the desired Project in the **Project Explorer** and choose **New > Business Process** from the pop-up menus. Name the Business Process **BusinessProcess1**.

A blank Business Process canvas appears in the right pane, along with the Business Process toolbar.

- 2 Arrange the **Start** and **End** icons at opposite sides of the canvas, then drag the following icons onto the canvas:
 - ◆ **Receive**
 - ◆ **Decision** (a **Decision End** icon also appears)
 - ◆ Two **Activity** icons, for your first two cases
 - ◆ **Wait**, for your third case
 - ◆ An additional **Activity** (for your result)

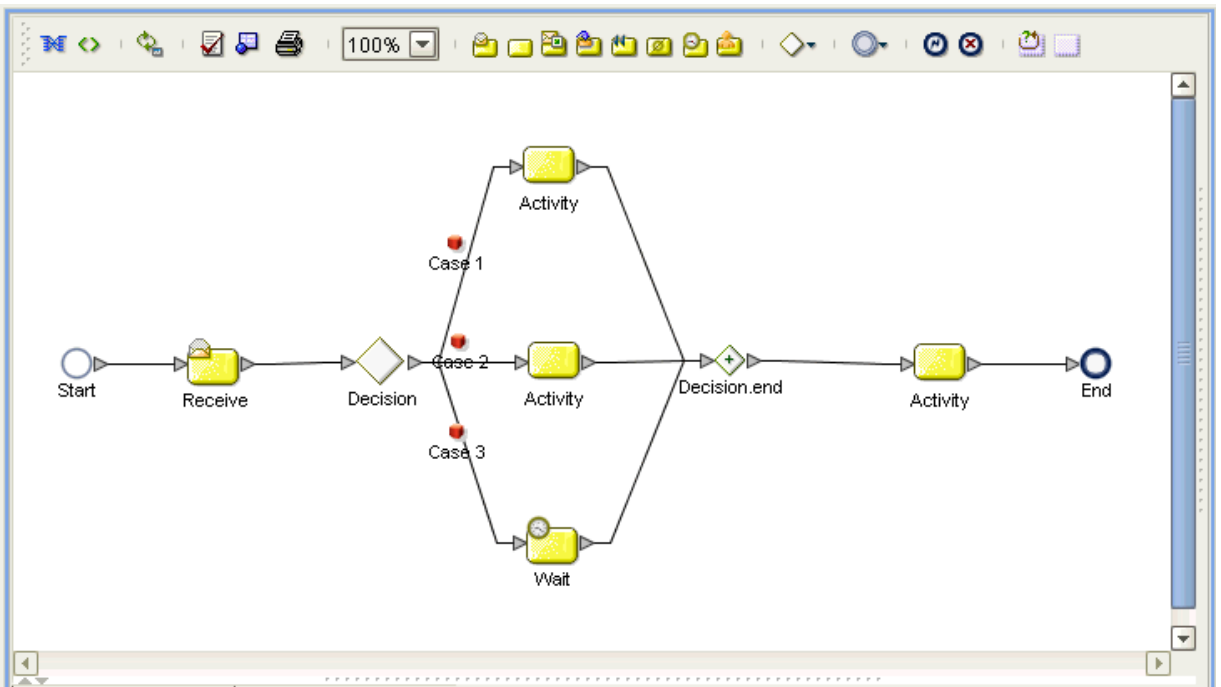
- 3 Again by dragging, arrange these icons on the canvas as shown in Figure 5.

Figure 5 Business Process Icons



- 4 By dragging from one icon to another, link the icons on the canvas, as shown in Figure 6 on page 20.

Figure 6 Business Process Icons With Links



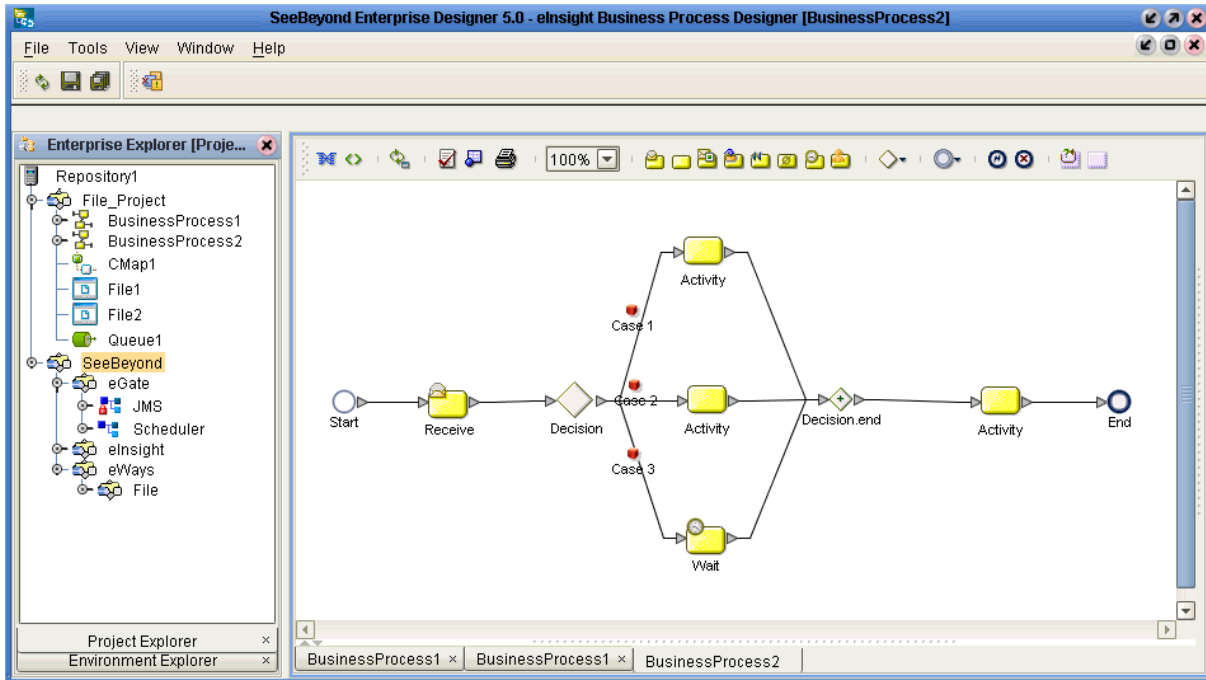
To implement the File eWay in your Business Process

- 1 From the **Project Explorer**, open the **SeeBeyond** icon.
eGate and **eWays** icons appear under **SeeBeyond**.

- 2 Open the **eGate** and **eWays** icons.

Additional icons appear, including **JMS** and **File**. See [Figure 7 on page 21](#).

Figure 7 Business Process Icons With Links



- 3 From the **Project Explorer**, drag the **File** icon onto the **Receive** icon on the Business Process canvas.

This action allows the File eWay to subscribe to the needed data from an external system and provide it for your Business Process.

- 4 From the **Project Explorer**, drag the **JMS** icon onto the final **Activity** icon. This action allows the File eWay to publish to an eGate JMS Queue.

From this component, the appropriate data can be sent along to the next Business Process for further routing. See Figure 7.

Finishing your Business Process

Once you are done implementing the File eWay, you can use eInsight's Business Process canvas features to enter the desired information to set up your decision, case/activity, and Business Rule Designer operations. See the *eInsight Business Process Manager User's Guide* for complete information on how to use these features.

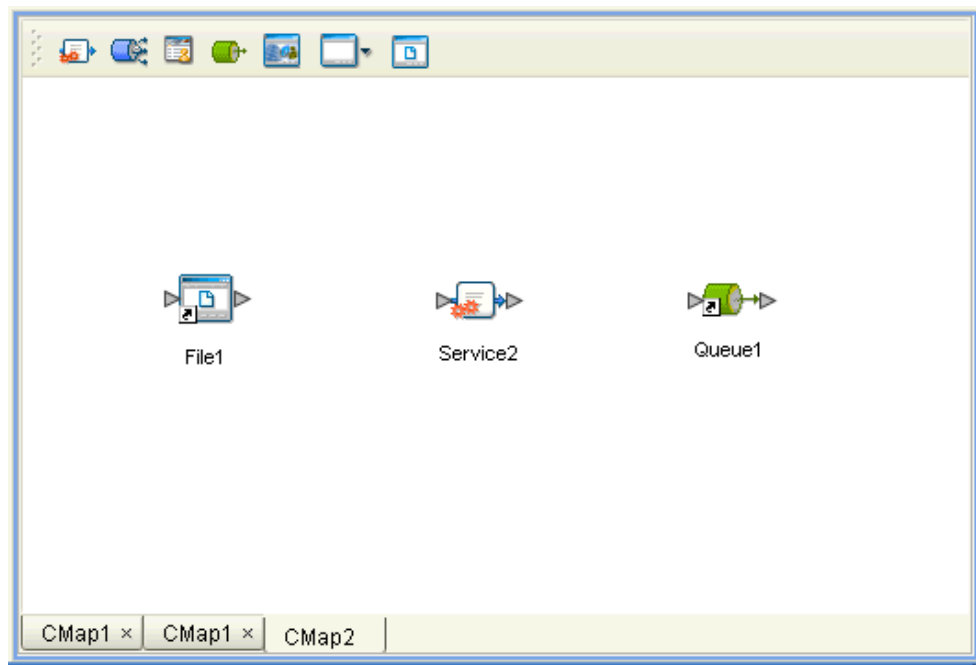
After you have finished creating your Business Process, you can use it to define one or more of the eGate Services on your Connectivity Map.

To implement your Business Process on the Connectivity Map

- 1 Under the same Project where you created your Business Process, create a Connectivity Map and give it the following components:
 - ♦ File external application
 - ♦ Service
 - ♦ Queue

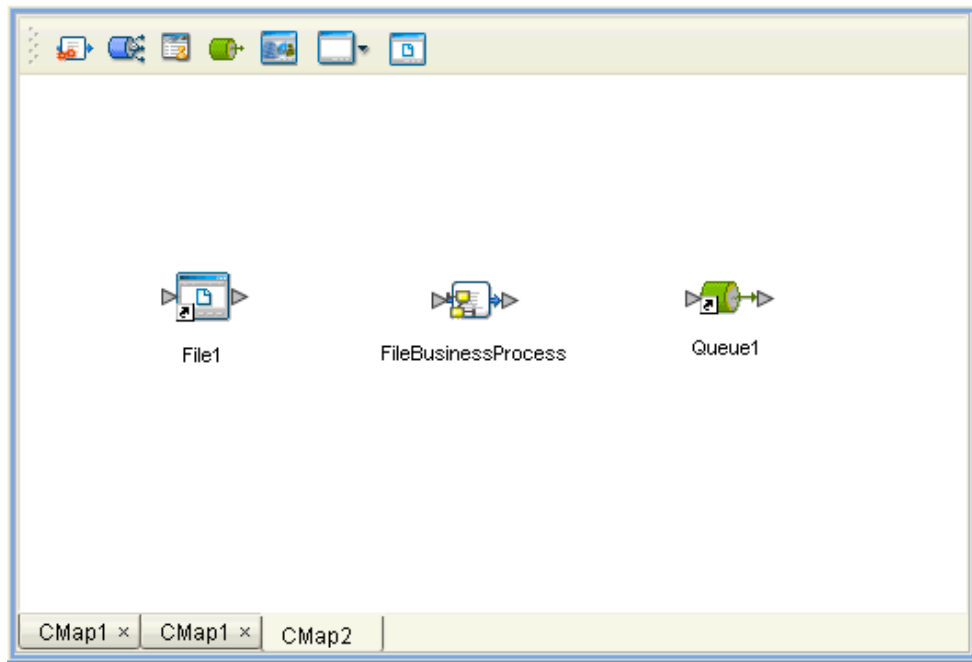
See Figure 8.

Figure 8 Starting Connectivity Map



- 2 Drag and drop **BusinessProcess1** from the **Project Explorer** onto the Collaboration. The **Service** icon changes to show you have implemented it with a Business Process. See [Figure 9 on page 23](#). You can give the Service another name, for example, **FileSendBusinessProcess**.

Figure 9 Connectivity Map: Business Process in Collaboration



- 3 Finish building your eGate Project as desired. For details on how to create and implement a Project, see the *eGate Tutorial*.

Using Java Collaborations

This chapter describes using the File eWay with eGate Java Collaborations.

Chapter Topics

- [“Using Java Collaborations” on page 24](#)
- [“Business Rules and Collaboration Definitions” on page 24](#)

5.1 Using Java Collaborations

Java Collaborations and their Definitions contain a set of rules that defines the processing and transport of data as it travels between eGate components.

You create Java Collaboration Definitions to assign to the Collaborations in your Project. This operation enables eGate to recognize the source and destination data relationships in your Project.

You must use the Java Collaboration Definition wizard to create a Java Collaboration Definition. After a Collaboration Definition is created, you can use the Java Collaboration Editor to create the Business Rules logic of the Collaboration.

Note: See the *eGate Integrator User’s Guide* for complete information on creating and editing Java Collaborations and Collaboration Definitions, as well as using the wizard.

You can use File eWays in Projects using Java Collaborations, to pass file data into and out of eGate.

5.2 Business Rules and Collaboration Definitions

You can customize Collaboration Definitions by mapping Business Rules using the Java Collaboration Editor window in the Enterprise Designer. By clicking and dragging, you map items in the Transformation Designer areas with other desired items via their icons.

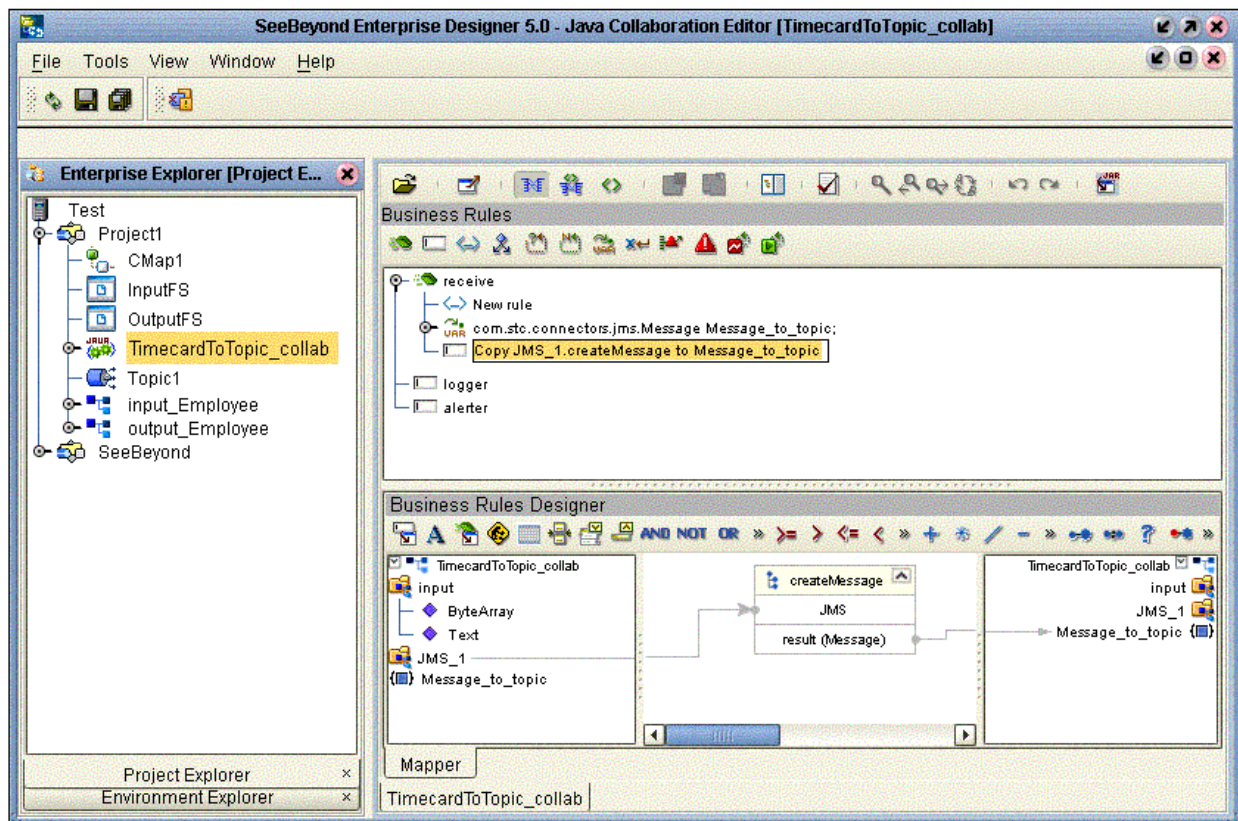
Using the Java Collaboration Editor

The Java Collaboration Editor window displays in the Enterprise Designer after you create a new Java Collaboration Definition. You can also open this Editor by right-clicking on the name of the desired Collaboration Definition in the **Project Explorer** and choosing **Open** from the pop-up menu.

See the *eGate Integrator User's Guide* for complete information on how to use the Java Collaboration Editor. To complete a Collaboration Definition, you can use the Java Collaboration Editor to create Business Rules.

Figure 10 shows an example of the Java Collaboration Editor using the File eWay.

Figure 10 Java Collaboration Editor With File eWay



For complete information on how to use the File eWay with Java Collaboration Definitions, see the *eGate Tutorial* and the *eGate Integrator User's Guide*.

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