SeeBeyond ICAN Suite

File eWay Intelligent Adapter User's Guide

Release 5.0.5

SeeBeyond Proprietary and Confidential

The information contained in this document is subject to change and is updated periodically to reflect changes to the applicable software. Although every effort has been made to ensure the accuracy of this document, SeeBeyond Technology Corporation (SeeBeyond) assumes no responsibility for any errors that may appear herein. The software described in this document is furnished under a License Agreement and may be used or copied only in accordance with the terms of such License Agreement. Printing, copying, or reproducing this document in any fashion is prohibited except in accordance with the License Agreement. The contents of this document are designated as being confidential and proprietary; are considered to be trade secrets of SeeBeyond; and may be used only in accordance with the License Agreement, as protected and enforceable by law. SeeBeyond assumes no responsibility for the use or reliability of its software on platforms that are not supported by SeeBeyond.

SeeBeyond, e*Gate, e*Way, and e*Xchange are the registered trademarks of SeeBeyond Technology Corporation in the United States and/or select foreign countries. The SeeBeyond logo, SeeBeyond Integrated Composite Application Network Suite, eGate, eWay, eInsight, eVision, eXchange, eView, eIndex, eTL, ePortal, eBAM, and e*Insight are trademarks of SeeBeyond Technology Corporation. The absence of a trademark from this list does not constitute a waiver of SeeBeyond Technology Corporation's intellectual property rights concerning that trademark. This document may contain references to other company, brand, and product names. These company, brand, and product names are used herein for identification purposes only and may be the trademarks of their respective owners.

© 2004 by SeeBeyond Technology Corporation. All Rights Reserved. This work is protected as an unpublished work under the copyright laws.

This work is confidential and proprietary information of SeeBeyond and must be maintained in strict confidence.

Version 20040927143437.

Contents

Chapter 1

Introducing the File eWay 5

About the File eWay 5
- eWay Operation 5
- Setting Properties 6
- Alerting and Logging 6

What's in This Document 6
- Organization of Information in This Book 6
- Scope 6
- Intended Audience 7
- Writing Conventions 7

SeeBeyond Web Site 7
- SeeBeyond Documentation Feedback 7

Related Documents 8

Chapter 2

Installing the File eWay 9

Supported Operating Systems 9

System Requirements 9

External System Requirements 9

Installing the eWay Product Files 10

Chapter 3

Setting File eWay Properties 11

File eWay Properties Dialog Box 11
- Setting Properties on the Connectivity Map 11
- Setting Up the Environment 12

Setting Properties 13
- Setting eWay Properties in Inbound Mode 13
  - Directory 14
  - Input file name 14
  - Input type 14

Maximum bytes per record 14
Multiple records per file 15
Polling interval 15
Remove EOL 15
Setting eWay Properties in Outbound Mode 15
Add EOL 16
Directory 16
Multiple records per file 17
Output file name 17

Chapter 4

Using the File eWay With eInsight 18

eInsight Engine and Components 18

File eWay With eInsight 18
Sample Scenario 19
Setting Up a Business Process 20
Using the Business Process Canvas 20

Chapter 5

Using Java-based Collaborations 25

Java-based Collaborations and eGate 25

Business Rules and Collaboration Definitions 25

Index 27

Chapter 1

Introducing the File eWay

What's in This Chapter

- "About the File eWay" on page 5
- "What's in This Document" on page 6
- "SeeBeyond Web Site" on page 7
- "Related Documents" on page 8

1.1 About the File eWay

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.

Important: *The File eWay is a file-based eWay used for testing your eGate configuration and is not intended for production environments.*

1.1.1 eWay Operation

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 writes 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.

1.1.2 Setting Properties

You can set configuration properties for the eWay, including names and locations of source and destination files, in the eWay Properties dialog box, 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 Integrator Tutorial*.

1.1.3 Alerting and Logging

eGate provides an alerting and logging feature. This feature allows monitoring of messages and captures any adverse messages in order of severity based on configured severity level and higher. To enable logging, 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. For example, an alert is generated when a file cannot be renamed during inbound processing.

1.2 What's in This Document

This guide explains how to install, configure, and operate the SeeBeyond® Integrated Composite Application Network Suite™ (ICAN) File eWay Intelligent Adapter, referred to as the File eWay throughout this guide.

1.2.1 Organization of Information in This Book

This document includes the following chapters:

- **Chapter 1 "Introducing the File eWay"**: Provides an overview description of the product as well as high-level information about this document.
- **Chapter 2 "Installing the File eWay"**: Describes the system requirements and provides instructions for installing the File eWay.
- **Chapter 3 "Setting File eWay Properties"**: Provides instructions for configuring the eWay to communicate with external file system.
- **Chapter 4 "Using the File eWay With eInsight"**: Explains how to use the File eWay with eInsight Business Processes.
- **Chapter 5 "Using Java-based Collaborations"**: Explains how to use the File eWay with eGate Java Collaborations.

1.2.2 Scope

This document describes the process of installing, configuring, and running the File eWay.

This document does not cover the Java methods exposed by this eWay. For information on the Java methods, download and view the File eWay Javadoc files from the Enterprise Manager.

1.2.3 Intended Audience

This guide is intended for experienced computer users who have the responsibility of helping to set up and maintain a fully functioning ICAN Suite system. This person must also understand any operating systems on which the ICAN Suite will be installed and must be thoroughly familiar with Windows-style GUI operations.

1.2.4 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	▪ 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`***.	`bootstrap -p` ***`password`***
Hypertext links	**Blue** text	**http://www.seebeyond.com**

1.3 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

1.4 SeeBeyond Documentation Feedback

We appreciate your feedback. Please send any comments or suggestions regarding this document to:

docfeedback@seebeyond.com

1.5 Related Documents

The following SeeBeyond documents provide additional information about the ICAN product suite:

- *eGate Integrator User's Guide*
- *SeeBeyond ICAN Suite Installation Guide*
- *eGate Integrator Tutorial*

Chapter 2

Installing the File eWay

What's in This Chapter

- "Supported Operating Systems" on page 9
- "System Requirements" on page 9
- "External System Requirements" on page 9
- "Installing the eWay Product Files" on page 10

2.1 Supported Operating Systems

The File is available on the operating systems as eGate Integrator. For a complete list of these supported operating systems, see the *SeeBeyond ICAN Suite Installation Guide*.

2.2 System Requirements

The system requirements for the File eWay are the same as for eGate Integrator. Refer to the *SeeBeyond ICAN Suite Installation Guide* for a complete listing of system requirements. It is also helpful to review the **Readme.txt** file for additional requirements prior to installation.

Note: *To enable Web services, you must also install and configure eInsight.*

2.3 External System Requirements

To use the File eWay, you must have read and write rights to your file system as are appropriate for your ICAN Project. For example, to use an eWay that reads a file from your local or LAN file system, you need read rights for that location. Similarly, you need write rights to use an eWay that writes a file to your file system.

2.4 Installing the eWay Product Files

The installation process includes:

- Installing the ICAN Repository.
- Uploading products to the Repository (including the File eWay, documentation, sample files, and Javadocs).
- Downloading components (including the Enterprise Designer and Logical Host) from the Repository.
- Updating products in the Enterprise Designer using the Update Center Wizard.

To install the File eWay

1. Follow the instructions for installing ICAN in the *SeeBeyond ICAN Suite Installation Guide*.
2. After uploading **eGate.sar** to the Repository, upload the following additional product files:
   - **FileeWay.sar** (to install the File eWay)
   - **FileeWayDocs.sar** (to install the File eWay documentation)

Note: *These files may not be located on the same installation disc as the **eGate.sar** file.*

To install the File eWay Samples and Javadocs

1. From the Documentation tab of the Enterprise Manager, click **File eWay** to view the list of files available for this product.
2. Click **Download Sample** to open the **FileeWaySample.zip** file.
3. Use WinZip to extract the sample files to the desired location.
4. Click Download Javadocs to open the **FileeWayJavadoc.zip** file.
5. Use WinZip to extract the Javadocs files to the desired location.

   After you complete the process of installing the Repository, Logical Host, and Enterprise Designer (as described in the *SeeBeyond ICAN Suite Installation Guide*), refer to **Chapter 4** and **Chapter 5** for instructions on importing the sample project into your repository via the Enterprise Designer.

Chapter 3

Setting File eWay Properties

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

Chapter Topics

- **"File eWay Properties Dialog Box" on page 11**
- **"Setting Properties" on page 13**

3.1 File eWay Properties Dialog Box

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

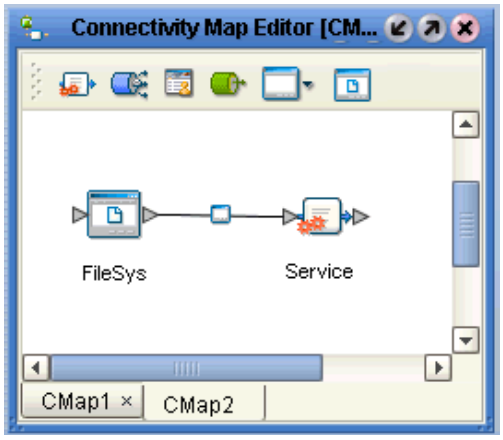
You can set properties for each individual eWay using the Enterprise Designer's eWay **Properties** dialog box. This section describes general procedures on how to change these default properties for the eWay. For details on these steps, see the *eGate Integrator User's Guide*.

3.1.1 Setting Properties on the Connectivity Map

To set properties for the File 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 12**.

Figure 1 eWay Icon



The eWay **Properties** dialog box appears. **Figure 2 on page 13**, and **Figure 3 on page 16** show the eWay's default properties available from the **Project Explorer** and Connectivity Map. You can use this dialog box to modify the eWay's current properties settings.

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

To use the eWay Properties dialog box

- The default properties are automatically provided. You can change the defaults, as desired.
- 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 dialog box for this purpose.

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

See the section under **"Setting Properties" on page 13** for complete details on the eWay's configurable properties.

3.1.2 Setting Up the Environment

You do not need to set any properties for the File eWay in the Project's Environment. However, remember to create an inbound and/or outbound external File system in the Environment if you have created one or more on the Connectivity Map. See the *eGate Integrator User's Guide* for details.

Note: *To avoid confusion, be sure to name the external File systems in your Environment appropriately, that is, inbound or outbound. This naming convention allows you to keep track of your inbound versus outbound systems for later reference.*

3.2 Setting Properties

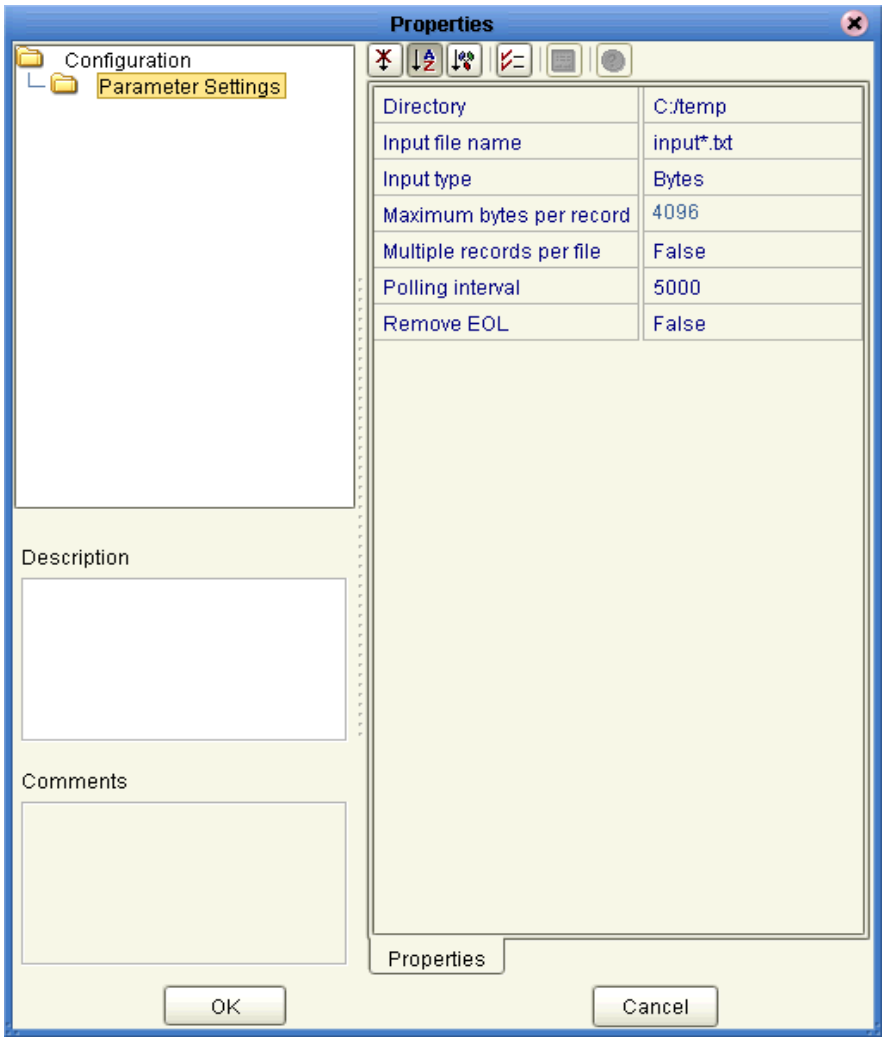
The File eWay's properties are set using the eGate Enterprise Designer's eWay **Properties** dialog box. The eWay's properties are organized as follows:

- **"Setting eWay Properties in Inbound Mode" on page 13**
- **"Setting eWay Properties in Outbound Mode" on page 15**

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 Dialog Box (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. An input file's extension is renamed to **.~in** after it is picked up.

Note: *If a file with the same name as the rename name exists, for example, **input1.~in**, picking up the input file fails. You must ensure no files with the rename names exist before the files are processed by the inbound file poller.*

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 (messages) 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**.

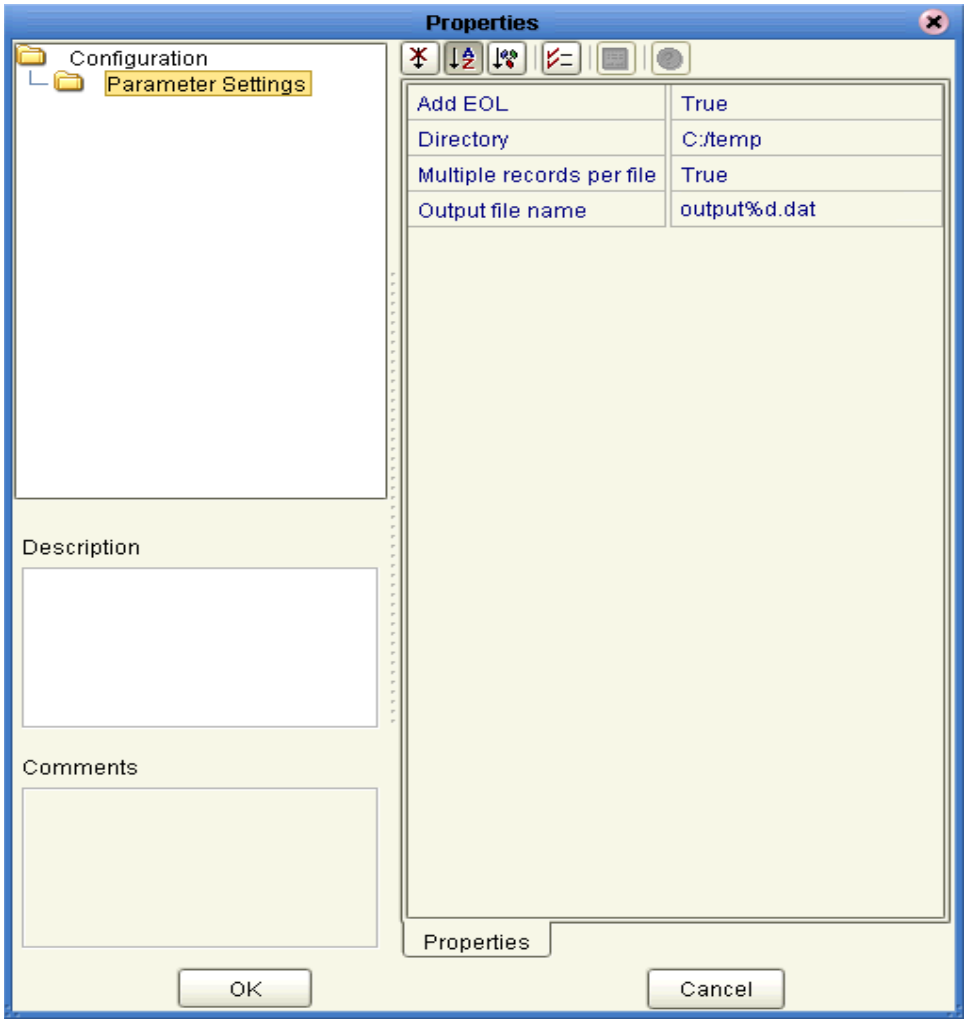
Required Values

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 16**.

Figure 3 File eWay: eWay Properties Dialog Box (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 (messages) 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 (messages); **False** indicates that each input file contains a single record (message). 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.

Chapter 4

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 18**
- **"File eWay With eInsight" on page 18**

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, a Service. In the Enterprise Designer, associate the Business Process and Service icons using drag-and-drop operations.

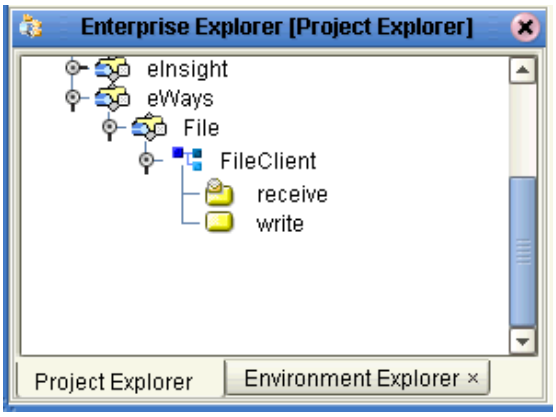
See the *eInsight Business Process Manager User's Guide* for details.

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 19 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 2 shows the Business Processes involved in this scenario.

Table 2 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**.

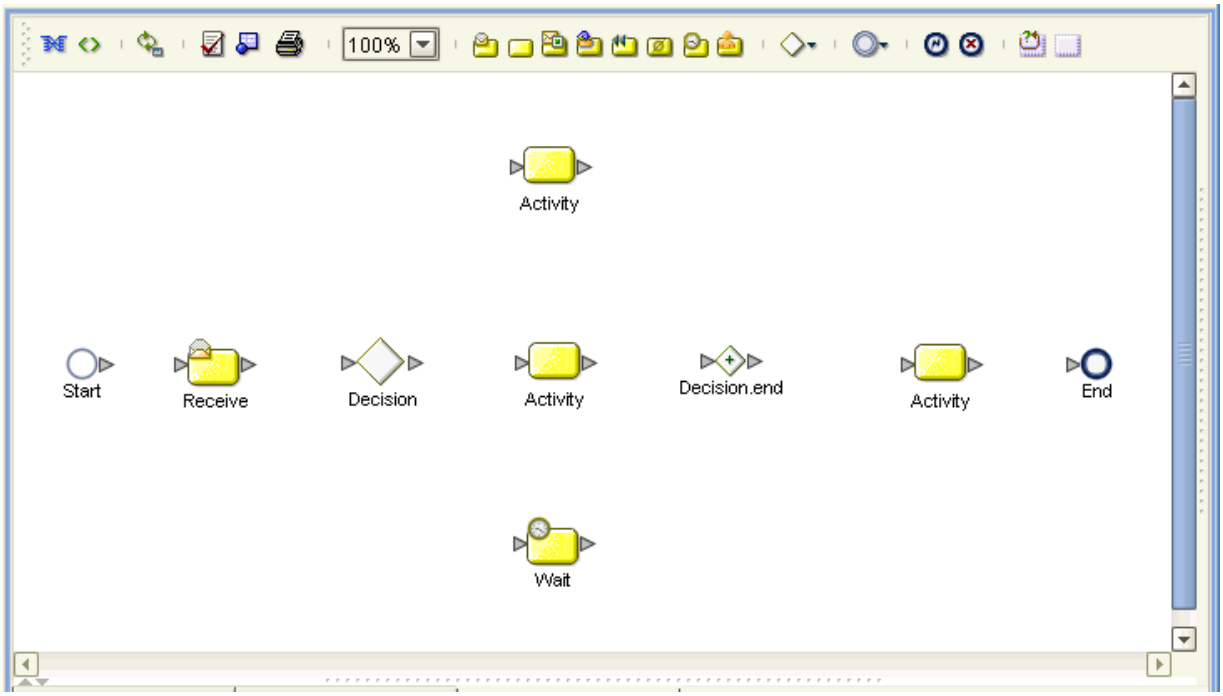
   A blank Business Process canvas appears in the right pane, along with the Business Process toolbar.

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)

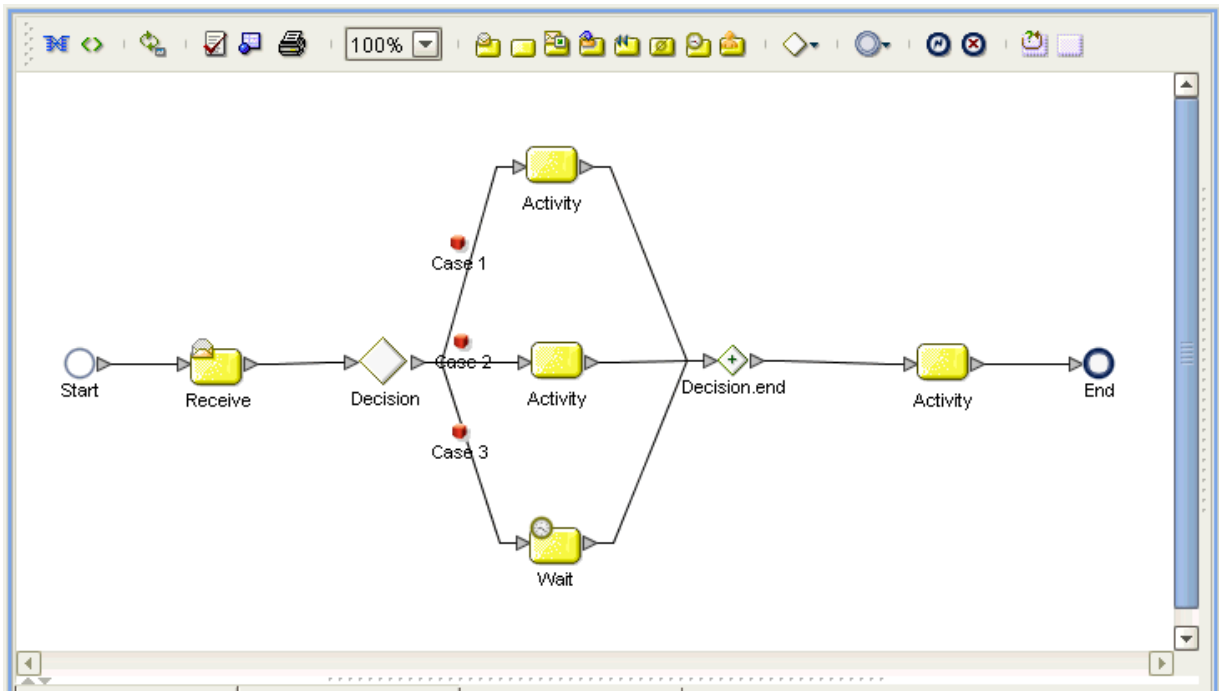
3 Again by dragging, arrange these icons on the canvas as shown in Figure 5.

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 21.

Figure 6 Business Process Icons With Links



To implement the File eWay in your Business Process

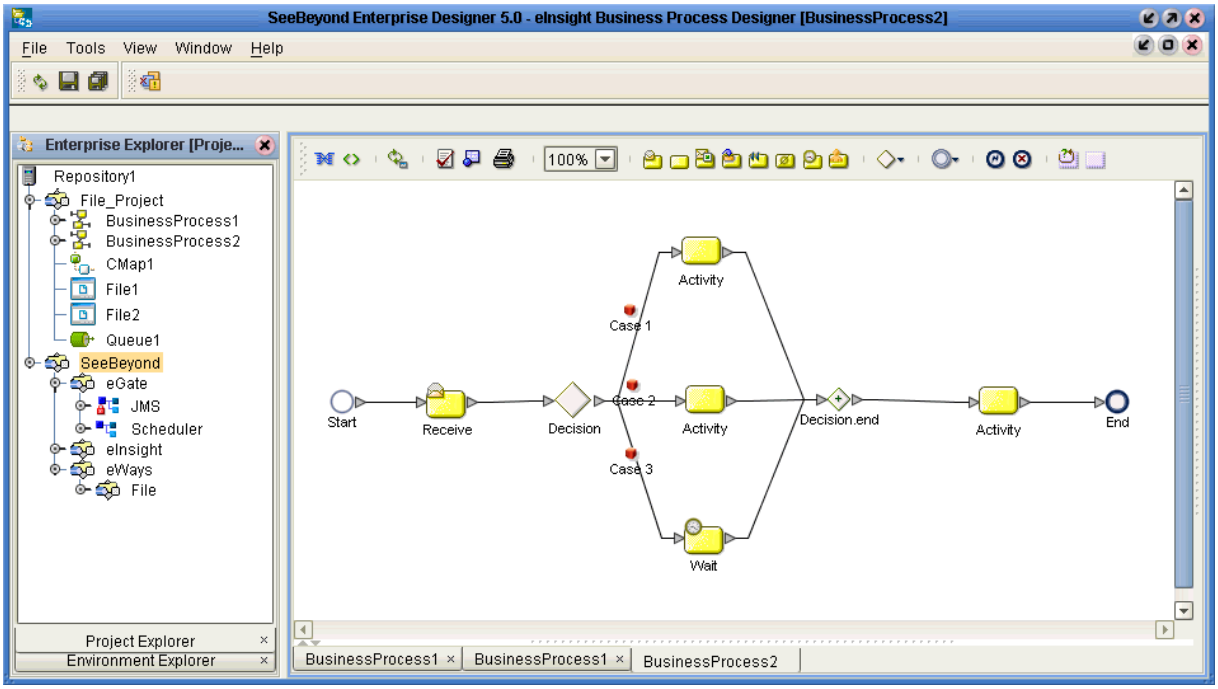
1 From the **Project Explorer**, open the **SeeBeyond** icon.

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 22**.

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.

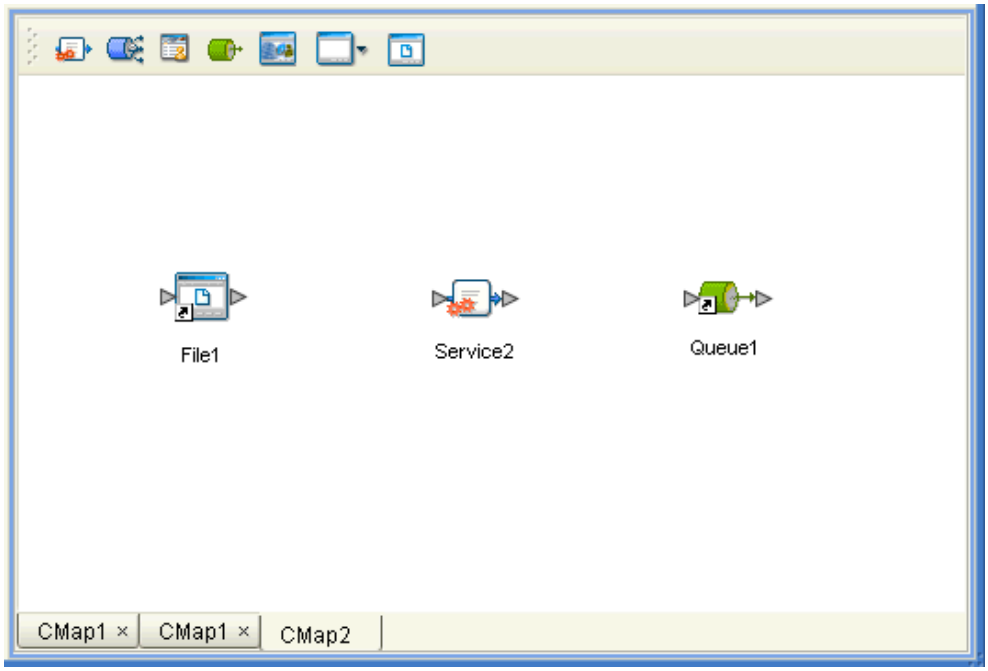
To implement your Business Process on the Connectivity Map

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.

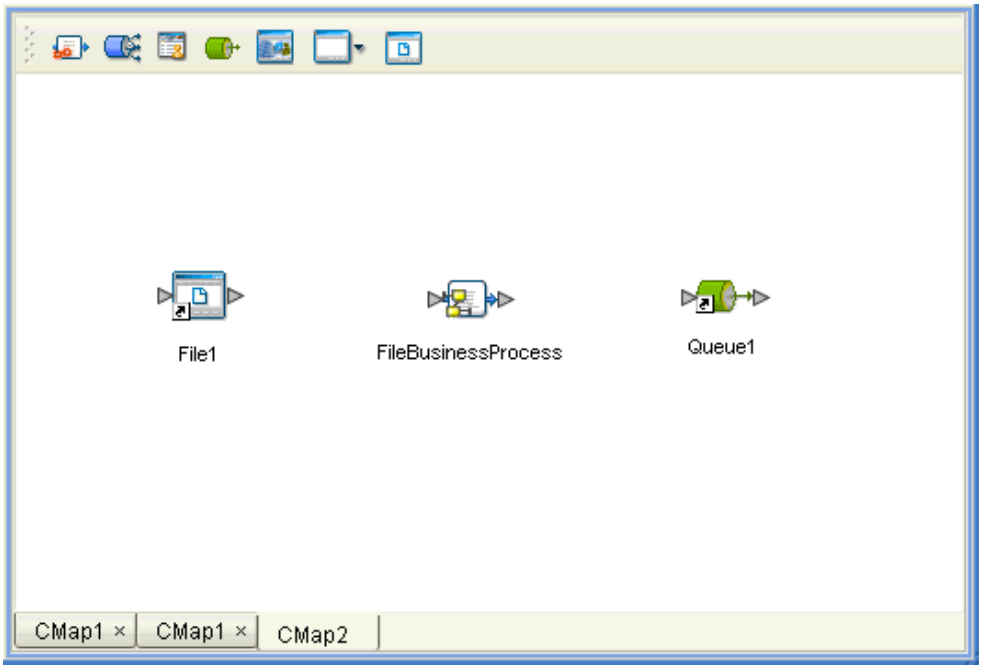
Figure 8 Starting Connectivity Map



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 24**. 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 Integrator User's Guide*.

Chapter 5

Using Java-based Collaborations

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

Chapter Topics

- **"Java-based Collaborations and eGate" on page 25**
- **"Business Rules and Collaboration Definitions" on page 25**

5.1 Java-based Collaborations and eGate

Java-based Collaborations and their Definitions contain a set of rules that define the processing and transport of data as it travels among eGate components.

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

You must use the Collaboration Definition wizard (Java) to create a Java-based Collaboration Definition. After one of these Collaboration Definitions is created, you can use the Collaboration Editor (Java) to create the Business Rules logic of the Collaboration. Assign Collaboration input and output data relationships using the Collaboration Binding window.

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

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

5.2 Business Rules and Collaboration Definitions

You can customize Java-based Collaboration Definitions by mapping Business Rules using the Collaboration Editor (Java) 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 Collaboration Editor (Java)

The Collaboration Editor (Java) window displays in the Enterprise Designer after you create a new Java-based 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 Collaboration Editor (Java). To complete one of these Collaboration Definitions, you can use the Collaboration Editor (Java) to create Business Rules that implement your business logic.

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

Index

A

Add EOL **16**

B

Business Process Execution Language (BPEL) **18**

D

Directory (inbound) **14**
Directory (outbound) **16**
document
    conventions **7**

E

eInsight
    sample scenario **19**
eInsight Engine and components **18**
eInsight with File eWay
    overview **18**
    setting up business process **20**
    using Business Process canvas **20**
eWay Properties dialog box, using **12**

F

File eWay properties
    outbound (send) settings **15**
    poller (inbound) settings **13**

I

Input file name **14**
Input type **14**
installation **9–10**

M

Maximum bytes per record **14**
Multiple records per file **15**, **17**

O

Output file name **17**

P

platforms. *See* operating systems
Polling interval **15**
properties template **11**

R

Remove EOL **15**
requirements **9**

S

setting eWay properties
    introduction **13**
    overview **11**
    Project Explorer **11**
system requirements
    external **9**
    ICAN **9**

T

third-party requirements **9**

W

writing conventions **7**