

Sterling Standards Library

Using Fedwire

Version 5.6

Sterling Commerce
An AT&T Company

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Using Fedwire with the Application

Fedwire Overview

Fedwire Funds Transfer System is a real-time inter-bank financial settlement system. Fedwire consists of a set of computer applications that route and settle payment orders. In addition, Fedwire and related applications review payment orders for syntax errors, query and update account balances, and notify participants of related credits and debits to their accounts. Fedwire is supported by a national communications network.

This version of the application supports the Fedwire Standard file format messages (27 messages) and Expanded file format messages (4 messages). Messages generated from the standards databases automatically contain extended rules to perform validations (primarily in the Expanded format OUTMSG).

Note: For this release, the application performs record-level validations for structured and expanded Fedwire messages.

This table describes how the application supports Fedwire:

| Functionality | Details | Action You Need to Take to Implement Fedwire |
|-------------------------------|--|--|
| Services | <ul style="list-style-type: none">♦ Generic Envelope service envelopes Fedwire messages by adding the appropriate Function Management Header (FMH).♦ Generic Deenvelope service deenvelopes incoming messages by removing the Function Management Header (FMH). | Create envelope definitions for any inbound and outbound messages. |
| Envelopes | <ul style="list-style-type: none">♦ Inbound Fedwire envelope wizards to implement inbound Fedwire.♦ Outbound Fedwire envelope wizards to implement outbound Fedwire. | <ul style="list-style-type: none">♦ Create the appropriate Fedwire envelopes for each message you are sending and receiving. <p>Note: The purpose for the envelopes is to ensure the correct FMH is wrapped around the outbound data, since there is no indication in the data to indicate the type of message. For inbound data, envelopes are necessary so that you can define a workflow to be bootstrapped (invoked) for a specified message.</p> |
| Predefined business processes | <ul style="list-style-type: none">♦ FedwireDeenvelope♦ FedwireEnvelope | None |

| Functionality | Details | Action You Need to Take to Implement Fedwire |
|--------------------|--|--|
| Map Editor | <ul style="list-style-type: none"> ◆ Map Editor wizard enables you to generate a file layout using the Fedwire message that you select, for both Standard and Expanded file format messages. Included in the Fedwire map are Fedwire fields and elements that are defined by Fedwire. ◆ Property dialog boxes that enable you to define and modify Fedwire map components. ◆ Fedwire extended rules library (FEDWIRE_01.erl) contains extended rules, is used primarily in Expanded Format (OUTMSG), and is installed automatically with Map Editor. ◆ Autolink function automatically creates links between input and output fields that have the same name or business name. This function can be used with any data format. ◆ Additional mapping operations as needed. | <ul style="list-style-type: none"> ◆ Download Map Editor. ◆ Download and install the Fedwire standards database from the Fedwire Standards CD. ◆ Create a map or maps to translate your Fedwire messages. |
| Correlation Search | Search by Fedwire information. | Use the EDI Correlation search functionality to search for Fedwire correlation information. |
| Reports | Report by Fedwire standard | Use the EDI Translation Detail report to search for details of inbound and outbound Fedwire messages and easily create useful reports on your inbound and outbound Fedwire messaging. |

Prerequisite Knowledge

The following are prerequisites to using the application with the Fedwire standard:

- ◆ The audience using this software should be familiar with the application and the Fedwire standard.

Note: This documentation is not intended to explain the Fedwire standard.

- ◆ The customer is responsible for connectivity between the application and Fedwire.

Using Fedwire with the Application

To use Fedwire with the application, you must complete the following tasks:

1. Create inbound and outbound Fedwire envelopes.
2. Create the necessary maps.

3. Using your own connectivity, send and receive messages from the Fedwire Central Computer.
4. To track Fedwire messages, use the EDI Correlation Search functionality.
5. To report on inbound and outbound Fedwire message flow, use the EDI Translation Detail report feature.

fedwire Enveloping

Fedwire Enveloping Overview

A *document envelope* consists of control information that enables organizations to effectively exchange messages. This information is added to the Function Management Header (FMH). Document envelopes are specific to the message protocol used. Creating document envelopes is necessary to use Fedwire with your trading partners.

Fedwire has only one level of envelope, which you must modify appropriately to reflect your information and your trading partner's information. Envelopes specify whether the message is inbound or outbound:

- ◆ The **Inbound Fedwire envelope** identifies messages that are received by Application so they can be properly routed. Inbound envelopes also give you the option to translate messages when you choose to check messages for compliance. By choosing to translate messages from within the envelope, you can reduce message processing time because you do not need to specify a separate Translation service step in the business process. You need to create an Inbound Fedwire envelope to configure deenveloping information.
- ◆ The **Outbound Fedwire envelope** identifies messages so that they can be sent to and received by trading partners. You need to configure an Outbound Fedwire envelope with the appropriate enveloping information.

When you envelope an outbound Fedwire message, the Fedwire Function Management Header (FMH) is created. For an inbound message, the envelope is looked up based on the Function Management Header (FMH) to determine the appropriate processing.

Creating Envelopes

Inbound envelopes define the expected Function Management Header (FMH) information for inbound message types you expect to receive. This information helps Application route and process the messages. Outbound envelopes specify information about messages that enable them to be sent to and received by trading partners, and they gather and provide the appropriate data used to create the header.

To create an envelope:

1. From the **Trading Partner** menu, **Document Envelopes > Envelopes**.
2. Under Create, next to New Envelope, click **Go!**
3. On the Envelope Standards page, select **Fedwire** and click **Next**.
4. Select the level of envelope you want to create, inbound or outbound, and click **Next**.
5. On the Base Envelope page, do you want this envelope to inherit properties from a base envelope (if available)?
 - ◆ If Yes, select a base envelope and click **Next**.
 - ◆ If No (you want to create a new envelope), select **Not Applicable** and click **Next**.
6. On the Name page, type a unique name for the envelope, and a description or comments, then click **Next**.

7. Complete the properties for the envelope as necessary and click **Next** after each page until you reach the confirm page. Required fields are highlighted in blue. See *Inbound Fedwire envelope* on page 9 or *Outbound Fedwire envelope* on page 16.
8. Click **Finish** to add the envelope.

Using Base Envelopes

A *base envelope* is a regular envelope that you use as a starting point to create a new envelope. The base envelope maintains a link to the envelope that inherited its properties. If you modify the base envelope, all related envelopes (those that inherited the base envelope properties) are also changed.

When you create an envelope using a base envelope, everything in the new envelope is the same as in the base envelope, except the envelope name, description, and parameters such as unique identification numbers. If you plan to create many envelopes using base envelopes, do not use the base envelopes in production. You should also be sure to note the envelopes that are related to the base envelopes.

To use a base envelope:

1. Create the base envelope.
2. Specify the name and description of a new envelope.
3. Identify the base envelope that the new envelope uses.

Inbound Fedwire envelope

You only need to create an Inbound Fedwire envelope if you are receiving inbound Fedwire messages. However, if you are receiving inbound Fedwire messages, you need to create a separate Inbound Fedwire envelope for *each* Fedwire message type you will be receiving. The following table describes Inbound Fedwire envelope properties:

Note: An (*) asterisk indicates that a wildcard value can be used with that parameter. For Inbound envelopes, a wildcard value in the envelope matches any value in the input document, while an empty value in the envelope matches only an empty value in the input document. For Outbound envelopes, a wildcard value is equivalent to an empty value in the envelope.

| Field or Check Box | Description |
|---------------------------|---|
| Sender ID | The sending Depository Institution (DI) ABA account number. Must be 9 valid numerics. Optional, depending on the message for which you are creating the envelope. |
| Receiver ID | The receiving Depository Institution (DI) ABA account number. Must be 9 valid numerics. Optional, depending on the message for which you are creating the envelope. |
| Message Type | Select the type of Fedwire message. Required. Default is * (wildcard). |
| Compliance check document | Check the message body for compliance. Required. Valid values are Yes (default) and No. |

| Field or Check Box | Description |
|---------------------------|---|
| Map Name Mode | <p>How to determine which map to use to perform a compliance check. Required. Valid values are:</p> <ul style="list-style-type: none"> ◆ Specify (default) ◆ Generate from data (this is useful if you want to share across envelopes) <p>Note: If you select this option, you must select at least one parameter for Primary Name Format.</p> |
| Map Name | Which map to use to perform a compliance check (if Compliance Check document is set to Yes and Map Name Mode set to Yes). The map must already be checked in to the application. Optional. |
| Compliance Check Map Name | Which map to use to perform a compliance check (if Compliance Check document set to Yes). The map must already be checked in to the application. Required. |
| Primary Name Format | <p>Check boxes to specify which information to include when generating and matching a name for the map. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated map name (Map Name Mode is set to Generate from data), the application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the map in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated map name exists in the system is set to Yes.</p> |

| Field or Check Box | Description |
|---------------------------|--|
| First Backup Name Format | <p>The first backup name format to use when generating a map name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then, if that is not found, checking for the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated map name (Map Name Mode is set to Generate from data), the application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the map in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated map name exists in the system is set to Yes.</p> |
| Second Backup Name Format | <p>The second backup name format to use when generating a map name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then, if that is not found, checking for the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated map name (Map Name Mode is set to Generate from data), the application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the map in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated map name exists in the system is set to Yes.</p> |

| Field or Check Box | Description |
|---|---|
| Generate an error if no generated map name exists in the system | <p>Specifies whether to generate an error if the Map Name selected is not found. Valid values are Yes (default) and No.</p> <p>Note: Only displayed if Map Name Mode is set to Generate from data.</p> |
| Keep translated document after compliance check | <p>Whether to keep the translated document after performing the compliance check. Valid values are Yes (default) and No. Required.</p> |
| Validate translation output | <p>Whether to validate the translation output. Valid values are Yes (default) and No. Required.</p> |
| Error Business Process Mode | <p>How to determine which business process name to use if there were errors in the compliance check. Required. Valid values are:</p> <ul style="list-style-type: none"> ◆ Specify (default) ◆ Generate from data <p>Note: If you select this option, you must select at least one parameter for Primary Name Format.</p> |
| Primary Name Format | <p>Check boxes to specify which information to include when generating and matching a name for the business process. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Error Business Process is set to Generate from data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the first Backup Name. ◆ Third, it tries to generate and match the second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |

| Field or Check Box | Description |
|---------------------------|--|
| First Backup Name Format | <p>The first backup name format to use when generating a business process name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Error Business Process is set to Generate from data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the first Backup Name. ◆ Third, it tries to generate and match the second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |
| Second Backup Name Format | <p>The second backup name format to use when generating a business process name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Error Business Process is set to Generate from data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the first Backup Name. ◆ Third, it tries to generate and match the second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |

| Field or Check Box | Description |
|--|--|
| Generate an error if no generated business process name exists in the system | Specify whether to generate an error if there is no match to the generated business process name in the system. Valid values are Yes (default) and No. Note: Only displayed if Determine the Business Process By is set to Generating the business process name from the data. |
| Business Process for Non-Compliant Document | Business process to be used when non-compliant documents are encountered. Optional. Displayed only if Error Business Process Name is set to Specify. |
| Determine the business process by | How to determine which business process name to use if there were no errors in the compliance check. Required. Valid values are: <ul style="list-style-type: none"> ◆ Specifying a business process (default) ◆ Generating the business process name from the data Note: If you select this option, you must select at least one parameter for Primary Name Format. |
| Primary Name Format | Check boxes to specify which information to include when generating and matching a name for the business process. Optional. Select from: <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type Note: If you are using a generated business process name (Determine the Business Process By is set to Generating the business process name from the data), the application tries to generate and match the following business process: <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the first Backup Name. ◆ Third, it tries to generate and match the second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes. |

| Field or Check Box | Description |
|---------------------------|---|
| First Backup Name Format | <p>The first backup name format to use when generating a business process name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Determine the Business Process By is set to Generating the business process name from the data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the first Backup Name. ◆ Third, it tries to generate and match the second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |
| Second Backup Name Format | <p>The second backup name format to use when generating a business process name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Determine the Business Process By is set to Generating the business process name from the data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the first Backup Name. ◆ Third, it tries to generate and match the second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |

| Field or Check Box | Description |
|--|---|
| Generate an error if no generated business process name exists in the system | Specify whether to generate an error if there is no match to the generated business process name in the system. Valid values are Yes (default) and No. Note: Only displayed if Determine the Business Process By is set to Generating the business process name from the data. |
| Business Process List | Select a previously created business process to associate with this envelope Optional. Displayed only if Determine the Business Process Name is set to Specifying a business process. |
| Extraction Options | Business process data extraction. Required. Valid values: <ul style="list-style-type: none"> ◆ Determined by business process (default) ◆ Extract to a file system directory ◆ Extract to a mailbox |
| Data Extraction Directory | Directory for data extraction. Displayed only if Extraction Options set to Extract to a file system directory . Optional |
| Data Extraction Filename | Filename for data extraction. Displayed only if Extraction Options set to Extract to a file system directory . Optional. |
| Data Extraction Mailbox | Mailbox for data extraction. Displayed only if Extraction Options set to Extract to a mailbox . Optional. |
| Data Extraction Mailbox Message Name | Mailbox message name for data extraction. Displayed only if Extraction Options set to Extract to a mailbox . Optional. |

Outbound Fedwire envelope

You only need to create an Outbound Fedwire envelope if you are sending outbound Fedwire messages. However, if you are sending outbound Fedwire messages, you need to create a separate Outbound Fedwire envelope for *each* Fedwire message type you will be sending. The following table describes Outbound Fedwire envelope properties:

Note: An (*) asterisk indicates that a wildcard value can be used with that parameter. For Inbound envelopes, a wildcard value in the envelope matches any value in the input document, while an

empty value in the envelope matches only an empty value in the input document. For Outbound envelopes, a wildcard value is equivalent to an empty value in the envelope.

| Field or Check Box | Description |
|--|---|
| FMH Type | The functional management header type. Valid selections are FLASH (default) and NONE. Required. |
| Message Type | Select the type of Fedwire message. Required. Default is * (wildcard). |
| Sender ID | The sending Depository Institution's (DI) ABA account number.. Must be 9 valid numerics. Required. |
| Receiver ID | The receiving Depository Institution's (DI) ABA account number.. Must be 9 valid numerics. Required. |
| * Application Sender ID | Coded identifier of the application data sender. Optional. |
| * Application Receiver ID | Coded identifier of the customer number or data source number. Optional. |
| Acceptor Lookup Alias | Identifying string used with the Sender ID and the Receiver ID to look up this envelope with the EDI Encoder service. This alias associates a message with the service it requires. Valid value must be at least one limited standard character. Required. |
| Use Correlation Overrides | Whether to use correlation overrides. Valid values are never (default), Only when the Envelope Field has a Wildcard Value, Always, and Use the default specified in enveloping properties. Required. |
| Batching Options | Whether to batch messages. Valid values are Do not batch messages (default) and Use batching. Required. |
| Encode Document | Whether to specify character encoding for the document. Valid values are Yes and No (default). Required. |
| Update Sequence Number (FTI0011 or FTI0811 only) | Whether to update the IMAD INPUT-MSG-SEQ field in the message. Valid values are Yes (default) and No. Required. |
| Encoding | Select the character encoding to use when translating and enveloping this message. Default is CP037 (EBCDIC). Required. Note: Only displayed if Encode Document is set to Yes. |
| Translate Message | Whether to automatically translate the message. Valid values are Yes (default) and No. Required. |
| Map Name Mode | How to determine which map to use to perform translation. Required. Valid values are: <ul style="list-style-type: none"> ◆ Specify (default) ◆ Generate from data (this is useful if you want to share across envelopes) Note: If you select this option, you must select at least one parameter for Primary Name Format. |
| Map Name | Which map to use to perform a compliance check (if Translate message is set to Yes and Map Name Mode set to Specify). The map must already be checked in to the application. Optional. |

| Field or Check Box | Description |
|--------------------------|---|
| Primary Name Format | <p>Check boxes to specify which information to include when generating and matching a name for the map. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated map name (Map Name Mode is set to Generate from data), the application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the map in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no matching map is found is set to Yes.</p> |
| First Backup Name Format | <p>The first backup name format to use when generating a map name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then, if that is not found, checking for the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated map name (Map Name Mode is set to Generate from data), the application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the map in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no matching map is found is set to Yes.</p> |

| Field or Check Box | Description |
|---|--|
| Second Backup Name Format | <p>The second backup name format to use when generating a map name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then, if that is not found, checking for the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated map name (Map Name Mode is set to Generate from data), the application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the map in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no matching map is found is set to Yes.</p> |
| Generate an error if no generated map name exists in the system | <p>Specifies whether to generate an error if the Map Name selected is not found. Valid values are Yes (default) and No.</p> <p>Note: Only displayed if Map Name Mode is set to Generate from data.</p> |
| Validate translation input | <p>Validate translated input (that is, documents received from trading partners). Valid values are Yes (default) and No. Required.</p> |
| Validate translation output | <p>Validate translated output (that is, documents sent to trading partners). Valid values are Yes (default) and No. Required.</p> |
| Error Business Process Mode | <p>How to determine which business process name to use if there were errors in the compliance check. Required. Valid values are:</p> <ul style="list-style-type: none"> ◆ Specify (default) ◆ Generate from data <p>Note: If you select this option, you must select at least one parameter for Primary Name Format.</p> |

| Field or Check Box | Description |
|--------------------------|--|
| Primary Name Format | <p>Check boxes to specify which information to include when generating and matching a name for the business process. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Error Business Process is set to Generate from data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the first Backup Name. ◆ Third, it tries to generate and match the second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |
| First Backup Name Format | <p>The first backup name format to use when generating a business process name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then, if that is not found, checking for the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Error Business Process name is set to Generate from data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |

| Field or Check Box | Description |
|--|--|
| Second Backup Name Format | <p>The second backup name format to use when generating a map name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then, if that is not found, checking for the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated map name (Map Name Mode is set to Generate from data), the application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the map in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no matching map is found is set to Yes.</p> |
| Generate an error if no generated business process name exists in the system | <p>Specify whether to generate an error if there is no match to the generated business process name in the system. Valid values are Yes (default) and No.</p> <p>Note: Only displayed if Determine the Business Process By is set to Generating the business process name from the data.</p> |
| Business Process for Non-Compliant Document | <p>Business process to be used when non-compliant documents are encountered. Optional.</p> <p>Displayed only if Error Business Process Name is set to Specify.</p> |
| Determine the business process by | <p>How to determine which business process name to use if there were no errors in the compliance check. Required. Valid values are:</p> <ul style="list-style-type: none"> ◆ Specifying a business process (default) ◆ Generating the business process name from the data <p>Note: If you select this option, you must select at least one parameter for Primary Name Format.</p> |

| Field or Check Box | Description |
|--------------------------|---|
| Primary Name Format | <p>Check boxes to specify which information to include when generating and matching a name for the business process. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Determine the Business Process By is set to Generating the business process name from the data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |
| First Backup Name Format | <p>The first backup name format to use when generating a business process name. The system allows for two alternatives if the Primary Name Format is not found—checking for the First Backup Name Format and then for the Second Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> ◆ Sender ID ◆ Receiver ID ◆ Message Type <p>Note: If you are using a generated business process name (Determine Business Process Name By is set to Generating a Business Process name from the data), the application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> ◆ First, it tries to generate and match the business process in the primary name format (replacing the values that are selected for the corresponding value in the message). ◆ Second, it tries to generate and match the First Backup Name. ◆ Third, it tries to generate and match the Second Backup Name. ◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated. <p>Note: Only occurs if Generate an error if no generated business process name exists in the system is set to Yes.</p> |

| Field or Check Box | Description |
|--|---|
| Generate an error if no generated business process name exists in the system | Specify whether to generate an error if there is no match to the generated business process name in the system. Valid values are Yes (default) and No. Note: Only displayed if Determine the Business Process By is set to Generating the business process name from the data. |
| Business Process List | Select a previously created business process to associate with this envelope Required. Displayed only if Determine the Business Process Name is set to Specifying a business process. |
| Extraction Options | Business process data extraction. Required. Valid values: <ul style="list-style-type: none"> ◆ Determined by business process (default) ◆ Extract to a file system directory ◆ Extract to a mailbox |
| Data Extraction Directory | Directory for data extraction. Displayed only if Extraction Options set to Extract to a file system directory . Optional |
| Data Extraction Filename | Filename for data extraction. Displayed only if Extraction Options set to Extract to a file system directory . Optional. |
| Data Extraction Mailbox | Mailbox for data extraction. Displayed only if Extraction Options set to Extract to a mailbox . Optional. |
| Data Extraction Mailbox Message Name | Mailbox message name for data extraction. Displayed only if Extraction Options set to Extract to a mailbox . Optional. |

Fedwire Business Processes

Overview

To help you accomplish your business goals, the application provides two predefined enveloping business processes that are used by the application to implement Fedwire processing: FedwireEnvelope and FedwireDeenvelope. These predefined business processes are initiated by services during Fedwire processing and do not require you to modify them.

The following table lists business goals for the predefined Fedwire business processes:

| Business Process | Business Goals |
|-------------------|---|
| FedwireDeenvelope | Extracts Fedwire message types from a message and translates and processes them, according to the content of the envelopes. |
| FedwireEnvelope | Applies a Fedwire envelope to one or more Fedwire messages and then uses the envelope data to translate and process them. |

FedwireDeenvelope Business Process

The FedwireDeenvelope business process is used to deenvelope Fedwire data. A typical scenario is one in which Fedwire data must be received from a trading partner. The data must be deenveloped to extract information from the Function Management Header.

The FedwireDeenvelope business process is initiated as part of the following inbound process flow:

1. When data is received from Fedwire, the EDIDeenvelope business process needs to be invoked as the first step.
2. The EDI Deenveloping service parses the whole document and extracts messages from it so it can be further processed by the application.
3. Passes the Fedwire messages to the FedwireDeenvelope business process. The Generic Deenvelope service runs as a subprocess.
4. The FedwireDeenvelope business process looks up the envelope, based on the data found in the header.
5. The envelope specifies what to do with the deenveloped messages.
6. Starts the Invoke Business Process service or a subprocess service to initiate the appropriate business process to handle each deenveloped message.

If exceptions occur when running an EDI Deenveloping business process, the application generates an EDI Compliance Report.

This table lists the configuration parameters for the FedwireDeenvelope business process:

| Parameter | Default | Description |
|------------------------|--|---|
| Document Tracking | False | When document tracking is enabled for a business process, tracking information is carried with the message throughout the process, and the tracking information is persisted about the message regardless of the persistence level you configured globally for the application. |
| Set onfault processing | False | Onfault processing allows the process to immediately execute the on-fault activity specified in the process, even if the process has not yet reached that step in the process. For example, if a process fails at step 3, but the on-fault activity is specified in step 7, if onfault processing is enabled, the process proceeds to the step 7 on-fault rather than halting at step 3. |
| Queue | 4 | The application enables you to set performance optimizations by queue, defining queue levels to allocate resources. This number indicates the previously allocated queue level that you want for this business process model for processing. |
| Persistence Level | System Default | The level of data to retain for generating a status report that describes each step that the business process completes. System default indicates that, for the data, configuration is already defined in the application to retain data. |
| Recovery Level | Manual | The level of recovery for this business process if the business process should halt during execution. Manual requires you to resume or restart the business process manually. |
| Document Storage Type | System Default | The level of document storage for messages that process when the business process runs. System Default specifies to store messages in the file system or database, according to how you configured archiving and purging in the application. |
| Life Span | Life Span Days — 2 Life Span Hours — 0 Life Span Type — System Level Removal Method — Archive | The length of time, in days and hours, to retain the data in the application, along with the life span type and removal method. |
| Complete by Deadline | None Available Note: To set a deadline you must change it in the business process. | Complete by – The deadline time, in hours and minutes, by which the business process must complete process once it starts. <ul style="list-style-type: none"> ◆ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline. ◆ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline. |

| Parameter | Default | Description |
|-----------------------|---------|---|
| Event Reporting Level | Full | The level of event reporting that is retrieved for this business process when it runs. Full specifies to generate events for the business process, including the business process start and end time, start and end times for all services or services running as a result of this business processes, and any resulting errors and exceptions. |

The following BPML code makes up the FedwireDeenvelope business process:

```

<process name="FedwireDeenvelope">
  <rule name="contract">
    <condition>CONTRACT_FOUND = "YES"</condition>
  </rule>
  <sequence>
    <sequence>
      <operation>
        <participant name="DeenvelopeGeneric"/>
        <output message="toService" >
          <assign to="break_processor">FEDWIRE</assign>
          <assign to="ExhaustInputDuringBreakTranslation">false</assign>
          <assign to="." from="*" />
        </output>
        <input message="fromService" >
          <assign to="." from="*" />
        </input>
      </operation>
      <onFault code="Interchange-Non-Compliant">
        <assign to="BREAK">YES</assign>
      </onFault>
      <onFault code="Transaction-Non-Compliant">
        <assign to="BREAK">YES</assign>
      </onFault>
      <onFault>
        <operation>
          <participant name="BPExceptionService"/>
          <output message="toService">
            <assign to="exceptionCode" from="Prev_NotSuccess_Adv_Status/text()" />
          </output>
          <input message="fromService"/>
        </operation>
      </onFault>
    </sequence>
  </sequence>
  <choice>
    <select>
      <case ref="contract" activity="invoke_contract_workflow"/>
    </select>
    <sequence name="invoke_contract_workflow">
      <operation>
        <participant name="InvokeBusinessProcessService"/>
        <output message="toService">
          <assign to="INVOKE_MODE">ASYNC</assign>
          <assign to="." from="*" />
        </output>
        <input message="fromService" >

```

```

        <assign to="." from="*" />
    </input>
</operation>
</sequence>
</choice>
</sequence>
</process>

```

FedwireEnvelope Business Process

The FedwireEnvelope business process is initiated when it is called by another business process. The FedwireEnvelope business process envelopes the Fedwire messages contained in the business process context with outbound Fedwire envelopes that you have preconfigured. You must have created one outbound Fedwire envelope for each Fedwire message that you are sending.

A typical scenario is one in which Fedwire data must be sent to a trading partner. To prepare for this, the data must be enveloped to provide the proper Functional Management Header (FMH). The FedwireEnvelope business process helps to provide these enveloping services.

The FedwireEnvelope business process is initiated as part of the following outbound process flow:

1. You create a business process that calls the EDI Encoder service or Document Extraction service.
2. The EDI Encoder service or Document Extraction service looks up the envelope to apply and prepares the document to be enveloped.
3. Either the business process calls the EDI Enveloping service or the Document Extraction service is configured to perform enveloping.
4. The EDI Enveloping service or Document Extraction service starts the FedwireEnvelope business process (which runs the Generic Envelope service as a subprocess to extract the name of the business process).
5. The FedwireEnvelope business process searches the envelope definition to retrieve information to envelope each message.

This table lists the configuration parameters for the FedwireEnvelope business process:

| Parameter | Default | Description |
|-------------------|---------|---|
| Document Tracking | False | When document tracking is enabled for a business process, tracking information is carried with the message throughout the process, and the tracking information is persisted about the message regardless of the persistence level you configured globally for the application. |

| Parameter | Default | Description |
|------------------------|--|---|
| Set onfault processing | False | Onfault processing allows the process to immediately execute the on-fault activity specified in the process, even if the process has not yet reached that step in the process. For example, if a process fails at step 3, but the on-fault activity is specified in step 7, if onfault processing is enabled, the process proceeds to the step 7 on-fault rather than halting at step 3. |
| Queue | 4 | The application enables you to set performance optimizations by queue, defining queue levels to allocate resources. This number indicates the previously allocated queue level that you want for this business process model for processing. |
| Persistence Level | System Default | The level of data to retain for generating a status report that describes each step that the business process completes. System default indicates that, for the data, configuration is already defined in the application to retain data. |
| Recovery Level | Manual | The level of recovery for this business process if the business process should halt during execution. Manual requires you to resume or restart the business process manually. |
| Document Storage Type | System Default | The level of document storage for messages that process when the business process runs. System Default specifies to store messages in the file system or database, according to how you configured archiving and purging in the application. |
| Life Span | Life Span Days — 2 Life Span Hours — 0 Life Span Type — System Level Removal Method — Archive | The length of time, in days and hours, to retain the data in the application, along with the life span type and removal method. |
| Complete by Deadline | None Available Note: To set a deadline you must change it in the business process. | Complete by – The deadline time, in hours and minutes, by which the business process must complete process once it starts. ♦ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline. ♦ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline. |
| Event Reporting Level | Full | The level of event reporting that is retrieved for this business process when it runs. Full specifies to generate events for the business process, including the business process start and end time, start and end times for all services or services running as a result of this business processes, and any resulting errors and exceptions. |

The following BPML code makes up the FedwireEnvelope business process:

```
<process name="FedwireEnvelope">
```

```

<rule name="contract">
  <condition>CONTRACT_FOUND = "YES"</condition>
</rule>
<sequence>
  <sequence>
    <operation>
      <participant name="EnvelopeGeneric" />
      <output message="toService" >
        <assign to="." from="*" />
      </output>
      <input message="fromService" >
        <assign to="." from="*" />
      </input>
    </operation>
    <onFault code="Translation-Error-Some-Docs">
      <assign to="BREAK">YES</assign>
    </onFault>
    <onFault code="Envelope-Translation-Error-Some-Docs">
      <assign to="BREAK">YES</assign>
    </onFault>
    <onFault>
      <operation>
        <participant name="BPExceptionService"/>
        <output message="toService" >
          <assign to="exceptionCode" from="Prev_NotSuccess_Adv_Status/text()" />
        </output>
        <input message="fromService" />
      </operation>
    </onFault>
  </sequence>

  <choice>
    <select>
      <case ref="contract" activity="invoke_contract_workflow" />
    </select>
    <sequence name="invoke_contract_workflow">
      <operation>
        <participant name="InvokeBusinessProcessService" />
        <output message="toService">
          <assign to="INVOKE_MODE">ASYNC</assign>
          <assign to="." from="*" />
        </output>
        <input message="fromService" >
          <assign to="." from="*" />
        </input>
      </operation>
    </sequence>
  </choice>

</sequence>
</process>

```

Creating Fedwire Maps

Overview

The Map Editor enables you to map Fedwire documents. The Map Editor generates a file layout for you using the components and message types that you select. The Map Editor-generated Fedwire map consists of groups, records, composites, and fields that are comparable to parameters that are defined by Fedwire.

Note: You need to download the Map Editor component to use it.

Map Editor allows you to modify the map components by using the Deactivate, Promote, Split, Copy, Cut, and Paste functions.

You can create a map for all Fedwire Standards Release messages loaded into the standards database through the Map Editor.

Fedwire Expanded Format Overview

When you create a Fedwire Expanded Format map using the standards database and Map Editor, the translator automatically uses the following Fedwire standard mandates when translating a Fedwire message using the map:

- ◆ Data is streamed.
- ◆ The end-of-file marker terminates the last segment.
- ◆ Fixed-length elements, if used, are not delimited.
- ◆ An asterisk (*) delimiter terminates the current element.
- ◆ The segment delimiter used is { (a left curly brace).
- ◆ The tag delimiter use is } (a right curly brace).
- ◆ Zeroes are always padded.
- ◆ Supports compressed variable-length fields (Expanded format delimiter is an asterisk (*)).

Fedwire Standard Format Overview




When you create a Fedwire Standard Format map using the standards database and Map Editor, the translator automatically uses the same Fedwire standard mandates as above (for *Fedwire Expanded Format Overview* on page 30) *except for the following* when translating a Fedwire message using the map:

- ◆ Tag delimiters are not used.
- ◆ The element delimiter is 0x03.
- ◆ The segment delimiter is 0x0A.

- ◆ Print and display messages are not streamed.
- ◆ Supports compressed variable-length fields (Standard format delimiter is hex 0x03).

Fedwire Components in the Map Editor

The following table lists the components that make up the Fedwire layout in the Map Editor, the icons that represent the components, and descriptions of the components. For information about adding a map component to a layout, see *Map Editor Basics*.

| Component | Icon | Description |
|----------------------|---|---|
| Fedwire root element |  | The <i>Fedwire root element</i> represents the message that the application is mapping. At the Fedwire file root element, you define the message type and encoding. It is a group and can contain groups and records. |
| FEDWIRE Field |  | <p>A <i>FEDWIRE field</i> contains a group of related elements that combine to communicate useful data. FEDWIRE fields are defined by the FEDWIRE standard. A FEDWIRE field can occur once or can repeat multiple times.</p> <p>Note: If a FEDWIRE field occurs more than once in a map, it is identified by its name <ID>. The second and subsequent occurrences are identified by <ID>:n, where n is the number of the occurrence in the map.</p> |
| Field |  | <p>A <i>field</i> is a subfield or a group of Fedwire components (the smallest piece of information defined by the Fedwire standard) that define a Fedwire subfield. A field can have different meanings depending on the context. In other data formats in the Map Editor, a field is not considered to have useful meaning except in the larger context of the record that contains it. However, fields used in the Map Editor to represent Fedwire subfields and components contain useful and discrete information.</p> <p>Note: If a field occurs more than once in a map it is identified by its name <ID>. The second and subsequent occurrences are identified by <ID>:n, where n is the number of the occurrence in the map.</p> <p>A <i>repeating field</i> is a field with the ability to loop (occur more than once) within a particular Fedwire record. To enable a single field to repeat multiple times within a Fedwire record, each occurrence of the field must be separated by a start and end delimiter. The use of start and end delimiters help the translator determine where subfields and components are defined within a field tag.</p> <p>When a field has a link performed against it, a red check mark appears over the field icon.</p> <p>When a field contains an extended rule or a standard rule, an asterisk appears to the right of the field icon.</p> |

Downloading and Installing the Fedwire Standards Data Dictionary

Before you install the Fedwire standards data dictionary (standards database) on your desktop, consider these guidelines:

- ◆ Download the Map Editor.
- ◆ For the most current version of the Fedwire standard and to obtain the Fedwire Standards CD, contact Sterling Commerce Customer Support.

- ◆ Be sure your desktop meets the Windows Client requirements listed in the application *System Requirements*.

To download and install the standards database:

1. Insert the Fedwire Standards CD into your CD-ROM drive.
2. From the application `install_dir/bin` directory, run **InstallService.sh/cmd** on the **fedwire_5000.jar** file (located on the Fedwire CD).

Note: **InstallService.sh/cmd** is located in the `<application_install>/bin` directory.

3. From the **Deployment** menu, select **Standards**.
4. In the Download and Install section next to Download Fedwire Standard, click **Go!**
5. In the **File Download** dialog box, select a download option, then click **OK**.
 - ◆ If you choose to run the file click **Run** and the operating system downloads the files immediately.
 - ◆ If you choose to save the file, the operating system prompts you to save the file. Browse to the location where you want to download the file and click **OK**. If you want to continue installing, run the file you just saved from the location you specified.
6. In the Security Warning page, select **Always trust content from Sterling Commerce (Mid America), Inc.** if you do not want to see similar security messages in the future when you download software from Sterling Commerce. Click **Yes**.
7. In the Welcome window, click **Next**.
8. In the Select Standards window, select the standards you want to download and click **Next**.
Select **Fedwire standards** to download the Fedwire standards data dictionary (including Expanded and Standard file formats).
9. In the Choose Destination Location window, select where you want to install the standards database:
 - ◆ If you accept the default location, click **Next**.
 - ◆ If you want to specify a different location, click **Browse**, specify the path to the folder, click **OK**, and click **Next**.

If you specify a folder name that does not exist, the application displays a message asking if you want to create that folder.
10. In the Select Components window, verify that **FedwireStandardDatabase** is selected and click **Next**.
The download wizard installs the standards databases (FEDWIRE.mdb and FEDWIRE_ExpandedFormat.mdb).
11. In the Setup Complete window, click **Finish**.

Creating a Fedwire Map

When you create a new map, you can either manually create a Fedwire layout or you can use a wizard that creates a layout for you based on the Fedwire standard. The wizard saves you time and effort and minimizes the risk of having an invalid standard format.

Note: Prior to creating a Fedwire map, you must have installed the Fedwire standards database.

To create a Fedwire map:

1. From the Map Editor **File** menu, select **New**.
 2. In the **New Map Wizard**, complete the questions in the first window and click **Next**.
- Note:** Be sure that **Sterling Integrator** is selected in the **What kind of map are you creating** list.
3. If you are translating from Fedwire, in the Input Format window (**Create a New Data Format Using this Standard** option) select **Fedwire** and click **Messages**. If you are translating from another format, select that format and continue to the next screen.
 4. Select the appropriate ODBC database, **GIS Fedwire Expanded Fmt** (for Expanded Format messages) or **GIS Fedwire Standard Fmt** (for Standard Format messages). The Standards agency and Version will be automatically populated (with [F] FEDWIRE and the version respectively).
 5. Select the transaction set (message) you want to use and click **Next**.
 6. Click **Finish** to load the message.
 7. Click **Next** to select the Output Format.
 8. If you are translating from Fedwire, in the Input Format window (**Create a New Data Format Using this Standard** option) select **Fedwire** and click **Messages**. If you are translating from another format, select that format and continue to the next screen.
 9. If necessary, select the appropriate ODBC database, **GIS Fedwire Expanded Fmt** (for Expanded Format messages) or **GIS Fedwire Standard Fmt** (for Standard Format messages). The Standards agency and Version will be automatically populated (with [F] FEDWIRE and the version respectively).
 10. Select the transaction set (message) you want to use and click **Next**.
 11. Click **Finish** to load the message.
 12. Click **Finish**. The Map Editor displays the new map in the Map Editor window.

Using the Preloaded Extended Rule Library with Fedwire

This section describes how to use the extended rule library and the properties of the dialog boxes that comprise its functionality. A rules library (used with Fedwire and any other data format) contains a list of rules in a separate file outside of the Map Editor source. Map Editor stores the name of the library in its source file, so when you open a map the library is also loaded. When you compile a map, the library rules that are referenced in the map are also compiled. This enables you to create a library of extended rules and then add it to any other map, so you do not have to recreate those extended rules after the first time. You can use this functionality with any data format.

Note: The Fedwire extended rules library (FEDWIRE_01.erl), which is automatically installed with the application (and checked in to the application automatically), contains all the extended rules necessary to carry out the business logic for Fedwire messages. The Fedwire extended rules library contains the necessary extended rules and is used primarily in Expanded Format (OUTMSG).

Only the extended rule libraries referenced by a map are compiled into the TXO translation object.

This functionality minimizes the impact to users when, for example, Fedwire updates their messages—without the rule library you would need to update the extended rules for each updated map

(correlating to the updated messages), but using the extended rule library you just update the library and then use the library with all the applicable maps.

When you view the checked in libraries through the Extended Rule Library check in interface, you are also able to obtain a list of all the maps that use each library.

The extended rules library can contain many rules. An extended rule consists of a declarations section followed by a statements section. The *declarations* section is required only if you use additional variables. The declarations section is where you declare the names and types of any variables you use either in the extended rule. The *statements* section is where you define the actions that you want the extended rule to run.

When calling a rule library function, you can pass parameters.

You must declare any variables that are not already defined as part of the input or output specification of the map before you use those variables in an extended rule. For the extended rule libraries, you typically use global variables that are passed as parameters.

Rule libraries are versioned resources. When you create a new rule library you need to check it in to the application just like you need to check in maps. This also enables you to check out, version, and delete extended rule libraries. Furthermore, when you view the checked in libraries through the Extended Rule Library check in interface, you can also see all the maps that use each library. This is very important because it enables you to easily view a list of the maps that will need to be recompiled if you change an extended rule in a library (you would recompile all the maps that use that particular library).

Additionally, you can import and export extended rule libraries into the application using the Resource Manager.

You can call an extended rule from a library in any extended rule in a map.

See *Extended Rule Libraries* for more information on this functionality.

Calling a Rule from an Extended Rule Library in a Map

You can call a rule from any extended rule library (that is currently checked in to the application) in any extended rule in your map. The syntax you use to call a rule from a library is:

```
call library_name.rule_name parameter1, parameter2, parameter3
```

In this syntax, **library_name** is the name of the extended rule library. For example, if the library is FEDWIRE_01.erl, the library_name is **FEDWIRE**. And the **rule_name** is the name of the rule that you defined in the Library Rule dialog box. There is no limit on the number of parameters you can use.

Note: You can have multiple rule libraries with the same name and different version numbers, but you can only use one rule library of the same name in a map (the last version of that rule library that was checked in to the system).

The syntax you use to call a rule with a return value set is:

```
integer i;  
  
i = call library_name.rule_name parameter1
```

In this syntax, **i** is the return value set.

Searching for Fedwire Correlations

Correlation searches rely on name-value pairs that define the specific data items you are trying to locate. These defined name-value pairs are tracking points for business processes and documents. The Correlation search feature offers the following additional benefits:

- ◆ You can receive the results of search queries more quickly.
- ◆ You can further refine correlation searches by specifying a start and end date/time range.
- ◆ You can further refine Fedwire correlation searches by specifying Fedwire-specific criteria.

Searching for Fedwire Messages Using EDI Correlations


To search for Fedwire messages using the EDI correlation interface:

1. From the **Administration** menu, select **Business Processes > Advanced Search > EDI Correlation**.
2. In the Search Option area, specify any combination of the following search criteria, as appropriate:

| Field | Description | Action |
|--------------------------|--|--|
| All Level Options | | |
| Location | Fedwire correlations maintained in a specific location. | Select one of the following options: <ul style="list-style-type: none">◆ Live Tables – Display live (active) Fedwire correlations.◆ Restored Tables – Display Fedwire correlations restored from an offline location. |
| Search Level Type | Processing level — this is not applicable for Fedwire, which uses only one level of processing. | Select the following option: <ul style="list-style-type: none">◆ Transaction – For the search query, display results from the transaction level (this is the only option applicable for Fedwire). |
| Test Mode | Mode of the application system where documents that contain the Fedwire correlations were created. | Select one of the following options: <ul style="list-style-type: none">◆ Any (default)◆ Test◆ Production◆ Information◆ Interchange is a test◆ Syntax only test◆ Echo request◆ Echo response |

| Field | Description | Action |
|----------------------------------|--|---|
| Direction | Flow of the documents that contain the Fedwire correlations. | Select one of the following options: <ul style="list-style-type: none"> ◆ Any (default) ◆ Inbound ◆ Outbound |
| Sender ID | ID for the organization that is sending documents. | Type the identifier of the sender. |
| Receiver ID | ID for the receiving organization. | Type the identifier of the receiver. |
| Sender ID Qualifier | Qualifier used with the Sender ID to define the organization that is sending documents. | Type the qualifier of the sender. |
| Receiver ID Qualifier | Qualifier used with the Receiver ID for the receiving organization. | Type the qualifier of the receiver. |
| Start Date | Documents in progress or completed after the specified start date and time. | Using the following formats, type a starting date and time range and select A.M. or P.M.: <ul style="list-style-type: none"> ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC Note: Defaults to a range of the last 24 hours. |
| End Date | Documents in progress or completed before the specified end date and time. | Using the following formats, type an end date and time range and select A.M. or P.M.: <ul style="list-style-type: none"> ◆ Date – MM/DD/YYYY ◆ Time – HR:MN:SC Note: Defaults to a range of the last 24 hours. |
| Interchange Level Options | | |
| Interchange Control Number | Sequential number, located at the beginning and end of an interchange, used to verify that all interchanges sent have been received and that the information in the interchange is complete. | None—not applicable for Fedwire. |
| Standard | Standard you are using. | Type Fedwire . |
| Acknowledgement Status | Status of an expected acknowledgement at the interchange level. | None—not applicable for Fedwire. |
| Compliance Status | Status of compliance checking at the interchange level. | None—not applicable for Fedwire. |
| Start Date | Correlations generated or completed for documents at the interchange level after the specific start date and time. This date is compared with the interchange date/time in the data. | None—not applicable for Fedwire. |

| Field | Description | Action |
|----------------------------------|---|--|
| End Date | Correlations generated or completed for documents at the interchange level before the specific end date and time. This date is compared with the interchange date/time in the data. | None—not applicable for Fedwire. |
| Group Level Options | | |
| Functional Group ID | ID of the functional group indicated in the document. | None—not applicable for Fedwire. |
| Group Control Number | Sequential number, used to verify that all groups sent have been received and that the information in the group is complete. | None—not applicable for Fedwire. |
| Acknowledgement Status | Status of an expected acknowledgement at the group level. | None—not applicable for Fedwire. |
| Compliance Status | Status of compliance checking at the functional group level. | None—not applicable for Fedwire. |
| Start Date | Fedwire correlations generated or completed for documents at the group level after the specific start date and time. This date is compared with the group date/time in the data. | None—not applicable for Fedwire. |
| End Date | Fedwire correlations generated or completed for documents at the group level before the specific end date and time. This date is compared with the group date/time in the data. | None—not applicable for Fedwire. |
| Transaction Level Options | | |
| Transaction Set ID | ID of the transaction set indicated in the document. | Type the ID of the transaction set (document). |
| Compliance Status | Status of compliance checking at the transaction set level. | Select one of the following options: <ul style="list-style-type: none"> ◆ Any (default) ◆ OK ◆ NOT OK |
| Message Repair Status | Status of message repair (for SWIFT documents only; not applicable for Fedwire). | None—not applicable for Fedwire. |

- Click **Go!** to display the Fedwire correlation records that match your search criteria.
- In the EDI Correlation Transaction Detail Results page, click  **info** to the right of Document Correlations.

Note: Correlations for a specific standard will be displayed using the Standard name as the beginning of the correlation. For example, FEDWIRE_URC indicates a Fedwire User Request Correlation. See the Fedwire Correlations below for a listing of all Fedwire correlations.

Fedwire Correlations

This table contains the correlations that are created for inbound and outbound Fedwire messages, if the corresponding data is available in the Fedwire message:

| Correlation Name | Description | Created Inbound or Outbound |
|----------------------------|---|-----------------------------|
| FEDWIRE_URC | User Request Correlation | Outbound |
| FEDWIRE_IMAD-KEY | Input Message Accountability Data | Outbound |
| FEDWIRE_INPUT-MSG-SEQ | Input Message Sequence Number | Outbound |
| FEDWIRE_URC | User Request Correlation | Inbound |
| FEDWIRE_IMAD-KEY | Input Message Accountability Data | Inbound |
| FEDWIRE_OMAD-KEY | Output Message Accountability Data | Inbound |
| FEDWIRE_INPUT-MSG-SEQ | Input Message Sequence Number | Inbound |
| FEDWIRE_OUTPUT-MSG-SEQ | Output Message Sequence Number | Inbound |
| FEDWIRE_MSG-DUPLICATION-CD | Indicates original or duplicate message | Inbound |
| FEDWIRE_MSG-STATUS-CD | Describes the message and its processing status | Inbound |
| FEDWIRE_ERROR-CODE | Error code associated with error/intercept | Inbound |

Fedwire Reporting

The EDI Translation Detail report enables you to access EDI data (for a particular standard like Fedwire) for a specified time period. It further allows you to organize the report by selecting criteria such as direction of the transmission, sender and receiver identifier, envelope name, unique identifier for the envelope level, EDI standard used, and translation success or failure, among other parameters. This report allows you to quickly and easily access information about EDI translation through the system.

To run a report containing details on inbound/outbound Fedwire messages:

1. From the **Operations** menu, select **Reports**.
2. Use the Report Configuration wizard to create a new **EDI Translation Detail** report.
3. On the **Detail Filtering** page in the **Standard** parameter, clear the checkboxes for all standards *except Fedwire*.
4. Filter by any other desired criteria and click **Finish** at the end of the Report Configuration Wizard to generate the report.