

# Application

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## Using CHIPS

Standards Library Version 5.1



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## Using CHIPS with the Application

### CHIPS Overview

CHIPS, the New York Clearing House Interbank Payment System, is an industry standard for clearing international payments in U.S. dollars. CHIPS is a real-time, final payments system for U.S. dollars that uses bilateral and multi-lateral netting for maximum efficiency. CHIPS has the capability of carrying extensive remittance information for commercial payments and is a premier payments platform serving the largest banks from around the world. In the Sterling Commerce implementation, messages are sent from Application to the CHIPS Central computer in New York, and are received by Application from the CHIPS Central computer.

This table describes how Application supports CHIPS:

Functionality	Details	Action You Need to Take to Implement CHIPS
Services	<ul style="list-style-type: none"> <li>♦ Generic Envelope service envelopes CHIPS messages.</li> <li>♦ Generic Deenvelope service deenvelopes CHIPS messages.</li> <li>♦ EDI Encoder service allows you to specify the Sender ID and/or Application Sender ID along with the Application Receiver ID and Acceptor Lookup Alias, to allow for an envelope lookup for a document that is to be enveloped.</li> <li>♦ The Document Extraction service allows you to obtain values for the Application Sender ID and Application Receiver ID so these values can be passed to the EDI Encoder service to find an envelope for the document that needs to be extracted, encoded, and enveloped.</li> <li>♦ CHIPS adapter is responsible for sending CHIPS messages using MQ and SWIFTNet.</li> <li>♦ CHIPS Utility service is responsible for the start of day, end of day, and CHIPS adapter lookup functions (to handle incoming CHIPS messages and returning acknowledgements).</li> <li>♦ WebSphereMQ Suite Async Receiver adapter enables you to receive CHIPS messages using the MQ transport mode (in conjunction with the CHIPS adapter).</li> <li>♦ The SWIFTNet Server adapter and SWIFTNet HTTP Server adapter enable you to receive CHIPS messages using the SWIFTNet transport mode.</li> </ul>	<ul style="list-style-type: none"> <li>♦ For the EDI Encoder service, specify the appropriate parameters for envelope lookup.</li> <li>♦ For the Document Extraction service, supply the appropriate parameters for the Application Sender ID and the Application Receiver ID.</li> <li>♦ Configure the CHIPS adapter at least once before any participant sends a message.</li> <li>♦ If you are using SWIFTNet as a transport mode, configure the appropriate SWIFTNet adapters and services.</li> <li>♦ If you are receiving CHIPS messages using the MQ transport mode in the CHIPS adapter you must configure the WebSphereMQ Suite Async Receiver adapter.</li> </ul>
Envelopes	<ul style="list-style-type: none"> <li>♦ Inbound CHIPS envelope wizards to implement inbound CHIPS.</li> <li>♦ Outbound CHIPS envelope wizards to implement outbound CHIPS.</li> </ul>	<ul style="list-style-type: none"> <li>♦ Create the appropriate CHIPS envelopes for each message you are sending and receiving.</li> </ul>

Functionality	Details	Action You Need to Take to Implement CHIPS
Predefined business processes	<ul style="list-style-type: none"> <li>◆ CHIPSDeenvelope</li> <li>◆ CHIPSEnvelope</li> <li>◆ CHIPSAdapter</li> <li>◆ CHIPSExtractMailboxMessage</li> <li>◆ CHIPSUtilityEOD</li> <li>◆ CHIPSUtilitySOD</li> <li>◆ CHIPSAdapter_SupervisoryCheck</li> <li>◆ CHIPSUtility_ReceiveHandler</li> </ul>	If you want to use the predefined business processes to perform start-of-day and end-of-day actions automatically, use the Scheduler to schedule the CHIPSUtilityEOD business process to start every evening, and schedule the CHIPSUtilitySOD business process to start every morning.
Map Editor	<ul style="list-style-type: none"> <li>◆ Map Editor wizard enables you to generate a file layout using the CHIPS message that you select. Included in the CHIPS map are CHIPS fields and elements that are defined by CHIPS.</li> <li>◆ Properties dialog boxes that enable you to define and modify CHIPS map components.</li> <li>◆ 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.</li> <li>◆ Additional mapping operations as needed.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Download Map Editor.</li> <li>◆ Download and install the CHIPS standards database from the <b>Deployment &gt; Standards</b> menu.</li> <li>◆ Create a map or maps to translate your CHIPS messages.</li> </ul>
Correlation Search	Search by CHIPS information.	Use the EDI Correlation search functionality to search for CHIPS correlation information.
Reports	Report by CHIPS standard	Use the EDI Translation Detail report to search for details of inbound and outbound CHIPS messages and easily create useful reports on your inbound and outbound CHIPS messaging.
Schedule	MailboxEvaluateAllAutomaticRulesSubMin schedule enables the mailbox routing rule you create to run automatically to use the CHIPS adapter as a transport mechanism.	Enable the predefined MailboxEvaluateAllAutomaticRulesSubMin schedule (installed with Application) to automatically execute the mailbox routing rule.

Functionality	Details	Action You Need to Take to Implement CHIPS
Archive and Restore	<ul style="list-style-type: none"> <li>Archives all inbound and outbound CHIPS data in the Application database.</li> <li>Uses Application restore functionality to restore archived data, as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Set the lifespan of the CHIPS business processes or use the system default setting.</li> <li>Configure the archive settings to purge or archive.</li> <li>Schedule the archive process to run regularly.</li> <li>Schedule the deletion of messages from the history mailbox for the CHIPS participant, through the Mailbox Deletion service.</li> </ul>

## Prerequisite Knowledge

The following are prerequisites to using Application with the CHIPS standard:

- The audience using this software should be familiar with Application and the CHIPS standard.

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

- The customer is responsible for connectivity between Application and CHIPS.

## Using CHIPS with Application

To use CHIPS with Application, you must complete the following tasks:

- Create inbound and outbound CHIPS envelopes.
- To use the CHIPS adapter to transport messages, configure it appropriately.
- If you are using the CHIPS adapter, create a mailbox routing rule to invoke the `CHIPSExtractMailboxMessage` business process.
- If you are using the CHIPS adapter, enable the predefined `MailboxEvaluateAllAutomaticRulesSubMin` schedule (installed with Application) to automatically execute the mailbox routing rule.
- If you are receiving CHIPS messages using the MQ transport mode, you must configure the WebSphereMQ Suite Async Receiver adapter.
- If you are receiving CHIPS messages using the SWIFTNet transport mode, you must configure the SWIFTNet Server adapter and the SWIFTNet HTTP Server adapter.
- Create the necessary maps if you want to translate a CHIPS message to or from a different format.
- Using the CHIPS adapter or your own connectivity, send and receive messages from the CHIPS Central Computer.
- To track CHIPS messages, use the EDI Correlation Search functionality.



10. To report on inbound and outbound CHIPS message flow, use the EDI Translation Detail report feature.
11. To archive and restore CHIPS messages, use the Application archive and restore functionality.

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# CHIPS Enveloping

## CHIPS Enveloping Overview

A *document envelope* consists of control information that enables organizations to effectively exchange messages. Document envelopes are specific to the message protocol used. Creating document envelopes is necessary to use CHIPS with your trading partners.

CHIPS 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 CHIPS envelope** identifies messages that are received by Gentran Integration Suite 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 CHIPS envelope to configure deenveloping information.
- ◆ The **Outbound CHIPS envelope** identifies messages so that they can be sent to and received by the CHIPS Central Computer. You need to configure an Outbound CHIPS envelope to configure enveloping information.

CHIPS envelopes are used to specify map and business process settings.

## Creating Envelopes

Inbound envelopes define expected CHIPS data for inbound messages. This information helps Gentran Integration Suite route and process the messages. Outbound envelopes specify information about messages that enable them to be sent to and received by the CHIPS Central Computer.

To create an envelope:

1. From the Admin Console, select **Trading Partner > Document Envelopes > Envelopes**.
2. Under Create, next to New Envelope, click **Go!**
3. On the Envelope Standards page, select **CHIPS** 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 CHIPS envelope* on page 11 or *Outbound CHIPS envelope* on page 17.
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 CHIPS envelope

You only need to create an Inbound CHIPS envelope if you are receiving inbound CHIPS messages. However, if you are receiving inbound CHIPS messages, you need to create a separate Inbound CHIPS envelope for *each* CHIPS message type you will be receiving. The following table describes Inbound CHIPS 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
Send participant number*	<p>Four-digit participant number. Required.</p> <p><b>Note:</b> When you are setting up an inbound CHIPS envelope for the response codes 55 and 85, the Send Participant Number must be set to * (a single asterisk character). CHIPS messages with response codes of 55 and 85 do not contain the send participant number information in them, so using an asterisk allows the envelope lookup to work with only the response code.</p>
Message name*	<p>Select a CHIPS message name. Required.</p> <p><b>Note:</b> The CHIPS deenveloping functionality uses the CHIPS response code in combination with another piece of data (this is usually the value of the first tag in the message) to obtain the CHIPS response message name from the chips.properties property file. The CHIPS deenveloping functionality will then use the message name in combination with the Send Participant Number to find the envelope. Wildcards can be used for the Send Participant Number and the CHIPS message name.</p>

Field or Check Box	Description
Compliance check document	Check the message body for compliance. Required. Valid values are Yes (default) and No.
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"> <li>◆ Specify (default)</li> <li>◆ Generate from data (this is useful if you want to share across envelopes)</li> </ul> <p><b>Note:</b> 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 <b>Compliance Check document</b> is set to Yes and <b>Map Name Mode</b> set to Specify). The map must already be checked in to Application. Optional.
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"> <li>◆ Send participant number</li> <li>◆ Message name</li> </ul> <p><b>Note:</b> If you are using a generated map name (<b>Map Name Mode</b> is set to Generate from data), Application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated map name exists in the system</b> 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"> <li>◆ Send participant number</li> <li>◆ Message name</li> </ul> <p><b>Note:</b> If you are using a generated map name (<b>Map Name Mode</b> is set to Generate from data), Application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated map name exists in the system</b> 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"> <li>◆ Send participant number</li> <li>◆ Message name</li> </ul> <p><b>Note:</b> If you are using a generated map name (<b>Map Name Mode</b> is set to Generate from data), Application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated map name exists in the system</b> 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><b>Note:</b> Only displayed if <b>Map Name Mode</b> is set to Generate from data.</p>
Translate message	<p>Whether to translate the message (using the specified map). Valid values are Yes (default) and No. Required.</p>

Field or Check Box	Description
Validate translation output	Whether to validate the translation output. Valid values are Yes (default) and No. Required.
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"> <li>◆ Specify (default)</li> <li>◆ Generate from data</li> </ul> <p><b>Note:</b> 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"> <li>◆ Send participant number</li> <li>◆ Message name</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Error Business Process</b> is set to Generate from data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the first Backup Name.</li> <li>◆ Third, it tries to generate and match the second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> is set to Yes.</p>

Field or Check Box	Description
First Backup Name Format	<p>The backup name format to use when generating a business process name. The system allows for one alternative if the Primary Name Format is not found—checking for the Backup Name Format. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> <li>♦ Send participant number</li> <li>♦ Message name</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Error Business Process name</b> is set to Generate from data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>♦ 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).</li> <li>♦ Second, it tries to generate and match the First Backup Name.</li> <li>♦ Third, it tries to generate and match the Second Backup Name.</li> <li>♦ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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><b>Note:</b> Only displayed if <b>Determine the Business Process By</b> is set to Generating the business process name from the data.</p>
Business Process List	<p>Select a previously created business process to associate with this envelope Optional.</p> <p>Displayed only if <b>Error Business Process Name</b> 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"> <li>♦ Specifying a business process</li> <li>♦ Generating the business process name from the data</li> </ul> <p><b>Note:</b> 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"> <li>◆ Send participant number</li> <li>◆ Message name</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Determine the Business Process By</b> is set to Generating the business process name from the data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the first Backup Name.</li> <li>◆ Third, it tries to generate and match the second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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"> <li>◆ Send participant number</li> <li>◆ Message name</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Determine Business Process Name By</b> is set to Generating a Business Process name from the data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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><b>Note:</b> Only displayed if <b>Determine the Business Process By</b> is set to Generating the business process name from the data.</p>



Field or Check Box	Description
Business Process List	Select a previously created business process to associate with this envelope Optional. Displayed only if <b>Determine the Business Process Name</b> is set to Specifying a business process.
Extraction Options	Business process data extraction. Required. Valid values: <ul style="list-style-type: none"> <li>◆ Determined by business process (default)</li> <li>◆ Extract to a file system directory</li> <li>◆ Extract to a mailbox</li> </ul>
Data Extraction Directory	Directory for data extraction. Displayed only if Extraction Options set to <b>Extract to a file system directory</b> . Optional
Data Extraction Filename	Filename for data extraction. Displayed only if Extraction Options set to <b>Extract to a file system directory</b> . Optional.
Data Extraction Mailbox	Mailbox for data extraction. Displayed only if Extraction Options set to <b>Extract to a mailbox</b> . Optional.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Displayed only if Extraction Options set to <b>Extract to a mailbox</b> . Optional.

## Outbound CHIPS envelope

You only need to create an Outbound CHIPS envelope if you are sending outbound CHIPS messages. However, if you are sending outbound CHIPS messages, you need to create a separate Outbound CHIPS envelope for *each* CHIPS message type you will be sending.

The following table describes Outbound CHIPS 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
Send participant number*	Four-digit participant number for sender. Required. <b>Note:</b> Although the Send Participant Number is mandatory for the CHIPS Outbound Envelope wizard, you can create a business process that only specifies the Application Sender ID and Acceptor Lookup Alias to enable to find the appropriate envelope using the updated EDI Encoder service. <b>Note:</b> To specify this parameter in the EDI Encoder service to perform an envelope lookup for a document to be enveloped, type this value in the EDI Encoder service <b>SenderID</b> parameter.

Field or Check Box	Description
Receive participant number*	<p>Four-digit participant number for receiver. Optional.</p> <p><b>Note:</b> To specify this parameter in the EDI Encoder service to perform an envelope lookup for a document to be enveloped, type this value in the EDI Encoder service <b>ReceiverID</b> parameter.</p>
Application Sender ID*	<p>Coded identifier of the application data sender. Optional.</p> <p><b>Note:</b> To specify this parameter in the EDI Encoder service to perform an envelope lookup for a document to be enveloped, type this value in the EDI Encoder service <b>AppSenderID</b> parameter.</p>
Application Receiver ID*	<p>Coded identifier of the customer number or data source number. Optional.</p> <p><b>Note:</b> To specify this parameter in the EDI Encoder service to perform an envelope lookup for a document to be enveloped, type this value in the EDI Encoder service <b>AppReceiverID</b> parameter.</p>
Transaction Code	<p>Coded identifier of the transaction. Valid values displayed in code list. Required. Default is 01 - Delete Payment Message.</p>
Acceptor Lookup Alias	<p>Identifying string used with the Sender ID (and/or Application Sender ID) and the Receiver ID (and/or the Application 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.</p> <p><b>Note:</b> To specify this parameter in the EDI Encoder service to perform an envelope lookup for a document to be enveloped, type this value in the EDI Encoder service <b>AcceptorLookupAlias</b> parameter.</p>
Use Correlation Overrides	<p>Whether to use correlation overrides. Default is Never.</p>
Update Payment Sequence Number (Payment Messages only)	<p>Whether the sequence number for payment messages should be incremented. Valid values are Yes (default) and No.</p> <p><b>Note:</b> Typically only payment messages require that their sequence number be incremented, but this parameter is always displayed to enable you to select the wildcard character (*) for <b>Message Type</b> and then select your preference whether to increment the Payment Sequence Number.</p>
Auto Generate Payment Sequence Number	<p>Whether to automatically generate the payment sequence number. Valid values are Yes (default) and No. Required.</p> <p><b>Note:</b> This parameter is displayed only if you select a Payment Message from Transaction Code.</p>
Translate Message	<p>Whether to automatically translate the message. Valid values are Yes (default) and No. Required.</p>
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"> <li>◆ Specify (default)</li> <li>◆ Generate from data (this is useful if you want to share across envelopes)</li> </ul> <p><b>Note:</b> If you select this option, you must select at least one parameter for Primary Name Format.</p>

Field or Check Box	Description
Map Name	Which map to use to perform a compliance check (if <b>Translate message</b> is set to Yes and <b>Map Name Mode</b> set to Specify). The map must already be checked in to Application. Optional.
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"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated map name (<b>Map Name Mode</b> is set to Generate from data), Application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no matching map is found</b> 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"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated map name (<b>Map Name Mode</b> is set to Generate from data), Application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no matching map is found</b> 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"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated map name (<b>Map Name Mode</b> is set to Generate from data), Application tries to generate and match the following maps:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing map that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no matching map is found</b> is set to Yes.</p>
Generate an error if no matching map is found	<p>Specifies whether to generate an error if the Map Name selected is not found. Valid values are Yes (default) and No.</p> <p><b>Note:</b> Only displayed if <b>Map Name Mode</b> 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"> <li>◆ Specify (default)</li> <li>◆ Generate from data</li> </ul> <p><b>Note:</b> 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 error business process. Optional.</p> <p>Select from:</p> <ul style="list-style-type: none"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Error Business Process</b> is set to Generate from data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the first Backup Name.</li> <li>◆ Third, it tries to generate and match the second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Determine Business Process Name By</b> is set to Generating a Business Process name from the data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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 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"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Determine Error Business Process Name By</b> is set to Generating a Business Process name from the data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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><b>Note:</b> Only displayed if <b>Determine the Business Process By</b> is set to Generating the business process name from the data.</p>
Business Process List	<p>Select a previously created business process to associate with this envelope. Optional.</p> <p>Displayed only if <b>Error Business Process Name</b> is set to Specify.</p>
Determine the Business Process By	<p>How to determine the 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"> <li>◆ Specifying a business process</li> </ul> <p><b>Note:</b> To integrate the CHIPS adapter with CHIPS enveloping, select <b>Specifying a business process</b>.</p> <ul style="list-style-type: none"> <li>◆ Generating the business process name from the data</li> </ul> <p><b>Note:</b> 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"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Determine the Business Process By</b> is set to Generating the business process name from the data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the first Backup Name.</li> <li>◆ Third, it tries to generate and match the second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Determine Business Process Name By</b> is set to Generating a Business Process name from the data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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 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"> <li>◆ Send participant number</li> <li>◆ Receive participant number</li> <li>◆ Transaction code</li> </ul> <p><b>Note:</b> If you are using a generated business process name (<b>Determine Error Business Process Name By</b> is set to Generating a Business Process name from the data), Application tries to generate and match the following business process:</p> <ul style="list-style-type: none"> <li>◆ 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).</li> <li>◆ Second, it tries to generate and match the First Backup Name.</li> <li>◆ Third, it tries to generate and match the Second Backup Name.</li> <li>◆ Fourth, if there is not an existing business process that matches the names generated in steps 1-3, an error is generated.</li> </ul> <p><b>Note:</b> Only occurs if <b>Generate an error if no generated business process name exists in the system</b> 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><b>Note:</b> Only displayed if <b>Determine the Business Process By</b> is set to Generating the business process name from the data.</p>
Business Process List	<p>Select a previously created business process to associate with this envelope. Optional.</p> <p><b>Note:</b> To integrate the CHIPS adapter with CHIPS enveloping, select the <b>CHIPSAdapter</b> business process from this list.</p> <p>Displayed only if <b>Determine the Business Process Name</b> is set to Specifying a business process.</p>
Extraction Options	<p>Business process data extraction. Required.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>◆ Determined by business process (default)</li> <li>◆ Extract to a file system directory</li> <li>◆ Extract to a mailbox</li> </ul>
Data Extraction Directory	<p>Directory for data extraction. Displayed only if Extraction Options set to <b>Extract to a file system directory</b>. Optional</p>
Data Extraction Filename	<p>Filename for data extraction. Displayed only if Extraction Options set to <b>Extract to a file system directory</b>. Optional.</p>



Field or Check Box	Description
Data Extraction Mailbox	Mailbox for data extraction. Displayed only if Extraction Options set to <b>Extract to a mailbox</b> . Optional.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Displayed only if Extraction Options set to <b>Extract to a mailbox</b> . Optional.

# CHIPS Business Processes

## Overview

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

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

Business Process	Business Goals
CHIPSEnvelope	Extracts CHIPS message types from a message and translates and processes them, according to the content of the envelopes.
CHIPSEnvelope	Applies an CHIPS envelope to one or more CHIPS messages and then uses the envelope data to translate and process them.
CHIPSAdapter	<p>Envelopes CHIPS data and saves each CHIPS message (except CHIPS Heartbeat messages) sent to and received from the CHIPS Central Computer in the participant mailbox as a new mailbox message. In sending mode, it picks up the configuration parameters from the CHIPS adapter in the workflow. In receiving mode, the CHIPS adapter puts the incoming documents into the workflow.</p> <p><b>Note:</b> To integrate the CHIPS adapter with CHIPS enveloping, select the <b>CHIPSAdapter</b> business process when you create the CHIPS outbound envelope.</p>
CHIPSUtilityEOD	Executes the CHIPS Utility service end-of-day housekeeping actions. You can schedule this predefined business process to be started every evening.
CHIPSUtilitySOD	Executes the CHIPS Utility service start-of-day housekeeping actions. You can schedule this predefined business process to be started every morning.
CHIPSExtractMailboxMessage	Receives and deenvelopes (using the EDIDeenvelope business process) each mailbox message received by the CHIPS adapter from the CHIPS Central Computer. This business process is started by a mailbox routing rule that you create. The mailbox routing rule is executed automatically when the MailboxEvaluateAllAutomaticRulesSubMin schedule is enabled.
CHIPSUtility_ReceiveHandler	<p>Handles incoming messages and returns acknowledgement messages according to the CHIPS Adapter transport method and details.</p> <ul style="list-style-type: none"> <li>◆ For SWIFTNet, this business process is assigned automatically in the SWIFTNet Routing Rule.</li> <li>◆ For MQ, the user needs to assign this business process in the Websphere MQ Async Receive Adapter.</li> </ul>

Business Process	Business Goals
CHIPSAdapter_SupervisoryCheck	Executes the CHIPS adapter to send a Supervisory STATUS message to check on the CHIPS line status. If there is no response, the CHIPS line status is updated as “down.” If there is a response, the CHIPS line status is updated as “up.” This is useful when the CHIPS line is already set to “down” during the Resend Handler and you need to check and update the line status through the business process.

The following business processes are provided to you in this release of Application to create the message whose name is included in the business process. The resulting message is stored as a primary document. For example, the CHIPSCreateContinueUnresolvedPaymentMessageReportFullRequest.bpml creates a **Continue Unresolved Payment Message Report Full Request** message and stores it as the primary document.

**Note:** It is your responsibility to integrate these business processes into your CHIPS solution (a solution that includes the use of a third party CHIPS communications solution).

- ◆ CHIPSCreateContinueUnresolvedPaymentMessageReportFullRequest.bpml
- ◆ CHIPSCreateContinueUnresolvedPaymentMessageReportRequest.bpml
- ◆ CHIPSCreateContinueWarningReportRequest.bpml
- ◆ CHIPSCreateContinueWarningReportWithSummaryRequest.bpml
- ◆ CHIPSCreateQueueStatusRequest.bpml
- ◆ CHIPSCreateRule13Request.bpml
- ◆ CHIPSCreateUnresolvedPaymentMessageReportRequest.bpml
- ◆ CHIPSCreateWarningReportRequest.bpml

## CHIPSDeenvelope Business Process

The CHIPSDeenvelope business process is used to deenvelope CHIPS data. A typical scenario is one in which CHIPS data must be received from the CHIPS Central Computer. The data must be deenveloped to extract identifying data, and the CHIPSDeenvelope business process helps to provide the deenveloping services.

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

1. You create a business process that calls the EDI Deenveloping service.
2. The EDI Deenveloping service parses the whole document and extracts messages from it so it can be further processed by Application.
3. Passes the CHIPS messages to the CHIPSDeenvelope business process. The Generic Deenvelope service runs as a subprocess.
4. The CHIPSDeenvelope business process looks up the envelope, based on the data found in the data.
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, Application generates an EDI Compliance Report.

This table lists the configuration parameters for the CHIPSDeenvelope 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 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	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 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 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 Application, along with the life span type and removal method.
Complete by Deadline	None Available <b>Note:</b> 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.

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 CHIPSDeenvelope business process:

```

<process name="CHIPSDeenvelope">
  <rule name="contract">
    <condition>CONTRACT_FOUND = "YES"</condition>
  </rule>
  <sequence>
    <sequence>
      <operation>
        <participant name="DeenvelopeGeneric" />
        <output message="Xout" >
          <assign to="map_name">CHIPSBreakMap</assign>
          <assign to="ExhaustInputDuringBreakTranslation">>false</assign>
          <assign to="RunInValidationMode">>true</assign>
          <assign to="." from="*"></assign>
        </output>
        <input message="Xin" >
          <assign to="." from="*"></assign>
        </input>
      </operation>
      <onFault code="Interchange-Non-Compliant">
        <!-- Just catch the error, so that the BP will continue. -->
        <!-- Dummy assign, since we need something here. -->
        <assign to="BREAK">YES</assign>
      </onFault>
      <onFault code="Transaction-Non-Compliant">
        <!-- Just catch the error, so that the BP will continue. -->
        <!-- Dummy assign, since we need something here. -->
        <assign to="BREAK">YES</assign>
      </onFault>
      <onFault>
        <operation>
          <participant name="BPExceptionService"/>
          <output message="Xout" >
            <assign to="exceptionCode"
from="Prev_NotSuccess_Adv_Status/text()" />
          </output>
          <input message="Xin"/>
        </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="Xout">
            <assign to="INVOKE_MODE">ASYNC</assign>
            <assign to="." from="*"></assign>
        </output>
        <input message="Xin" >
            <assign to="." from="*"></assign>
        </input>
    </operation>
</sequence>
</choice>
</sequence>
</process>

```

## CHIPSEnvelope Business Process

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

A typical scenario is one in which CHIPS data must be sent to the CHIPS Central Computer. The CHIPSEnvelope business process helps to provide these enveloping services.

The CHIPSEnvelope 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 CHIPSEnvelope business process (which runs the Generic Envelope service as a subprocess to extract the name of the business process).
5. The CHIPSEnvelope business process searches the envelope definition to retrieve information to envelope each message.

This table lists the configuration parameters for the CHIPSEnvelope 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 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	Application enables you to set performance optimizations by queue, defining queue levels to allocate resources. This number indicates that 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 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 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 Application, along with the life span type and removal method.
Complete by Deadline	None Available <b>Note:</b> 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 CHIPSEnvelope business process:

```
<process name="CHIPSEnvelope">
```

```

<rule name="contract">
  <condition>CONTRACT_FOUND = "YES"</condition>
</rule>

<sequence>
  <sequence>
    <operation>
      <participant name="EnvelopeGeneric" />
      <output message="Xout" >
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin" >
        <assign to="." from="*"></assign>
      </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="Xout" >
          <assign to="exceptionCode" from="Prev_NotSuccess_Adv_Status/text()" />
        </output>
        <input message="Xin"/>
      </operation>
    </onFault>
  </sequence>

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

</sequence>
</process>

```



## CHIPSAdapter Business Process

The CHIPS adapter saves each CHIPS message sent to and received from the CHIPS Central Computer in the participant mailbox as a new mailbox message. The CHIPSAdapter business process is used to envelope CHIPS data and send it to the CHIPS Central Computer. In sending mode, it picks up the configuration parameters from the CHIPS adapter in the workflow. In receiving mode, the CHIPS adapter puts the incoming documents into the workflow.

**Note:** To integrate the CHIPS adapter with CHIPS enveloping, select the **CHIPSAdapter** business process when you create the CHIPS outbound envelope.

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

1. You create an outbound CHIPS envelope that invokes the CHIPSAdapter business process.
2. The CHIPSAdapter business process invokes the CHIPS adapter
3. The CHIPS adapter sends CHIPS messages to CHIPS, using either the SWIFTNet network (optionally using IBM Websphere MQ) or The Clearing House Frame Relay Network (a proprietary network that uses IBM Websphere MQ). All CHIPS messages includes a message header and all message requests require a message acknowledgement (participant acknowledgement, CHIPS acknowledgement, or CHIPS Invalid Message acknowledgement).
4. Acknowledgements are received from CHIPS using the Acknowledgement Handler. The CHIPS adapter also receives all response messages from CHIPS, including heartbeat messages, and sends supervisory STATUS messages (if the message are resent the specified number of times and the acknowledgement is not received).
5. Starts the Invoke Business Process service or a subprocess service to initiate the appropriate business process to handle each deenveloped message.

This table lists the configuration parameters for the CHIPSAdapter 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 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	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.

Parameter	Default	Description
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 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 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 Application, along with the life span type and removal method.
Complete by Deadline	None Available <b>Note:</b> 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"> <li>◆ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline.</li> <li>◆ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline.</li> </ul>
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 CHIPSAdapter business process:

```
<process name="CHIPSAdapter">
  <sequence name="CHIPSAdapter">
    <operation name="set user token">
      <participant name="SetUserToken"/>
      <output message="SetUserTokenMessage">
        <assign to="USER_TOKEN">admin</assign>
        <assign to="." from="*" />
      </output>
      <input message="inmsg">
        <assign to="." from="*" />
      </input>
    </operation>
    <!-- send CHIPS request -->
    <operation>
```

```

    <participant name="CHIPSAdapter"/>
    <output message="sendCHIPSRequest">
      <assign to="." from="*" />
    </output>
    <input message="testing">
      <assign to="." from="*" />
    </input>
  </operation>
</sequence>
</process>

```

## Setting the Lifespan

The CHIPSAdapter business process stores all data from CHIPS adapter in the Application database. The system default setting for the lifespan of this data (to be persisted in the system prior to being archived or purged) is two days. If you want to change the Lifespan setting, you must check out the business process and check it back in to the system. During the check-in process you are able to configure the following information regarding the length of time that business processes (instances) using the CHIPSAdapter model should remain in the system:

Field	Description
Process Specific	Enter the number of days or hours, or days and hours combined, that data for each instance of this business process model are permitted to remain in the system.
Expired Business Processes should be	Select either Archived or Purged for expired data. Archived data is stored in your file system.
System Default	Select this option if you want the data for instances of this business process model to expire and be archived after two days. This option is configurable. <b>Note:</b> If you use the System Default setting, you can then configure archive settings in the Archive Manager.

See *Checking In Business Process Models Through the GPM* and *Archiving and Purging Activities* for more information.

## CHIPSUtilityEOD Business Process

The CHIPSUtilityEOD business process executes the CHIPS end-of-day housekeeping actions. You can also schedule this predefined business process to be started every evening.

This table lists the configuration parameters for the CHIPSUtilityEOD 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 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	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 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 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 Application, along with the life span type and removal method.
Complete by Deadline	None Available <b>Note:</b> 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 CHIPSUtilityEOD business process:

```
<process name="CHIPSUtilityEOD">
```

```

<sequence name="CHIPSUtility_EndOfDay">
  <operation name="set user token">
    <participant name="SetUserToken"/>
    <output message="SetUserTokenMessage">
      <assign to="USER_TOKEN">admin</assign>
      <assign to="." from="*" />
    </output>
    <input message="inmsg">
      <assign to="." from="*" />
    </input>
  </operation>
  <!-- End of Day process -->
  <operation>
    <participant name="CHIPSUtilityService"/>
    <output message="endOfDay">
      <assign to="." from="*" />
      <assign to="serviceName">CHIPSAdapter</assign>
    </output>
    <input message="testing">
      <assign to="." from="*" />
    </input>
  </operation>
</sequence>
</process>

```

## Setting the Lifespan

The CHIPSUtilityEOD business process stores all data from CHIPS adapter in the Application database. The system default setting for the lifespan of this data (to be persisted in the system prior to being archived or purged) is two days. If you want to change the Lifespan setting, you must check out the business process and check it back in to the system. During the check-in process you are able to configure the following information regarding the length of time that business processes (instances) using the CHIPSUtilityEOD model should remain in the system:

Field	Description
Process Specific	Enter the number of days or hours, or days and hours combined, that data for each instance of this business process model are permitted to remain in the system.
Expired Business Processes should be	Select either Archived or Purged for expired data. Archived data is stored in your file system.
System Default	Select this option if you want the data for instances of this business process model to expire and be archived after two days. This option is configurable. <b>Note:</b> If you use the System Default setting, you can then configure archive settings in the Archive Manager.

See *Checking In Business Process Models Through the GPM* and *Archiving and Purging Activities* for more information.

## CHIPSUtilitySOD Business Process

The CHIPSUtilitySOD business process is invoked by the CHIPS adapter to execute the CHIPS start-of-day housekeeping actions. You can also schedule this predefined business process to be started every morning.

This table lists the configuration parameters for the CHIPSUtilitySOD 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 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	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 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 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 Application, along with the life span type and removal method.

Parameter	Default	Description
Complete by Deadline	None Available <b>Note:</b> 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"><li>◆ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline.</li><li>◆ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline.</li></ul>
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 process, and any resulting errors and exceptions.

The following BPML code makes up the CHIPSUtilitySOD business process:

```
<process name="CHIPSUtilitySOD">
  <sequence name="CHIPSUtility_StartOfDay">
    <operation name="set user token">
      <participant name="SetUserToken"/>
      <output message="SetUserTokenMessage">
        <assign to="USER_TOKEN">admin</assign>
        <assign to="." from="*" />
      </output>
      <input message="inmsg">
        <assign to="." from="*" />
      </input>
    </operation>
    <!-- Start of Day Process -->
    <operation>
      <participant name="CHIPSUtilityService"/>
      <output message="startOfDay">
        <assign to="." from="*" />
        <assign to="serviceName">CHIPSAdapter</assign>
      </output>
      <input message="testing">
        <assign to="." from="*" />
      </input>
    </operation>
  </sequence>
</process>
```

## Setting the Lifespan

The CHIPSUtilitySOD business process stores all data from CHIPS adapter in the Application database. The system default setting for the lifespan of this data (to be persisted in the system prior to being archived or purged) is two days. If you want to change the Lifespan setting, you must check out the business process and check it back in to the system. During the check-in process you are able to configure the following

information regarding the length of time that business processes (instances) using the CHIPSUtilitySOD model should remain in the system:

Field	Description
Process Specific	Enter the number of days or hours, or days and hours combined, that data for each instance of this business process model are permitted to remain in the system.
Expired Business Processes should be	Select either Archived or Purged for expired data. Archived data is stored in your file system.
System Default	Select this option if you want the data for instances of this business process model to expire and be archived after two days. This option is configurable. <b>Note:</b> If you use the System Default setting, you can then configure archive settings in the Archive Manager.

See *Checking In Business Process Models Through the GPM* and *Archiving and Purging Activities* for more information.

## CHIPSExtractMailboxMessage Business Process

This business process receives and deenvelopes (using the EDIDevelope business process) each mailbox message received by the CHIPS adapter from the CHIPS Central Computer. This business process is started by a mailbox routing rule that you create. The mailbox routing rule is executed automatically when the MailboxEvaluateAllAutomaticRulesSubMin schedule is enabled.

This table lists the configuration parameters for the CHIPSExtractMailboxMessage 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 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	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 Application to retain data.



Parameter	Default	Description
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 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 Application, along with the life span type and removal method.
Complete by Deadline	None Available <b>Note:</b> 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"> <li>◆ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline.</li> <li>◆ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline.</li> </ul>
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 process, and any resulting errors and exceptions.

The following BPML code makes up the CHIPSExtractMailboxMessage business process:

```
<process name="CHIPSExtractMailboxMessage">

  <!-- Keep looping until the message count = 0 -->
  <rule name="MailboxMessagesLeftToExtract">
    <condition>MailboxMessageIdIndex <= MailboxMessageIdCount</condition>
  </rule>

  <sequence>

    <!-- How many message IDs do we have? -->
    <assign to="MailboxMessageIdCount" from="count(//RoutingRequest/MessageId)"/>
    <assign to="MailboxMessageIdIndex" from="'1'"/>

    <choice name="MailboxMessageIdLoop">
      <select>
        <case ref="MailboxMessagesLeftToExtract"
activity="ExtractMessageAndDevelope" />
      </select>
    </choice>
  </sequence>
</process>
```

```

<!-- Extract and deenvelope a single mailbox message -->
<sequence name="ExtractMessageAndDeenvelope">
  <operation name="Mailbox ExtractBegin Service">
    <participant name="MailboxExtractBegin"/>
    <output message="ExtractBeginRequest">
      <assign to="MessageId"
from="//RoutingRequest/MessageId[/ProcessData/MailboxMessageIdIndex/text()]/text()" /
>
      <assign to="CommitNow" from="'Yes'"/>
      <assign to="." from="*" />
    </output>
    <input message="inmsg">
      <assign to="ExtractBeginResponse" from="*" />
      <assign to="." from="PrimaryDocument" />
    </input>
  </operation>
  <operation name="Deenvelope">
    <participant name="InvokeSubProcessService"/>
    <output message="InvokeSubProcessServiceTypeInputMessage">
      <assign to="INVOKE_MODE">ASYNC</assign>
      <assign to="WFD_NAME">EDIDeenvelope</assign>
      <assign to="." from="*"></assign>
    </output>
    <input message="inmsg">
      <assign to="." from="*"></assign>
    </input>
  </operation>
  <!-- Increment the message ID index and loop around to see if we have
more extractions to do -->
  <assign to="MailboxMessageIdIndex" from="MailboxMessageIdIndex + 1" />
  <repeat ref="MailboxMessageIdLoop" />
</sequence>
</choice>

</sequence>
</process>

```

## CHIPSAdapter\_SupervisoryCheck Business Process

This business process executes the CHIPS adapter to send a Supervisory STATUS message to check on the CHIPS line status. If there is no response, the CHIPS line status is updated as “down.” If there is a response, the CHIIPS line status is updated as “up.” This is useful when the CHIPS line is already set to “down” during the Resend Handler and you need to check and update the line status through the business process.

This table lists the configuration parameters for the CHIPSAdapter\_SupervisoryCheck 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 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	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 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 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 Application, along with the life span type and removal method.
Complete by Deadline	None Available <b>Note:</b> 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"><li>◆ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline.</li><li>◆ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline.</li></ul>

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 process, and any resulting errors and exceptions.

The following BPML code makes up the CHIPSAdapter\_SupervisoryCheck business process:

```
<process name="CHIPSAdapter_SupervisoryCheck">
  <sequence name="CHIPSAdapter_SupervisoryCheck">
    <operation name="set user token">
      <participant name="SetUserToken"/>
      <output message="SetUserTokenMessage">
        <assign to="USER_TOKEN">admin</assign>
        <assign to="." from="*" />
      </output>
      <input message="inmsg">
        <assign to="." from="*" />
      </input>
    </operation>
    <!-- send Supervisory request -->
    <operation>
      <participant name="CHIPSAdapter"/>
      <output message="runSupervisoryCheck">
        <assign to="." from="*" />
      </output>
      <input message="testing">
        <assign to="." from="*" />
      </input>
    </operation>
  </sequence>
</process>
```

## Setting the Lifespan

The CHIPSAdapter\_SupervisoryCheck business process stores all data from CHIPS adapter in the Application database. The system default setting for the lifespan of this data (to be persisted in the system prior to being archived or purged) is two days. If you want to change the Lifespan setting, you must check out the business process and check it back in to the system. During the check-in process you are able to configure the following information regarding the length of time that business processes (instances) using the CHIPSAdapter\_SupervisoryCheck model should remain in the system:

Field	Description
Process Specific	Enter the number of days or hours, or days and hours combined, that data for each instance of this business process model are permitted to remain in the system.
Expired Business Processes should be	Select either Archived or Purged for expired data. Archived data is stored in your file system.

Field	Description
System Default	Select this option if you want the data for instances of this business process model to expire and be archived after two days. This option is configurable. <b>Note:</b> If you use the System Default setting, you can then configure archive settings in the Archive Manager.

See *Checking In Business Process Models Through the GPM* and *Archiving and Purging Activities* for more information.

## CHIPSUtility\_ReceiveHandler Business Process

This business process handles incoming messages and returns acknowledgement messages according to the CHIPS Adapter transport method and details.

- ◆ For SWIFTNet, this business process is assigned automatically in the SWIFTNet Routing Rule.
- ◆ For MQ, the user needs to assign this business process in the Websphere MQ Async Receive Adapter.

This table lists the configuration parameters for the CHIPSUtility\_ReceiveHandler 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 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	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 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.

Parameter	Default	Description
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 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 Application, along with the life span type and removal method.
Complete by Deadline	None Available <b>Note:</b> 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"> <li>◆ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline.</li> <li>◆ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline.</li> </ul>
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 process, and any resulting errors and exceptions.

The following BPML code makes up the CHIPSUtility\_ReceiveHandler business process:

```

<process name="CHIPSUtility_ReceiveHandler">
  <sequence name="CHIPSUtility_ReceiveHandler">
    <operation name="set user token">
      <participant name="SetUserToken"/>
      <output message="SetUserTokenMessage">
        <assign to="USER_TOKEN">admin</assign>
        <assign to="." from="*" />
      </output>
      <input message="inmsg">
        <assign to="." from="*" />
      </input>
    </operation>
    <!-- handle incoming CHIPS request -->
    <operation>
      <participant name="CHIPSUtilityService"/>
      <output message="handleCHIPSReceiveRequest">
        <assign to="." from="*" />
      </output>
      <input message="testing">
        <assign to="." from="*" />
      </input>
    </operation>
  </sequence>
</process>

```

```
</sequence>
</process>
```

## Setting the Lifespan

The CHIPSUtility\_ReceiveHandler business process stores all data from CHIPS adapter in the Application database. The system default setting for the lifespan of this data (to be persisted in the system prior to being archived or purged) is two days. If you want to change the Lifespan setting, you must check out the business process and check it back in to the system. During the check-in process you are able to configure the following information regarding the length of time that business processes (instances) using the CHIPSUtility\_ReceiveHandler model should remain in the system:

Field	Description
Process Specific	Enter the number of days or hours, or days and hours combined, that data for each instance of this business process model are permitted to remain in the system.
Expired Business Processes should be	Select either Archived or Purged for expired data. Archived data is stored in your file system.
System Default	Select this option if you want the data for instances of this business process model to expire and be archived after two days. This option is configurable. <b>Note:</b> If you use the System Default setting, you can then configure archive settings in the Archive Manager.

See *Checking In Business Process Models Through the GPM* and *Archiving and Purging Activities* for more information.

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# Creating CHIPS Maps

## Overview

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

**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 CHIPS Standards Release messages loaded into the standards database through the Map Editor.

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

- ◆ The end-of-file marker terminates the last segment.
- ◆ Fixed-length elements, if used, are not delimited.
- ◆ An element delimiter terminates the current element.
- ◆ The variable-length delimiter is \* (asterisk).
- ◆ The tag delimiter is ] (right square bracket).
- ◆ The segment delimiter [ (left square bracket).

**Note:** When you create a CHIPS map, be aware that the maximum usage for CHIPS tags 610, 620, 630, 640 and 650 is set to 6, and the maximum usage for CHIPS tags 621, 631 and 641 is set to 3. However, the CHIPS specification is unclear on whether there are situations in which more occurrences may be permitted. If necessary (if you encounter this situation), edit your map to increase the maximum usage values for these tags (the CHIPS-specified maximum usage was set when the map was created).




The Map Editor allows you to use preloaded Data Definition Format (DDF) files to easily create the following messages:

Message	DDF file used to create it
Status Active Participants Response	CHIPSStatusActiveOrFundedParticipantsResponse.ddf
Status Funded Participants Response	CHIPSStatusActiveOrFundedParticipantsResponse.ddf
Cutoff Time Response	CHIPSCutoffTimeResponseExtensionsGranted.ddf or CHIPSCutoffTimeResponseNoExtensions.ddf
Queue Status Response	CHIPSQueueStatusResponse.ddf

## CHIPS Components in the Map Editor



The following table lists the components that make up the CHIPS 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
CHIPS root element		The <i>CHIPS root element</i> represents the message that Application is mapping. At the CHIPS file root element, you define the message type and encoding. This root element contains CHIPS fields (that contain elements).
CHIPS Field		<p>A <i>CHIPS field</i> contains a group of related elements that combine to communicate useful data. CHIPS fields are defined by the CHIPS standard. A CHIPS field can occur once or can repeat multiple times.</p> <p><b>Note:</b> If a CHIPS field occurs more than once in a map, it is identified by its name &lt;ID&gt;. The second and subsequent occurrences are identified by &lt;ID&gt;: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 CHIPS components (the smallest piece of information defined by the CHIPS standard) that define a CHIPS 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 CHIPS subfields and components contain useful and discrete information.</p> <p><b>Note:</b> If a field occurs more than once in a map it is identified by its name &lt;ID&gt;. The second and subsequent occurrences are identified by &lt;ID&gt;: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 CHIPS record.</p> <p>Variable-length elements are delimited regardless of whether they repeat.</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 CHIPS Standards Database

Before you install the CHIPS standards database on your desktop, consider these guidelines:

- ◆ Download the Map Editor.
- ◆ For the most current version of the CHIPS standard, 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. From the Application **Deployment** menu, select **Standards**.
2. In the Download and Install section next to Download CHIPS Standards, click **Go!**
3. 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.
4. 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**.
  5. In the Welcome window, click **Next**.
  6. In the Select Standards window, select the standards you want to download and click **Next**.  
Select **Sterling Integration Standards** to download the Application standards. Select **CHIPSstandards** to download the CHIPS standards data dictionary.
  7. 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, Application displays a message asking if you want to create that folder.
  8. In the Select Components window, verify that **CHIPSStandardDatabase** is selected and click **Next**.  
The download wizard installs the standards database (CHIPS.mdb).
  9. In the Setup Complete window, click **Finish**.

## Creating a CHIPS Map

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

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

To create a CHIPS 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 CHIPS, in the Input Format window (**Create a New Data Format Using this Standard** option) select **CHIPS** and click **Messages**. If you are translating from another format, select that format and continue to the next screen.

**Note:** If you select **CHIPS Supervisory Responses** and click **Messages**, you must select the version (**Format Version 02** is the only choice available) and a message. The following Data Definition Format (DDF) files DDFs are available (these DDFs are located in the <map editor install dir>/samples/ddfs/CHIPS\_SUPERVISORY\_RESPONSES directory):

- ♦ CHIPSCreateContinueUnresolvedPaymentMessageReportFullRequest.bpml
- ♦ CHIPSCreateContinueUnresolvedPaymentMessageReportRequest.bpml

- ◆ CHIPSCreateContinueWarningReportRequest.bpml
  - ◆ CHIPSCreateContinueWarningReportWithSummaryRequest.bpml
  - ◆ CHIPSCreateQueueStatusRequest.bpml
  - ◆ CHIPSCreateRule13Request.bpml
  - ◆ CHIPSCreateUnresolvedPaymentMessageReportRequest.bpml
  - ◆ CHIPSCreateWarningReportRequest.bpml
4. Select the **GIS CHIPS Standard** ODBC database. The Standards agency and Version will be automatically populated (with [C] CHIPS 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 to CHIPS, in the Output Format window (**Create a New Data Format Using this Standard** option) select **CHIPS** and click **Messages**. If you are translating from another format, select that format and continue to the next screen.
  9. Select the **GIS CHIPS Standard** ODBC database. The Standards agency and Version will be automatically populated (with [C] CHIPS 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 Data Definition Format Files to Create CHIPS Messages

The *data definition format* (DDF) is a Sterling Commerce format that contains an XML-formatted description of the input or output side of a source map and has the file extension .ddf. DDF files include the hierarchical and looping structure of the data, the map objects (CHIPS fields and elements) and their attributes (for example, names, descriptions, data types).

**Note:** DDF files do not contain standard or extended rules, links, or any other map information unrelated to the data format. The one exception is the Use Code code lists. If the map references a Use Code standard rule and instructs Application to raise a compliance error if the code is not found in the Use Code code list, Application saves the standard rule and the associated code list.

The following CHIPS messages require you to use a DDF file:

- ◆ Status Active Participants Response
- ◆ Status Funded Participants Response
- ◆ Cutoff Time Response
- ◆ Queue Status Response

### Requirement for Using DDF Files

Because DDF files are formatted in XML, you must have the Microsoft XML Core Services (MSXML) 4.0 installed on the same computer as the Map Editor. You can obtain Microsoft XML Core Services (MSXML) 4.0 by installing the most current release of Microsoft Internet Explorer. If you do not have the Microsoft XML Core Services (MSXML) 4.0 installed, the Map Editor cannot support DDF files.

## Using a DDF File

Application enables you to open, or import, a DDF file into one side of an existing map. When you open a DDF file, Application assigns acceptable defaults if attributes are not included. For example, if a value is not specified for Minimum Length, a value of zero is assigned.

To open a DDF into an existing map for any of the CHIPS messages listed above:

**Caution:** Opening a DDF file into an existing map replaces the selected side of the map. After you open a DDF file into a map, you cannot undo the operation.

1. In the Map Editor, right-click the **data format** icon on the side of the map where you want to open the DDF file and select **Open File Definition** from the shortcut menu.

**Note:** If you already used Application to create that side of the map, you are prompted with a message that warns you that the existing file format will be replaced. Click **Yes** to continue.

2. Browse to locate the appropriate DDF file based on the following table:

Message	DDF file used to create it
Status Active Participants Response	CHIPSStatusActiveOrFundedParticipantsResponse.ddf
Status Funded Participants Response	CHIPSStatusActiveOrFundedParticipantsResponse.ddf
Cutoff Time Response	CHIPSCutoffTimeResponseExtensionsGranted.ddf or CHIPSCutoffTimeResponseNoExtensions.ddf
Queue Status Response	CHIPSQueueStatusResponse.ddf

3. Click **Open** to open the selected DDF file into the map.

---

## Searching for CHIPS 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 CHIPS correlation searches by specifying CHIPS-specific criteria.

## Searching for CHIPS Messages Using EDI Correlations


To search for CHIPS 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
<b>All Level Options</b>		
Location	CHIPS correlations maintained in a specific location.	Select one of the following options: <ul style="list-style-type: none"><li>◆ Live Tables – Display live (active) CHIPS correlations.</li><li>◆ Restored Tables – Display CHIPS correlations restored from an offline location.</li></ul>
Search Level Type	Processing level — this is not applicable for CHIPS, which uses only one level of processing.	Select the following option: <ul style="list-style-type: none"><li>◆ Transaction – For the search query, display results from the transaction level (this is the only option applicable for CHIPS).</li></ul>
Test Mode	Not applicable for CHIPS.	Not applicable for CHIPS.
Direction	Flow of the documents that contain the CHIPS correlations.	Select one of the following options: <ul style="list-style-type: none"><li>◆ Any (default)</li><li>◆ Inbound</li><li>◆ Outbound</li></ul>
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	Not applicable for CHIPS.	Not applicable for CHIPS.
Receiver ID Qualifier	Not applicable for CHIPS.	Not applicable for CHIPS.

Field	Description	Action
Start Date	Documents in progress or completed after the specified start date and time.	<p>Using the following formats, type a starting date and time range and select A.M. or P.M.:</p> <ul style="list-style-type: none"> <li>◆ Date – MM/DD/YYYY</li> <li>◆ Time – HR:MN:SC</li> </ul> <p><b>Note:</b> Defaults to a range of the last 24 hours.</p>
End Date	Documents in progress or completed before the specified end date and time.	<p>Using the following formats, type an end date and time range and select A.M. or P.M.:</p> <ul style="list-style-type: none"> <li>◆ Date – MM/DD/YYYY</li> <li>◆ Time – HR:MN:SC</li> </ul> <p><b>Note:</b> Defaults to a range of the last 24 hours.</p>
<b>Interchange Level Options</b>		
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 CHIPS.
Standard	Standard you are using.	Type <b>CHIPS</b> .
Acknowledgement Status	Status of an expected acknowledgement at the interchange level.	Some CHIPS messages support an acknowledgement status. For these messages, the valid values are WAITING, ACCEPTED, and REJECTED.
Compliance Status	Status of compliance checking at the interchange level.	None—not applicable for CHIPS.
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.	The CHIPS VALUE DATE is used as the interchange date/time, which enables you to search using interchange date/time.
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 CHIPS.
<b>Group Level Options—Not applicable to CHIPS</b>		
<b>Transaction Level Options</b>		
Transaction Set ID	ID of the transaction set indicated in the document.	Type the ID of the transaction set (document).

Field	Description	Action
Compliance Status	Status of compliance checking at the transaction set level.	Select one of the following options: <ul style="list-style-type: none"> <li>◆ Any (default)</li> <li>◆ OK</li> <li>◆ NOT OK</li> </ul>
Message Repair Status	Status of message repair (for SWIFT documents only; not applicable for CHIPS).	None—not applicable for CHIPS.

- Click **Go!** to display the CHIPS 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, CHIPS\_URC indicates a CHIPS User Request Correlation. See the CHIPS Correlations below for a listing of all CHIPS correlations.

**Note:** Transaction Overdue Time in the EDI Correlation Detail pages is displayed in system milliseconds instead of a formatted date string. To obtain the correct timestamp, take the timestamp when the enveloping process ran and add the configured overdue time to it.

## CHIPS Correlations

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

Correlation Name	Description
CHIPS_ResponseCode	Response Code
CHIPS_TransactionCode	Transaction Code
CHIPS_ValueDate	Value Date
CHIPS_SendParticipantNumber	Send Participant Number
CHIPS_ReceiveParticipantNumber	Receive Participant Number
CHIPS_PaymentSequenceNumber	Payment Sequence Number
CHIPS_SystemSequenceNumber	System Sequence Number
CHIPS_InputSequenceNumber	Input Sequence Number
CHIPS_OutputSequenceNumber	Output Sequence Number
CHIPS_PaymentResolverSequence Number	Payment Resolver Sequence Number

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## Overview of CHIPS Transport

Application enables you to send CHIPS messages to CHIPS, using either the SWIFTNet network (optionally using IBM Websphere MQ) or The Clearing House (TCH) Frame Relay Network (a proprietary network that uses IBM Websphere MQ). Acknowledgements are sent to CHIPS using the SWIFTNet Server adapter. Using the SWIFTNet or MQ transport available in Application, you can also receive all response messages from CHIPS, including heartbeat messages, and it enables you to send supervisory STATUS messages to CHIPS to test the connection.

The CHIPS adapter works with the SWIFTNet Server adapter, SWIFTNet HTTP Server adapter, the SWIFTNet MEFG Server (only if you are receiving CHIPS messages using the SWIFTNet transport mode), and the WebSphere MQ Suite Async Receiver adapter (only if you are receiving CHIPS messages using the MQ transport mode) to communicate with CHIPS. When the CHIPS adapter is used with the SWIFTNet network, it receives acknowledgement messages from CHIPS in the SWIFTNet Response within sixty seconds, and any incoming messages (for example, heartbeat message, resolver notification, and so forth) are received by SWIFTNet Server adapter. The return acknowledgement of the incoming messages is performed by the Receive Handler and Acknowledgement Handler within the CHIPS adapter (the business process is bootstrapped using the SWIFTNet Routing Rule).

You must configure the CHIPS adapter prior to sending any messages to CHIPS. The message payload is passed through a business process that you must also create (or configure the predefined business process).

Additionally, the CHIPS Utility service is used by the CHIPS adapter to execute:

- ◆ Start of Day functions (reset the CHIPS status to 1, CHIPS message number to 1, and the MQ\_counter to 0)
- ◆ End of Day functions (move the outbound messages into the history table, move the inbound messages into the history table, update Mailbox\_id in the MBX\_MAILBOX table with the Mailbox\_id of the <participant\_num>\_history mailbox)
- ◆ CHIPS adapter lookups (to handle incoming messages and return acknowledgements according to the transport mode—if you are using MQ transport, it will be based on the queue information—and get the CHIPS adapter name related to the appropriate set) redirect the inbound message to the CHIPS Adapter configured to MQ or SWIFTNet in the following manner:

For MQ, the lookups are: Channel Name, Queue Manager and Queue Name. These three values appear in Process Data when the WebsphereMQ Async Receiver adapter receives an incoming message and bootstraps the CHIPSUtility\_ReceiveHandler. The CHIPS Utility service matches these three values against the Channel Name, Reply-To Queue Manager, and Reply-To Queue in the CHIPS adapter instances. If a CHIPS adapter instance that matches is found, it sends the CHIPS messages using the transport mode and values that are configured on that matching CHIPS adapter instance.

For SWIFTNet, the lookups are: Requestor DN, Responder DN, Service Name, and Request Type. Based on these four values, the CHIPS Utility service invokes the CHIPSUtility\_ReceiveHandler in the SWIFTNet Routing Rule to return an acknowledgement.

The CHIPS Utility service is used to prepare for daily CHIPS usage, perform end of day housekeeping functions to properly store the data in the database, and look up the CHIPS adapter name when a message is received from the WebsphereMQ Async Receiver adapter (to allow Application to send back an acknowledgement message using the correct CHIPS adapter and transport mode). If you are using SWIFTNet as the transport method, it will return the acknowledgement by setting it in the Primary



Document. A predefined business process (CHIPSUtilitySOD) is provided to execute the CHIPS Utility service start-of-day actions. You can schedule this predefined business process to be started every morning. Also, a predefined business process (CHIPSUtilityEOD) is provided to execute the CHIPS Utility service end-of-day actions. You can schedule this predefined business process to be started every evening.

In accordance with CHIPS regulations, Application control message flow as follows:

- ◆ Message numbering is restarted each day, beginning with “1.”
- ◆ Application monitors message acknowledgement from CHIPS.
- ◆ If you are using SWIFTNet as the transport mode, SWIFTNet will timeout a message if it is not acknowledged within one minute.
- ◆ TCH Frame Relay network that connects directly to CHIPS does not timeout or send an error message if a message is not acknowledged in the mandated one minute timeframe. Therefore, if Application has not received the acknowledgement within one minute, the message is resent to CHIPS.
- ◆ If the message is payment, the PSN (possible duplicate flag) tag (which is 271) is set.
- ◆ If there is not an activity connection, a Supervisory STATUS message may be sent. If this message is not acknowledged, Application stops transmitting and contacts TCH.

## Additional Tasks Necessary to Use the CHIPS Adapter

In addition to configuring the CHIPS adapter, you must also perform the following tasks:

- ◆ Create a mailbox routing rule to invoke the CHIPSExtractMailboxMessage business process.
- ◆ Enable the predefined MailboxEvaluateAllAutomaticRulesSubMin schedule (installed with Application).

### Creating the Mailbox Routing Rule

You must create a mailbox routing rule to invoke the CHIPSExtractMailboxMessage business process, which extracts each mailbox message received by the CHIPS adapter and bootstraps the EDIDevelope business process for each extracted mailbox message.

To create the necessary mailbox routing rule:

1. From the **Deployment** menu, select **Mailboxes > Routing Rules**.
2. Next to **Create a new Routing Rule** click **Go!**
3. Specify a Name for the routing rule. This name must be unique for each routing rule. It is used to identify the routing rule in other parts of Application.
4. In the Rule Application page, select **Evaluate Manually** as the **Evaluation Mode**. This specifies that the rule must be evaluated manually or evaluated using a scheduled business process.
5. For **Action Type**, accept the default **Business Process** selection. This specifies that the rule will notify a business process when a match is found.
6. Click **Next**.
7. In the Rule Pattern page, select **Filter by Name**.
8. From the **Available Mailboxes** list, select the **mailbox that contains your sender ID**, and click the single down arrow to add the mailbox to the Selected Mailboxes list.

**Note:** All groups in the Selected Mailboxes list are searched by the routing rule.

9. For **Message Name Pattern**, type **CHIPSIN\_\*** and click **Next**.

**Note:** This is the message name or pattern that the routing rule searches for in the mailboxes specified.

10. In the Rule Action page, select the **CHIPSExtractMailboxMessage** business process and click **Next**.

11. In the Run Rule as User page, select the **admin** user ID and click **Next**.

12. In the Confirm page, verify the parameters and click **Finish**.

13. When the system update is complete, click **Return**.

## Enable the Predefined Schedule

The mailbox routing rule you created above is executed automatically when the predefined MailboxEvaluateAllAutomaticRulesSubMin schedule is enabled. This means that Application will evaluate all mailbox routing rules on an automatic basis.

To enable the MailboxEvaluateAllAutomaticRulesSubMin schedule:

1. From the **Deployment** menu, select **Schedules**.
2. In the Search section, type **Mailbox** and click **Go!**.
3. Locate the **MailboxEvaluateAllAutomaticRulesSubMin** schedule in this list and select the check box in the Enable column.
4. Click **Return**.

## How the CHIPS Adapter Communicates with SWIFTNet

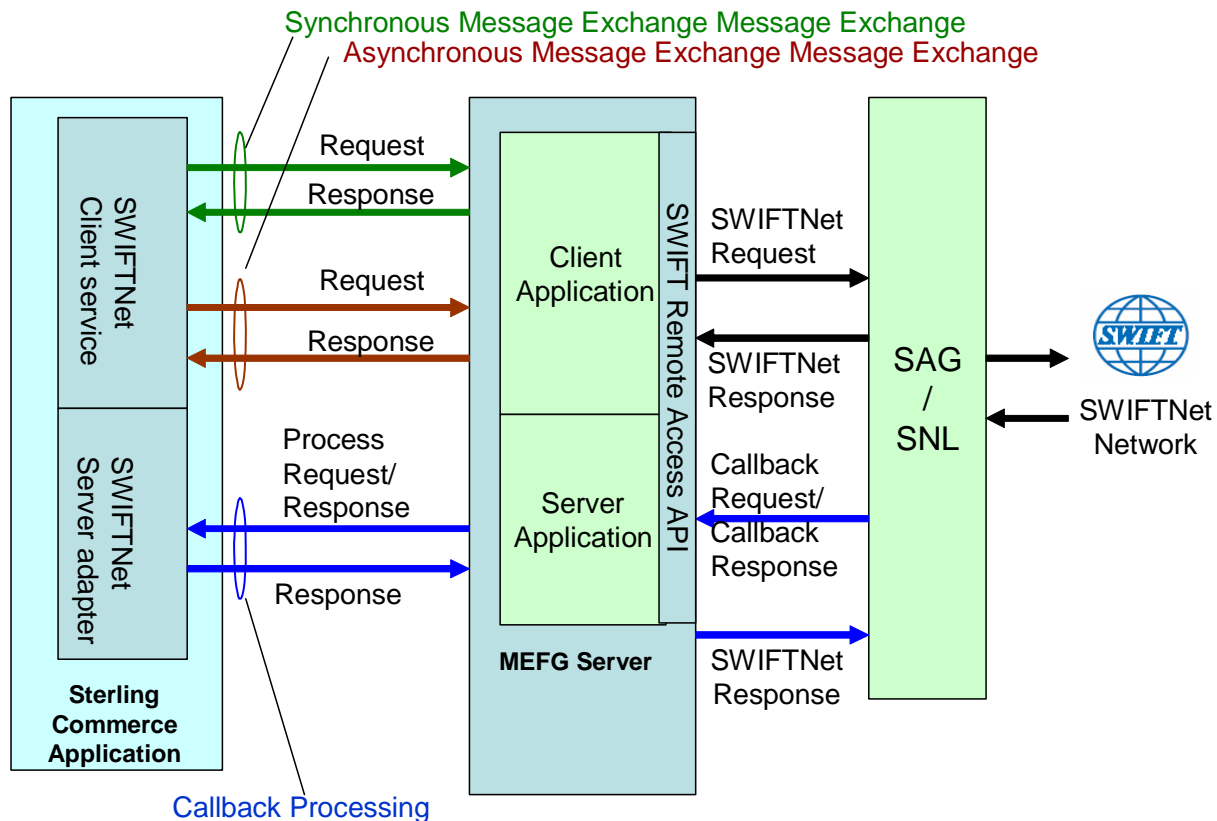
When the CHIPS adapter is used with the SWIFTNet network, it receives acknowledgement messages from CHIPS in the SWIFTNet Response within sixty seconds, and any incoming messages (for example, heartbeat message and resolver notification) are received by SWIFTNet Server adapter. The return acknowledgement of the incoming messages is performed by the Receive Handler and Acknowledgement Handler within the CHIPS adapter (the business process is bootstrapped using the SWIFTNet Routing Rule).

**Note:** The SWIFTNet Server adapter must be preconfigured to start up the SWIFTNet MEFG Server to listen for incoming messages.

The SWIFTNet transport process handles batches of messages as a sequential request and response process.

The CHIPS adapter creates the CHIPS message header based on the configuration set in the CHIPS adapter and the CHIPS payload. The request type is either chips.payment (if the transaction code is 10) or chips.message (for all transaction codes except 10).

This diagram illustrates the process flow between Application and the SWIFTNet network through the FileAct and InterAct protocols:



## How the CHIPS Adapter Communicates with MQ

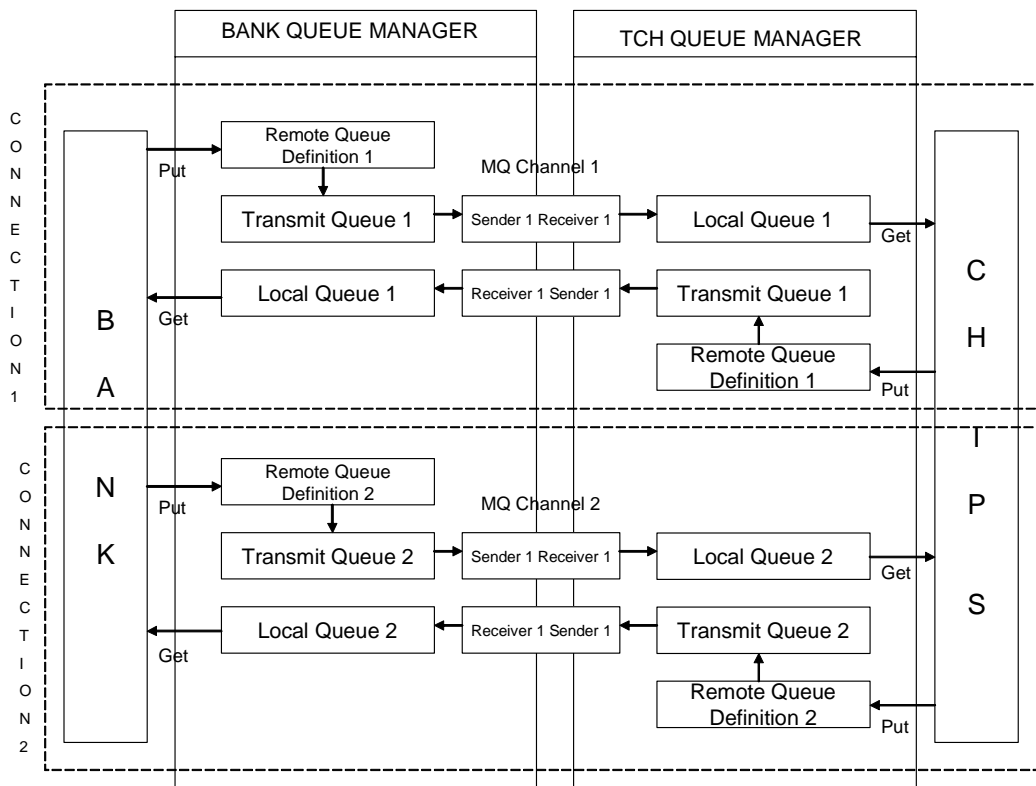
When the CHIPS adapter is used with MQ, any acknowledgement from CHIPS and any incoming messages (for example, heartbeat message and resolver notification) are received by the WebsphereMQ Suite Async Receiver adapter. The user must assign the CHIPSUtility\_ReceiveHandler Business Process as the workflow to bootstrap when the message is received. This Business Process will handle incoming CHIPS messages.

The return acknowledgement of the incoming messages is performed by the Receive Handler and Acknowledgement Handler within the CHIPS adapter (the business process is bootstrapped from the Websphere MQ Suite Async Receiver adapter).

**Note:** A unique set of the Queue Manager, Channel Name, and Send Queue parameters can only be used in *one* CHIPS adapter configuration. Therefore, if a unique set of these parameters is used, it must not be used in any other CHIPS adapter configuration. A unique set of the Reply-To Queue Manager, Channel Name, and Reply-To Queue can also be used. This unique set is important because when a message is received by the Websphere MQ Suite Async Receiver adapter, the CHIPSUtility\_ReceiveHandler will use this information to look up the correct CHIPS Adapter instance to send the acknowledgement.

The MQ transport process handles batches of messages as follows: open session, open queue, send multiple messages, close queue, and close session.

This diagram illustrates the process flow between Application and the MQ:



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## Archiving and Restoring CHIPS Messages

The CHIPS adapter and CHIPS Utility service store all inbound and outbound CHIPS data (from the entire transaction process) in the Application database, and this data grows larger over time. To keep the database size at a reasonable level (so the size of the database does not impact system performance), the CHIPS adapter and CHIPS Utility service integrate the Application archive functionality to include CHIPS data according to the archive settings you specify.

And, archived CHIPS data can be restored to the database by using the Application restore functionality. This allows you to keep the minimum amount of the live data in the system and still have the ability to restore all your archived data later.

You must complete the following tasks to archive CHIPS data:

Task Number	Task	Reference
1	<p>Set the lifespan (or use the system default setting) and the whether to archive or purge the data for the following CHIPS business processes:</p> <ul style="list-style-type: none"> <li>◆ CHIPSAdapter</li> <li>◆ CHIPSUtility_ReceiveHandler</li> <li>◆ CHIPSUtilitySOD</li> <li>◆ CHIPSUtilityEOD</li> <li>◆ CHIPSAdapter_SupervisoryCheck</li> </ul> <p><b>Note:</b> The length of time that the persisted data is available to you in the system depends on how you configure the the lifespan of business processes. In the Business Process Manager, you indicate the length of time that data pertaining to each instance of this business process remains in the system after the process has completed, to be available for monitoring, tracking and reporting activities. Additionally, you specify whether to archive or purge the process-related data when the life span expires. The lifespan options you can choose are:</p> <p><b>Process Specific</b> - Allows you to specify the number of days or hours, or days and hours combined, that data for each instance of a business process model are permitted to remain in the system.</p> <p><b>Expired Business Processes should be</b> - Allows you to select either Archived or Purged for expired data. Archived data is stored in your file system</p> <p><b>System Default</b> - This options enables you to specify that the data for instances of this business process model will expire and be archived after two days. (If you use the System Default setting, you can then configure archive settings in the Archive Manager.)</p>	<i>CHIPS Business Processes on page 26</i>
2	Schedule the archive process to run regularly.	<i>Configuring Archive Schedules</i>
3	Schedule the deletion of messages from the history mailbox for the CHIPS participant, through the Mailbox Deletion service.	

## Deleting Messages from Your CHIPS History Mailbox

You need to schedule the deletion of messages from your CHIPS history mailbox. CHIPS stores each message in this mailbox (except heartbeat messages), and messages that are not deleted from the system will not be archived. Therefore, you need to schedule the deletion of these messages from the CHIPS history mailbox if you want them to be archived.

Complete the following tasks to configure the Mailbox Delete service to delete CHIPS messages:

1. From the Administration menu, select **Deployment > Services > Configuration**.
2. In the Search area, in the Service Name box, type **Mailbox Delete Service** and click **Go!**
3. Click **edit** to edit the service.
4. Click **Next** to proceed to the Properties page.
5. In the Properties page, set **Delete only messages older than (days)** to the number of days you want to keep live data in the system.

**Note:** You should set this value to be the same or nearly the same as you set the Lifespan setting for the CHIPS business processes.

6. For **Message Extractability**, select **Delete All messages**.
7. Leave the **Message Name Pattern** box blank.
8. For **Select Mailboxes for Message Removal**, select **Selected Mailboxes**.
9. Click **Next**.
10. In the Mailboxes page, select the participant history mailbox and use the arrow key to move the mailbox to the right box.

**Note:** The CHIPS participant history mailbox is named in the format **/xxxx\_history**, in which **xxxx** is the 4-digit CHIPS participant code.

**Note:** If you perform this task early in the process of implementing CHIPS on your system, the CHIPS participant's mailbox name may not be displayed because the CHIPS adapter creates each mailbox dynamically. If this occurs, you can wait and configure the Mailbox Delete service later in your implementation process, or, if you know the participant code, you can create the mailbox manually in the Mailbox subsystem according to the naming standard (**/xxxx\_history**, where **xxxx** is the 4-digit participant code).

11. Click **Next**.
12. Click **Finish**.

When the messages are deleted from the CHIPS participant history mailbox and each CHIPS business process instances has exceeded its lifespan, the archive process archives and/or purge the CHIPS data according to the configuration of the Mailbox Delete service.

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## CHIPS Reporting

The EDI Translation Detail report enables you to access EDI data (for a particular standard like CHIPS) 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 ACH 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* **CHIPS**.
4. Filter by any other desired criteria and click **Finish** at the end of the Report Configuration Wizard to generate the report.