

# **Gentran Integration Suite™**

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## **Using ACH with Gentran Integration Suite**

**Version 4.2**

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*An IBM Company*

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# Contents

Using ACH with Gentran Integration Suite . . . . .	4
ACH with Gentran Integration Suite Overview . . . . .	4
Matching Existing CTX envelopes . . . . .	4
How ACH Deenveloping Works . . . . .	5
How ACH Enveloping Works . . . . .	6
How Acknowledgments are Generated . . . . .	7
About Addenda Records . . . . .	7
ACH Currency Conversion . . . . .	8
Using a Code List . . . . .	8
Example . . . . .	8
Using an Application Interface Extension Solution . . . . .	8
Transaction XREF . . . . .	10
Sending Dishonored Returns, Contested Dishonored Returns, Refused Notifications of Change, and Refused Acknowledgments in Gentran Integration Suite . . . . .	10
ACH Inbound Batch-Entry Detail Level Envelope Properties, Document Level . . . . .	14
ACH Inbound CTX Envelope Properties, Document Level . . . . .	18
ACH Inbound File-Level Envelope Properties, Document Level . . . . .	21
ACH Outbound Batch - Entry Detail Level Envelope Properties, Document Level . . . . .	23
ACH Outbound CTX Envelope Properties, Document Level . . . . .	27
ACH Outbound File Level Envelope Properties, Document Level . . . . .	29

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# Using ACH with Gentran Integration Suite

## ACH with Gentran Integration Suite Overview

The Automated Clearing House (ACH) is an electronic banking network operating system used by participating financial institutions in the United States. ACH processes large volumes of both credit and debit batch-oriented transactions. Rules and regulations governing the ACH network are established by the National Automated Clearing House Association (NACHA) and the Federal Reserve.

NACHA requires the use of Standard Entry Class Code (SEC) codes for each transaction processed through the ACH.

Gentran Integration Suite supports the use of all ACH SEC codes for all ACH inbound and outbound envelopes.

To support all SEC codes, you must define inbound envelopes at two different levels, ACH File Level and ACH Batch/Entry Detail Level. In addition to supporting all SEC codes (including CTX), these two levels provide more functionality than ACH – CTX envelopes provide. Envelopes defined with these options also have additional configuration parameters which are not available for ACH-CTX envelopes.

All new envelopes should be created using the two-level process (ACH File Level and ACH Batch/Entry Detail Level), rather than the one-level envelope process (ACH-CTX). Although the existing one level process is still supported for files containing only ACH-CTX transactions, it is recommended that existing ACH-CTX envelopes be replaced with the ACH File Level and ACH Batch/Entry Detail Level envelopes.

### Matching Existing CTX envelopes

ACH-CTX envelopes can be used to process only CTX data.

If an incoming ACH file contains data pertaining to any application other than CTX, Gentran Integration Suite will only attempt to find envelopes conforming to the two-level process (ACH File Level and ACH Batch/Entry Detail Level), even if a data file contains CTX data in addition to non-CTX data.

If an incoming ACH file contains only CTX data, Gentran Integration Suite will first attempt to find envelopes conforming to the ACH-CTX single-level process. For a file containing only CTX data, Gentran Integration Suite will attempt to match envelopes belonging to the new two-level process, ACH File Level and ACH Batch/Entry Detail Level, only if no envelope belonging to the ACH-CTX file matches the data in this file.

**Note:** ACH-CTX envelopes with wildcards configured in your system are used for incoming data even though you may have ACH File Level envelopes and ACH Batch/Entry Detail Level envelopes that have a more specific match for the incoming data.

If there are no active ACH-CTX envelopes in the system or if you do not want ACH-CTX envelopes to be included in lookup, you can skip the ACH-CTX envelope lookup by setting the property "disableInboundLegacyCTXEnvelopes" to "Yes" in customer\_overrides.properties file. This will improve the performance of the system.

**Note:** The default value of this property is "No". This means that for files containing only ACH-CTX data, Gentran Integration Suite will attempt to match ACH-CTXACH-CTX envelopes before attempting a match on ACH File Level and ACH Batch/Entry Detail Level envelopes.

## How ACH Deenveloping Works

There are two processing paths for an inbound ACH envelope:

- ◆ Delimited EDI based ACH application (for CTX and TRX SEC codes only)
- ◆ Non-EDI based ACH application (all SEC codes)

### Delimited EDI based ACH applications

EDI based processing for ACH documents works as follows:

1. The compressed EDI data (for example, X12 820) is extracted from the addenda records.
2. The relevant fields are extracted from this EDI data into an XML document using a validation map. These fields are then validated against the contents of the ACH Entry Detail and Batch Header records.
3. The extracted EDI document is then passed into the selected business process for processing. The file header record, batch header records, and entry detail record fields are placed into process data for this business process

### Non-EDI based ACH Applications

Non-EDI processing for ACH documents works as follows:

1. The file header record, batch header record, entry detail record, and corresponding addenda records are extracted into an XML document. The addenda record conversion is applied in one of two ways:
  - a. If Payment Related Information to DOM map is selected, the 80-character payment-related information portion of the data will be applied in the map and the XML generated by that map will be inserted under ACHFile/EntryDetailRecord/AddendaRecord/TranslatedPaymentRelatedInfo.
  - b. If the Payment Related Information to DOM map is not selected, then the 80-character payment related information portion of the data will be placed as is under ACHFile/EntryDetailRecord/AddendaRecord/PaymentRelatedInfo.
2. The generated XML document is translated by the post-processing map.
3. The translated data is passed into the selected business process for processing.

### Deenveloping Output

When there are no addenda records, the Deenvelope service will extract all of the positional fields into an XML DOM (regardless of the map you selected). The following is a deenveloping output sample with no addenda records:

```
<ACHFile>
  <FileHeader>
    [header fields]
  </FileHeader>
  <CompanyBatchHeader>
    [header fields]
  </CompanyBatchHeader>
  <EntryDetailRecord>
    <Amount>1000</Amount>
```

```

    <DFIAccountNumber>12345</DFIAccountNumber>
    [other entry detail 1 fields]
  </EntryDetailRecord>
</EntryDetailRecord>
  [entry detail 2 fields]
</EntryDetailRecord>
  ...(1 for each entry detail that is combined by the envelope)
</ACHFile>

```

The post-processing map is applied to this DOM to convert the data to application-specific format.

When there are addenda records, the PRI to DOM map is applied to the payment related information portion of the addenda to get XML for each addenda record. Deenveloping sample with addenda records:

For Acct1234\*20.00\*Joe User, XML output from the PRI map.

```

<OUTPUT>
  <AcctNum>Acct1234</AcctNum>
  <CreditAmt>20.00</CreditAmt>
  <Name>Joe User</Name>
</OUTPUT>

```

This XML entry detail is inserted with the other extracted data:

```

<ACHFile>
  <FileHeader>
    [header fields]
  <FileHeader>
  <CompanyBatchHeader>
    [header fields]
  </CompanyBatchHeader>
  <EntryDetailRecord>
    <Amount>1000</Amount>
    <DFIAccountNumber>12345</DFIAccountNumber>
    [other entry detail 1 fields]
    <AddendaRecord>
      [base addenda record fields]
      <TranslatedPaymentRelatedInfo> Contains fields from the PRI DOM
        <AcctNum>Acct1234</AcctNum>
        <CreditAmt>20.00</CreditAmt>
        <Name>Joe User</Name>
      </TranslatedPaymentRelatedInfo>
    </AddendaRecord>
  </EntryDetailRecord>
  <EntryDetailRecord>
    [entry detail 2 fields]
  </EntryDetailRecord>
  ...(1 for each entry detail that is combined by the envelope)
</ACHFile>

```

The post-processing map is applied to the full XML document, which contains information from all the entries, including associated addenda records.

## How ACH Enveloping Works

To use the ACH Envelope service, you should use the supplied Data Definition Format (DDF) on the output map to ensure that the document used for the ACH Enveloping service is formatted correctly. The ACH

Envelope service locates a file that has all the fields in the entry detail record, with the exception of: the Record Type Code, Addenda Record Indicator, and Trace Number fields. DDFs for both entry detail records and addenda are installed as part of Gentran Integration Suite Map Editor install and can be found in the **Samples** directory.

**Note:** The specified map is invoked multiple times on the input file until the input file is completely processed. Users can generate multiple entry detail records from the same input file.

Addenda records are also generated in a similar manner. For applications where the structure of entire Addenda Record has been outlined, Gentran Integration Suite provides corresponding DDFs. Customers should use the appropriate addenda DDF on the output side of the map. For applications where addenda records contain payment related information, you should define the structure for the output side of an addenda map. The output of the addenda map will be used to generate the **Payment Related Information** field.

**Note:** The same input document is used to generate both entry detail records and addenda records.

## How Acknowledgments are Generated

The process for acknowledging ACH entries received by Gentran Integration Suite is as follows:

1. The ACH Develope Service receives a CCD or CTX entry with AK in its discretionary data.

**Note:** The envelope settings can override the behavior so that acknowledgments (ACKs) are never generated, or are always generated, regardless of the discretionary data.

2. The Develope service will automatically generate the ACK data, and encode it for enveloping with the acceptor lookup alias ACH\_ACK (specific to CCD) or ACH\_ATX (specific to CTX) depending on the type of acknowledgment being generated.

Set up your outbound envelopes. The File Level envelope is set up as normal; however, for the Batch-Entry Detail Level envelope you must select **Acknowledgment Entries** as the ACH Message Category. For this envelope, ODFI is the originator of the Gentran Integration Suite (otherwise known as the DFI that received the original data). The RDFI is, similarly, the DFI where the acknowledgment is being sent.

3. Execute the EDIEnvelope service in deferred mode. This will pick up the ACK data and generate the outbound file.

## About Addenda Records

An addenda record is an ACH record type that carries the supplemental data needed to completely identify an account holder or provide information concerning a payment to the Receiving Depository Financial Institution and the Receiver.

Additional information about addenda records used in Gentran Integration Suite:

- ◆ The 80-character payment related information portion of the addenda record is generated by the user map as specified.
- ◆ For the non\_EDI message category, the ACK map will receive the XML document for that entry (including the file header fields, batch header fields, entry fields, and addenda record information). That is, you'll get the same type of output as described by ACH\_Output.ddf, but with only one entry detail tag.

## ACH Currency Conversion

You can configure currency conversion rates in Gentran Integration Suite one of three ways for Outbound Batch Entry Detail Level envelopes:

- ◆ Hardcode it in the Batch Envelope.
- ◆ Use a codelist
- ◆ Use an application interface that you provide for one of two cross border entries, either CBR or PBR. There is no need to convert currencies unless the payment is crossing an international border.

When you select a method for ACH currency conversion, keep the following in mind:

- ◆ Exchange rates are constantly changing
- ◆ When using a batch or a codelist, you may be required to frequently change the envelope.
- ◆ If you use the interface extension, you can supply the current exchange rate by modifying the file from the application program at runtime. The same process that supplies the data to the CBR or PBR file could also supply this file with the current exchange rate in it.

## Using a Code List

You can define a code list in Gentran Integration Suite. Complete these steps to define a code list:

1. Add the line `currencyCodeListName=ACH_Currencies` to the `ach.properties.in` file.
2. On the **Code List** screen, click **Go!** to create a New Codelist.
3. Type, `ACH_Currencies` in the **Code List** name and click **Next**.
4. In the **Sender Code** field, type the from currency. For example, if you are converting from USD to EUR, type `USD`.
5. In the **Receiver Code** field, type the to currency. For example, if you are converting from USD to EUR, type, `EUR`.
6. In the **Text1** field, type the conversion rate.
7. Finish the setup and run `setupfiles.sh` in the `GISServerDirectory/bin/` directory supplying no arguments.
8. Reload GIS server to use the new changes.

## Example

For example, to create a codelist called `ACH_Currencies`, add the line `currencyCodeListName-ACH_Currencies` to the `ACH` properties file.

If you want to provide a conversion rate from US Dollar to Euro, then create a new entry in this codelist with `SenderID=USD`, `ReceiverID=EUR` and `Text1 =0.795`.

## Using an Application Interface Extension Solution

### Sample Application Interface Extension

1. In the file called `GISServerDirectory/properties/ach.properties.in`, (located in the properties directory under the main GIS Server directory), add a line in the `ACH` section that reads:



```
currencyConversionRateProvider=com.sterlingcommerce.woodstock.services.edi.ach.utils.SampleCu
urrencyConversionRateGenerator
```

**Note:** GISServerDirectory is only an example name for the directory the GIS Server would use.

2. Initialize a new file in the same properties directory called ACHCurrencyConversion.properties Add a single line that reads:  
USD.to.CAD=1.33333
3. You can add other lines for other currency conversions, and Gentran Integration Suite will find the correct one to use - the batch envelope definition tells GIS the 'from' and 'to' currencies to look for. The 1.33333 is the exchange rate.
4. Add a line to both the vendor.properties.in and servers.properties.in files in the properties directory that says:  
ACHCurrencyConversion=GISServerDirectory/properties/ACHCurrencyConversion.properties
5. Run setupfiles.sh in the GISServerDirectory/bin/ directory supplying no arguments. This rolls the .in files contents mentioned above into their corresponding ach.properties, vendor.properties and servers.properties files.
6. You must then reload GIS server for it to locate the changes.

In production, you can dynamically update the ACHCurrencyConversion.properties file and Gentran Integration Suite will immediately locate the changes without having to restart GIS Server. This allows you to supply the correct current exchange rate to the process in an automated way.

If you want to view a sample on how to set up and use the class you can view a sample implementation of the interface at:

```
com.sterlingcommerce.woodstock.services.edi.ach.utils.ICurrencyConversionRateGenerator through class
com.sterlingcommerce.woodstock.services.edi.ach.utils.SampleCurrencyConversionRateGenerator
```

This class reads the conversion rates from the file ACHCurrencyConversion.properties in the Gentran Integration Suite properties directory. Gentran Integration Suite will first determine if an extension class is defined and is accessible. If it is unable to find the extension point, it will try to use the codelist.

To use an interface for currency conversion in Gentran Integration Suite

1. Extend the interface:  
com.sterlingcommerce.woodstock.services.edi.ach.utils.ICurrencyConversionRateGenerator.

This interface defines a single function:

```
**
* Supply the current conversion rate with respect to the two currency codes.
* @param currencyCodeFrom
* @param currencyCodeTo
* @return
*/
public double getCurrentConversionRate(String currencyCodeFrom, String
currencyCodeTo);
```

This interface allows users to supply their custom log to be used by Gentran Integration Suite to retrieve the current currency conversion rates.

1. Make this code available to Gentran Integration Suite using the `install3rdParty.sh(.cmd)` script.
2. Define a property called "currencyConversionRateProvider" in `ach.properties.in`

## Transaction XREF

If you need to have the ability to cross-reference the application data to generated transaction.

1. The mapper will have a new update rule. `TransactionCrossReferenceTable`. Possible values will be `SenderID`, `ReceiverID`, `MessageType`, `Identifier`.
2. `ExternalDataImpl` will populate these values during translation.
3. After each round of translation completes, the enveloping service can query the harness for these values. When it performs the enveloping, it will know what the standard specific values are for the same four parameters.
4. Based on these two sets of values for identifiers (application specific and standard specific), the enveloping service populates a `TransactionCrossReferenceTable`
5. Users can build their custom application that looks at this table to uniquely link an application file and generated ACH transaction.

## Sending Dishonored Returns, Contested Dishonored Returns, Refused Notifications of Change, and Refused Acknowledgments in Gentran Integration Suite

When you are sending dishonored returns, contested dishonored returns, refused notifications of change or refused acknowledgments in Gentran Integration Suite you need to configure the envelope and input data for these messages.

For Dishonored Returns and Contested Returns:

- ◆ **Envelope Setup:** In the outbound ACH batch envelope, select `Returned Entry Detail Records` in the `ACH Message Category`.
- ◆ **Data Format:** The data must consist of 3 lines:
  - ◆ **Line 1:** The unmodified original 94-character batch header for the entry that is dishonored or contested.
  - ◆ **Line 2:** Characters 2 through 78 of the entry detail record you want to send.
  - ◆ **Line 3:** Characters 4 through 79 of the addenda record you want to send.

For example, if you receive the following return entry:

```
5225UVW CLUB          DUES          1047727779PPDMONTH-DUES0625909006201781123918710000001
62605999990719650-54326      00000000003918      Joe User          071123918711300000
799R0405999990000301      12391871          123928711300000
```

If you want to dishonor it, encode the following data for processing by the EDI Envelope service (the actual data would vary based on the return reason):

```

5225UVW CLUB          DUES          1047777779PPDMONTH-DUES0625909006261781123948710000001
212391871019650-52326      00000200000000000000003918Joe User          07
R6805999990000301      12391871      123918711130000017901

```

#### For Refused Notifications of Change:

The envelope setup and data format for this message is a similar configuration to a regular notification of change. The only difference is that the entry detail and addenda maps should be configured to generate fields appropriate for a refused notification of change.

#### For Refused Acknowledgments:

- ◆ Envelope Setup: In the outbound ACH batch envelope, select Acknowledgment Entries for the ACH Message Category.
- ◆ Data Format: The data must consist of 2 lines:
  - ◆ Line 1: The 94-character batch header that you wish to send.

**Note:** This format is different from returns. On returns the first line is the original batch header.

- ◆ Line 2: Characters 2 through 78 of the entry detail record you want to send.

For example, if you receive the following acknowledgment:

```
5200USER JOE          CDD          1000234567ATXGENERAL PU040709040000 1544530410000001  
6245555554139876543210 00000033305555404100000010028USER JOE AK0554440411200000
```

Encode the following data for processing by the EDI envelope service (the actual data would vary based on the reason for refusal:

```
5200USER JOE          CDD          33334567ATXGENERAL PU040709040304 1555540410000001  
245555897969876543210 00000000005557564100066610028USER JOE B3
```

## ACH Inbound Batch-Entry Detail Level Envelope Properties, Document Level

**Note:** An (\*) asterisk indicates that a wildcard value can be used with that parameter (for mandatory fields, the wildcard value is an (\*) asterisk and for optional fields, the wildcard value is leaving the field blank).

The following table describes ACH inbound batch-entry detail level envelope properties at the document level:

Field	Description
ACH Message Category	<p>Valid values are:</p> <ul style="list-style-type: none"> <li>◆ Delimited EDI Based ACH Application. Use this option for supporting for CTX and TRX SEC codes only.</li> </ul> <p>Addenda Related Information: The addenda record is translated by the addenda map specified in the envelope.</p> <ul style="list-style-type: none"> <li>◆ Non EDI Based ACH Application</li> </ul>
ACH SEC code	Standard Entry Class Code (SEC Code). This code identifies the specific computer record format that will be used to carry the payment and payment-related information relevant to the application. Valid value is three characters.
Business Process for Non-Compliant Documents	Select the business process for the non-compliant documents from the list. Required.
Business Process List	Select a previously created business process to associate with this envelope. Required.
Combine all entries that match this envelope into a single output document	If Yes is selected, any entry in a batch that matches this envelope will be put into a single XML document for processing. If No is selected, every entry is put into its own XML document. Valid values are Yes or No. Required.
* Company Identification	Type the company identification. Required.
Contract List	Select a previously created contract to associate with this envelope. Optional.
Data Extraction Directory	Directory for data extraction. Required.
Data Extraction Filename	Filename for data extraction. Required.
Data Extraction Mailbox	Mailbox for data extraction. Required.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Required.

Field	Description
Determine the Business Process by	Valid values are: <ul style="list-style-type: none"> <li>◆ Looking up contract dynamically</li> <li>◆ Specifying a contract</li> <li>◆ Specifying a business process</li> <li>◆ Generating the business process name from the data</li> </ul> Required.
* DFI Account Number	The Depository Financial Institution account number. ReceiverIDQual for envelope lookup. Available when Non EDI Based ACH Application is selected. Required.
Error Business Process Name Mode	Valid values are: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from data</li> </ul> Required.
Extraction Options	Business process data extraction. 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> Required.
First Backup Name Format	Information may include some or all of the following: <ul style="list-style-type: none"> <li>◆ Receiving DFI Identification</li> <li>◆ ACH SEC Code</li> <li>◆ Originating DFI Identification</li> </ul> Check all that you want to use in the format. Optional.
Generate an acknowledgment	Indicates when an acknowledgment should be generated. Valid values are: <ul style="list-style-type: none"> <li>◆ Always</li> <li>◆ Only when requested by input</li> <li>◆ Never</li> </ul>
Generate an addenda record for the acknowledgment	Indicates if a generated acknowledgment should contain an addenda record. If yes, additional selections appear for using the map for generating the addenda record. Valid values are Yes or No. Required.
Generate an error if no business process name exists in the system	Valid values are Yes or No. Required.
Generate an error if no matching map is found	Generate an error message no matching map is found. Required. Valid values are Yes and No.
Invoke a business process if translation or extraction errors occur	Indicates whether or not to invoke a business process on the extracted data if an error occurs. If Yes is selected, additional screens appears that allow you to specify a business process. Valid values are Yes and No. Required.

Field	Description
Is this envelope for processing returns	Valid values are Yes and No. Required.
Map Name	Select a map name.
Map Name Mode	Select a map name mode.
Message Category	Select a map name category.
* Originating DFI Identification	Originating Depository Financial Institution identification number. Required.
Payment Related Information to DOM Map name	Option for the map used for converting payment related information into XML. Select the DOM Map name. Valid Values are: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from data</li> </ul> Required.
Payment related to DOM related Map Name Mode	Select Map name from the list. Valid values are: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from Data</li> </ul> Required.
Post Processing Map Name	Option for the map to process the final XML document generated from the ACH data. Select the post-processing map name. Required.
Post Processing Map Name Mode	Valid values are: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from Data</li> </ul> Required.
Primary Name Format	Check boxes to instruct Information may include some or all of the following: <ul style="list-style-type: none"> <li>◆ ACH SEC Code</li> <li>◆ Receiving DFI Identification</li> <li>◆ Originating DFI Identification</li> </ul> Check all that you want to use in the format. Optional.
Process COR entries as cross-border	Indicates if COR data should be processing in cross-border format or regular format. Valid values are Yes or No. Required.
* Receiving DFI Identification	Receiving Depository Financial Institution identification number. Required.
Retain Enclosing Envelope	Valid values are Yes and No. Required.
Retain Untranslated DOM	If Yes is selected, the XML document generated when the develope service parses the ACH data will be included in process data when the business process is used. Valid values are Yes and No. Required.

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Field	Description
Second Backup Name Format	Information may include some or all of the following: <ul style="list-style-type: none"><li>◆ ACH SEC Code</li><li>◆ Receiving DFI Identification</li><li>◆ Originating DFI Identification</li></ul> Check all that you want to use in the format. Optional.
SEC Code	Standard Entry Class Code (SEC Code). This code identifies the specific computer record format that will be used to carry the payment and payment-related information relevant to the application. Required.

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## ACH Inbound CTX Envelope Properties, Document Level

**Note:** An (\*) asterisk indicates that a wildcard value can be used with that parameter (for mandatory fields, the wildcard value is an (\*) asterisk and for optional fields, the wildcard value is leaving the field blank).

The following table describes ACH inbound Batch-Level envelope properties at the document level:

Field	Description
Backup Name Format	Optional. Valid values are: <ul style="list-style-type: none"> <li>◆ Destination Identification</li> <li>◆ Origin Identification</li> <li>◆ X12 Group Version ID</li> </ul>
Business Process for Non-Compliant Documents	Select the business process for the non-compliant documents from the list. Required.
Business Process List	Select a previously created business process to associate with this envelope. Required.
Contract List	Select a previously created contract to associate with this envelope. Optional.
Data Extraction Directory	Directory for data extraction. Required.
Data Extraction Filename	Filename for data extraction. Required.
Data Extraction Mailbox	Mailbox for data extraction. Required.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Required.
* Destination Identification	Routing number of the ACH Operator or receiving point to which the message is being sent. Required.
* Destination Name	Name of the ACH or receiving point for which the message is destined. Optional.
Error Business Process Name Mode	Valid values are: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from data</li> </ul>
Extraction Options	Business process data extraction. 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>
Generate an error if the business process name does not exist in the system	Valid values are Yes or No. Required.
Generate BP Name from Data	Valid values are Yes or No.

Field	Description
Generate Error BP Name from Data	Valid values are Yes or No.
Generate Map Name from Data	If a generated map name is not found, a default map is used: ACH_820_<group_version>_to_CTX_Fields.
Handling of batches with discrepancies	Required. Valid values are: <ul style="list-style-type: none"> <li>◆ Accept</li> <li>◆ Reject</li> </ul>
Handling of interchanges with discrepancies	If a discrepancy occurs, is the incoming ACH-CTXACH-CTX accepted or rejected?
Invoke a business process if translation or extraction errors occur	Required. Valid values are Yes and No.
Map Name	Select the map to be used to perform a compliance check. The map must already be checked in. Optional.
Map Name Mode	Mode in which to specify the map to use to perform a compliance check. Required. Valid values are: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from data</li> <li>◆ Default</li> </ul>
Maximum age of File ID Modifier History Record in days	Maximum days to retain a history of File ID Modifier to use for duplication determinations. Valid value is nine standard characters. Optional.
* Origin Identification	Routing number of the ACH Operator or sending point that is sending the message. Required.
* Origin Name	Name of the ACH Operator or sending point that is sending the message. Optional.
Perform duplicate File ID Modifier check	When receiving an ACH-CTX, will duplicate File ID checking be performed. Valid values are Yes and No. Required.
Primary Name Format	Optional. Valid values are: <ul style="list-style-type: none"> <li>◆ Destination Identification</li> <li>◆ Origin Identification</li> <li>◆ X12 Group Version ID</li> </ul>
<u>Specify Custom Business Process</u>	
Specify if a business process should be invoked if translation or extraction errors occur.	Valid values are Yes or No. Required.

---

Field	Description
Specify the extracted 820 business process selection method	Determines how to select a business process to send the 820 to. Valid values are: <ul style="list-style-type: none"><li>◆ Use the default X12 ISA interchange business process</li><li>◆ Look up contract dynamically</li><li>◆ Specifying a contract</li><li>◆ Specifying a business process</li><li>◆ Generating the business process name from data</li></ul>

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## ACH Inbound File-Level Envelope Properties, Document Level

**Note:** An (\*) asterisk indicates that a wildcard value can be used with that parameter (for mandatory fields, the wildcard value is an (\*) asterisk and for optional fields, the wildcard value is leaving the field blank).

The following table describes ACH inbound File-Level envelope properties at the document level:

Field	Description
Business Process for Non-Compliant Documents	Select the business process for the non-compliant documents from the list. Optional.
* Destination Identification	Routing number of the ACH Operator or receiving point to which the message is being sent. Required.
* Destination Name	Name of the ACH or receiving point for which the message is destined. Optional.
Generate an error if the business process name does not exist in the system	Valid values are Yes or No. Required.
Invoke a business process for batch-level compliance errors	Required. Valid values are Yes and No.
Invoke a business process for file-level compliance errors	Required. Valid values are Yes and No.
Maximum age of File ID Modifier History Record in days	Maximum days to retain a history of File ID Modifier to use for duplication determinations. Valid value is nine standard characters. Optional.
* Origin Identification	Routing number of the ACH Operator or sending point that is sending the message. Required.
* Origin Name	Name of the ACH Operator or sending point that is sending the message. Optional.
Perform duplicate File ID Modifier check	When receiving an ACH File Level envelope, will duplicate File ID checking be performed. Valid values are Yes and No. Required.
Stop processing of a file on a translation or EDI validation error	Provides an option to process the entire transaction within the file when a component of the file errors out. Valid values are Yes and No. Required.



## ACH Outbound Batch - Entry Detail Level Envelope Properties, Document Level

**Note:** An (\*) asterisk indicates that a wildcard value can be used with that parameter (for mandatory fields, the wildcard value is an (\*) asterisk and for optional fields, the wildcard value is leaving the field blank).

The following table describes ACH outbound batch - detail level envelope properties at the document level:

Field	Description
Acceptor Lookup Alias	Identifying string used with the sender ID and the receiver ID to look up this envelope with the EDI Encoder service. This alias associates a document with the service it requires. Valid value must be at least one limited standard character. Required.
ACH Message Category	Valid values are: <ul style="list-style-type: none"> <li>◆ Delimited EDI Based ACH Application</li> <li>◆ Non EDI Based ACH Application</li> </ul>
ACH SEC Code	Standard Entry Class Code (SEC Code). This code identifies the specific computer record format that will be used to carry the payment and payment-related information relevant to the application. Required.
ACH Operator Data	ACH operator information. Optional.
Addenda Map Name Mode	Valid values are: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from data</li> </ul>
Acknowledgment overdue after (hours)	Type the hours of the overdue acknowledgment.
Acknowledgment overdue after (minutes)	Type the minutes of the overdue acknowledgment.
Company Entry Description	Type the company entry description. Required.
Company Identification	Type the company identification. Required.
Company Discretionary Data	Field in the Company/Batch Header Record. Allows Originators and ODFIs to include codes of significance only to them, to enable specialized handling of all subsequent entries in that batch. There is no standardized interpretation for the value. Optional.
Company Descriptive Date	Type the company descriptive date.
Company Name	Type the name of the company. Required.
Contract List	Select a previously created contract to associate with this envelope. Optional.
Create Next Envelope	Adds group level envelope to use as the next envelope. Optional.

Field	Description
Currency Conversion Rate Generator	To use ACH currency conversion rate generator: <ol style="list-style-type: none"> <li>1 Locate the name of the user supplied class from ach.properties. Confirm that this class implements Currency Conversion Rate Reader and initiate it.</li> <li>2 If implementation returns a value of -1, then look at the ach.properties for the name of a code list that contain the conversion rates.</li> <li>3 If the codelist approach does not return the correct conversion rate, then return -1.</li> </ol>
Data Extraction Directory	Directory for data extraction. Optional.
Data Extraction Filename	Filename for data extraction. Optional.
Data Extraction Mailbox	Mailbox for data extraction. Required.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Optional.
Discretionary Data	Field in Entry Detail Record allows ODFIs to include codes of significance only to them, to enable specialized handling of the entry. There is no standardized interpretation for the value in this field. Optional.
DFI Account Number	The Depository Financial Institution account number.
Effective Entry Date Offset	Required.
Entry Detail Map Name Mode	Valid values are: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from data</li> </ul> Required.
Entry Detail Transaction Code	Type the transaction code. Required.
Expect an acknowledgment for messages sent using this envelope	Valid values are Yes and No.
First Backup Name Format	Information may include some or all of the following: <ul style="list-style-type: none"> <li>◆ ACH SEC Code</li> <li>◆ Receiving DFI Identification</li> <li>◆ DFI Account Number (For lookup only, except ENR and TRX)</li> <li>◆ Originating DFI Identification</li> <li>◆ Company Identification</li> </ul> Check all that you want to use in the format. Optional.
Generate an error if no matching map is found	Value values are Yes or No. Required.
Generate an error if no generated business process name exists in the system.	Valid values are Yes or No. Required.

Field	Description
Map Name	Select the map to be used to perform a compliance check. The map must already be checked in. Optional
Map Name Mode	Mode in which to specify the map to use to perform a compliance check. Required. Valid values: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from data</li> <li>◆ Default</li> </ul>
Name of map to be used for generation of Addenda record	Select a map name.
Name of map to be used for generation of Entry Detail record(s)	Select a map name.
Next Envelope	Envelope to apply after this envelope.
Originating DFI Identification	Originating Depository Financial Institution identification number. Required.
Originator Status Code	Select a status code type. Required.
Primary Name Format	Information may include some or all of the following: <ul style="list-style-type: none"> <li>◆ ACH SEC Code</li> <li>◆ Receiving DFI Identification</li> <li>◆ DFI Account Number (For lookup only, except ENR and TRX)</li> <li>◆ Originating DFI Identification</li> <li>◆ Company Identification</li> </ul> Check all that you want to use in the format. Optional.
Receiving Company Name	Name of receiving company.
Receiving DFI Identification	Receiving Depository Financial Institution identification number.
Routing Number of ACH Operator	ACH operator routing number.
SEC Code	Standard Entry Class Code (SEC Code). This code identifies the specific computer record format that will be used to carry the payment and payment-related information relevant to the application. Required. To utilize ACH currency conversion rate generator, select CBR and PBR.
Second Backup Name Format	Information may include some or all of the following: <ul style="list-style-type: none"> <li>◆ ACH SEC Code</li> <li>◆ Receiving DFI Identification</li> <li>◆ DFI Account Number (For lookup only, except ENR and TRX)</li> <li>◆ Originating DFI Identification</li> <li>◆ Company Identification</li> </ul> Check all that you want to use in the format. Optional.



<b>Field</b>	<b>Description</b>
Service Class Code	<p>Choose from the list</p> <ul style="list-style-type: none"> <li>◆ * (wildcard)</li> <li>◆ 200 (Mixed Credits and Debits)</li> <li>◆ 220 (Credits only)</li> <li>◆ 225 (Debits only)</li> <li>◆ 280 (Automatic Accounting Advices)</li> </ul>
Settlement Date Offset	<p>Settlement Date Offset is an integer value <math>\geq 0</math> of how many days the effective entry date (company batch header field 9) will be set from the current date.</p> <p>For Example:</p> <p>If today is 092806.</p> <p>If Settlement Date Offset is "0", then effective entry date is 092806</p> <p>If Settlement Data Offset is 2, then effective entry date is 093006</p>
Use addenda records with each entry detail record	Values are Yes and No. Required.
X12 Group Version ID Code	The code from the embedded X12 document that identifies the version of the document.

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## ACH Outbound CTX Envelope Properties, Document Level

**Note:** An (\*) asterisk indicates that a wildcard value can be used with that parameter (for mandatory fields, the wildcard value is an (\*) asterisk and for optional fields, the wildcard value is leaving the field blank).

The following table describes ACH inbound CTX envelope properties at the document level:

Field	Description
Acceptor Lookup Alias	Identifying string used with the sender ID and the receiver ID to look up this envelope with the EDI Encoder service. This alias associates a document with the service it requires. Valid value must be at least one limited standard character. Required.
Backup Name Format	Optional. Valid values are: <ul style="list-style-type: none"><li>◆ Destination Identification</li><li>◆ Origin Identification</li><li>◆ X12 Group Version ID</li></ul>
Business Process List	Select a previously created business process to associate with this envelope. Optional.
* Company Discretionary Data	Field in the Company/Batch Header Record. Allows Originators and ODFIs to include codes of significance only to them, to enable specialized handling of all subsequent entries in that batch. There is no standardized interpretation for the value. Optional.
Contract List	Select a previously created contract to associate with this envelope. Optional.
Data Extraction Directory	Directory for data extraction. Optional.
Data Extraction Filename	Filename for data extraction. Optional.
Data Extraction Mailbox	Mailbox for data extraction. Required.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Optional.
* Destination Name	Name of the ACH or receiving point for which the message is destined. Optional.
* Destination Identification	Routing number of the ACH Operator or receiving point to which the message is being sent. Required.
Determine the Business Process By	Required. Valid values: <ul style="list-style-type: none"><li>◆ Look up contract dynamically</li><li>◆ Specifying a contract</li><li>◆ Specifying a business process</li><li>◆ Generate the business process name from data</li></ul>

Field	Description
* Discretionary Data	Field in Entry Detail Record allows ODFIs to include codes of significance only to them, to enable specialized handling of the entry. There is no standardized interpretation for the value in this field. Optional.
Extraction Options	Business process data extraction options
Generate an error if the business process name does not exist in the system.	Valid values are Yes or No.
<u>Generate BP Name from Data</u>	Valid values are Yes or No. <b>Note:</b> When enveloping multiple batches in deferred mode, group version is not used when generating the BP name.
<u>Generate Map Name from Data</u>	If a generated map name is not found, a default map is used: ACH_820_<group_version>_to_CTX_Fields.
Map Name	Select the map to be used to perform a compliance check. The map must already be checked in. Optional.
Map Name Mode	Mode in which to specify the map to use to perform a compliance check. Required. Valid values: <ul style="list-style-type: none"> <li>◆ Specify</li> <li>◆ Generate from data</li> <li>◆ Default</li> </ul>
* Origin Identification	Routing number of the ACH Operator or sending point that is sending the message. Required.
* Origin Name	Name of the ACH Operator or sending point that is sending the message. Optional.
Primary Name Format	Optional. Valid values are: <ul style="list-style-type: none"> <li>◆ Destination Identification</li> <li>◆ Origin Identification</li> <li>◆ X12 Group Version ID</li> </ul>
* Reference Code	Field in the ACH File Header Record. Reserved for information pertinent to the Originator. Optional.

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## ACH Outbound File Level Envelope Properties, Document Level

**Note:** An (\*) asterisk indicates that a wildcard value can be used with that parameter (for mandatory fields, the wildcard value is an (\*) asterisk and for optional fields, the wildcard value is leaving the field blank).

The following table describes ACH outbound file level envelope properties at the document level:

Field	Description
Contract List	Select a previously created contract to associate with this envelope. Required.
Data Extraction Directory	Directory for data extraction. Available when Extract to File a System directory is selected. Optional.
Data Extraction Filename	Filename for data extraction. Available when Extract to a File System directory is selected. Optional.
Data Extraction Mailbox	Mailbox for data extraction. Available when Extract to a Mailbox is selected. Required.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Available when Extract to a Mailbox is selected. Optional.
* Destination Name	Name of the ACH or receiving point for which the message is destined. Optional.
* Destination Identification	ReceiverID for envelope lookup. Routing number of the ACH Operator or receiving point to which the message is being sent. Required.
Determine the Business Process By	Required. Valid values: <ul style="list-style-type: none"><li>◆ Looking up contract dynamically. The develope service will find a contract based on the sender and receiver and execute the business process for that contract.</li><li>◆ Specifying a contract. The develope service will execute the business process for the specified contract.</li><li>◆ Specifying a business process.</li><li>◆ Generate the business process name from data. The name of the executed business process is determined on values in the data. When selected, the next screen allows you to specify the specific pieces of data that you want to use to build up the business process name.</li></ul>
Extraction Options	Valid values are: <ul style="list-style-type: none"><li>◆ Determined by business process</li><li>◆ Extract to a file system directory</li><li>◆ Extract to a mailbox</li></ul>

Field	Description
First Backup Name Format	Information may include some or all of the following: <ul style="list-style-type: none"> <li>◆ Destination Identification</li> <li>◆ Destination Name</li> <li>◆ Origin Identification</li> <li>◆ Origin Name</li> </ul> Check all that you want to use in the format. Optional.
Generate an error if no generated business process name exists in the system.	Valid values are Yes or No. Available when Generating a business process name from the data is selected. Required.
Originating DFI Identification	Originating Depository Financial Institution identification number. Required
* Origin Identification	SenderID for envelope lookup. Routing number of the ACH Operator or sending point that is sending the message. Required.
* Origin Name	Name of the ACH Operator or sending point that is sending the message. Optional.
Primary Name Format	Information may include some or all of the following: <ul style="list-style-type: none"> <li>◆ Destination Identification</li> <li>◆ Destination Name</li> <li>◆ Origin Identification</li> <li>◆ Origin Name</li> </ul> Check all that you want to use in the format. Optional.
Receiving DFI Identification	Receiving Depository Financial Institution identification number.
* Reference Code	Field in the ACH File Header Record. Reserved for information pertinent to the Originator. Optional.
SEC Code	Standard Entry Class Code (SEC Code). This code identifies the specific computer record format that will be used to carry the payment and payment-related information relevant to the application. Required.
Second Backup Name Format	Information may include some or all of the following: <ul style="list-style-type: none"> <li>◆ Destination Identification</li> <li>◆ Destination Name</li> <li>◆ Origin Identification</li> <li>◆ Origin Name</li> </ul> Check all that you want to use in the format. Optional.