

# Perceptive Connector for Infor Lawson AP Invoice Automation

## Integration Guide

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## What is Perceptive Connector for Infor Lawson AP Invoice Automation?

Perceptive Connector for Infor Lawson APIA (AP Invoice Automation) is a solution that integrates Perceptive Content with Infor Lawson APIA to enable creation of invoice transactions within the Infor Lawson environment directly from Perceptive Content. During the invoice coding and approval process in APIA, users view the invoice image using requests made through the connector. When invoice processing is complete, APIA submits the final invoice information to Perceptive Content through the connector, facilitating the synchronization of document indexes. The connector routes the document through workflow as it is updated. To enable seamless communication between Perceptive Content and Infor Lawson APIA, both the applications and the connector must be configured. This guide discusses about how to configure Perceptive Content, Infor Lawson APIA, and the Perceptive Connector for Infor Lawson APIA so that they can seamlessly communicate with each other.

This assumes that Perceptive Content, Infor Lawson APIA, and Perceptive Connector for Infor Lawson APIA are already installed. For more information about the installation process of these products, refer to the respective installation and setup guides.

## Configure Perceptive Content

Perceptive Content workflow with Envoy services facilitates back-end integration of Perceptive Content with Infor Lawson APIA. To configure Perceptive Content to work with Infor Lawson APIA, complete each of these tasks in the specified order.

1. [Create the custom properties](#)
2. [Create the document type](#)
3. [Associate custom properties to document type](#)
4. [Configure Envoy](#)
5. [Create the workflow process](#)

### Create the custom properties

You must create the following custom properties that automatically updates after Infor Lawson successfully processes the document.

- Finance Group
- Company
- Vendor ID
- Vendor Name
- Invoice Number
- Invoice Date
- Invoice Amount
- PO Number
- Voucher Number
- Payment Number

- Payment Date
- Payment Amount
- APIA Error Type
- APIA Error Message
- APIA Status

**Note** Invoice Amount is a number type custom property. Invoice Date and Payment Date are date type custom properties.

To create these custom properties, complete the following steps.

1. In **Management Console**, in the left pane, click **Custom Properties**.
2. On the **Custom Properties** tab, click **New > String**.

**Note** When you create a number type custom property, such as Invoice Amount, on the **Custom Properties** tab, click **New > Number**. Similarly, when you create a date type custom property, such as Invoice Date or Payment Date, on the **Custom Properties** tab, click **New > Date**.

3. In the **New String Property** dialog box, in the **Name** box, type `Finance Group` and click **OK**.
4. To create the remaining string type custom properties, repeat the previous steps for each string type custom properties listed above. Apart from Invoice Amount, Invoice Date, and Payment Date, all other custom properties are of string type.

## Create the document type

To create the document type, complete the following steps.

1. In **Management Console**, in the left pane, click **Document Types**.
2. On the **Document Types** tab, click **New**.
3. Under **Select a document type**, type `Invoice` as the document type.

## Associate custom properties to document type

To associate the custom properties to document type, complete the following steps.

1. On the **Document Types** tab, under **Select a document type**, select the **Invoice** document type, and click **Modify**.
2. In the **Document Type** dialog box, select the **Custom Properties** tab.
3. Under **Available**, select the custom property you want to associate to the document type and click **Add**.
4. Repeat the previous step until all the custom properties are included under the **Added** list.
5. Click **OK**.

## Configure Envoy

If you have Perceptive Content version 7.1.5 or earlier installed on your machine, you must configure the AsqEndpointService envoy service with its corresponding operation and WSDL URL as shown in the table given below. To configure a Perceptive Content Envoy service, complete the steps given in this section.

Web service	Operation	WSDL URL
AsqEndpointService	InvokeTrigger	<u><a href="http://&lt;IP of the system where Perceptive Connect is installed&gt;:&lt;port number&gt;/ws/workflowTrigger?wsdl">http://&lt;IP of the system where Perceptive Connect is installed&gt;:&lt;port number&gt;/ws/workflowTrigger?wsdl</a></u>

For more information on configuring ASQEndpointService, refer to the Perceptive Connect document.

1. In **Perceptive Content**, click **Manage** to open **Perceptive Content Management Console**.
2. In the **Perceptive Content Management Console**, in the left pane, click **Envoy Services > New**.  
**Note** If **Envoy Services** does not appear in the left pane, ensure that you change the department to **Cross Department Settings** from the **Select Department** drop-down.
3. In the **Envoy Services** dialog box, in the **Definition** page, set the following attributes.
  1. In the **Name** box, type a name to identify the remote service. For example, ASQEndpointService
  2. Optional. In the **Description** box, type a description of the remote service.
  3. In the **URI** box, type the URI for your connector server in the format **http://<Perceptive ConnectRuntimeServer>/ws/workflowTrigger?wsdl**. For example, **http://localhost:81/ws/workflowTrigger?wsdl**
  4. In the **Authentication** list, select **None**.
  5. Optional. If you want to enable interceptor logging for the remote service, select the **Enable interceptor logging** check box.
4. Click **Next**.
5. In the **Operations** page, in the ASQEndpointService operation, select the check box for **InvokeTrigger**.
6. Click **Finish**.

## Configure the Content Connect Service

Perceptive Content version 7.1.5 and higher, includes a new queue type called Connect ASQ, which can be configured to integrate with a single instance of the Connect Runtime.

To configure the Perceptive Content Connector service, complete the following steps.

1. Navigate to the location where the Content Server is installed and enter the **{install location}\etc** directory.
2. Open the `inserverWorkflow.ini` file and make the following changes in configuration settings.
  - Configure the `connect.uri` setting and set it to your Connect Runtime instance with the format `http://{Connect Runtime host name}:{port}/rs/workflowTrigger`.

- Configure the `connect.timeout` to your desired expiration time.
3. Save the file.
  4. Optional. The setting will be automatically loaded after a short period. To reload the configuration immediately, you can restart the Content Server service.

## Create the workflow process

You may follow the steps in the example below to create a Perceptive Connector for Infor Lawson APIA specific workflow. You may modify the suggested workflow to fit your specific document processing rules.

1. In **Perceptive Content Management Console**, in the left pane, click **Workflow**.
2. In the right pane, on the **Workflow** tab, click **New**.
3. In the **Add Process** dialog box, in the **Name** box, type a name, such as Infor Lawson AP Invoice Automation.
4. Optional. In the **Description** box, type a description of the process.
5. Click **OK**.

## Create the Queues

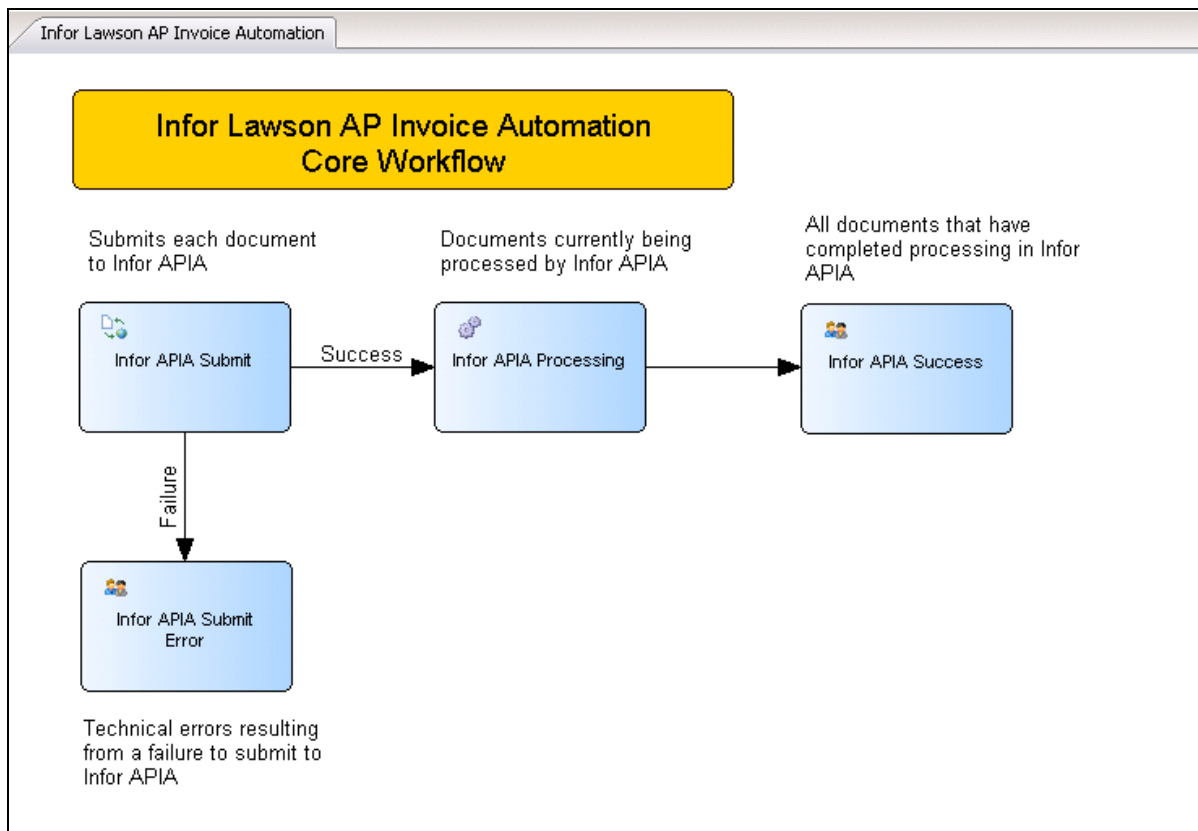
To trigger the connector process, configure an Integration ASQ, three work queues, and a system queue. The following table describes the queues that you must add in the workflow process.

Queue Name	Queue Type	Description
Infor APIA Submit	ASQ/ Connect	First queue where the documents are submitted for processing.
Infor APIA Submit Error	Work	Documents are routed to this queue from the Infor APIA Submit queue if a technical error occurs while routing it to the Infor APIA Processing queue.
Infor APIA Processing	System	Documents currently being processed in Infor Lawson APIA are routed to this queue from the Infor APIA Submit queue.
Infor APIA Success	Work	Documents are routed from the Infor APIA Processing queue to this queue if Infor Lawson APIA processes the documents successfully.

### Notes

- When you create the workflow queues manually, it is recommended that you create the queues with names as specified in the table.
- If you use Perceptive Intelligent Capture along with Perceptive Connector for Infor Lawson APIA but occasionally want to bypass Intelligent Capture for some invoices, you must create another integration ASQ and configure two different channels.

The following image displays how the workflow process layout appears in the Perceptive Content Workflow Designer window. The image includes a brief description for each queue in the workflow.



To add queues in the workflow process, complete the following procedures.

- [Create the Infor APIA Submit Error and Infor APIA Success](#)
- [Create the Infor APIA Processing queue](#)
- [Create the Infor APIA Submit queue](#)


## Create the Infor APIA Submit Error and Infor APIA Success

To create the Infor APIA Submit Error and Infor APIA Success work queues, complete the following steps.

1. Select the workflow you created in "Create or open the workflow process" and click **Modify**.
2. In the **Workflow Designer** window, in the left pane, under **Queues**, select the **Work** queue and drag it to the right in your process diagram. Repeat this step to create another work queue.
3. Double-click the first work queue, and in the **Queue Properties** dialog box, in the **Name** box, type **Infor APIA Submit Error** and click **OK**.
4. Repeat the previous step to name the **Infor APIA Success** queue.


## Create the Infor APIA Processing queue

To create the Infor APIA Processing queue, complete the following steps.


1. In the **Perceptive Content Workflow Designer** window, in the left pane, under **Queues**, select **System**  and drag it into your process diagram to the right.
2. Double-click the **System** queue and in the **Queue Properties** dialog box, in the **Name** box, type **Infor APIA Processing**.
3. In the left pane, click **Routes**, and under the **Routes Out** tab, click **Add**.
4. In the **Add Route Out** dialog box, select **Destination** tab.
5. In the **Available queues** box, select **Infor APIA Success**, and then click **Add**.
6. Click **OK** to close the **Add Route Out** dialog box.
7. Click **OK**.

## Create the Infor APIA Submit queue

If you have Perceptive Content version 7.1.5 or earlier installed on your machine, complete the following steps to create the Integration automated system queue (ASQ) in the workflow process you created.

1. In the **Perceptive Content Workflow Designer** window, in the left pane, under **Queues**, select **Integration**  and drag it into your process diagram to the right.
2. Double-click the Integration queue and in the **Queue Properties** dialog box, in the **Name** box, type **Infor APIA Submit**.
3. Under **Automated Action**, set the following attributes.
  1. Under **Success Action**, in the **Process** list select the workflow process and in the **Queue** list select **Infor APIA Processing**.
  2. Under **Failure Action**, in the **Process** list select the workflow process and in the **Queue** list select **Infor APIA Submit Error**.
  3. Under **Envoy Service**, in the **Service Operation Name** list, click the Envoy Service name, such as **ASQEndpointService::InvokeTrigger**.
  4. Click **OK**.


If you have Perceptive Content version 7.2 or higher installed on your machine, complete the following steps to create the Connect ASQ in the workflow process you created.

1. Under **Queues**, drag a **Connect**  queue to the process diagram.
2. Double-click the Connect queue to open the **Queue Properties** dialog box. In the **Name** box, type **Infor APIA Submit**.
3. Under **Automated Action**, set the following attributes.
  1. Under **Success Action**, in the **Queue** list, select **Infor APIA Processing**.
  2. Under **Failure Action**, in the **Queue** list, select **Infor APIA Submit Error**.
  3. In the **Route After (Days)** box, type the number of days during which items should remain in the **Failed** queue after the business application receives a successful call for those items. The maximum number of days is 365. By default, Content routes items to the failure queue after one day.

4. Click **OK**.

## Configure Infor Lawson AP Invoice Automation connectivity

You can configure multiple Infor Lawson connections in the connector. To configure the Infor Lawson connection, complete the following steps.

1. In **Perceptive Connect Runtime Web Console**, under **Perceptive Connect**, click **View Configuration**.
2. In the **View Configuration** page, under **Perceptive Content Connector**, select the specific version of your Integration Server.
3. In the **Integration Server <version number> Connection** dialog box, ensure that the **Integration Server URL** field displays the correct URL.
4. Navigate back to the **View Configuration** page, and under **General**, click the **Edit the configuration values**  button next to **Infor Lawson APIA Configuration**.
5. In the **Infor Lawson APIA Configuration** dialog box, complete the following steps.
  1. In the **Client Hostname** box, enter the hostname/IP Address of the system where Infor Lawson APIA is installed.
  2. In the **Lawson Service** list, select SOAP.
  3. In the **Invoice Header WSDL** box, enter the Infor Lawson WSDL for Invoice header posting.
  4. In the **Invoice Detail WSDL** box, enter the Infor Lawson WSDL for Invoice line posting.
  5. In the **Invoice Header Namespace** box, enter the Infor Lawson header namespace for Invoice header posting.
  6. In the **Invoice Details Namespace** box, enter the Infor Lawson details namespace for Invoice lines posting.
  7. In the **Base URL Indicator** list, select the appropriate version name of WebNow or Perceptive Web.
  8. In the **Perceptive Web URL** box, type the Perceptive Web URL that facilitates viewing of invoice.
  9. In the **WebNow URL** box, type the WebNow URL that facilitates viewing of invoice.
  10. Select the **Anonymous Login** check box to allow users to view invoices stored in Perceptive Content from Infor Lawson APIA without logging in.
  11. Select the **Success Message** check box to enable adding of success messages to the **Notes** box of the Perceptive Content document.
  12. Select the **Error Message** check box to enable adding of error messages to the **Notes** box of the Perceptive Content document.
  13. Click **Save**.

## Configure Infor Lawson to use the connector

The Infor Lawson application needs to be configured to work with the Perceptive Connector for Infor Lawson APIA. To configure Infor Lawson, in the Infor Lawson settings, include the <http://<server name>:<port>/ws/LawsonSyncOperations?wsdl> URL. This exposes the webservice that enables the Infor Lawson connector to connect with the following web-methods.

- GetDocumentPage
- GetDocumentUrl
- UpdateInvoice

The Infor Lawson application requests parameter values for each web-method from Perceptive Connector for Infor Lawson APIA to access the webservice. The Perceptive Connector for Infor Lawson APIA replies to the webservice by providing the requested values. For details on the input and output <>, refer to Appendix A: Input and output code blocks for web-methods.

## Appendix A: Input and output XML templates for web-methods

The Infor Lawson application calls each web-method in Perceptive Connector for Infor Lawson APIA using a synchronous operation. The Perceptive Connector for Infor Lawson APIA returns the values required by Infor Lawson.

### GetDocumentPage

The following XML template displays the input parameters for GetDocumentPage.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:sync="http://sync.apef.perceptivesoftware.com/">
  <soapenv:Header/>
  <soapenv:Body>
    <sync:GetDocumentPage>
      <DocId></DocId>
      <PageNo></PageNo>
    </sync:GetDocumentPage>
  </soapenv:Body>
</soapenv:Envelope>
```

The following parameters in this XML template are mandatory.

- DocId
- PageNo

The following XML template displays the output parameters that the Perceptive Connector for Infor Lawson APIA returns in response to the input parameters for GetDocumentPage.

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" />
  <soap:Body>
    <ns1:GetDocumentPageResponse
      xmlns:ns1="http://sync.apef.perceptivesoftware.com/">
      <DocumentPage>
        <Status></Status>
        <PageNo></PageNo>
        <FileType></FileType>
        <PageByteArrayBase64></PageByteArrayBase64>
      </DocumentPage>
    </ns1:GetDocumentPageResponse>
  </soap:Body>
</soap:Envelope>
```

```

    </ns1:GetDocumentPageResponse>
  </soap:Body>
</soap:Envelope>

```

## GetDocumentUrl

The following XML template displays the input parameters for GetDocumentUrl.

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sync="http://sync.apef.perceptivesoftware.com/">
  <soapenv:Header/>
  <soapenv:Body>
    <sync:GetDocumentUrl>
      <DocId></DocId>
    </sync:GetDocumentUrl>
  </soapenv:Body>
</soapenv:Envelope>

```

The DocId parameter in this XML template is mandatory.

The following XML template displays the output parameters that the Perceptive Connector for Infor Lawson APIA returns in response to the input parameters for GetDocumentUrl.

```

<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Header xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/" />
  <soap:Body>
    <ns1:GetDocumentUrlResponse
xmlns:ns1="http://sync.apef.perceptivesoftware.com/">
      <DocumentInfo>
        <Status></Status>
        <DocumentURL></DocumentURL>
      </DocumentInfo>
    </ns1:GetDocumentUrlResponse>
  </soap:Body>
</soap:Envelope>

```

## UpdateInvoice

The following XML template displays the input parameters for UpdateInvoice.

```

<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:sync="http://sync.apef.perceptivesoftware.com/">
  <soapenv:Header/>
  <soapenv:Body>
    <sync:UpdateInvoice>
      <IncomingInvoiceHeader>
        <DocId></DocId>
        <FinanceGroup></FinanceGroup>
        <Company></Company>
        <Vendor></Vendor>
        <VendorDetails>
          <VendorName></VendorName>
          <VendorClass></VendorClass>
          <Addr1></Addr1>
          <Addr2></Addr2>
          <City></City>
          <State></State>
          <PostalCode></PostalCode>
        </VendorDetails>
      </IncomingInvoiceHeader>
    </sync:UpdateInvoice>
  </soapenv:Body>
</soapenv:Envelope>

```

```

    <Suffix></Suffix>
    <CancelSequence></CancelSequence>
    <PurchaseOrderNumber></PurchaseOrderNumber>
    <PurchaseOrderRelease></PurchaseOrderRelease>
    <PurchaseOrderCode></PurchaseOrderCode>
    <InvoiceDate></InvoiceDate>
    <VoucherNumber></VoucherNumber>
    <InvoiceAmount></InvoiceAmount>
    <IncomeCode></IncomeCode>
    <CurrencyAmount></CurrencyAmount>
    <BatchNumber></BatchNumber>
    <DistributionDate></DistributionDate>
    <Description></Description>
    <InvoiceCurrency></InvoiceCurrency>
    <OverrideExchangeRate></OverrideExchangeRate>
    <HandlingCode></HandlingCode>
    <TaxAmount></TaxAmount>
    <TaxCode></TaxCode>
    <TaxableAmount></TaxableAmount>
    <VendorGroup></VendorGroup>
    <RemitToLocation></RemitToLocation>
    <ProcessLevel></ProcessLevel>
    <BatchDate></BatchDate>
    <InvoiceGroup></InvoiceGroup>
    <TermCode></TermCode>
    <DueDate></DueDate>
    <AuthorityCode></AuthorityCode>
    <AccrualCode></AccrualCode>
    <InvoiceType></InvoiceType>
    <DiscountPercent></DiscountPercent>
    <DiscountDate></DiscountDate>
    <DiscountCode></DiscountCode>
    <InvoiceSource></InvoiceSource>
    <ReferenceType></ReferenceType>
    <CashCode></CashCode>
    <DistributionCode></DistributionCode>
    <CreationDate></CreationDate>
    <Operator></Operator>
  </IncomingInvoiceHeader>
</sync:UpdateInvoice>
</soapenv:Body>
</soapenv:Envelope>

```

The DocId parameter in this XML template is mandatory.

The following XML template displays the output parameters that the Perceptive Connector for Infor Lawson APIA returns in response to the input parameters for UpdateInvoice.

```

<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns1:UpdateStatusResponse xmlns:ns1="http://sync.apecf.perceptivesoftware.com/">
      <SoapResponse>
        <responseCode></responseCode>
        <responseMsg> </responseMsg>
      </SoapResponse>
    </ns1:UpdateStatusResponse>
  </soap:Body>
</soap:Envelope>

```