Perceptive Intelligent Capture Connector

Installation and Setup Guide

Version: 1.2.x

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Date: March 2023

Hyland

Documentation Notice

Table of Contents

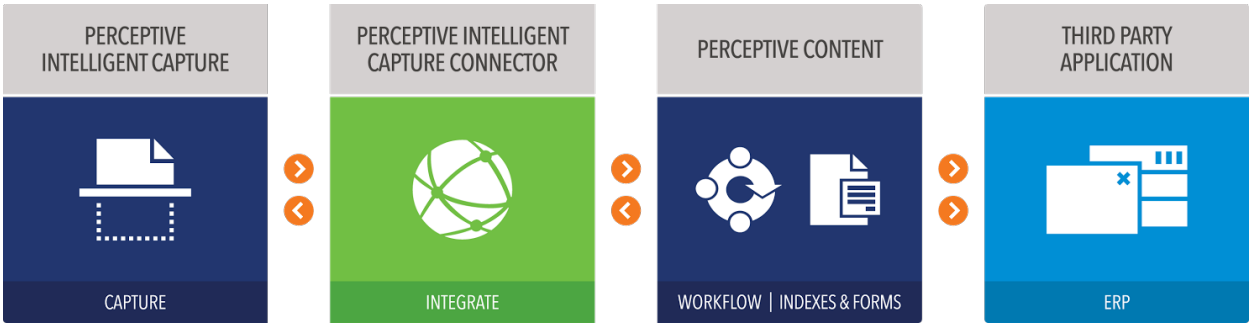
Documentation Notice **2**
What is Perceptive Intelligent Capture Connector? **5**
Prerequisites 6
Overview of the setup process 6
Install the PIC Connector **6**
Download 6
Install the connector using the drag-and-drop feature in Perceptive Connect Runtime 6
Install the connector manually using Perceptive Connect Runtime 7
Upgrade the connector **7**
Upgrade the connector using the drag-and-drop feature in Perceptive Connect Runtime 7
Upgrade the connector manually using Perceptive Connect Runtime 8
Uninstall the existing version of Perceptive Intelligent Capture Connector *8*
Install the latest version of Perceptive Intelligent Capture Connector *8*
Configure Perceptive Content to use the connector **9**
Configure Perceptive Content Envoy 9
Create the workflow process 9
Create the queues 10
Create File Output channels **10**
Channel requirements 11
Create and configure a File Output channel 11
Create PIC Status Code channels **11**
Channel requirements 12
Create and configure a PIC Status Code channel 12
Create PIC Export channels **12**
Channel requirements 13
Create and configure a PIC Export channel 13
Appendix A: Triggers **14**
Export trigger 14
Status Code Update trigger 15
Use trigger values in a channel input or output mapping 15
Appendix B: Actions **16**
File System Document Export action 16
Parameter Descriptions *17*

Route ImageNow Workflow Item action **19**
Appendix C: Writers **20**
DCExport Subobject writer 20
Appendix D: Example of File Output channel queues in Perceptive Content **21**

What is Perceptive Intelligent Capture Connector?

The Perceptive Intelligent Capture Connector (PIC Connector) allows you to create, configure, and enable channels that map data and functionality between Perceptive Content and Perceptive Intelligent Capture (PIC).

With a combination of channels, you can create a solution that outputs Perceptive Content files to PIC, routes processing documents according to their status code, and imports the extracted XML data into Perceptive Content eForm fields, document properties, or other objects.



Each PIC Connector channel consists of a trigger, an action, and a results phase.

- A trigger is an event that initiates the channel. The PIC Connector provides two triggers. The Status Update Trigger allows you to create channels that trigger when PIC provides status codes during document processing. The Export Trigger creates channels that provide extracted XML data from PIC to Perceptive Content, which you can use in several ways.
- An action is a task that the channel performs when the trigger event occurs. The PIC Connector provides the following actions.
  - **File System Document Export**. This action allows you to create channels that, when triggered, create a copy of a Perceptive Content document in the TIFF format and place it on the file system. For example, you can use this action to create the TIFF files that PIC uses for data extraction.
  - **Route ImageNow Workflow Item**. The connector configuration uses this action, provided by the Content Connector, to route documents from one queue to the other queue in the PIC workflow.
- The results phase lets you specify what to do with the data that is available after the action completes. For example, you can output extracted XML values to Perceptive Content document keys, custom properties, eForm fields, or as the DCExport subobject.

This guide outlines the installation and configuration procedures for the PIC Connector. It also includes basic instructions for creating and configuring each channel type.

The PIC Connector files include several sample XML files to help you understand one way you can configure your channel mappings.

For more information about other required Perceptive Connect Runtime components, refer to the *Perceptive Connect Runtime Installation Online Help*.

Prerequisites

You must have access to a working installation of the following products on your network before you install and use this connector.

- ImageNow 6.7 or Perceptive Content 7.x.
- Output Agent, version 6.7 or 7.x
- Integration Server, version 6.7.x or 7.x
- Intelligent Capture 5.5 SP2 or higher
- Intelligent Capture for Invoices 2.3 or higher, a custom Intelligent Capture solution, or project with web services integration
- Perceptive Connect Runtime 2.x

Overview of the setup process

To install the PIC Connector and set up File Output, PIC Status Code, and PIC Export channels, review or complete the following sections as needed.

- Install the PIC ConnectorPCR
- Create File Output channels
- Create PIC Status Code channels
- Create PIC Export channels

Install the PIC Connector

You can install Perceptive Intelligent Capture Connector, version 1.2 and related files manually using Perceptive Connect Runtime Web Console or from the “Upload new bundles” section in Perceptive Connect Runtime. You must install the connector on the same computer as the Perceptive Connect Runtime service.

Download

To download Perceptive product installation files, complete the following steps.

1. Go to the Hyland Community site.
2. From the menu, click **Support** and then under **Software Downloads** select **Perceptive Downloads**.
3. Find and download the installer file corresponding to the version to be installed. Your computer must have access to the Perceptive Connect Runtime Web Console, located at **http://<*Perceptive Connect Runtime machine name*>:<*port*>/connect.**

2. **Note** New and updated documentation and help topics are regularly published to the documentation website at docs.hyland.com.

Install the connector using the drag-and-drop feature in Perceptive Connect Runtime

To install the PIC connector using Perceptive Connect Runtime, complete the following steps.

1. In a browser, type the Dashboard address in the format `http://<Perceptive Connect Runtime machine name>:<port>`.
2. Click **Install a Connector**.
3. In **Perceptive Connect Runtime**, on the **Upload new bundles** page, drag the **Perceptive Intelligent Capture Connector 1.2.5-PICC.zip** file to the **DRAG FILES HERE** box. **Perceptive Connect Runtime** extracts and installs the bundles included in the ZIP file automatically and displays the number of installed bundles in the **Pending** box.
4. In the **Pending** box, click **Accept** to complete the installation.

   Result After installation is complete, the installation summary appears in the **Completed** box.

Install the connector manually using Perceptive Connect Runtime

You can install the PIC connector from the **Perceptive Connect Runtime Web Console** page on Perceptive Connect Runtime.

To install the PIC connector, complete the following steps.

1. In a browser, navigate to the **Perceptive Connect Runtime Web Console** URL in the format **http://*<Perceptive Connect Runtime machine name or IP>*:*<port>*/connect**.
2. In the browser dialog box, enter the Web Console user name and password.

   Note The default user name and password are **admin**. However, the administrator can change the defaults during the Perceptive Connect Runtime installation process.
3. In the **Bundles** page, click **Install/Update**.
4. In the **Upload/Install Bundles** dialog box, complete the following substeps.
   - Select the **Start Bundle** check box.
   - Clear the **Refresh Packages** check box.

     Note The **Start Level** remains at the default value.
5. To install the JAR files included in the connector ZIP file, complete the following substeps.
   1. Click **Choose Files** and navigate to the connector in your temporary directory.
   2. Select the **PICC Writer**, **PICC Endpoint**, and **PICC Action JAR** files, one at a time, and click **Open**.
   3. Click **Install or Update**.

Upgrade the connector

Upgrade the connector using the drag-and-drop feature in Perceptive Connect Runtime

To upgrade the connector using the drag-and-drop feature in Perceptive Connect Runtime, complete the following steps.

1. In a browser, type the Dashboard address in the format http://<Perceptive Connect Runtime machine name>:<port>.
2. Click **Install a Connector**.

3. In **Perceptive Connect Runtime**, on the **Upload new bundles** page, drag the **Perceptive Intelligent Capture Connector 1.2.5-PICC.zip** file to the **DRAG FILES HERE** box. **Perceptive Connect Runtime** extracts and installs the bundles included in the ZIP file automatically and displays the number of installed bundles in the **Pending** box.
4. In the **Pending** box, click **Accept** to complete the installation.

   Result After installation is complete, the installation summary appears in the **Completed** box.

Upgrade the connector manually using Perceptive Connect Runtime

To upgrade from a previous version of Perceptive Intelligent Capture Connector, complete the following steps.

1. Uninstall the existing version of Perceptive Intelligent Capture Connector.
2. Install the latest version of Perceptive Intelligent Capture Connector.

Uninstall the existing version of Perceptive Intelligent Capture Connector

To uninstall the existing version of Perceptive Intelligent Capture Connector, complete the following steps.

1. In **Perceptive Connect Runtime Web Console**, under **Perceptive Connect**, click **View Bundles**.
2. In the **Bundles** page, click the **Stop** button next to the following bundles.
   - **PICC Actions**
   - **PICC Endpoint**
   - **PICC Writer**
3. Click the **Uninstall**  button next to each of the stopped bundles.

Install the latest version of Perceptive Intelligent Capture Connector

To install the latest version of Perceptive Intelligent Capture Connector, complete the following steps.

1. Locate the temporary directory you created in the **Download and extract the files** section.
2. In **Perceptive Connect Runtime Web Console**, under **Perceptive Connect**, click **View Bundles**.
3. In the **Bundles** page, click **Install/Update** and complete the following substeps.
   1. In the **Upload/Install Bundles** dialog box, click **Choose Files**.
   2. Navigate to each of the following files in the extracted directory, and then click **Open**, select the **Start Bundle** check box, and click **Install or Update**.
      1. **picc.endpoint-1.2.5.jar**
      2. **picc.writer-1.2.5.jar**
      3. **picc.action-1.2.5.jar**
   3. Restart Perceptive Connect Runtime service.

Configure Perceptive Content to use the connector

Perceptive Content workflow with Envoy services enables Perceptive Content to communicate with Perceptive Connect Runtime (PCR), Output Agent, and the file export directory. Perceptive Intelligent Capture collects the document from the file export directory. The Integration automated system queue you implement in your workflow process sends a web service notification using the Envoy service operation name you define. Based on the format of the document to be processed, PCR or Output Agent receives the document from Perceptive Content. After this process is complete, PCR or Output agent sends a success response using Perceptive Integration Server. Perceptive Content can route the file forward in the Perceptive Content workflow for additional processing.

To configure Perceptive Content to use the connector, complete the following procedures.

- Configure Perceptive Content Envoy
- Create the workflow process
- Create the queues

Configure Perceptive Content Envoy

You must configure the Perceptive Content Envoy web service—AsqEndpointService with operation—InvokeTrigger and WSDL URL—http://<*server IP:port*>/ws/workflowTrigger?wsdl.

To configure a Perceptive Content Envoy service, complete the following steps.

1. In **Perceptive Content Management Console**, in the left pane, click **Envoy Services** and then click **New**.
2. 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.
    3. In the **URI** box, type the URI for your connector server in the format **http://<*Perceptive Connect Runtime server*>:<*port*>/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.
3. Click **Next**.
4. In the **Operations** page, in the **ASQEndpointService** operation, select the check box for **Invoke** and click **Finish**.

    Note In case of **ErpCommonOperationsService**, all its associated operations load in the **Operations** page.
5. Click **Finish**.

Create the workflow process

To create a workflow process, complete the following steps.

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, complete the following substeps.
    1. In the **Name** box, type a name.
    2. In the **Description** box, type the description of the process that appears in the ToolTip for the process.
4. Click **OK**, select the process, and then click **Modify**. Use **Perceptive Content Workflow Designer** to create queues, routes, and workflow rules.

Create the queues

Based on how you want to process your invoices, create the integration ASQ and the work queues. The workflow you create using the integration ASQ and work queues ascertains how a document is processed. The ASQ integrates the workflow process with Perceptive Connect Runtime and uses the subsequent work queues to indicate the processing status of the document.

For information about creating a workflow process and queues, refer to the following help topics.

- Create an Integration ASQ
- Create a work queue

Note For a sample workflow, refer to Appendix D: Example of File Output channel queues in Perceptive Content.

Create File Output channels

File Output channel exports copies of documents from Perceptive Content to a local or network directory, triggered by an Integration ASQ. PIC is configured to monitor the directory and pull incoming TIFF files, and then performs classification, extraction, and validation on each image.

This section provides the steps for creating and configuring a File Output channel by specifying the ASQ used for the trigger, the destination directory, the separator character, and the file name parameters. The file name always includes the Content document ID, and can include any of the following values.

- A separator character, such as ^
- Up to 99 value segments, as needed, using any of the following options
    - A literal string
    - A Perceptive Content document property, which can include the document name and document version number
    - A Perceptive Content document key value
    - A Perceptive Content custom property value

You can create multiple File Output channels with differing value segments or destination directories as needed for your solution. Before you begin configuring a channel, we recommend that you open the *Perceptive Connect Runtime Installation Online Help* to use as reference material.

Channel requirements

A File Output channel requires the following components.

- An Integration ASQ ID from Perceptive Content
- The Integration ASQ trigger and the Object Property reader provided by the Perceptive Content Connector
- The File System Document Export action provided by this connector
- The Trigger reader provided by the Perceptive Connect Runtime

Create and configure a File Output channel

To create and configure a File Output channel, complete the following steps.

1. In a browser, navigate to the channel wizard URL in the format **http://*<Perceptive Connect Runtime machine>*:*<port>*/ui/**.
2. To create the channel, complete the following substeps.
    1. In the **Select a trigger** list, select **Integration ASQ Trigger**.
    2. To specify the queue that triggers the action, in the **Workflow Queue ID** box, type the ASQ ID, such as 301YW2R_0001LLH16000028, and click **Next**.
3. To set the channel action, in the **Select an action** list, select **FileSystemDocumentExport**.
4. From the temporary directory where you downloaded the PIC Connector files, open the sample **Export_Inputs.xml** file with a text editor.
5. To configure the inputs, in the **Configure the input mapping** XML editor, use the sample XML file and the information in the File System Document Export action section to configure the **DocId, ExportDirectory, Separator,** and extra file name segment parameters, as needed.

    Note Keep your file system file name character limits in mind as you configure the file name parameters.
6. Click **Next** and then click **Save Channel.**
7. When prompted to enable the channel, click **OK**.

    Important After you create a channel, you cannot modify the configuration.

Create PIC Status Code channels

PIC Status Code channels route documents in Perceptive Content workflow as they pass through different stages of Intelligent Capture processing.

These channels use the PIC project name, client ID, and the status code to route documents to specified queues. For example, you can create a channel that routes documents that failed the extraction process, such as status code 250, to a queue called IC Processing Error. Your users can then review documents in the queue and resubmit them for processing.

You can create one channel per combination of project name, client ID, and status code.

Warning You cannot replace or modify an enabled channel. For assistance with modifying an Intelligent Capture Status Code channel, contact your Perceptive Software representative.

Before you begin configuring a channel, we recommend that you open the *Perceptive Connect Runtime Installation Online Help* to use as reference material. For information on the client ID, refer to the "BRWClient" section in the *Perceptive Intelligent Capture for Invoices Solution Guide 2.3.x* or contact your administrator for other Intelligent Capture solutions.

Channel requirements

A PIC Status Code channel requires the following components.

- A PIC project name, client ID, and status code
- Two Perceptive Content queue names
- The Status Code Update trigger, provided by this connector
- The RouteImageNowWorkflowItem action, provided by the Perceptive Content Connector

Create and configure a PIC Status Code channel

To create and configure a Status Update channel, complete the following steps.

1. In a browser, navigate to the channel wizard URL in the format **http://<*Perceptive Connect Runtime machine*>:<*port*>/ui/**.
2. In the **Configure the channel trigger** page, complete the following substeps.
    1. In the **Select a trigger** list, select **Intelligent Capture Status Update**.
    2. In the **ProjectName** field, type the name of the PIC project that processes the documents you want to route, such as `DFI-BPO`. Do not include the file extension.

        Note The PIC project name is set in the GRL_VL_ProjectName setting in the PIC DFI.ini file.
    3. In the **ClientId** field, type the PIC client ID. Client IDs are non-negative integers.
    4. In the **StatusCode** box, type the PIC status code that you want this channel to handle, such as `550`. Status codes are numbers between 0-999.
    5. Click **Next**.
3. To set the channel action, in the **Select an action** list, select **RouteImageNowWorkflowItem**.
4. From the temporary directory where you downloaded the PIC Connector files, open **StatusCodeUpdateChannel_input mapping.txt** to use as configuration examples.
5. To configure the inputs, in the **Configure input mapping** XML text editor, use the sample XML files and the information in the Route ImageNow Workflow Item action section to configure the `WorkflowItemID`, `SuccessQueueName` and `FailureQueueName`.
6. Click **Next**, and then click **Save Channel**.

    Note You cannot configure any writer outputs for a PIC Status Code channel.
7. When prompted to enable the channel, click **OK**.

Create PIC Export channels

PIC Export channels pass XML data, extracted by Intelligent Capture, back to your original documents in Perceptive Content. With a PIC Export channel, you can write this XML data to document keys, custom properties, eForm fields, or the DCExport subobject. The channel uses the XML transformer, a specialized reader, to migrate the extracted data to an XML template or schema.

These channels use the PIC project name, client ID, and doc class to identify which data to export from PIC to Perceptive Content. For example, you can create a channel that uses extracted information from the image to populate an eForm or update indexes in Perceptive Content.

You can create one channel per combination of project name, client ID, and doc class.

Warning You cannot replace an enabled channel. For assistance with modifying an Intelligent Capture Export channel, contact your Perceptive Software representative.

For information on the PIC client ID, refer to the "BRWClient" section in the *Perceptive Intelligent Capture for Invoices Solution Guide 2.3.x* or contact your administrator for other Intelligent Capture solutions.

Channel requirements

A PIC Export channel requires the following components.

- A PIC project name, client ID, and doc class
- The Export trigger and DCExport Subobject writer, provided by this connector
- The XML reader and XML transformer, provided by the Perceptive Connect Runtime
- The RouteImageNowWorkflowItem action, eForm Data Definition reader, eForm writer, and Object Property writer, provided by the Perceptive Content Connector

Create and configure a PIC Export channel

This section provides a high-level overview of how to create PIC Export channels. When you create a PIC Export channel, you must configure the input and output XML data to map the extracted Intelligent Capture data to your specific data definition or schema. This process is highly variable depending on your target. As you read this overview, we recommend that you refer to the detailed appendices for the required components.

To create and configure a PIC Export channel, complete the following steps.

1. In a browser, navigate to the channel wizard URL in the format **http://*<Perceptive Connect Runtime machine>*:*<port>*/ui/**.
2. On the **Configure the channel trigger** page, in the **Select a trigger** list, select **Intelligent Capture Export** and then complete the following substeps.
    1. In the **ProjectName** field, type the name of the Intelligent Capture project that processes the documents you want to route, such as `DFI-BPO`. Do not include the file extension.

        Note The PIC project name is set in the GRL_VL_ProjectName setting in the PIC DFI.ini file.
    2. In the **ClientId** field, type the Intelligent Capture client ID. The client ID consists of a non-negative integer.
    3. In the **DocClass** field, type the Intelligent Capture parent document class, such as `Invoices` or `Void`, and click **Next**.
3. On the **Configure the channel action** page, in the **Select an Action** list, select **RouteImageNowWorkflowItem**.
4. From the temporary directory where you downloaded the PIC Connector files, open the **Export_Invoice_Inputs.xml**, **Export_Void_Inputs.xml**, and **Export_Invoice_Outputs.xml** files. These files demonstrate how to map extracted data to the Perceptive AP Invoice eForm data definition. If you are mapping values to a different target, use these files as a general example of the overall process.

5. In the **Configure input mapping** XML text editor, configure the data sources with the following substeps. These steps assume you will map values to the AP Invoice eForm, and will vary for other targets.
    1. Configure the `WorkflowItemID`, `SuccessQueueName`, and `FailureQueueName`.
    2. Configure the XML reader to extract the invalid reason code, **IC_InvalidReason**, from the PIC XML. You need the Xpath to the invalid reason value in the PIC XML.
    3. Configure the XML reader to extract additional values from the PIC XML, such as `InvoiceType` and `InvoiceNumber`, which you will use when you map the outputs.
    4. Configure the eForm Data Definition reader, `eFormDataDefinitionSource`, to extract the data definition from your form, such as AP Invoice eForm.
    5. Configure the XML transformer to map the extracted PIC values to your form's data definition. This maps the additional values extracted from the PIC XML to the data definition extracted from your form.
6. In the **Configure output mapping** XML text editor, configure the outputs with the following substeps.
    1. Configure the eForm writer to write the transformed XML values into your eForm fields. The writer references the name of the XML transformer. In the Export_Invoice_Inputs.xml file, this is `TransformedXml`.
    2. Configure the Object Property writer to write the `IC_InvalidReason` code to the `IC Invalid Reason` custom property.
    3. Optional. Configure the DCExport Subobject writer to write the PIC XML, `ic_xml`, to Perceptive Content's DCExport Subobject.
7. In the `<c:outputs ... />` element, remove the trailing backslash (`/`). Then, after the final `</c:parameter>` value, add a closing `</c:outputs>` element.
8. Click **Save**. When the UI prompts you to enable the channel, click **OK**.

Appendix A: Triggers

A trigger is an event that causes a channel to execute. Each channel has a single trigger, so the event defined by the trigger and its inputs is the only entry point into a given channel. Triggers can also bring data into the channel. This data is available for input mapping for the channel action or for the results output. For additional information about triggers, refer to the "Appendix A: Triggers" section of the *Perceptive Content Connector Installation Guide*.

All of the triggers for the Perceptive Intelligent Capture Connector use REST calls. Each trigger includes output values that you can use in the channel data context for either input or output mappings.

The Perceptive Content Connector provides the following triggers and associated data.

Export trigger

The Export trigger allows you to create Intelligent Capture Export channels. Refer to the Create PIC Export channels section.

This trigger includes the following case-sensitive output values that you can use in the channel data context.

- **DocumentId**. The Perceptive Content document ID

- **ProjectName**. The project name, configured in the GRL_VL_ProjectName setting in the PIC DFI.ini file
- **ClientId**. The client ID, configured in the Intelligent Capture database
- **DocClass**. The document class, configured in the Intelligent Capture project
- **XMLDocument**. A W3C XML document consisting of the Intelligent Capture-extracted data

Status Code Update trigger

The Status Code Update trigger allows you to create Intelligent Capture Status Code channels. Refer to the Create and configure a PIC Status Code channel section.

This trigger includes the following case-sensitive output values that you can use in the channel data context.

- **DocumentId**. The Perceptive Content document ID
- **ProjectName**. The project name, configured in the GRL_VL_ProjectName setting in the PIC DFI.ini file
- **ClientId**. The client ID, configured in the Intelligent Capture database
- **StatusCode**. The Intelligent Capture document-processing status code, such as 550

Use trigger values in a channel input or output mapping

To use an Export trigger or Status Code Update trigger value in the input mapping, use the Perceptive Content Connector Trigger reader. In this instance, the `trigger` node contains the output value from the selected trigger and the `name` is any string that you use as a reference in another node.

Example

```
<c:parameter>
	<c:name>DocId</c:name>
	<c:trigger>DocumentId</c:trigger>
</c:parameter>
```

To use a trigger value in the output mapping, such as for the **DC Export Sub-object**, reference the value directly.

Example

```
<c:parameter>
	<c:name>ICXmlDoc</c:name>
	<ic:DCExportTarget>DocumentId</ic:DCExportTarget>
</c:parameter>
```

Appendix B: Actions

An action is a connector-defined task configured in the channel that executes when the channel triggers. You configure the various inputs that the action requires when you create the channel. The action uses these inputs to complete its task in an application outside of Perceptive Connect Runtime, as defined in the connector. For additional information about actions, refer to the “Appendix B: Actions” section of the *Perceptive Content Connector Installation Guide*.

The PIC Connector provides the following action.

File System Document Export action

This action copies any Perceptive Content documents from an Integration ASQ to a specific network location, such as the Intelligent Capture import directory. With this action, you configure the file name format. For example, you can include Perceptive Content values or literal values in the file naming convention and pass it to Perceptive Intelligent Capture.

When you select the FileSystemDocumentExport action, Perceptive Connect Runtime automatically populates the following XML configuration template in the Configure input mapping box.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<c:inputs xmlns:c="http://www.perceptivesoftware.com/pif/mapping"
xmlns:in="http://www.perceptivesoftware.com/pif/imagenow"
xmlns:ic="http://www.perceptivesoftware.com/pif/ic">
    <c:parameter>
        <c:name>DocId</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
        <c:name>ExportDirectory</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
        <c:name>Separator</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
        <c:name>TiffBypassOA</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
        <c:name>TiffConvertImage</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
        <c:name>PdfBypassOA</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
        <c:name>EnableSubDirectory</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
        <c:name>SinglePageDocFlag</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
```

```
        <c:name>ConvertPDFtoTiff</c:name>
        <c:none/>
    </c:parameter>
    <c:parameter>
        <c:name>Segment1</c:name>
        <c:none/>
    </c:parameter><c:parameter>
    ...
    <c:parameter>
        <c:name>Segment99</c:name>
        <c:none/>
    </c:parameter>
```

The action requires that you specify the `DocId` and `ExportDirectory` parameters. `DocId` retrieves the ID of the Perceptive Content document that the action is exporting. The ID is always the first element of the file name.

The Integration ASQ Trigger provides the Doc ID. However, if you use this action with another trigger that does not provide the doc ID, the Workflow Item Reader can use the workflow ID to retrieve the doc ID.

Parameter Descriptions

`PdfBypassOA` allows you to specify whether to process a PDF document using Output Agent or PIC Connector. To process the document using Output Agent add FALSE to the literal reader or add TRUE to process it using the PIC Connector.

Note PIC Connector exports a PDF document in its native file format.

`TiffBypassOA` allows you to specify whether to process a TIFF document using Output Agent or PIC Connector. To process the document using Output Agent add FALSE to the literal reader or add TRUE to process it using the PIC Connector.

`TiffConvertImage` allows you to specify whether to convert an image document to a standard one-bit black and white image with 300 DPI, which is the optimal file dimension for Intelligent Capture import. To convert the image to the standard dimension add FALSE to the literal reader or add TRUE to process the original document.

`ConvertPDFtoTiff` allows you to specify whether to process a PDF document in PDF format or TIFF format. To process a PDF document as TIFF, add TRUE to the literal reader or add FALSE to process PDF document as PDF. However, if a Perceptive Content document has both, PDF and TIFF files, and value of the SinglePageDocFlag parameter is set to FALSE, PIC Connector converts the PDF files to TIFF irrespective of whether you specify TRUE or FALSE value to this parameter.

`EnableSubDirectory` enables you to configure the connector to create a subdirectory in the output directory for the processed Perceptive Content document. To create a subdirectory in the export directory add TRUE to the literal reader.

`SinglePageDocFlag` enables you to configure the connector to create individual files for each page that makes up a Perceptive Content document. To create individual files for each page of a file add TRUE to the literal reader. For example, if one TIFF file and one PDF file with ten pages each are associated with a Perceptive Content document, ten PDF files and ten TIFF files are created separately in the export directory if you set the literal reader for `SinglePageDocFlag` as TRUE. The files created inherit their native file type.

`ExportDirectory` sets the output location on the file system. If the export directory is on a network location, the Perceptive Connect Runtime user must specify the network path of the export directory under the `ExportDirectory` parameter. To specify the export directory, replace `<c:none/>` with an

empty set of literal reader from Perceptive Connect Runtime, and provide the network path value. The following example describes the `ExportDirectory` parameter.

```
<c:parameter>
    <c:name>ExportDirectory</c:name>
    <c:literal>//192.168.45.101/Shared/Export</c:literal>
</c:parameter>
```

Note The Perceptive Connect Runtime user must have write access to the export directory.

`Separator` sets the separator character for the file name. If you do not specify a character, the default is ^. Refer to the following list for acceptable separator characters.

~ ! @ # $ % ^ & ( ) - _ + [ ] { } ; ' , .

With the `Segment` parameters, you can configure up to 99 additional segments in the file name. Keep in mind your system file name character limits.

To insert a Perceptive Content document key value, custom property value, or Perceptive Content document name, complete the following steps.

1. In the `Segment` parameters, replace `<none\>` with the element `<objectPropertyReader>`. The element `<objectPropertyReader>` is described below.

   ```
   <in:objectPropertyReader>
       <in:name>Field4</in:name>
       <in:objectIdRef>DocId</in:objectIdRef>
       <in:objectType>document</in:objectType>
       <in:propertyType>KEY</in:propertyType>
   </in:objectPropertyReader>
   ```

2. Modify `<objectPropertyReader>` using any of the following options.

   - To insert a literal string, use the literal reader from Perceptive Connect Runtime. For example, insert a company name or business unit.

     To insert an empty segment, use the literal reader from Perceptive Connect Runtime with an empty set.

     ```
     <c:literal></c:literal>
     ```

     Note You cannot use any of the following characters in the `Segment` values or as the separator.

     < > : " / \ | ? *

   - To insert a Perceptive Content document key value, in the element `<in:propertyType>`, type `KEY`, and in the element `<in:name>`, specify a key value. Allowed values are `field1`, `field2`, `field3`, `field4`, `field5`, `folder`, `tab`, `drawer`, and `type`.
   - To insert a Perceptive Content custom property, in the element `<in:propertyType>`, type `CUSTOMPROPERTY`, and in the element `<in:name>`, specify the name of the custom property.
   - To insert the Perceptive Content document name, in the element `<in:propertyType>`, type `DOCPROPERTY`, and in the element `<in:name>`, specify the document name.

     Example

     ```
     <c:parameter>
         <c:name>DocId</c:name>
         <in:workflowItem>
             <in:reference>WfId</in:reference>
     ```

```
        <in:objectType>WORKFLOW</in:objectType>
        <in:objectField>OBJECT_ID</in:objectField>
    </in:workflowItem>
</c:parameter>
<c:parameter>
    <c:name>WfId</c:name>
    <c:trigger>WorkflowItemId</c:trigger>
</c:parameter>
<c:parameter>
    <c:name>ExportDirectory</c:name>
    <c:literal>C:\Program Files\Perceptive\Projects\AP\Export</c:literal>
</c:parameter>
<c:parameter>
    <c:name>Separator</c:name>
    <c:literal>#</c:literal>
</c:parameter>
<c:parameter>
    <c:name>Segment1</c:name>
    <c:literal>ID</c:literal>
</c:parameter>
<c:parameter>
    <c:name>Segment2</c:name>
    <in:objectPropertyReader>
        <in:name>Field4</in:name>
        <in:objectIdRef>DocId</in:objectIdRef>
        <in:objectType>document</in:objectType>
        <in:propertyType>KEY</in:propertyType>
    </in:objectPropertyReader>
</c:parameter>
```

Note The system user must have write access permission to the ExportDirectory location you mention.

Route ImageNow Workflow Item action

The connector configuration uses this action, provided by the Content Connector, to route documents from one queue to the other queue in the PIC workflow.

When you select the RouteImageNowWorkflowItem action, Perceptive Connect Runtime automatically populates the following XML configuration template in the Configure input mapping box.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<c:inputs xmlns:c="http://www.perceptivesoftware.com/pif/mapping"
xmlns:in="http://www.perceptivesoftware.com/pif/Perceptive Content"
xmlns:ic="http://www.perceptivesoftware.com/pif/ic">
   <c:parameter>
       <c:name>WorkflowItemId</c:name>
       <c:none/>
   </c:parameter>
   <c:parameter>
       <c:name>SuccessQueueName</c:name>
       <c:none/>
   </c:parameter>
   <c:parameter>
       <c:name>FailureQueueName</c:name>
       <c:none/>
   </c:parameter>
</c:inputs>
```

The action requires that you specify the `WorkflowItemId`, `SuccessQueueName`, `FailureQueueName`, and the `DocId`, parameters. To include `DocId`, you must replace the `WorkflowItemId` parameter with the following XML script in the XML configuration template.

```
<c:parameter>
    <c:name>DocId</c:name>
    <c:trigger>DocumentId</c:trigger>
 </c:parameter>
 <c:parameter>
    <c:name>WorkflowItemId</c:name>
    <in:workflowItem>
       <in:reference>DocId</in:reference>
       <in:objectType>DOCUMENT</in:objectType>
       <in:objectField>WORKFLOW_ID</in:objectField>
    </in:workflowItem>
 </c:parameter>
```

The XML configuration template also enables you to map document keys and custom properties of a Perceptive Content document. To map document keys and custom properties, copy the relevant sections of the sample XML file. The sample XML files are available in the directory [*drive:*]\{*path*}\picc-distributable-1.2.5-PICC\Sample Configurations. The drive and path in the directory are based on the location where you extract the picc-distributable-1.2.5-PICC.zip file.

Appendix C: Writers

Writers are interfaces, provided by connectors, which let you configure channels to output data to applications outside of Perceptive Connect Runtime. You use writers to configure the results output mapping, which lets you specify what to do with any data resulting from the action execution. You can invoke writers using specific XML tags, defined per writer. For additional information about writers, refer to the “Appendix D: Writers” section of the *Perceptive Content Connector Installation Guide*.

The Intelligent Capture Connector provides the following writers.

DCExport Subobject writer

This writer lets you save an XML document (w3c.Document Java type) to the DCExport subobject of a document in Perceptive Content. Perceptive Content uses the `workingName` parameter to identify objects attached to the DCExport subobject. The `workingName` value is the root node from the XML document to be stored, such as `BrainwareDocument`. If an object with the same `workingNam`e already exists, the writer replaces the data with the latest XML document.

To output an XML document from a channel to a Perceptive Content document, include the following XML template in the channel output mapping, and enter the appropriate values.

```
<name></name>

<ic:DCExportTarget></ic:DCExportTarget>
```

The `name` field references the name node of the Perceptive Content Connector Trigger reader. Refer to the “Trigger” section in the Perceptive Connect Runtime Installation and Setup Guide.

In the `DCExportTarget` field, reference the Perceptive Content document ID to which you want to attach the XML. For example, if you used the Status Code Update trigger from this connector, you can use the trigger’s output value `DocumentId`. If you used the Integration ASQ Trigger, from the Perceptive Content Connector, you would reference the Workflow Item reader name, such as `DocId`.

DCExport subobjects only exist at the document level. You cannot write this subobject to a Perceptive Content folder, or to an individual page within a Perceptive Content document.

Example

```
<c:parameter>
      <c:name>ICXmlDoc</c:name>
      <ic:DCExportTarget>DocumentId</ic:DCExportTarget>
</c:parameter>
```

Appendix D: Example of File Output channel queues in Perceptive Content

The following image provides an example layout of the Perceptive Content queues provided for the Perceptive Intelligent Capture workflow. If you create a File Output channel, for example, you would use the IC Submit Integration ASQ to trigger the channel.