FactorSoft™

- Release v4.7

FactorSoft DocAI User Guide

Limitations on Maintenance Services

The FactorSoft™ application is intended for use in accordance with the standards and processes described within this documentation. Efforts to investigate and/or repair FactorSoft™ application or data integrity issues caused by activities or integrations outside of the intended use of the FactorSoft™ platform will be subject to the then-current Jack Henry Professional Services billable hourly rate.

Standard Maintenance Services (Technical Support) does not include the following:

> Investigation and Remediation of errors and data integrity issues caused, contributed to, or by any of the following:

- a software program that was not originally provided by Jack Henry
  - third-party automation, BOT/Screen Scraping technology, custom importers, or any other integration with FactorSoft™ that was not created by or in conjunction with Jack Henry.
- any modification not provided by Jack Henry to the software or standard database schema
  - the addition of custom database elements including triggers, stored procedures, tables, and columns
  - the alteration of standard FactorSoft™ triggers, tables, columns, stored procedures and indexes
  - the execution of T-SQL scripts resulting in changes to the data stored within the FactorSoft™ database
- equipment, software, networks or any other infrastructure in the customer's environment that does not meet the minimum requirements described within the then-current FactorSoft™ product documentation

Please note that if you are exploring possibilities with third-party software providers or considering altering the FactorSoft database in any way, it is strongly recommended that you discuss your plans with the FactorSoft™ support team before making any commitments or changes. As your software partner, we may be able to help solve your business problem in a way that does not introduce risk, data corruption, or system instability.

Table of Contents

FactorSoft™ DocAI

DocAI uses machine learning to efficiently scan, analyze, and extract information from invoice images. The goal of DocAI is to utilize industry-leading technologies: computer vision (including OCR) and natural language processing (NLP) that create pre-trained models for high-value, high-volume documents in order to drastically reduce the amount of effort required to input document data during invoice purchasing.

> **SEPARATELY LICENSED ADD-ON MODULE**
>
> This feature is only available as a separately licensed upgrade.
> For more information, contact your Jack Henry™ representative at lendinginfo@jackhenry.com

Setting Up FactorSoft DocAI

Before you can use FactorSoft DocAI, some setup needs to occur. Some of the setup may have been done when FactorSoft was implemented. If you have any questions, contact Technical Services.

The following outlines the setup steps that need to be done before using DocAI. More information about each step can be found in the sections below.

1. Turn on the DocAI feature in the Control File
    - FactorSoft DocAI is one of our add-on modules for FactorSoft. Please contact Technical Services to have it enabled for your business.
2. Set up Engine Tasks
3. Set up System Preferences
4. Set up Security Roles
5. Enable DocAI for Clients

Engine Tasks

DocAI requires two Engine Tasks to be enabled:

- **DocAI Uploads** - Responsible for uploading purchase batches and tracking the status of batches being analyzed.
- **DocAI Downloads** - Responsible for downloading analyzed purchase batches, converting the results to Invoice XML and preparing for the Engine to process.

1. Open up the EngineAdmin module.
2. In the Database Settings area, click **Task Types**.
3. Locate the Engine tasks in the list. Set the **Default Priority** to **9** and select the **Enabled** check box.

Contact our Technical Services team if you have any questions about setting up Engine Tasks.

System Preferences

The following System Preferences must be set in the **System Preferences** > **Identification/System Constants** > **Interface parameters** > **DocAI** folder:

Preference	Description
GCP batch endpoint domain	Domain of the application for batches
GCP credentials JSON*	Encrypted Google Cloud Service Account Credentials
GCP project ID*	Google Cloud Project ID
GCP synchronous endpoint domain*	Domain of the application for single invoices
GCP web token audience	Google Cloud Project Application Java web token audience
HITL URL	Link for correcting Doc AI invoices
Working image folder	The unique folder location where images are stored to send through DocAI process

*Required for the Web Portal DocAI Image Capture process.

The following System Preferences must be set in the **System Preferences** > **Identification/System Constants** > **Data entry behavior** > **Imaging** folder:

Preference	Description
All scanned batches require release	Set to True.

Security Roles

Security Roles are used to provide access to DocAI screens and features and must be set up before it can be used.

To access Security Roles, in the Admin module, on the **Security** menu, select **Manage Roles** > **Data Entry** > **Purchase Entry**

Preference	Description
Allow user to correct DocAI batch	Set to True to allow users to open the DocAI Corrections application by clicking Correct from Manage Pending Purchases (F8).

Enable DocAI for Clients

DocAI is enabled by client. Go to **Client Information** > **Control** panel > check **Use DocAI** to enable.

FactorSoft DocAI Importing Invoices

FactorSoft Import Purchasing

ACCESS
File > Input Functions > Scan Invoices

In the invoice purchasing process, DocAI replaces the manual Purchase Entry steps. Instead of manually entering invoice data in the Schedule Batch screen, the invoices added via **File** > **Input Functions** > **Scan Invoices** and **Released** are processed through DocAI for clients where DocAI is enabled.

1. From **Scan Invoices**, click **Browse**.

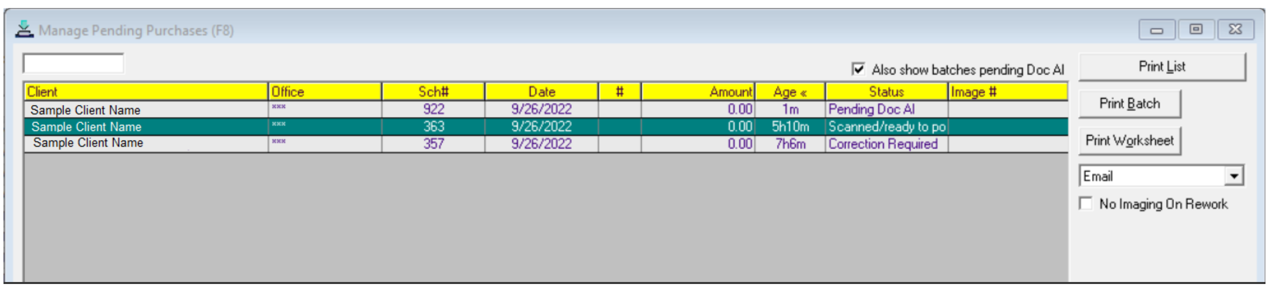
2. Browse to select the file. Repeat to select additional images if needed.

> **TIP**
> If uploading multiple files of invoices and supporting documents, it is good practice to add invoice files then add supporting documents so that the system will associate and assign those supporting documents appropriately.

3. Purchase batches created for clients who have DocAI enabled, will need to be **Released**.

4. After releasing the purchase batch, DocAI is processed and the purchase batch receives a status in the **Manage Pending Purchases** screen. DocAI Statuses are:

    - **Pending DocAI** - invoice information is being analyzed and extracted.
    - **Correction Required** - invoice information needs reviewed and/or corrected.
    - **DocAI Interpretation** - high-confident invoice data or manual corrections are being interpreted and brought in to the Manage Pending Purchases screen.

    > **NOTE**
    > To include DocAI batches in the grid, check **Also show batches pending DocAI**.

5. Batches requiring corrections are manually corrected by selecting the batch and clicking **Correct** to open the **DocAI Correction** application.

    See the DocAI Corrections section for details on correcting batches.

> **NOTE**
> The four required fields for FactorSoft Invoices are: Debtor Name, Invoice Amount, Invoice Number, and Invoice Date. If these fields are read with high-confidence, your invoice will not require corrections. Other fields such as Purchase Order, Freight, etc. should be verified during the purchase process.

6. Invoices that have completed **DocAI Correction** or that did not require correction are processed through the normal rework, approval, or verification steps that currently exist in FactorSoft, as defined by your business rules.

Web Portal Import Purchasing - Image Capture

> ACCESS
> Main > Purchases > click New Batch > select Image Capture

1. From New Batch, select **Image Capture**.
2. Click **Continue**.
3. From Capture Invoice, click **Yes**.
4. Browse to select the file. Repeat to select additional images if needed.
5. From Capture Invoice, when all invoice images are added, click **No** (no more invoice images).
6. From Supporting Documents, click:

- **Yes** to add documents.
- **No** to either add another invoice or go to the Edit Batch screen, where you can submit when ready.

7. When all images and documents are added, this message is displayed while the system processes the images through DocAI: "We are building your purchase batch. This may take a moment."

8. After the DocAI process is complete, check the Status column to ensure all invoices are **Ready**.

9. For each invoice with a status of **Needs Work**, click the status to edit the invoice. From Edit Batch, the highlighted fields indicate that DocAI was unable to reliably extract the information. Update the fields as needed.

10. When all invoice fields are complete and correct, click **Update**.

11. When all invoices are Ready, click **Submit**.

12. Invoices submitted from the Web Portal are processed through the normal rework, approval, or verification steps that currently exist in FactorSoft, as defined by the existing Invoice XML logic and business rules.

> **TIP**
> DocAI batches imported through the Web Portal will follow your Invoice XML Import system preferences. For details, see the Invoice XML Import Add-on Module Guide.

Web Portal Import Purchasing - Image Only Files

> **ACCESS**
> Main > Purchases > click New Batch > select Import File

1. From New Batch, select **Import File**.

2. Click **Continue**.

3. From Add File, drop down and select **Image Only**.

4. Browse to select the file. Repeat to select additional images if needed. Click an image's [X] to delete if needed.

5. Select an action:

    - Submit – to submit the batch to DocAI (batch cannot be edited after submitting).
    - Save – to save the images and close the form (batch can be edited).
    - Cancel – to discard input and close the form without saving.

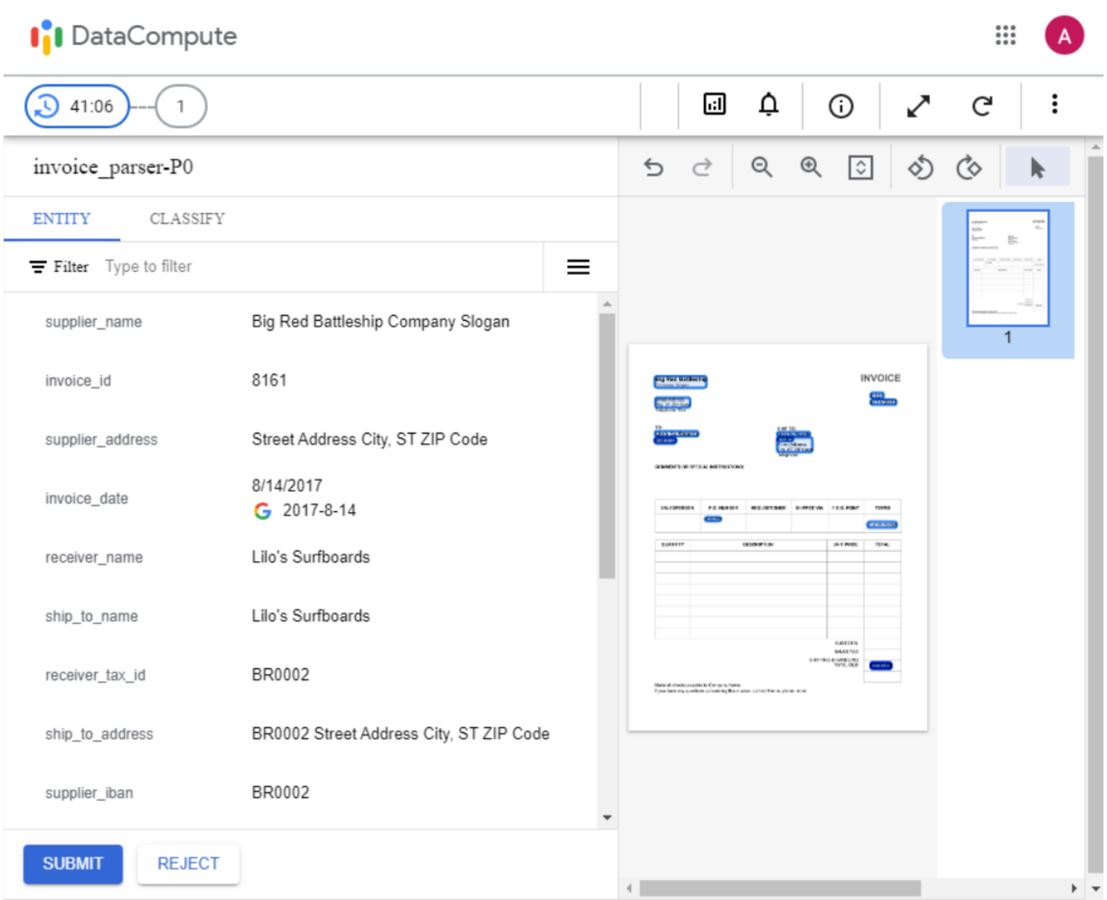
6. Invoices submitted from the Web Portal are processed through the normal rework, approval, or verification steps that currently exist in FactorSoft, as defined by your business rules.

FactorSoft DocAI Corrections

ACCESS

Office > **Manage Pending Purchases**, select DocAI batch with status Correction Required > **Correct**

The DocAI Corrections screen provides you the ability to analyze and correct any low confidence invoice information.



NOTE

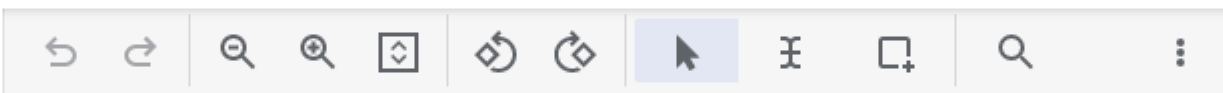
Users who have permission to correct DocAI batches will need to have their email address set up in the Google Cloud Platform (GCP) and log in when the DocAI Corrections screen launches.

Auditing users who attempt correction is available from Manage Pending Purchases (F8).

1. 

From the DocAI Workbench, you can:

- View time allotted for correction
- View number of fields that require your attention
- View analytics
- View notifications
- View more information about this document
- Expand the Workbench area
- Reload the questions. This will undo any changes you have made in Human in the Loop and reset items that require correction.
- More

2. 

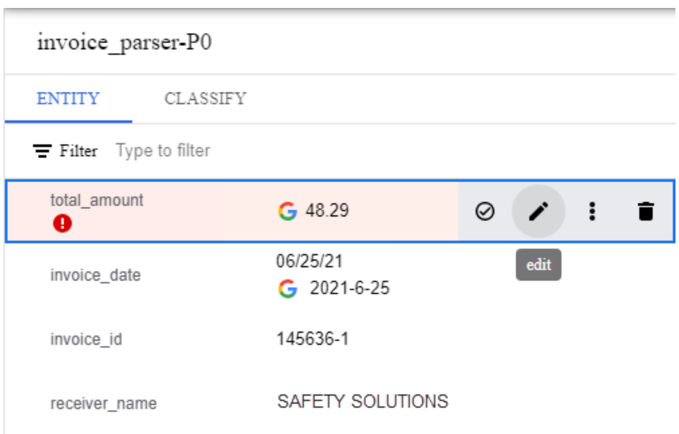
From the Image Viewer, you can:

- Zoom in and out
- Fit image to window
- Rotate left or right
- Use Browser mode tool
- Use Select Text tool
- Add Bounding Box
- Search text in image
- More

3. Classify the document as an invoice by selecting **invoice_statement** in the Classify tab > Invoice type drop down.

> **NOTE**
> If the document you see is not an Invoice, click **Reject** and those images will be unassigned supporting documents.

4. From the Entity tab, make any corrections necessary.
    - Required entities of low confidence are highlighted in red.
    - Select the field and click the pencil icon to edit.
    - When corrections are made, click the check mark icon to confirm changes.



5. Use the Add Bounding Box tool  to add any potentially missed fields by drawing over any unrecognized data and choosing the appropriate entity. Ex: Debtor Name (receiver_name).
6. When corrections are complete, click **Submit**.
7. The DocAI batch status is updated in Manage Pending Purchases (F8) and will continue through your institution's purchasing process.

Captured Fields

DocAI Entity	FactorSoft Field
receiver_name*	Debtor Name
receiver_address	Debtor Address
receiver_phone	Debtor Phone 1
receiver_email	Debtor Emails
invoice_id*	Invoice Number
invoice_date*	Invoice Date
total_amount*	Invoice Amount
purchase_order	Purchase Order Number

*Required for FactorSoft Invoices

> **NOTE**
> If the required fields are read with high-confidence, your invoice will not require corrections. Other fields such as Purchase Order should be verified during the purchase process.

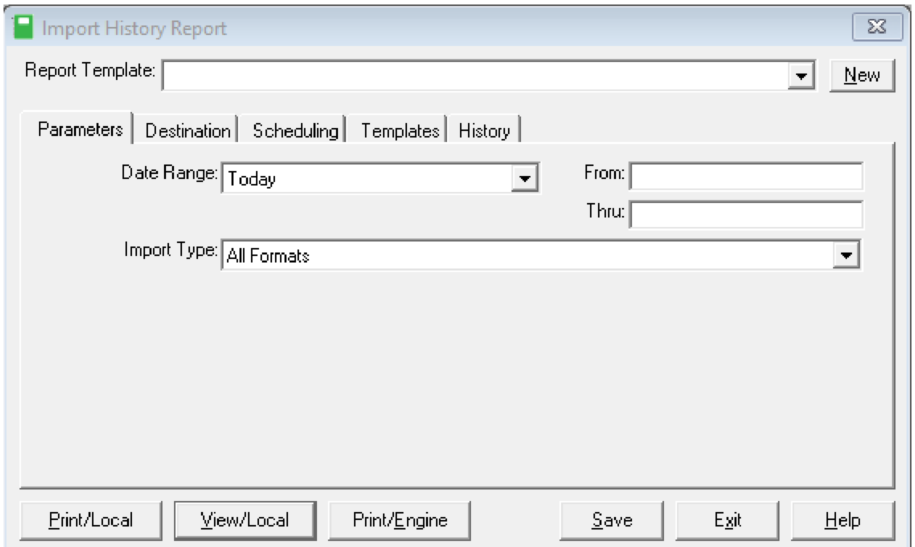
Client Information XML Import Reports

The following reports are for use with the Client Information XML Import Add-On module located in the Reports module.

Import History Report

The Import History Report shows the import history, as processed by the Engine, for your clients. You can choose the time frame for imports that you want to view in the report.

To view this report, on the **Audit Reports** menu, click **Import History Report**.



Field	Description
ReportTemplate	Lists any report template created to date. Select a template from the list to generate a report based on its saved display parameters. Type a new **Report template** name and click **Save** to create a new template for this report, then Select the template from the Templates tab and make any applicable parameter and scheduling selections to complete the template.

Report Parameters

Field	Definition
Date Range	Select the date to use for the report from the list:

Field	Definition
	• Today • Yesterday • Last Month • Current month-to-date • Year through last month-end • Current year-to-date • Specific date • Set At Run Time (Web Template Only) If the Specific date range option is selected, enter the beginning and ending dates of the date range to which to limit the report in the From and Thru fields. Last Business Day can be substituted for Yesterday. To enable Last Business Day, set System Preference **Identification/system constants** > **CLMS|Reporting Services** > **Requests** > Use last business day instead of yesterday in date range to **True**. The **Yesterday** option in the **Date Range** field is replaced with **Last Business Day**, and reports printed on Monday will print Friday's data (assuming Friday was the last business day) instead of Sunday's. Set System Preference **Identification/system constants** > CLMS|Reporting Services > Requests > Saturday is a business day to **True** to consider Saturday a business day when the Date Range is set to Last Business Day. This function is only valid for Reporting Services reports when Use last business day instead of yesterday in date range is set to **True**.
Import Type	List of all Import Types available via the Engine: Folder Monitor Task. Select a specific Import Type for the Report.

Report Columns

The Import History Report contains the following information:

- **Drop Date** – The date and time when the import was initiated.
- **Call Time** – The date and time when the import started to run.
- **Done Time** – The date and time when the import was completed.
- **Status** – The status for the import.
- **Wrapper** – This field is for internal use only.
- **File** – The name of the file that was imported.
- **Location** – The location of the file that was imported. This is the location from which the file was imported, not the final destination for file(s) in the import.
- **Report Comments** – Lists the items imported into the system with descriptions about each.

Report Sample

****TEST** GAP No Insurance Financial Serv**

January 1, 2019 Thru June 22, 2020

Drop Date	**Call Time**	**Done Time**	**Status**
04/15/2019 10:40:43:663	04/17/2019 09:56:50:647	04/17/2019 09:59:36:093	Successful

Wrapper: BBS.Biz.Imports.InvXml.Importer

File: HubTran_enhancements_test.zip **Location:** \\BHM-FILES-01\QAALPHA_Share\TBNoIns_QAA\Imports\JSO

Report Comments:

WARNING: Batch #1 has a BatchPayouts total value of 1500.0 but its actual invoice total is 1525.0. Import will continue.
1 invoices imported successfully.

BATCH: Hubtran (HUBTRAN), PostDate 4/16/2019
Payout added for AcctName='Hubtran Operating ACCT' and Amount='1500.0'.
Imported 1 invoices and 58 images

INV Chris:
IMG backup_documents_11536494.pdf: 5 images imported
IMG backup_documents_23153320.pdf: 16 images imported
IMG backup_documents_23153321.pdf: 37 images imported
Imported successfully (PreCalcKey=605)
3 image files processed.
58 images imported.

Drop Date	**Call Time**	**Done Time**	**Status**
04/15/2019 01:00:53:553	04/15/2019 01:00:56:703	04/15/2019 01:02:37:233	Successful

Wrapper: BBS.Biz.Imports.InvXml.Importer

File: HubTran_enhancements_test.zip **Location:** \\BHM-FILES-01\QAALPHA_Share\TBNoIns_QAA\Imports

Report Comments:

1 invoices imported successfully.

BATCH: Hubtran (HUBTRAN), PostDate 2/28/2018
Payout added for AcctName='Hubtran Operating ACCT' and Amount='1500.0'.
Imported 1 invoices and 58 images

INV 22818-load1:
IMG backup_documents_11536494.pdf: 5 images imported
IMG backup_documents_23153320.pdf: 16 images imported
IMG backup_documents_23153321.pdf: 37 images imported
Imported successfully (PreCalcKey=71)
3 image files processed.
58 images imported.

Drop Date	**Call Time**	**Done Time**	**Status**
04/15/2019 02:26:00:857	04/15/2019 02:26:08:953	04/15/2019 02:26:09:780	Failed

Wrapper: BBS.Biz.Imports.InvXml.Importer

File: HubTran_enhancements_test (2).zip **Location:** \\BHM-FILES-01\QAALPHA_Share\TBNoIns_QAA\Imports

Report Comments:

IMPORT ERROR!

ERROR MESSAGES: The zip file must contain one xml file

Drop Date	**Call Time**	**Done Time**	**Status**
04/15/2019 02:31:01:343	04/15/2019 02:31:14:430	04/15/2019 02:31:15:257	Failed

Wrapper: BBS.Biz.Imports.InvXml.Importer

File: cadence.zip **Location:** \\BHM-FILES-01\QAALPHA_Share\TBNoIns_QAA\Imports

Report Comments:

IMPORT ERROR!

ERROR MESSAGES: The import file contains invalid XML, or does not conform to the schema. The 'Amount' element is invalid - The value '' is invalid according to its datatype 'http://www.w3.org/2001/XMLSchema:decimal' - The string '' is not a valid Decimal value. The string '' is not a valid Decimal value

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Printed: June 22, 2020, 11:27 AM(*ImportHistory) **Page 1 of 19**

Security Roles

To generate the Facility Audit Report, the following Security Role needs to be set to **YES**:

- **Security Roles** > **Reports** > **Audit Reports** > **Import History Report**