

easyWORKFLOW Setup Guide

Code-Free Batch, Document and Field Processing for Kofax Capture

v2.3

Contents

1. OVERVIEW	4
1.1 NEW FEATURES IN V2.1	4
1.2 NEW FEATURES IN V2.2	4
1.3 NEW FEATURES IN V2.3	5
2. INSTALLATION AND UPGRADE.....	5
2.1 UPGRADE INSTALLATION.....	5
3. CONFIGURATION	6
3.1 ADDING EASYWORKFLOW TO A BATCH CLASS	6
3.2 MINIMUM REQUIREMENTS	6
3.4 BATCH PROCESSING OPTIONS	7
3.4.1 Run After	7
3.4.2 Translate Batch Fields	8
3.4.3 Test Type	8
3.4.4 Test For and Criteria	9
3.4.5 Action	9
3.4.6 Match All/Match Any.....	10
3.4.7 Update Batch Settings.....	10
3.4.8 Clear Batch Settings.....	10
3.5 DOCUMENT PROCESSING OPTIONS.....	11
3.5.1 Run After	11
3.5.2 Document Class.....	12
3.5.3 Field and Delimiter Selection	12
3.5.4 Update Document Settings.....	12
3.5.5 Clear Document Settings	12
3.5.6 Settings For Display	12
3.5.7 Remove Document Settings	13
3.6 INDEX FIELD PROCESSING OPTIONS	14
3.6.1 Run After	15
3.6.2 Document Class and Field	15
3.6.4 Set Field Value	15
3.6.4 Field Processing Options	15
3.6.5 Update Field Settings	18
3.6.6 Clear Field Settings	18
3.6.7 Options Set For List.....	18
3.6.8 Remove Field Settings	18
3.7 PRE-FIELD OPTIONS	19
3.8 DOCUMENT STRUCTURE OPTIONS	21
3.8.1 Run After	22
3.8.2 Default Form Type	22
3.8.3 Document Structure Options	22
3.9 LOGGING	24
4. GENERAL CONSIDERATIONS.....	25
4.1 SKIP IF CANNOT LOAD.....	25
4.2 PROCESSING ORDER	26
4.3 RUNNING PROCESSES MULTIPLE TIMES.....	26
4.4 SKIPPING MODULES.....	26
4.5 SETTING DOCUMENTS VALID.....	26
4.6 CHANGES TO BATCH CLASS	27
4.7 MAKING SETTINGS LIVE	27

- 5. COMMON EXAMPLES 28**
 - 5.1 BATCH PROCESSES28
 - 5.1.1 Skip Validation if All Fields in Batch Over 90% Confidence28
 - 5.1.2 Mark Document Valid if all Fields have Data29
 - 5.1.3 Reject Document if All Fields Empty30
 - 5.2 DOCUMENT PROCESSES.....31
 - 5.2.1 Concatenate 4 or More Fields31
 - 5.3 FIELD PROCESSES32
 - 5.3.1 Character Conversion for ICR Cleanup32
- 6. REGULAR EXPRESSIONS 33**
- 7. CONTACT 35**

1. Overview

This guide is intended to show how to install and configure the **easyWORKFLOW** workflow agent for Kofax Capture.

It assumes a working knowledge of Kofax Capture batch class setup and an understanding of the standard Kofax workflow process.

easyWORKFLOW is supported for Kofax Capture version 9, 10, and 11.

1.1 New Features in v2.1

Pattern Matching	All field level tests in Batch Options now have additional Pattern Matching criteria
Delete Empty Documents	Document Structure Options now include the ability to delete empty documents

1.2 New Features in v2.2

New Batch Action	A new action allows the batch priority to be changed if batch test criteria are met
New Batch Tests	A set of new batch test criteria can be applied: <pre>{ \$NumberOfDocumentsInBatch } { \$NumberOfDocumentsOfClass: DocClassName } { \$NumberOfDocumentsOfFormType: FormTypeName } { \$NumberOfPagesInBatch }</pre>
Translate Batch Fields	Batch fields can be populated with specific values: <pre>{ \$NumberOfDocumentsInBatch } { \$NumberOfDocumentsOfClass: DocClassName } { \$NumberOfDocumentsOfFormType: FormTypeName } { \$FormattedDateTime: ddMMyyyy } { \$NumberOfPagesInBatch }</pre>
Populate Index Fields	Index Fields can be populated with specific values such as <pre>{ \$NumberOfDocumentsInBatch } { \$NumberOfPagesInDocument } { \$DocumentPositionInBatch } { \$FormattedDateTime: ddMMyyyy } { \$NumberOfDocumentsOfClass: DocClassName } { \$NumberOfDocumentsOfFormType: FormTypeName } { \$NumberOfPagesInBatch }</pre>

1.3 New Features in v2.3

Pre-Field Options

The ability to split a multi-value field into its separate parts and populate other index fields with the values.

Fields can be marked as mandatory, and documents can be marked valid if all mandatory fields are found.

Index and/or batch fields can be updated to reflect a successful split. These can be used by other easyWORKFLOW processes to skip processing modules.

2. Installation and Upgrade

To install **easyWORKFLOW** follow the steps below:

-Unzip the **easyWORKFLOW.zip** file and copy **easyWORKFLOW_Setup.dll**, **easyWORKFLOW_Runtime.dll**, and **easyWORKFLOW_v2.AEX** to the Kofax Capture\Bin folder

-In the Administration module, select Tools>Workflow Agent Manager and Add

-Browse to the **easyWORKFLOW_v2.AEX** file and select it

-Select **easyWORKFLOW v2** and Install

easyWORKFLOW should now be installed and ready for use.

2.1 Upgrade Installation

If you currently use an older version of **easyWORKFLOW** then once you have installed the latest version (v2), go to the Properties>Workflow Agents tab of any Batch Classes using **easyWORKFLOW** and add **easyWORKFLOW v2** and remove **easyWORKFLOW**.

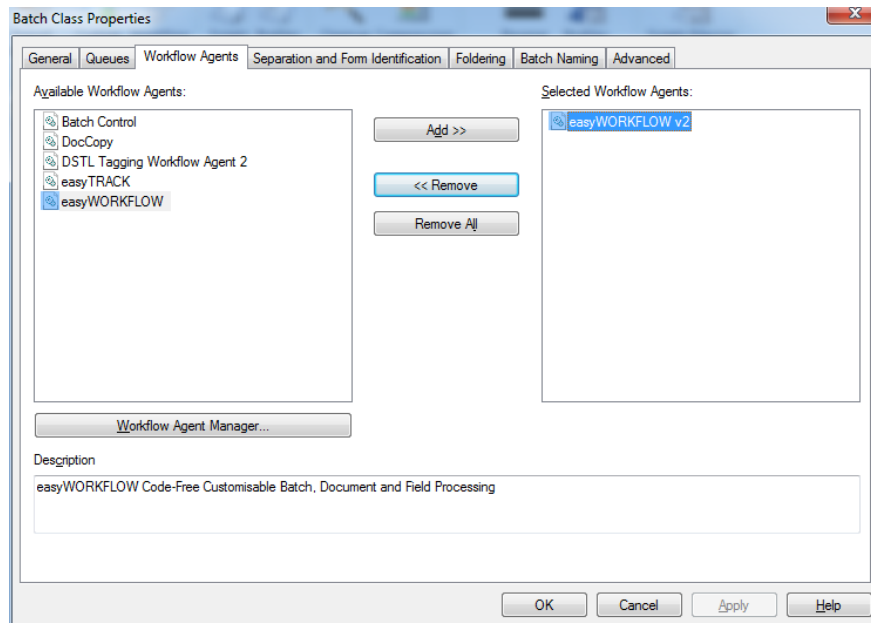
All previously defined settings will be preserved, but you need to re-publish the Batch Class for the new version to be used.

NB. You can run both versions of **easyWORKFLOW** on the same system, but not on the same Batch Class. It is strongly advised to remove earlier versions and only use the latest version.

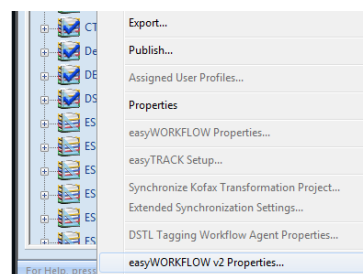
3. Configuration

3.1 Adding easyWORKFLOW to a Batch Class

To add **easyWORKFLOW** to a Batch Class, select the Workflow Agents tab from the Batch Class properties, and add **easyWORKFLOW** to the Selected Workflow Agents list.



Once **easyWORKFLOW** has been added to a Batch Class, right-clicking on the Batch Class will show the **easyWORKFLOW** Properties menu item.



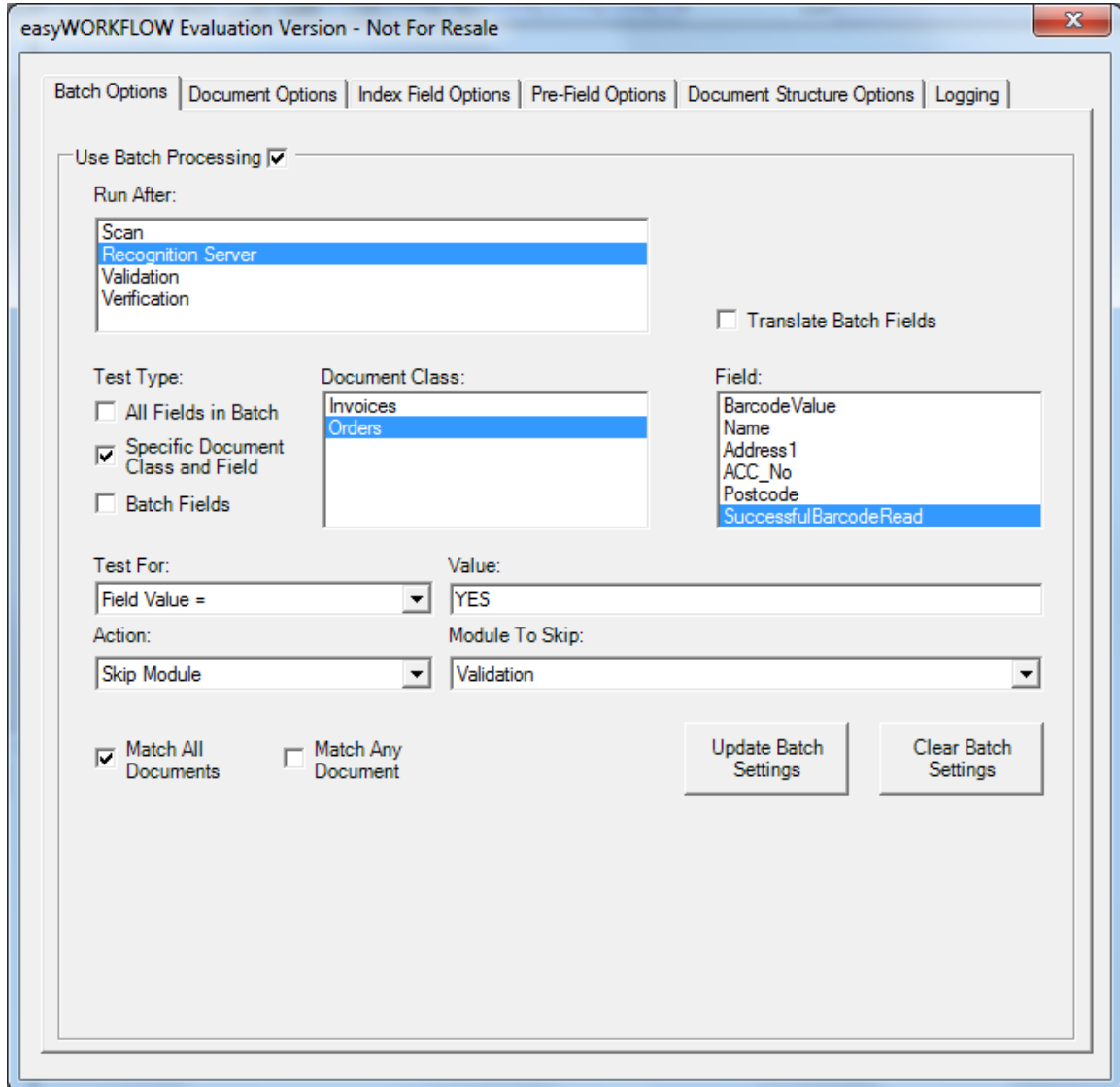
3.2 Minimum Requirements

In order to use **easyWORKFLOW** a Batch Class must have at least one Document Class defined, and all Document Classes need at least one Index Field defined and one Form Type. **easyWORKFLOW** will not start if these requirements are not met.

Once minimum requirements are met, **easyWORKFLOW** will start for the selected Batch Class.

3.4 Batch Processing Options

Check the Use Batch Processing checkbox to allow settings to be configured. Uncheck this box to remove Batch Processing from this Batch Class.



3.4.1 Run After

The Run After list allows the selection of modules where the processing will take place. It is possible to select multiple modules. For example, you may wish to check a specific field after recognition as well as after validation.

3.4.2 Translate Batch Fields

Select this option if you want to allow the translation of special values in batch fields. If the value of any batch field contains one of the special values below, this will be translated to the actual value at run time.

```

{$NumberOfDocumentsInBatch}
{$NumberOfDocumentsOfClass:DocClassName}
{$NumberOfDocumentsOfFormType:FormTypeName}
{$FormattedDateTime:ddMMyyyy}
{$NumberOfPagesInBatch}
  
```

For example, if the batch field has the value 'NumberDocs: {\$NumberOfDocumentsInBatch}', then at runtime this could be translated to 'NumberDocs: 25' where the batch had 25 documents.

You can use more than one special value, and also a mix of plain text and special values.

Batch Fields:			
Name	Display Label	Field Type	Default
NumDocsInBatch		AlphaNum256	{NumberOfDocumentsInBatch}
NumPagesInBatch		AlphaNum256	{NumberOfPagesInBatch}
NumTriSpecDocs		AlphaNum256	{NumberOfDocumentsOfClass:TriSpectrum}
NumNorthwestDocs		AlphaNum256	{NumberOfDocumentsOfClass:Northwest}

3.4.3 Test Type

There are three types of Batch Level tests:

- All Fields in Batch* ALL index fields on ALL documents are checked
- Specific Document Class and Field* Only documents of a specific class are checked for a specific field
- Batch Fields* A batch field is checked

Depending on which test type is chosen, batch field, document class and field will need to be selected.

Use Batch Processing

Run After:

- Scan
- Recognition Server**
- Validation
- Verification
- PDF Generator

Test Type:

All Fields in Batch

Specific Document Class and Field

Batch Fields

Document Class:

- Northwest**
- Tri_Spectrum

Field:

- Name
- Address
- Client Ref**

Use Batch Processing

Run After:

- Scan
- Recognition Server**
- Validation
- Verification
- PDF Generator

Test Type:

All Fields in Batch

Specific Document Class and Field

Batch Fields

Batch Fields:

- Name0
- Name1**

3.4.4 Test For and Criteria

There are eight tests which can be applied to the selected field(s):

Confidence <	The field's confidence must be less than the value entered
Confidence <>	The field's confidence must not be equal to the value entered
Confidence =	The field's confidence must be equal to the value entered
Confidence >	The field's confidence must be greater than the value entered
Field Value <>	The field's value must not be equal to the value entered
Field Value =	The field's value must be equal to the value entered
LIKE*	The field's value must match the pattern specified in regular expression
NOT LIKE*	The field's value must not match the pattern specified in regular expression

* see section 6 for more information on regular expressions

The following special values can be used as the test criteria:

```
{NumberOfDocumentsInBatch}
{NumberOfDocumentsOfClass:DocClassName}
{NumberOfDocumentsOfFormType:FormTypeName}
{FormattedDateTime:ddMMyyyy}
{NumberOfPagesInBatch}
```

NB. Confidence level checks are not available when checking Batch Fields

3.4.5 Action

There are five Actions available if the test specified is true:

<i>Mark Document Valid</i>	Mark a document valid if test true for that document
<i>Reject Batch</i>	Reject the Batch if test true
<i>Reject Document</i>	Reject a document if test true for that document
<i>Skip Module</i>	Skip a process module if test true
<i>Set Priority</i>	Choose the new priority for the batch

NB. When test type is Batch Fields only Reject Batch, Skip Module, and Set Priority are available

When Skip Module is selected as the Action, a module to skip can be selected from the list of available modules. **easyWORKFLOW** Batch Processes must be configured to run after the module before the Module to Skip.

When either Reject Batch or Reject Document is selected as the Action, a Rejection Note can be entered. This will be seen in the Batch History and in Quality Control.

3.4.6 Match All/Match Any

When either Reject Batch or Skip Module is selected as the Action, an additional option is displayed to Match All Documents or Match Any Document.

Match All Documents The Action will be carried out only when the test is true for EVERY relevant document in the Batch

Match Any Document The Action will be carried out when the test is true for ANY relevant document in the Batch

NB. When using Specific Document Class and Field, the test is only evaluated for Documents of that class. All other documents in the Batch are ignored.

3.4.7 Update Batch Settings

To update and save Batch Processing Options, click the Update Batch Settings button. This will overwrite any current settings for the Batch Class.

3.4.8 Clear Batch Settings

To reset the default Batch Processing Options, click the Clear Batch Settings button.

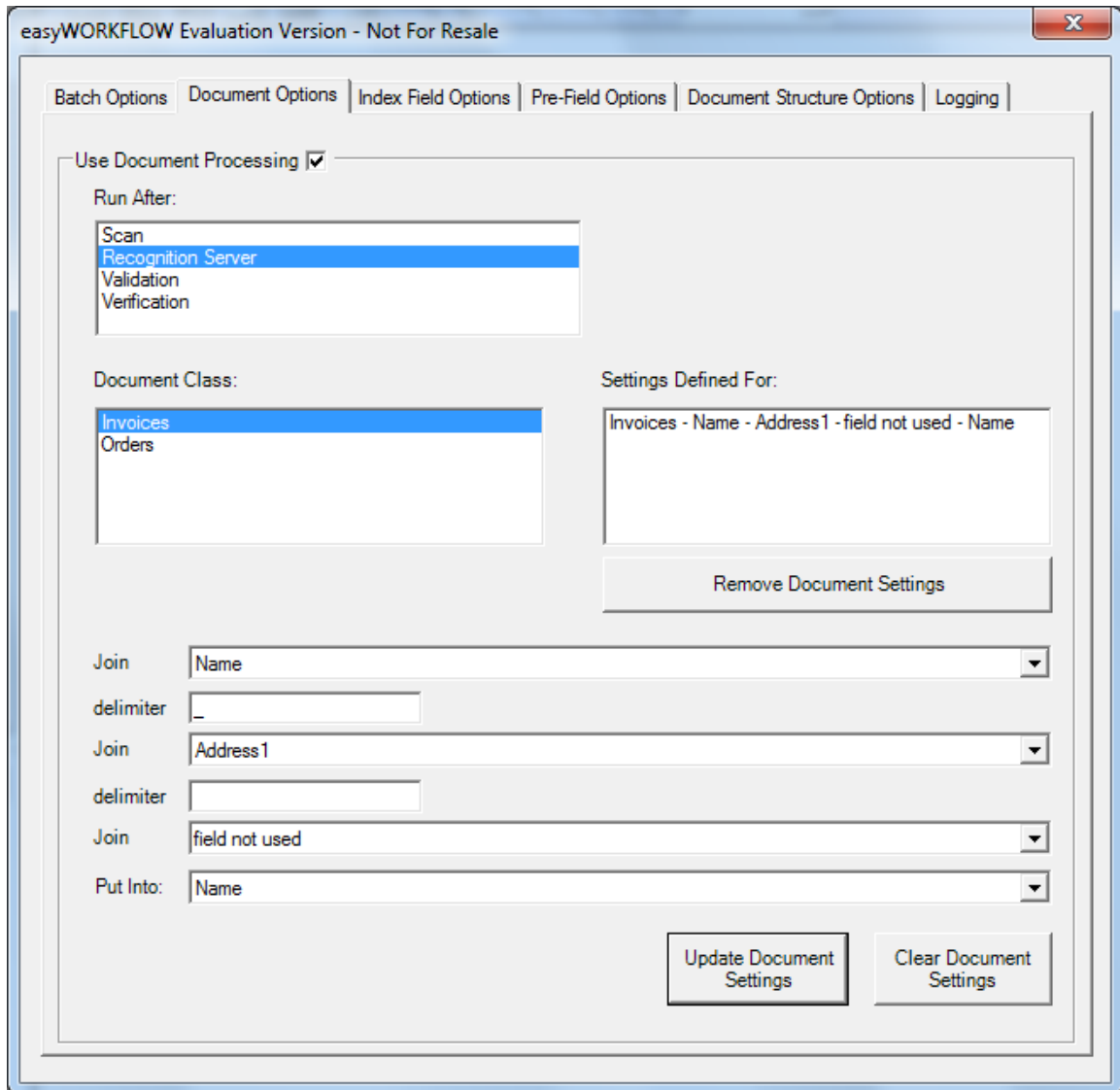
NB. This does not remove any currently selected options. It simply resets the defaults. In order to update, click the **Update Batch Settings** button. To remove Batch Processing Options altogether, uncheck the main Use Batch Processing checkbox.

3.5 Document Processing Options

Check the main Use Document Processing box to enable and set document processing options for the Batch Class.

Multiple sets of processes may be configured for the Batch Class.

Document processes allow the joining of multiple fields (with optional delimiters) for a Document Class and the population of a field with the result.



3.5.1 Run After

The Run After list allows the selection of modules after which to run Document Processes. Multiple modules may be selected.

3.5.2 Document Class

Select a Document Class from the list to configure a process for that Document Class. Once selected, the field lists will be populated with the Index Fields for the selected Document Class.

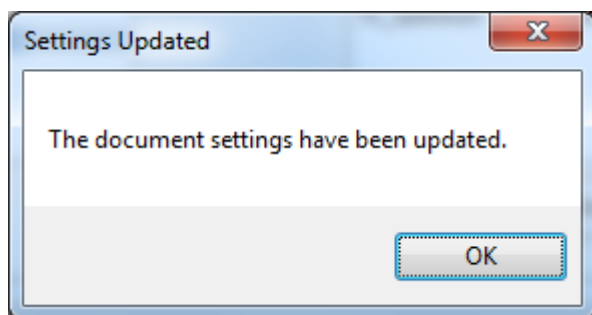
3.5.3 Field and Delimiter Selection

Select the fields to be joined, any required delimiters, and the field to populate with the result. Up to three fields can be joined in one process. If more than three fields are required it is possible to define more processes to achieve this. It is also possible to configure specific formatting for fields by using more processes – see section 5 Common Examples for more details.

At least two fields must be selected for a process, but the third can be ignored by setting to field not used.

3.5.4 Update Document Settings

To save the current options, click the Update Document Settings button. The settings will be saved, and displayed in the Settings For list.



3.5.5 Clear Document Settings

The Clear Document Settings button resets the current options to defaults. It will not remove any saved settings. To remove, use the Remove Document Settings button.

3.5.6 Settings For Display

This display shows all saved Document Processes. Clicking on any of the defined processes in this list will display the settings. If the delimiters are changed, it is possible to update the process by clicking the Update Document Settings button. If the fields have changed however, updating will create a new Document Process.

Document Class:	Settings Defined For:
<input type="text" value="Northwest"/> <input type="text" value="Tri_Spectrum"/>	<input type="text" value="Tri_Spectrum - First Name - Surname - field not used - F"/>
	<input type="button" value="Remove Document Settings"/>
Join	<input type="text" value="First Name"/>
delimiter	<input type="text" value="-"/>
Join	<input type="text" value="Surname"/>
delimiter	<input type="text" value=""/>
Join	<input type="text" value="field not used"/>
Put Into:	<input type="text" value="FullName"/>

NB. Document Processes run in the order they are defined in the Settings For list. If you are using multiple processes to achieve specific outputs in a single field – see section 5 Common Examples – it is essential that they are defined in the correct order.

3.5.7 Remove Document Settings

To remove a Document Process from the Batch Class, select that process in the Settings For list, and click the Remove Document Settings button. This will remove the specified settings from the list.

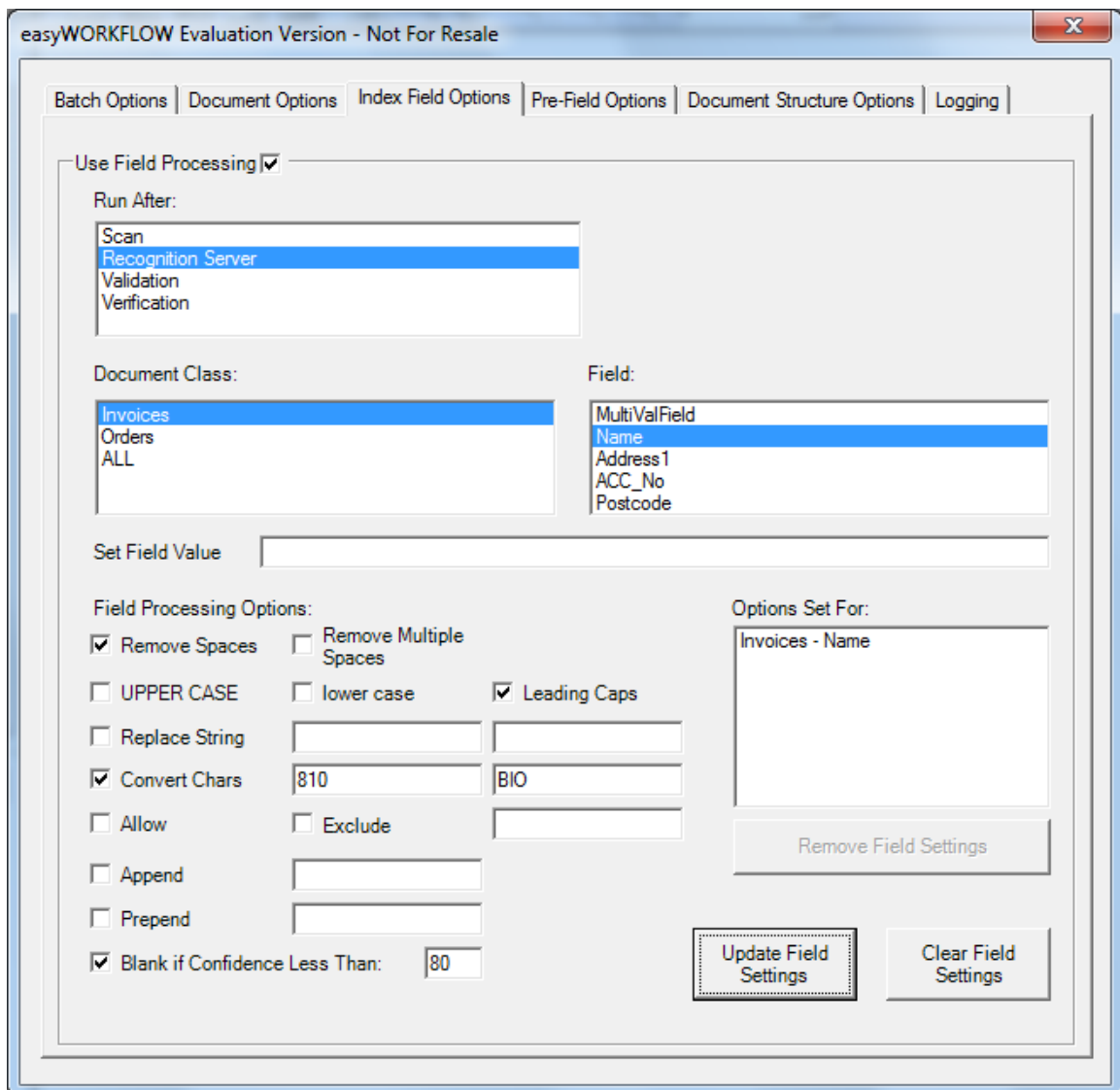
3.6 Index Field Processing Options

Check the main Use Field Processing box to enable and configure Field Processes for the Batch Class.

Settings can be applied for ALL, or specific Document Classes and Index Fields.

ALL All fields on all documents in the Batch will have the Field process options applied.

Specific Class and Field All Documents of the specified Class will have the Field Process options applied to the specified field.



3.6.1 Run After

The Run After list allows the selection of modules after which to run Field Processing. Multiple modules can be selected.

3.6.2 Document Class and Field

Either select ALL to define a global Field Process setting, or select a specific Document Class and Field.

If ALL is selected, it is the only setting. If a specific Document Class and Field is selected, multiple Field Process Options can be configured – 1 per Document Class and Field.

3.6.4 Set Field Value

It is possible to use special values to populate index fields. These are:

- { \$NumberOfDocumentsInBatch }
- { \$NumberOfPagesInDocument }
- { \$DocumentPositionInBatch }
- { \$FormattedDateTime: ddMMyyyy }
- { \$NumberOfDocumentsOfClass: DocClassName }
- { \$NumberOfDocumentsOfFormType: FormTypeName }
- { \$NumberOfPagesInBatch }

A mix of special values and text can be used within a field. For example the following definition:

'DocPos: { \$DocumentPositionInBatch } of { \$NumberOfDocumentsInBatch }'

Could populate the field with:

'DocPos: 3 of 25'

3.6.4 Field Processing Options

There are 12 commonly used Field Processes available for each Index Field. It is possible to select any combination of processes for each field.

NB. During the Field Processing, the processes are applied in the order they appear in the setup screen. If multiple processing options are applied to a single field, the options need to be considered carefully.

3.6.4.1 Remove Spaces

All single space characters are removed.

String value
Stringvalue

3.6.4.2 Remove Multiple Spaces

All multiple space characters are reduced to single spaces.

String value
String value

3.6.4.3 UPPER CASE

All characters are converted to upper case.

String Value
STRING VALUE

3.6.4.4 lower case

All characters are converted to lower case.

String Value
string value

3.6.4.5 Leading Caps

String is converted to leading caps format.

STRING VALUE
String Value

3.6.4.6 Replace String

Any instances of the first replace string are replaced with the second replace string.

Replace [GB] [UK]
GB12345
UK12345

This feature can be used to remove values from a field. For example, setting the first replace string to [GB] and leaving the second replace string blank.

Replace [GB] []

GB12345
12345

3.6.4.7 Convert Characters

A single character found in the first convert string is converted to its corresponding character in the second convert string.

Convert [125680] [IZSGB0]

MART1N R0BERT5
MARTIN ROBERTS

3.6.4.8 Allow

Only characters in the allow string will be left in the field.

Allow [ABCDEFGHijklmnopqrstuvwxyz]

ABC123XYZ
ABCXYZ

3.6.4.9 Exclude

All characters in the exclude string will be removed from the field.

Exclude [1234567890]

abc123xyz
abcxyz

3.6.4.10 Append

The append text will be added to the end of the field value.

Append [-UK Policy]

12345
12345-UK Policy

3.6.4.11 Prepend

The prepend text will be added to the start of the field value.

Prepend [Full Name:]

John Smith
Full Name: John Smith

3.6.4.12 Blank if Confidence Less Than

Any field with a confidence less than that specified will be blanked.

3.6.5 Update Field Settings

To save or update the settings for the field (or ALL if selected), click the Update Field Settings button. The settings will be saved, and displayed in the Options Set For list.

3.6.6 Clear Field Settings

To reset the field options to defaults, click the Reset Field Settings button. This will not remove the settings, to remove use the Remove Field Settings button.

3.6.7 Options Set For List

This list display all the currently configured Field Process Options. Clicking on an entry in the list will display the settings for that particular Document Class and Field (or ALL if that is the selected option).

The screenshot shows a dialog box with the following elements:

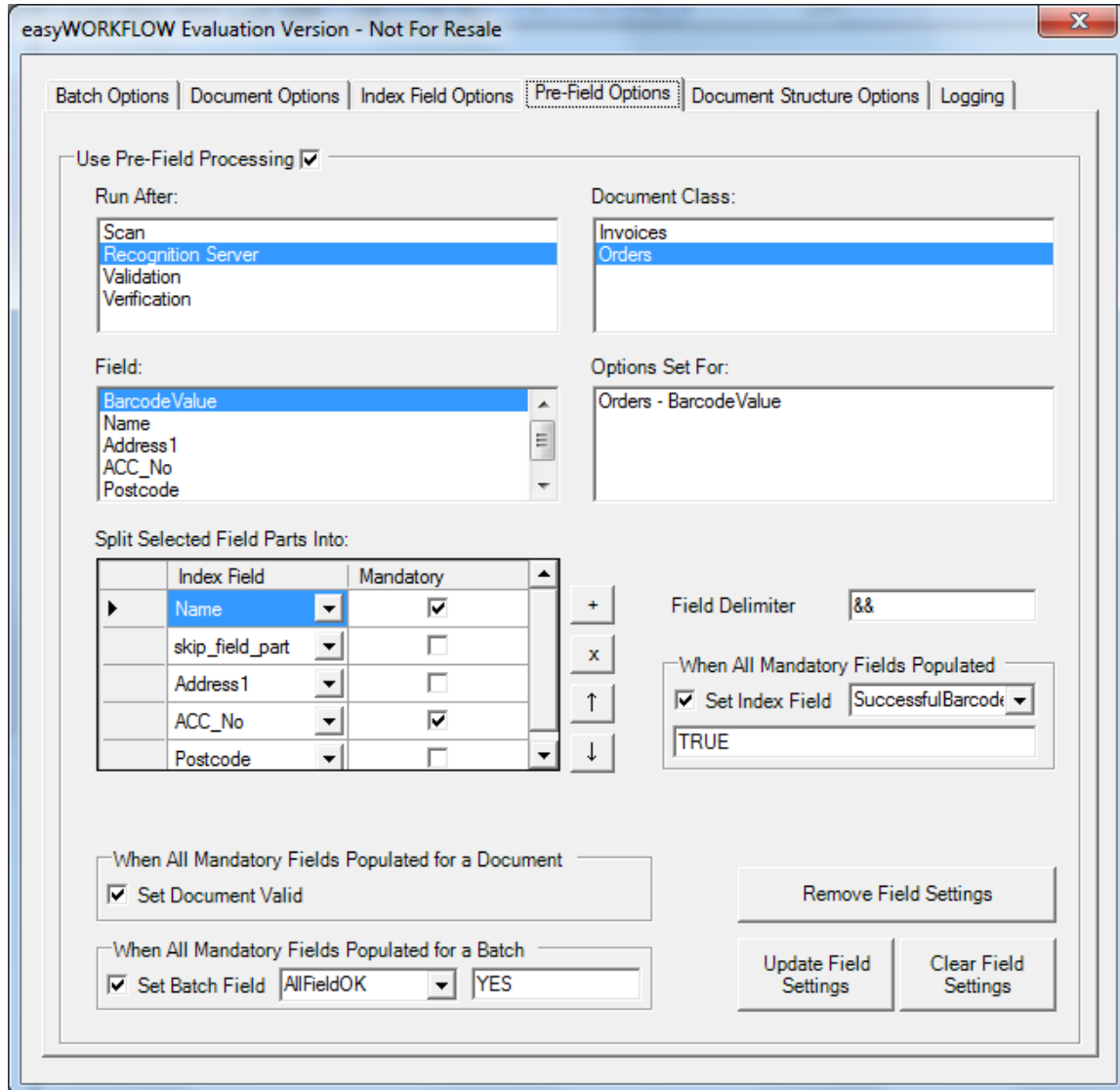
- Field Processing Options:**
 - Remove Spaces
 - Remove Multiple Spaces
 - UPPER CASE
 - lower case
 - Leading Caps
 - Replace String (with two empty text boxes)
 - Convert Chars (with text boxes containing '124580' and 'IZASBO')
 - Allow
 - Exclude (with an empty text box)
 - Append (with an empty text box)
 - Prepend (with a text box containing 'FullName:')
 - Blank if Confidence Less Than: (with an empty text box)
- Options Set For:**
 - Northwest - Name (highlighted)
 - Northwest - Address
 - Tri_Spectrum - Client Ref
- Buttons:**
 - Remove Field Settings
 - Update Field Settings
 - Clear Field Settings

3.6.8 Remove Field Settings

To remove settings, highlight them in the Options Set For list, and click the Remove Field Settings button. The selected options will be removed.

3.7 Pre-Field Options

Check the main Use Pre-Field Processing box to enable and configure Pre-Field Processing.



3.7.1 Run After

Choose which module(s) after which the Pre-Field processes will run.

3.7.2 Document Class and Field

Choose the Document Class and Field you want to define field splitting for. The field selected is the one which will hold the multi-value and be split into the selected fields.

Enter a Field Delimiter for the multi-value field which is to be split.

3.7.3 Split Selected Field Parts Into

Choose which fields will be populated by the values in the multi-value field, by adding rows and selecting fields in this box.

In the example above the field BarcodeValue will be split and index fields will be populated as:

Name	part 1
Address1	part 3
ACC_No	part 4
Postcode	part 5

Note that as skip_field_part was selected in position 2, this part will be ignored.

Mark any of the fields as mandatory.

3.7.4 When All Mandatory Fields Populated

For each field which is to be split, you can specify a field which will be updated if all mandatory parts are populated.

3.7.5 When All Mandatory Fields Populated for a Document

If all mandatory fields (for all split fields) as populated, then a document can be marked as valid.

3.7.6 When All mandatory Fields Populated for a Batch

If all mandatory fields (for all split fields on all documents) are populated, then a batch field can be updated with a specified value.

3.8 Document Structure Options

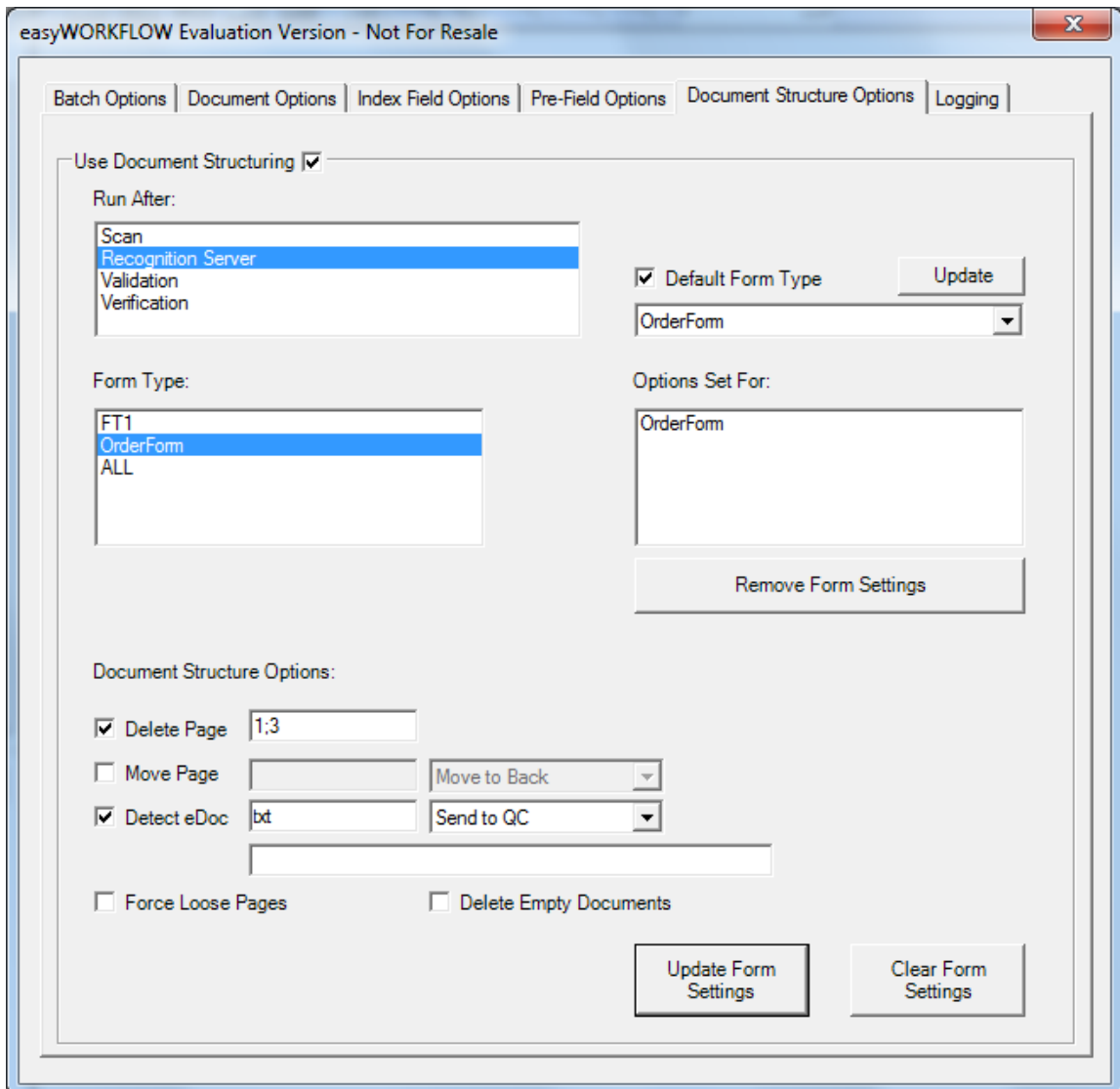
Check the main Use Document Structuring box to enable and configure Document Structure Processes for the Batch Class.

Document Structure Options are defined at the Form Type rather than at the Document Class level in order to give greater flexibility – it may be desirable to remove the first page of FormType1, but not for FormType2 for example.

Settings can be applied for ALL, or specific Form Types.

ALL All Form Types in the Batch will have the Document Structure Process options applied.

Specific Form Type All Form Types of the specified type will have the Document Structure Process options applied.



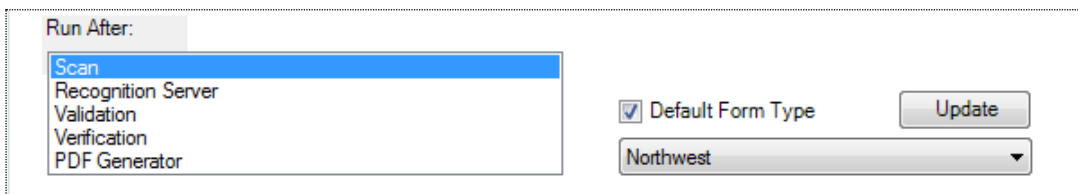
3.8.1 Run After

The Run After list allows the selection of modules where the processing will take place. It is possible to select multiple modules.

3.8.2 Default Form Type

If required, check Default Form Type and select a Form Type from the list. Click Update to apply.

If selected, this option will assign the selected Form Type to any document which has not yet been assigned a Form Type at the time the processing runs.

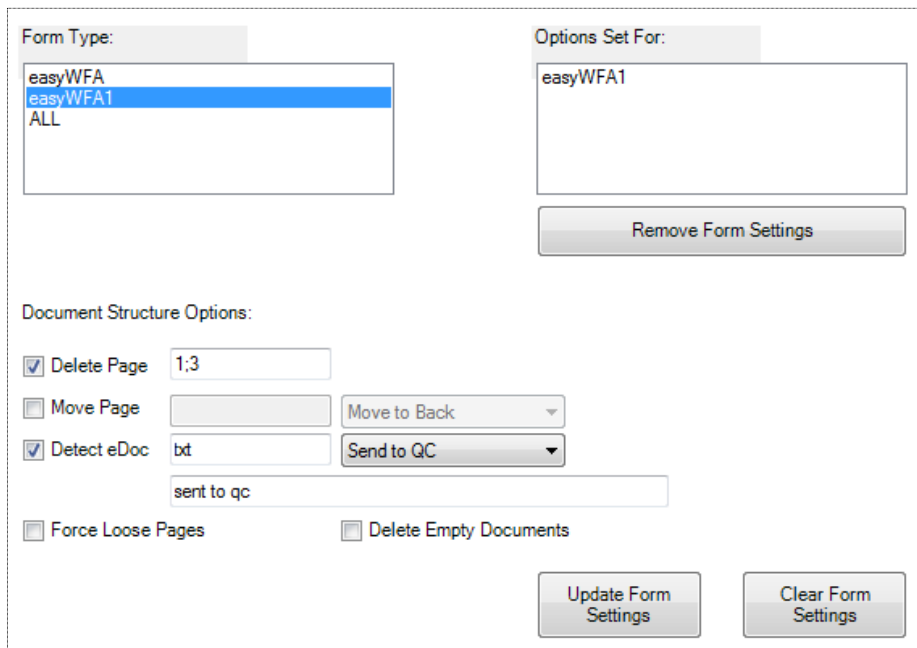


3.8.3 Document Structure Options

Options can be set for ALL Form Types, or for individual Form Types. Highlight a Form Type, or ALL in the Form Type list and edit settings as desired.

Once configured, click Update Form Settings to save the currently defined settings. An entry will appear in the Options Set For list.

To remove settings for a Form Type, select it in the Options Set For list and click Remove Form Settings.



Delete Page

Specify a Page or Pages which should be deleted. If the original document has pages:

Page1
Page2
Page3
Page4
Page5

Then the results of various settings is shown below:

Setting	2	3;5	1;3;5
Result	Page1 Page3 Page4 Page5	Page1 Page2 Page4	Page2 Page4

Move Page

Specify a Page which should be moved.

Select Action type:	<i>Move to Front</i>	Page is moved to first position in document
	<i>Move to Back</i>	Page is moved to last position in document
	<i>Move to Loose Pages</i>	Page is moved from document into Batch Loose Pages
	<i>Move to Position</i>	Page is moved to specified position. If Position is greater than the number of pages in the document, it is moved to last position

Detect eDoc

Specify a file type or types to check for in a document. Where a page is found with the extension specified, it will be handled according to the action specified.

Possible Actions types:	<i>Move to Front</i>	Page is moved to first position in document
	<i>Move to Back</i>	Page is moved to last position in document
	<i>Remove Pages</i>	Page is deleted
	<i>Send to QC</i>	Page is rejected and batch sent to QC. Custom rejection note can be defined
	<i>Move to Loose Pages</i>	Page is moved from document into Batch Loose Pages

If document has original pages: Page1.eml
Page2.tif
Page3.tif
Page4.txt

Then the results of various settings is shown below:

Type	eml	eml;txt	txt
Action	Remove Pages	Move to Back	Send to QC
Result	Page2.tif Page3.tif Page4.txt	Page2.tif Page3.tif Page1.eml Page4.txt	Page1.eml Page2.tif Page3.tif Page4.txt

Force Loose Pages

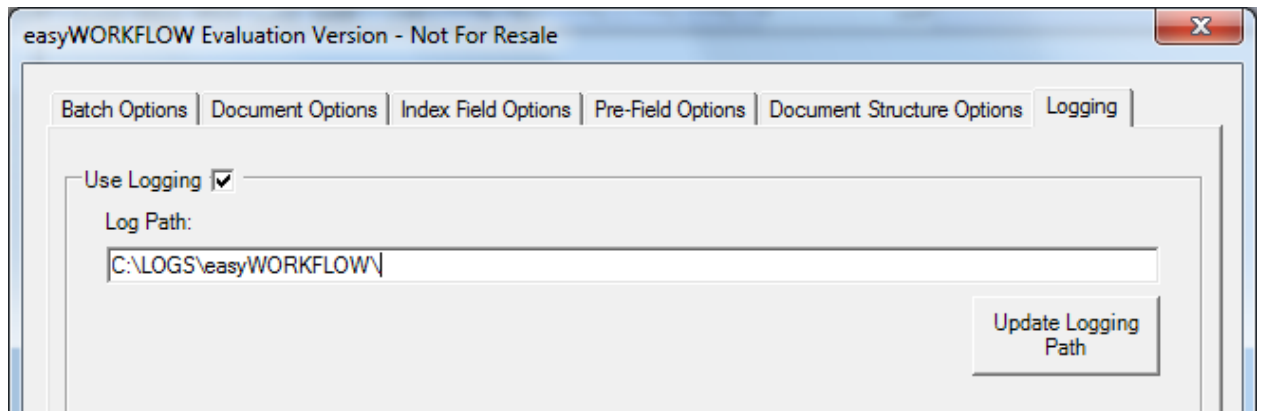
If Force Loose Pages is selected, then for any document with the specified Form Type, all pages will be removed from Documents and sent to the Batch Loose Pages. The empty documents will be deleted.

Delete Empty Documents

If Delete Empty Documents is selected, then any documents which have no pages will be removed from the batch.

3.9 Logging

Check the main Use Logging box to enable and configure the Logging Path.



Enter a valid log path, and click Update Log Path.

The following logs will be produced in the specified path:

- LOG_MM_YYYY.txt
- ERR_MM_YYYY.txt

NB. The logging path is defined for the Batch Class, so when processing batches over multiple workstations, the path must be accessible to all.

4. General Considerations

4.1 Skip If Cannot Load

An option exists in Kofax workflow agents to skip if not loaded. This option can be set to TRUE or FALSE.

If set to TRUE, if a workstation processes a batch but does not have **easyWORKFLOW** installed, it will just ignore the settings.

If set to FALSE, if a workstation processes a batch but does not have **easyWORKFLOW** installed, it will cause an error and the batch will be sent to Quality Control.

By default **easyWORKFLOW** is set to TRUE. If it is required to set this to FALSE, then the `easyWORKFLOW_v2.AEX` file needs to be edited so that the highlighted line reads FALSE instead of TRUE. **easyWORKFLOW** then has to be re-registered via Workflow Agent Manager in the Administration module. **No other changes must be made to `easyWORKFLOW_v2.AEX`**

```
[Workflow Agents]
easyWORKFLOW v2
```

```
[easyWORKFLOW v2]
WorkflowAgentID=easyWORKFLOW v2
WorkflowAgentProgID=easyWORKFLOW.Runtime
WorkflowAgentFile= easyWORKFLOW_Runtime.dll
Description=easyWORKFLOW Code-Free Customisable Batch, Document and Field Processing
Version=2.3
SupportsNonImageFiles=True
SetupProgram=Workflow Agent Setup
WorkflowAgentSkipIfCantLoad=True
```

```
[Workflow Agent Setup]
OCXFile=easyWORKFLOW_Setup.dll
ProgID= easyWORKFLOW.Setup
Visible=0
MinSizeX=300
MinSizeY=150
BatchClassMenus=easyWORKFLOW Menu
```

```
[easyWORKFLOW Menu]
MenuText=easyWORKFLOW v2 Properties...
```

4.2 Processing Order

easyWORKFLOW processes run in the following way during batch processing for a given batch.

- The Batch closes in the current module
- easyWORKFLOW starts
- If Batch is in Error state, no further processing
- Document Structure Run After Module list is checked
- If Document Structure Processes set to run after this module, they are run
- Pre-Field Process Run After Module list is checked
- If Pre-Field Processes set to run after this module, they are run
- Field Process Run After Module list is checked
- If Field Processes set to run after this module, they are run
- Document Process Run After Module list is checked
- If Document Processes set to run after this module, they are run
- Batch Process Run After Module list is checked
- If Batch Processes set to run after this module, they are run
- easyWORKFLOW closes, batch returns to workflow

ALL Document Structure Processing is finished before Pre-Field Processing, ALL Pre-Field Processing is finished before Field Processing, ALL Field Processing is finished before Document Processing, and ALL Document Processing is finished before Batch Processing.

4.3 Running Processes Multiple Times

Whilst it is possible to select that Batch, Document or Field processes run after multiple modules, it is important to ensure that changes made in one processing step are not being overwritten or changed in a second or subsequent processing.

Sometimes this behaviour is desired, and other times it could cause unexpected results. Ensure that the process workflow has been analysed and tested before selecting to run processes multiple times.

4.4 Skipping Modules

When selecting Batch Processing Action to be Skip Module, it must be remembered that any processing specific to that module – lookups, validation scripts, recognition... - will not be run.

easyWORKFLOW will allow the skipping of any module apart from Scan and Release. It is important to check that no other processing will be affected by skipping a module.

NB. In order to skip a module, Batch Processing must be set to run after the module before the one to be skipped. If it is not, the skipping will not take place as **easyWORKFLOW** will not have access to the workflow data required until the preceding module is running.

4.5 Setting Documents Valid

When setting documents valid, they will not be automatically opened in Validation.

This is usually the desired behaviour, but it is important to check that no other processes are set to run in Validation, as these may not run for the documents which have been marked valid.

4.6 Changes to Batch Class

If Batch, Document or Field processes are defined, when **easyWORKFLOW** Properties are opened a check will be made to ensure that all referenced Batch Fields, Document Classes and Index Fields are still present. If they are not, then settings will be removed.

It is recommended therefore to ensure the creation and naming of Document Classes, Batch Fields and Index Fields is finalised before configuring **easyWORKFLOW**.

Additional Batch Fields, Document Classes and Index Fields will not affect current settings.

4.7 Making Settings Live

As with all Kofax Capture settings, in order to make **easyWORKFLOW** changes Live, the Batch Class must be published after changes are made.

If a Batch Class is exported, all **easyWORKFLOW** settings will be exported with the Batch Class.

5. Common Examples

5.1 Batch Processes

5.1.1 Skip Validation if All Fields in Batch Over 90% Confidence

The settings below will check all fields in the Batch. If all fields have a confidence of greater than 90%, then Validation will be skipped.

The screenshot shows a configuration window for batch processing. At the top, 'Use Batch Processing' is checked. Under 'Run After:', a list box contains 'Scan', 'Recognition Server' (highlighted), 'Validation', 'Verification', and 'PDF Generator'. The 'Test Type:' section has three options: 'All Fields in Batch' (checked), 'Specific Document Class and Field' (unchecked), and 'Batch Fields' (unchecked). The 'Test For:' dropdown is set to 'Confidence >' and the 'Value:' text box contains '90'. The 'Action:' dropdown is set to 'Skip Module' and the 'Module To Skip:' dropdown is set to 'Validation'. At the bottom, 'Match All Documents' is checked and 'Match Any Document' is unchecked. There are two buttons: 'Update Batch Settings' and 'Clear Batch Settings'.

NB. Recognition has to be in the Run After list, as it is the module before Validation

NB. Match All Documents means that Validation will be skipped only if ALL fields on EVERY document have confidence greater than 90%. If this was changed to Match Any Document then if ANY document in the batch had ALL fields with confidences greater than 90%, then Validation will be skipped.

5.1.2 Mark Document Valid if all Fields have Data

The settings below will mark a document valid if all the fields in that document have a value in them.

Use Batch Processing

Run After:

Scan
Recognition Server
Validation
Verification
PDF Generator

Test Type:

All Fields in Batch
 Specific Document Class and Field
 Batch Fields

Test For: Value:

Field Value <>

Action:

Mark Document Valid

Match All Documents Match Any Document

Update Batch Settings Clear Batch Settings

NB. Setting the Test For to Field Value <> and leaving the Value blank means that the test will be TRUE where ALL fields in a Document have a value.

All documents of any class will be evaluated, and marked Valid if they satisfy the test. These documents will not need to be checked in Validation.

5.1.3 Reject Document if All Fields Empty

The settings below will reject a document where ALL fields in that document are empty.

Use Batch Processing

Run After:

Scan
Recognition Server
Validation
Verification
PDF Generator

Test Type:

All Fields in Batch
 Specific Document Class and Field
 Batch Fields

Test For: Value:

Field Value =

Action: Rejection Note:

Reject Document All fields empty

Match All Documents Match Any Document

Update Batch Settings Clear Batch Settings

NB. The text entered in the Rejection Note box will be displayed in Quality Control for any documents rejected by this Batch Process.

5.2 Document Processes

5.2.1 Concatenate 4 or More Fields

The basic Document Processing options allow for the concatenation of up to three fields, with delimiters. If there is a requirement to join 4 or more fields, this can be achieved in the following way:

Requirement to join Fld1 # Fld2 # Fld3 # Fld4 # Fld5 into Fld6

- 1. Create a Document Process to join Fld1, Fld2, Fld3 into Fld6 with # delimiters

The screenshot shows a configuration window for a document process. On the left, under 'Document Class:', a list contains 'Northwest' (highlighted) and 'Tri_Spectrum'. On the right, under 'Settings Defined For:', a text box contains 'Northwest - fld1 - fld2 - fld3 - fld6'. Below this is a 'Remove Document Settings' button. The main configuration area has four rows: 'Join' (fld1), 'delimiter' (#), 'Join' (fld2), 'delimiter' (#), 'Join' (fld3), and 'Put Into' (fld6).

- 2. Create a Document Process to Join Fld6, Fld4, Fld5 into Fld6 with # delimiters

The screenshot shows a configuration window for a document process. On the left, under 'Document Class:', a list contains 'Northwest' (highlighted) and 'Tri_Spectrum'. On the right, under 'Settings Defined For:', a text box contains two lines: 'Northwest - fld1 - fld2 - fld3 - fld6' and 'Northwest - fld6 - fld4 - fld5 - fld6'. Below this is a 'Remove Document Settings' button. The main configuration area has four rows: 'Join' (fld6), 'delimiter' (#), 'Join' (fld4), 'delimiter' (#), 'Join' (fld5), and 'Put Into' (fld6).

This will work as follows:

After the first process Fld6 will be set to Fld1 # Fld2 # Fld3
The second process will set Fld6 to Fld6(Fld1 # Fld2 # Fld3) # Fld4 # Fld5
The final value of Fld6 will be Fld1 # Fld2 # Fld3 # Fld4 # Fld5

Using this method, many more processes can be defined to concatenate even more fields.

NB. As Document Processes are performed in the order defined in the Settings For list, it is important that they are defined in the correct order. If changes are required, it may be necessary to remove both Document Processes and start again.

NB. It is possible to use the same field more than once in a Document Process, as is seen in step 2.

5.3 Field Processes

5.3.1 Character Conversion for ICR Cleanup

Most Field Processing options are self explanatory. But a useful application of the Convert options is to cleanup ICR/OCR misreads. This is mainly applicable where the content and format of the field is limited and known. For example a numeric Date of Birth field on an application form should only have numeric values. It is possible to use Convert to attempt to correct some common ICR misreads.

The screenshot shows a dialog box titled "Field Processing Options:" with several settings:

- Remove Spaces
- Remove Multiple Spaces
- UPPER CASE
- lower case
- Leading Caps
- Replace String
- Convert Chars
- Allow
- Exclude

There are three input fields for the Convert Chars option:

- The first field is empty.
- The second field contains "IZASGBO".
- The third field contains "1245680".

Below the Exclude option, there is a field containing "0123456789".

In the example, any alphabetical characters found in the field value which are defined in the Convert from string, will be replaced with the corresponding character from the Convert to string.

If a field was read by ICR as Z10B19B3 it would be set to 21081983

NB. The Allow setting would run after the Convert setting, and remove any characters that could not be converted.

6. Regular Expressions

When using the LIKE or NOT LIKE tests in Batch Options, a regular expression must be entered to test against.

Regular expressions are a way of defining patterns. The values of fields using LIKE or NOT LIKE tests will be evaluated against the defined regular expression. Where a valid match is found, the test returns TRUE. Where no match can be found in the string, the test returns FALSE.

A full discussion of regular expression definition is beyond the scope of this document – an online search will provide further details if required.

Some basics of regular expressions:

Character class	Description	Pattern	Matches
[<i>character_group</i>]	Matches any single character in <i>character_group</i> . By default, the match is case-sensitive.	[ae]	"a" in "gray" "a", "e" in "lane"
[^ <i>character_group</i>]	Negation: Matches any single character that is not in <i>character_group</i> . By default, characters in <i>character_group</i> are case-sensitive.	[^aei]	"r", "g", "n" in "reign"
[<i>first - last</i>]	Character range: Matches any single character in the range from <i>first</i> to <i>last</i> .	[A-Z]	"A", "B" in "AB123"
.	Wildcard: Matches any single character except \n. To match a literal period character (., or \u002E), you must precede it with the escape character (\.).	a.e	"ave" in "nave" "ate" in "water"
\w	Matches any word character.	\w	"I", "D", "A", "1", "3" in "ID A1.3"
\W	Matches any non-word character.	\W	" ", ".", in "ID A1.3"
\s	Matches any white-space character.	\w\s	"D " in "ID A1.3"
\d	Matches any decimal digit.	\d	"4" in "4 = IV"

Quantifier	Description	Pattern	Matches
*	Matches the previous element zero or more times.	<code>\d*\.\d</code>	".0", "19.9", "219.9"
+	Matches the previous element one or more times.	<code>"be+"</code>	"bee" in "been", "be" in "bent"
?	Matches the previous element zero or one time.	<code>"rai?n"</code>	"ran", "rain"
{ <i>n</i> }	Matches the previous element exactly <i>n</i> times.	<code>",\d{3}"</code>	",043" in "1,043.6", ",876", ",543", and ",210" in "9,876,543,210"
{ <i>n</i> , }	Matches the previous element at least <i>n</i> times.	<code>"\d{2,}"</code>	"166", "29", "1930"
{ <i>n</i> , <i>m</i> }	Matches the previous element at least <i>n</i> times, but no more than <i>m</i> times.	<code>"\d{3,5}"</code>	"166", "17668" "19302" in "193024"

A few examples of the type of tests which can be defined are shown below:

```
[A-Z]{2}[0-9]{5}
AB12345    TRUE
ABC123     FALSE
```

```
[A-Z]{1,3}[0-9]{2}
AB123     TRUE
1234      FALSE
```

note that a substring (AB12) match will return TRUE

Regular expressions will return TRUE when a field's value contains the pattern. So for example looking for 'BC123' will return TRUE in 'ABC1234'. To avoid this, it is possible to use `\b` at the beginning or end of a regular expression.

```
\b[A-Z]{1}[0-9]{2}
A12        TRUE
A123       TRUE
1234       FALSE
```

```
\b[A-Z]{1}[0-9]{2}\b
A12        TRUE
A123       FALSE
AB1234     FALSE
```

7. Contact

For support and assistance please contact mail@davidcrewe.com