

# eFLOW Extract Validate

## User Guide

Version 6.0

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# eFLOW Extract Validate

In the eFLOW Extract Validate station, you can correct and complete fields that were not correctly recognized or that did not pass validations in the Recognize station.

**Note:** eFLOW Extract Validate is customizable. Depending on your system configuration, some features described in this guide may not be available, or may be different than described.

## Open Validate

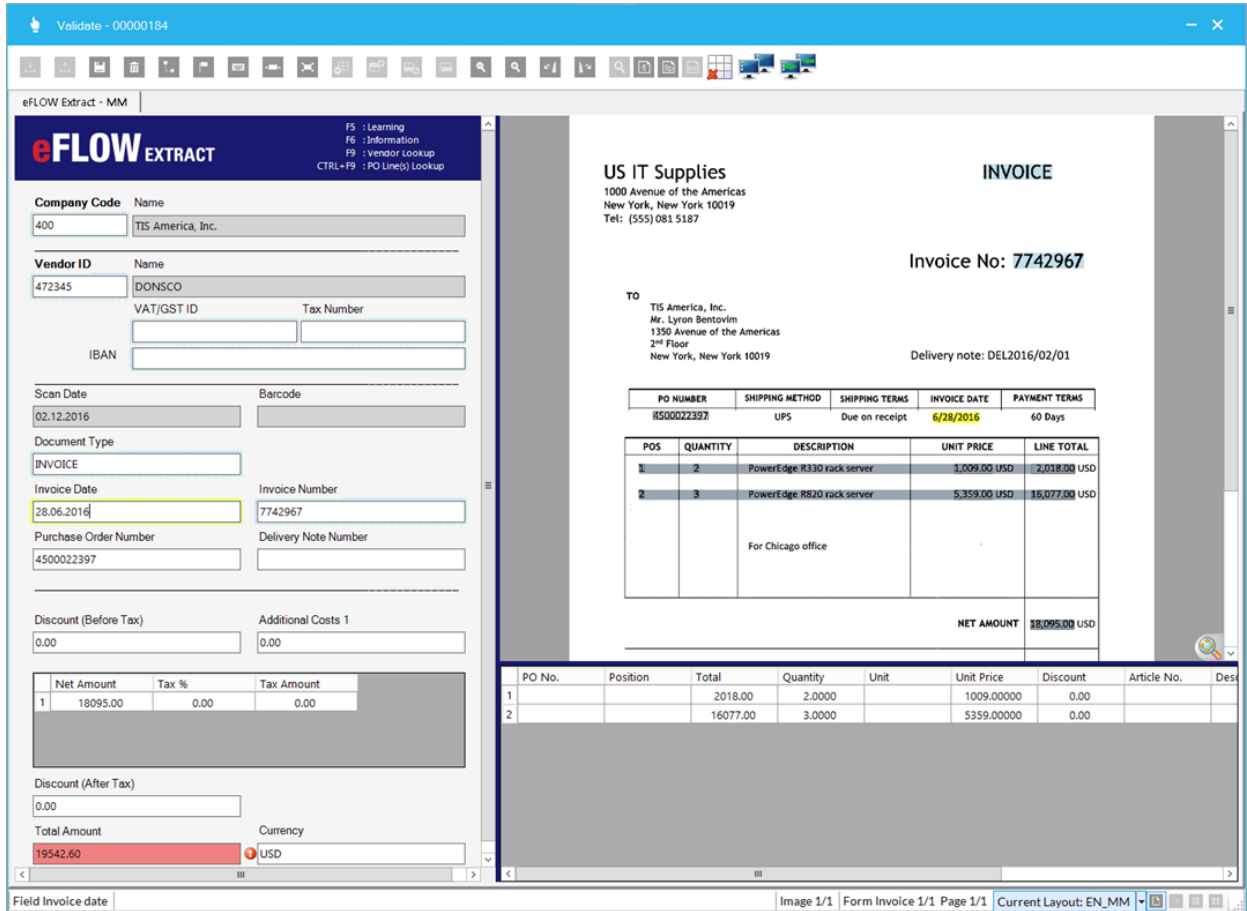
In eFLOW Launch, select your eFLOW application, then click the **Validate** button.



The **Validate** window opens. Usually, collections load automatically and the fields and image are displayed.

If collections do not automatically load, click the **Get Batch**  button.

You can now [navigate](#) to fields that need correction and type in the values, transfer them from [lookup tables](#) or [capture](#) them from the image.



Fields and values on the image are highlighted:

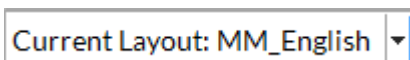
Color	Screen area	Meaning
Green	Field layout	Fields with a correct value. Non-mandatory fields without a value are also highlighted in green.
Blue	Image	Recognized fields.
Yellow	Field layout and image	Currently selected field.
Red	Field layout	Invalid mandatory field. You must correct invalid fields before you can move to the next field or form. If you cannot correct the value for some reason, set an <u>exception</u> .




## Layouts

The layout of the fields depends on the configuration, and on the invoice type. The invoice type can be one of the following:

- MM invoice: relates to a purchase order and has line items
- FI invoice: does not relate to a purchase order and has no line items
- FIP invoice: does not relate to a purchase order, but has line items






The name of the current layout is displayed at the bottom right of the screen. To select a different layout (if available), click the arrow and select the layout from the list.





If configured, you can also click the **FI**, **FIP** and **MM** buttons to change the invoice type, and therefore also the layout:   . When you change the invoice type, the appropriate validations for that invoice type are applied.

## Collections

Use the following buttons or shortcut keys to work with collections.

Command	Button	Shortcut	Description
Get Batch		F6	Retrieves available collections from the server.  The number of collections retrieved in one batch is defined in the Validate station configuration.  Available only when no batch is currently loaded.
Put Batch		F7	Writes the collections back to the server after work on the collections is completed.  Available only when all fields in the collection are valid.
Save Batch		CTRL+B	Saves the collections without writing them back to the server.
Discard Batch		CTRL+ALT +B	Discards the collections without saving any changes.
Forms Navigation		F12	Displays the <b>Forms navigation</b> window with thumbnails of all pages of all forms. Click a thumbnail to display a specific page.

Command	Button	Shortcut	Description
Exceptions		ALT+E	Opens the <b>Exceptions list</b> dialog box. See <a href="#">Exceptions</a> .
Shortcut Editor		F1	Opens the <a href="#">Shortcut Editor</a> .

## Navigation



Use the following shortcut keys to navigate between fields and forms.

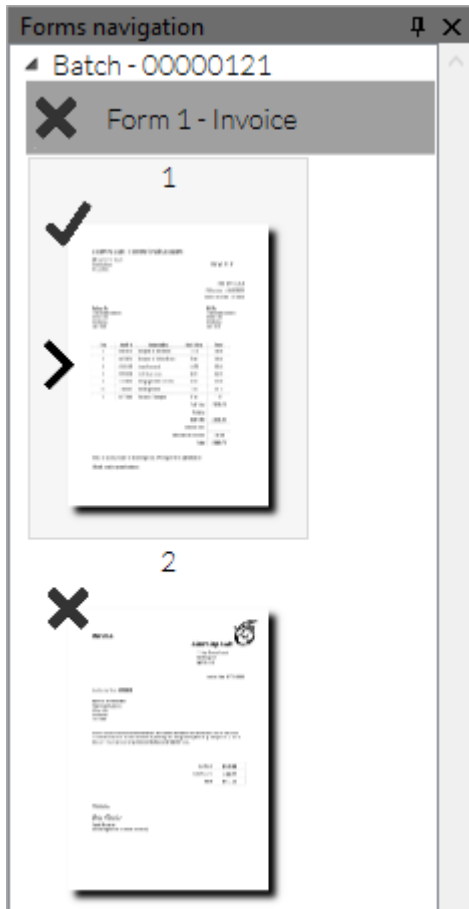
Go to	Shortcut	Description
Next field	TAB	The next or previous field is determined by the tab index order defined in the Layout Designer.
Previous field	SHIFT+TAB	
Next invalid field	ENTER	The next or previous invalid field is determined by the tab index order defined in the Layout Designer.  When there are no more invalid fields in the current form, the cursor moves to the next form that contains invalid fields, if such a form exists.
Previous invalid field	SHIFT+ENTER	
Next form	CTRL+PGDN	Available only when all fields of the current form are valid.
Previous form	CTRL+PGUP	

In the **Forms navigation** window, you can navigate between forms and their pages. Click the **Forms**

**Navigation**  button or press F12 to open this window.

Each form page is displayed as a thumbnail. An arrow  indicates the form whose input fields are currently displayed in the layout window.

Forms and pages with invalid fields are marked with a cross . Forms and pages with no invalid fields are marked with a tick .





Click on a thumbnail to view the page in the image viewer.







**Note:** Clicking on a thumbnail simply displays the image of the selected page in the image viewer. It does not change the display in the layout window to show the input fields of the form to which the selected page belongs.

## Image viewer

Use the following buttons or shortcut keys to work with images.






Command	Button	Shortcut	Description
Zoom In		CTRL +	Increase the image size.
Zoom Out		CTRL -	Decrease the image size.



Command	Button	Shortcut	Description
Fit Viewer to Window Width		F2	Adjust the image viewer to show the full image width.
Fit Viewer to Window Size		F3	Adjust the image viewer to show the entire image.
Rotate Left		CTRL+Q	Rotate the image counter-clockwise.
Rotate Right		CTRL+P	Rotate the image clockwise.
Show/Hide Image Viewer		ALT+V	Display or hide the image viewer.
Switch Screens		ALT+W	Open the image in a separate window. This is useful, for example, if you work with two monitors: you can display the fields on one screen and the image on the other.

## Tables

Use the following buttons or shortcut keys to work with tables, such as the line items table in MM or FIP invoices.

Command	Button	Shortcut	Description
Delete Row		CTRL+H	Deletes the current row.
Insert Row Above		CTRL+I	Inserts a new row above the current one.
Insert Row Below		CTRL+J	Inserts a new row below the current one.
Copy Row From Above		CTRL+K	Copies the row above the current one and inserts it as a new row.
Delete Table			Deletes the entire table.

## Lookup tables

Lookup tables enable you to search for field values and transfer them to the fields. The following lookup tables are available:

Table	Shortcut	Description
Receiver Lookup	F9	Click in the <b>Company Code</b> field, then press F9.
Vendor Lookup	F9	Click in a vendor field, then press F9.
PO Items Lookup	CTRL+F9	Click in the <b>PO No.</b> field, then press Ctrl+F9.

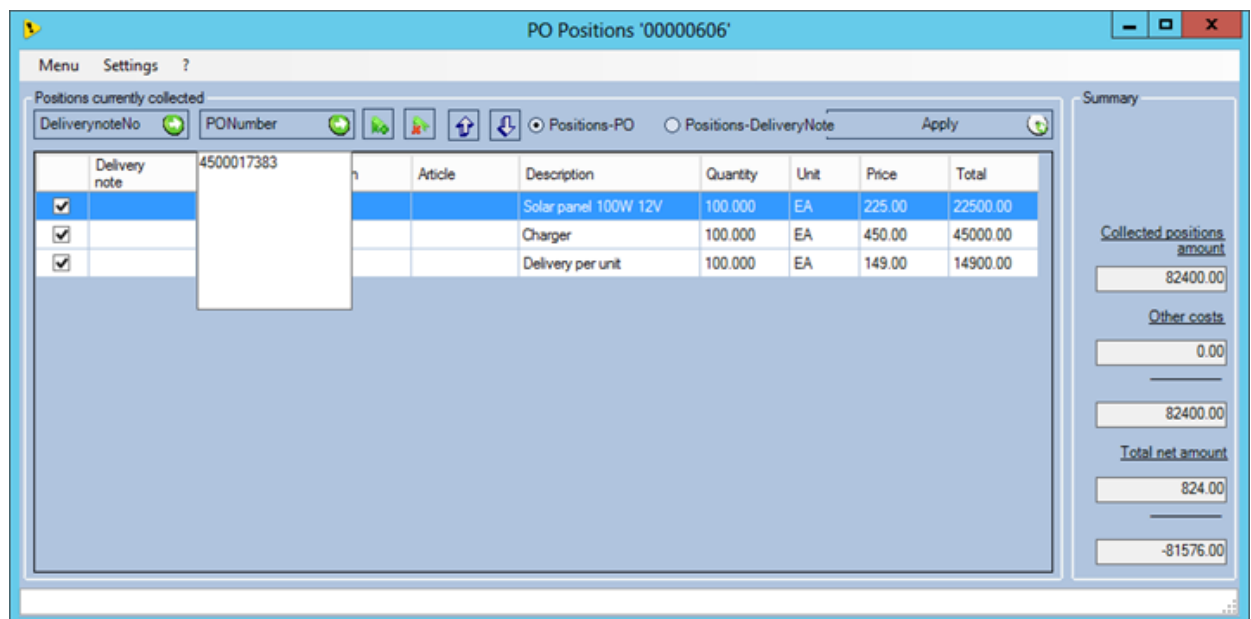
### Receiver and vendor lookups

1. Enter search criteria, then click the **Search** button.
2. Select a record, then click **Yes** to transfer the values of the selected record to the fields.





### PO Items Lookup

1. Select **Positions-PO** or **Positions-DeliveryNote**, depending on whether you want to find values in the purchase order or a delivery note.

By default, the items of the recognized purchase order or delivery note are displayed. To search in a different PO or delivery note, click the **DeliverynoteNo** or the **PONumber** button, type in the number and click the button again. You can add multiple numbers.



2. Click in the check box to select items whose values you want to transfer.

Click  to select all items and  to deselect all items. You can also change the position of the items by clicking the arrow buttons  .

3. Click the **Apply** button.


## Capture values from the image

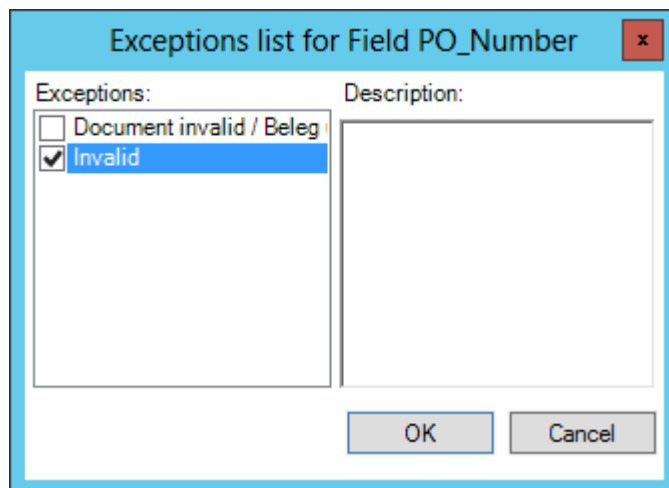
You can capture a value on the image and transfer it directly to a field.

1. Click in the field.
2. Hold down the left mouse button and draw a rectangle around the corresponding value in the image.

## Exceptions

If you are unable to complete a field or an entire form for some reason, you can mark it as an exception. Collections with exceptions move to the Escalate station, where they can be handled by other users.

1. Click the **Exceptions**  button.
2. In the **Exceptions List** dialog box, select an exception and enter a description of the problem (optional).
3. Click **OK**.



## FIP supplier assignments

FIP invoices (non-PO related invoices with line items) usually require that accounting information is assigned to each line item. eFLOW Extract can automatically assign accounting information based on identifiers quoted on the invoice, such as mobile phone numbers or car registration numbers. You can add and change these assignments in the Validate station.

Qty	Description	Product Code	Quantity	Nett Value/£	Amount /£
1	Perfect care Pre-wash, main wash, clear gloss, drying with supplemental maintenance, interior cleaning	K-TI 2000	1	31,60	31,60
2	Perfect care Pre-wash, main wash, clear gloss, drying with supplemental maintenance, interior cleaning	K-TI 66	1	31,60	31,60
3	Oil change service	K-TI 9999	1	72,40	72,40

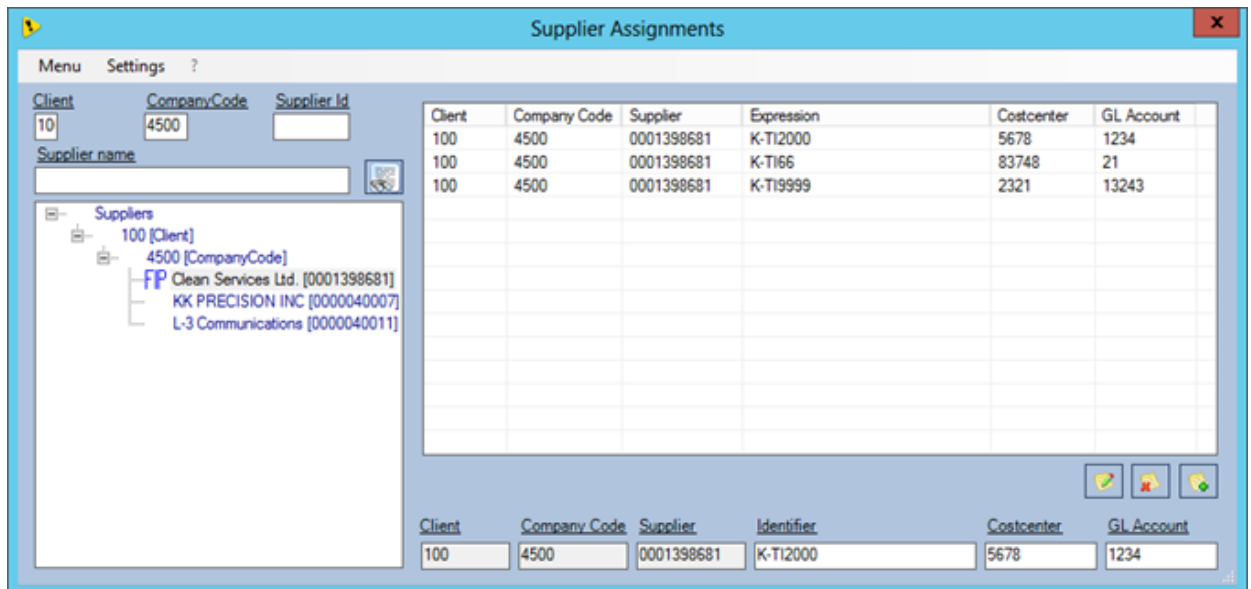
  

	Total	Quantity	Qty. Unit	Unit price	Discount	Description	Identifier	Costcenter	GL account
1	31.60	1.0000		31.600	0.00		K-TI2000	5678	1234
2	31.60	1.0000		31.600	0.00		K-TI66	83748	21
3	72.40	1.0000		72.400	0.00		K-TI9999	2321	13243





1. In the **Vendor ID** field or the **Identifier** field, press CTRL + F9.

The **Supplier Assignments** dialog box opens.

Suppliers for which account assignments are already defined are indicated by the **FIP** icon in the **Suppliers** list.



2. Perform one of the following actions:

Action	Details
Search for a supplier	Enter the client, company code and supplier ID in the search fields at the top left of the dialog box, then click the <b>Search</b> button  .  Leave the <b>Supplier ID</b> and <b>Supplier Name</b> fields blank to list all FIP suppliers for the client and company code.
Change an existing assignment	<ol style="list-style-type: none"> <li>1. Click the supplier and then click the line with the assignment you want to change.</li> <li>2. Enter the new values in the fields at the bottom of the dialog box, then click the <b>Update selected assignment</b> button .</li> </ol>
Add assignments for a new supplier	<ol style="list-style-type: none"> <li>1. Right-click the supplier and select <b>FI Positions</b>.</li> <li>2. Enter values in the fields at the bottom of the dialog box, then click the <b>Add a new assignment</b> button .</li> </ol>
Delete an assignment	Click the line with the assignment, then click the <b>Delete selected assignment</b> button  .
Delete all assignments for a supplier	Right-click the supplier and select <b>FI Positions</b> .

3. Select **Menu > Exit** to save your changes and close the dialog box.


## Information dialog

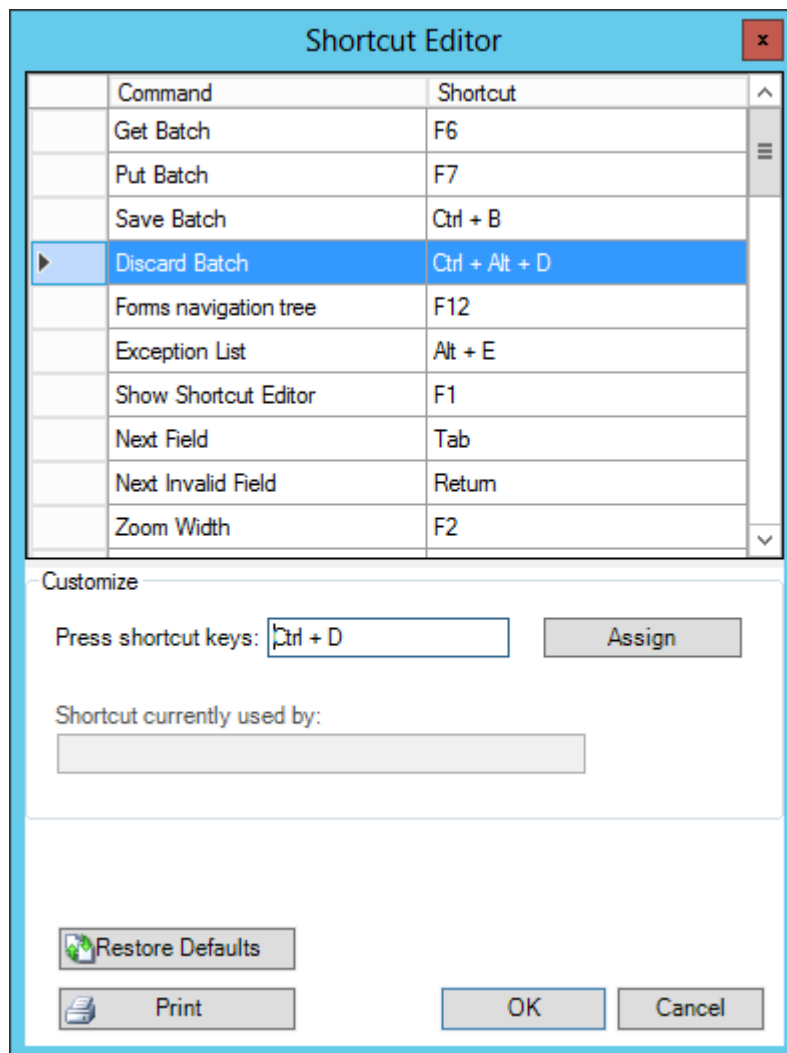
Press F6 to open the **Information** dialog, which provides the following information.

Tab	Available information
Page-Recognition-Info	Scripts or learning schemas that were used to identify field values.
Receiver-Info	How the receiver information was found.
Supplier-Info	How the vendor information was found.
Usetag-Info	Values of user tags.

## Shortcut editor

You can edit the default shortcut keys.

1. Click the **Shortcut Editor**  button.
2. In the **Shortcut Editor** dialog box, select the shortcut you want to change.
3. Click in the **Press shortcut keys** field and press the key combination you want to use.
4. Click the **Assign** button.



# eFLOW Extract Learning

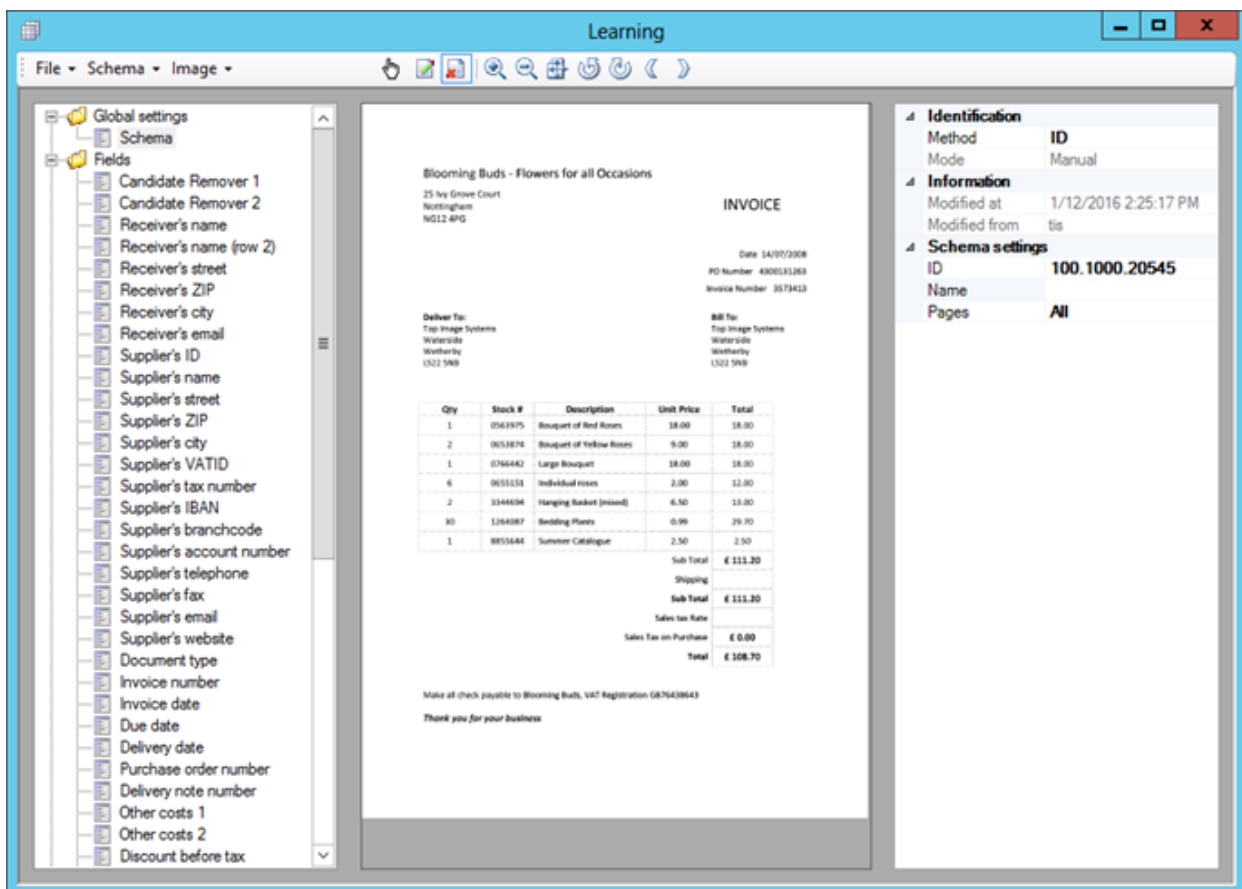
The Learning feature of the eFLOW Extract Validate station enables you to teach eFLOW Extract how to find correct field values. Learning involves creating a “schema”, which specifies how the learning is identified (by text or supplier ID) and the position of the fields. Learning schemas are applied after the regular recognition scripts.

After you create learning schemas, they are applied directly to the next collection that passes through the Recognize station. It is not necessary to restart the Recognize station.

## Open Learning

To open Learning, in the Validate or Escalate station, press the F5 key.

The **Learning** window opens.



**Learning**

File ▾ Schema ▾ Image ▾

**Global settings**

- Schema
- Fields**
  - Candidate Remover 1
  - Candidate Remover 2
  - Receiver's name
  - Receiver's name (row 2)
  - Receiver's street
  - Receiver's ZIP
  - Receiver's city
  - Receiver's email
  - Supplier's ID
  - Supplier's name
  - Supplier's street
  - Supplier's ZIP
  - Supplier's city
  - Supplier's VATID
  - Supplier's tax number
  - Supplier's IBAN
  - Supplier's branchcode
  - Supplier's account number
  - Supplier's telephone
  - Supplier's fax
  - Supplier's email
  - Supplier's website
  - Document type
  - Invoice number
  - Invoice date
  - Due date
  - Delivery date
  - Purchase order number
  - Delivery note number
  - Other costs 1
  - Other costs 2
  - Discount before tax

**Blooming Buds - Flowers for all Occasions**  
25 Ivy Grove Court  
Nottingham  
NG12 4PG

**INVOICE**

Date: 14/01/2016  
PO Number: 4800111263  
Invoice Number: 3573412

Deliver For:  
Top Image Systems  
Waterside  
Wetherby  
LS22 5WB

Bill To:  
Top Image Systems  
Waterside  
Wetherby  
LS22 5WB

Qty	Stock #	Description	Unit Price	Total
1	0543975	Bouquet of Red Roses	18.00	18.00
2	0653874	Bouquet of Yellow Roses	9.00	18.00
1	0766442	Large Bouquet	18.00	18.00
6	0655131	Individual roses	2.00	12.00
2	1344934	Hanging Basket (mixed)	6.50	13.00
30	1240887	Bedding Plants	0.99	29.70
1	8853444	Summer Catalogue	2.50	2.50
			Sub Total	€ 113.20
			Shipping	
			Sub Total	€ 113.20
			Sales tax Rate	
			Sales Tax on Purchase	€ 0.00
			<b>Total</b>	<b>€ 108.70</b>

Make all chek paymtn to Blooming Buds, VAT Registration GB76438643  
Thank you for your business

**Identification**

Method	ID
Mode	Manual
<b>Information</b>	
Modified at	1/12/2016 2:25:17 PM
Modified from	tis
<b>Schema settings</b>	
ID	100.1000.20545
Name	
Pages	All

The left pane lists the fields and tables that can be learned. Which fields and tables are available here can be configured in the file *ConfigFieldLearning.appconfig*.

The middle pane displays the image. To open an image, on the **Image** menu, select **Add**.

The right pane displays the schema, field or table settings, depending on which element you select in the left-hand pane.

To create a learning schema, you select a learning method, enter a unique schema name, learn the fields or tables, and then save the schema.

## Schemas

Use the following menu items to work with schemas.

Action	Menu item	Notes
Save a schema	<b>Schema &gt; Save</b>	<p>Before saving a schema, in the settings pane, enter a unique <b>Name</b> and, in the case of an <u>ID-based schema</u>, a schema <b>ID</b>.</p> <p>Optionally, in the <b>Pages</b> list, select an option to apply the settings to all invoice pages, only the first page, only middle pages, or only the last page.</p> <p>You can save the schema with or without the image. Depending on the configuration, schemas are saved in the <i>FieldLearning</i> database or on a file share.</p>
Create a schema	<b>File &gt; New</b>	To load an image for the new schema, on the <b>Image</b> menu, select <b>Add</b> .
Open a schema	<b>Schema &gt; Open</b>	Type a <b>Name</b> and click the <b>Search</b> button to find the schema.
Disable a schema	<b>Schema &gt; Edit</b>	<p>The Recognize station ignores disables schemas.</p> <p>To find the schema, type a <b>Name</b> and click the <b>Search</b> button.</p> <p>Check the <b>Deactivated</b> check box and click the <b>Change</b> button.</p>
Export a schema	<b>File &gt; Export</b>	You can export selected schemas or all schemas to individual files or to a single file.
Import a schema	<b>File &gt; Import</b>	Note that existing schemas are overwritten when importing.



Action	Menu item	Notes
View schemas defined for the current collection	<b>Schema &gt; Current collection</b>	This menu item is only available if you open Learning from Validate or Escalate.

## Learning methods

- ID-based learning:

The schema is identified by a supplier ID. This method requires that the supplier has already been identified. The ID may consist of just the supplier ID from the reference database, or the client, company code and supplier ID, for example 100.2000.123456. Leading zeros are ignored.

You can only create one ID-based learning schema per company code and client.

- Text-based learning:

The schema is identified by the image contents. You can define up to three texts that the image must contain in order for the schema to be applied.


A text-based learning schema is valid for all company codes and clients and is usually used when an incorrect vendor or no vendor was identified, or when multiple layouts exist for a vendor.

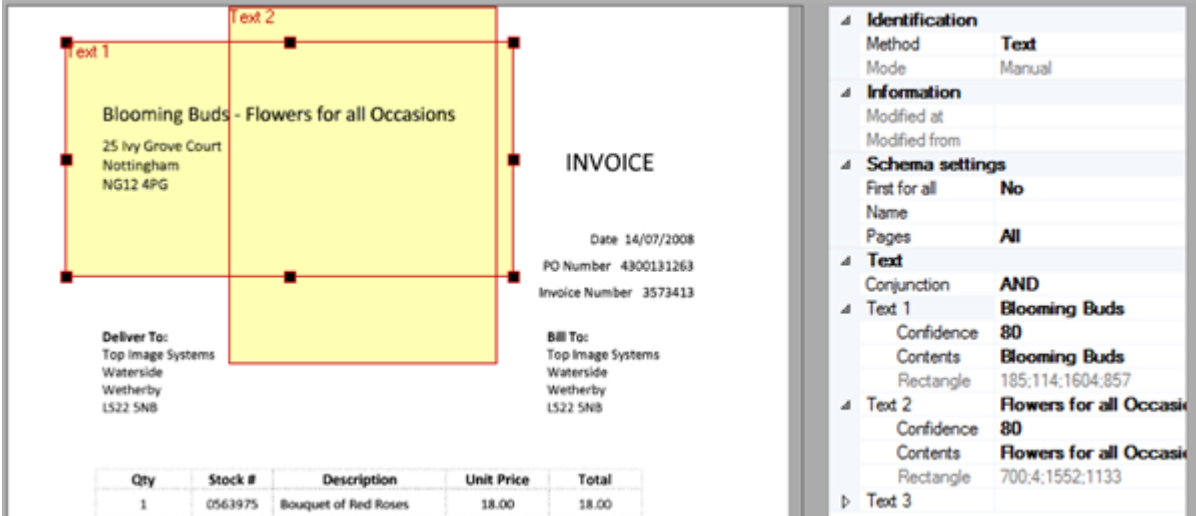
### ID method

1. In schema settings pane, in the **Method** list, select **ID**.
2. If necessary, in the **ID** field, enter a supplier ID.

When you open Learning from the Validate or Escalate station, the ID field is automatically filled if the supplier has been recognized.

### Text method

1. In schema settings pane, in the **Method** list, select **Text**.
2. In the **Text1** field, enter a text located somewhere on the invoice.
3. Click the **Draw rectangle**  button and draw a large rectangle around the text on the image. You must draw a large rectangle, because, unlike fields, no tolerance rectangle is added.



The screenshot shows an invoice for 'Blooming Buds - Flowers for all Occasions'. Two yellow text boxes are drawn over the invoice content, labeled 'Text 1' and 'Text 2'. 'Text 1' covers the address '25 Ivy Grove Court, Nottingham, NG12 4PG'. 'Text 2' covers the title 'Blooming Buds - Flowers for all Occasions'. To the right, a settings panel is visible with the following configuration:

Identification	
Method	Text
Mode	Manual
Information	
Modified at	
Modified from	
Schema settings	
First for all	No
Name	
Pages	All
Text	
Conjunction	AND
Text 1	Blooming Buds
Confidence	80
Contents	Blooming Buds
Rectangle	185;114;1604;857
Text 2	Flowers for all Occas
Confidence	80
Contents	Flowers for all Occas
Rectangle	700;4;1552;1133
Text 3	


At the bottom of the invoice, there is a table with the following data:

Qty	Stock #	Description	Unit Price	Total
1	0563975	Bouquet of Red Roses	18.00	18.00

- (Optional) Enter **Text2** and **Text3** and draw the corresponding rectangles. Select the appropriate **Conjunction**:
  - AND**: all texts must be found
  - OR**: any one of the texts must be found
- You must specify a **Confidence** level, because characters of the text may not be correctly recognized. Normally, you should not need to change the default confidence value of **80**.

## Fields

### Learn a field

- In the fields list, select a field.
- Click the **Draw rectangle**  button and draw a rectangle closely around the corresponding value on the image. A tolerance rectangle is automatically added, which is only visible on the image when the field is selected.

### Unlearn a field

If a field has been incorrectly recognized by the recognition scripts, you can “unlearn” the field. For example, a number on the invoice may have been recognized as the delivery note number, but no delivery note number is actually quoted on the invoice.

In the fields or tables list, right-click the field and select **Field does not exist**.

## Tables

Table learning is similar to field learning, with the following differences:

- An entire table row is learned instead of a single field.
- Vertical tolerances are not relevant.
- Rules can be defined.

**Note:** Table recognition can be slow if many columns, or columns that cannot be validated, such as the description, have been learned.

### Learn a table

You learn tables by drawing rectangles around their fields (see [Fields](#)). Whenever possible, you should learn all fields in the first row of the table, especially the amount, unit price and line total. The line total is particularly important because this value is required by the underlying script that supports field recognition.

### Unlearn a table

In the tables list, right-click the table and select **Table does not exist**.

You can only unlearn the entire table, not individual fields.

### Table settings


To open the table settings, in the table list, select the table.



The **Max. Difference** defines the number of pixels within which the following row is located.

Normally, for items with 1-2 rows, you do not have to change the value of 120. For items with 3 rows or more, you should only increase or reduce the value accordingly if the item rows are very close together and were partially skipped.

## Table rules


Table rules specify the position of the table fields in relation to one another.

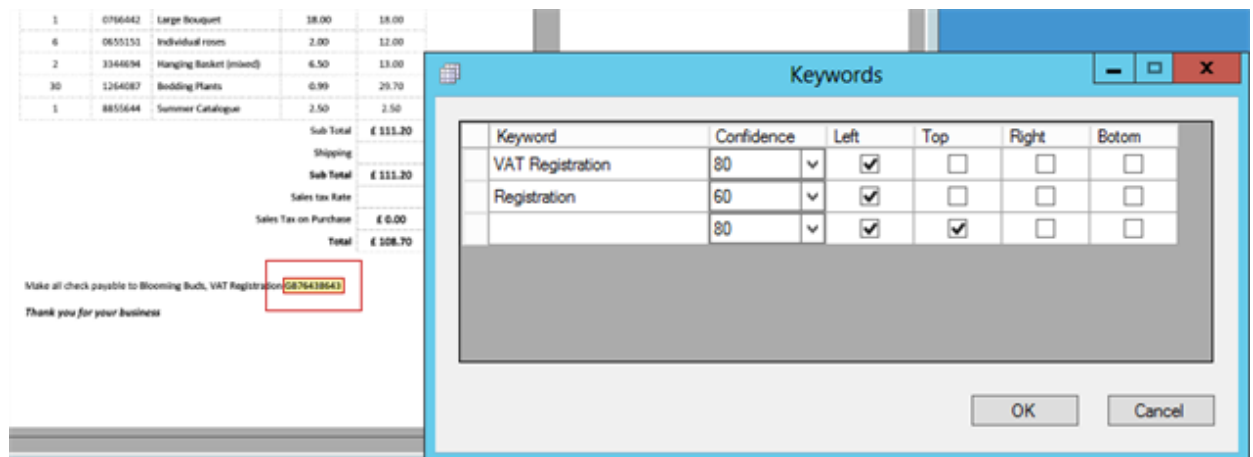
1. In the tables list, select the table.
2. In the settings pane, click in the **Rules** field, then click the  button.
3. In the **Rule Manager** dialog box, right click **Rules** and select **New**.
4. Click **New rule 1** twice and enter a name.
5. Right-click the rule and select **Edit**.
6. In the **Rule Editor**, add fields, positioning elements and values to build the rule syntax, which is displayed in the box at the top of the dialog.
7. Click **OK** to save the rule.

Action	Follow these steps
Add a field to the rule	Select the field and click the  button.
Add a positioning element	Select one of the options in the <b>Resulting rule</b> area.
Add a value	Enter a <b>Value</b> and click the  button.
Remove an item from the rule	Click the <b>Undo</b> button. This removes the last item that you added to the rule. Click <b>Undo</b> again to remove more items from the rule.

## Keywords

Defining the field location is usually sufficient for fields whose position remains the same for all invoices of a supplier. For fields whose locations may not be the same on all invoices, you can define keywords to aid recognition. For example, the location of line item amounts can differ depending on how many rows the line items table contains.


1. Click in the **Keywords** field, then click the  button.
2. Type keywords and specify their location in relation to the field value: to the left or right, or above or below.



3. Specify the confidence level for each keyword.
4. Click **OK**.

## Masks

Masks enable you to define a pattern that the field value must match. For example, the invoice number for a supplier may consist of 4 numbers, then 3 letters, and then 6 numbers, separated by hyphens: 2015-ABC-123456.

1. Click in the **Masks** field, then click the  button.
2. Type the pattern that the field value must match.

For example, to define a mask for invoice numbers like 2015-ABC-123456, enter @@@-###-@@@@@.

- The @ sign represents any number.
- The # sign represents any lowercase or uppercase letter.
- You can also enter specific characters and numbers.

Instead of using the placeholders @ and #, you can define the masks as regular expressions. In this case, you must check the **Is regex** check box.

3. Select a **Confidence** value.
4. (Optional) To disable the regular recognition validation for the field and use only the learning schema, check **Disable standard validation**.
5. Click **OK**.

## Replacements

In the **Masks and regular expressions** dialog box, click the  button.

Enter the value to be replaced and the value that will replace it.