

IRIS Powerscan 10.5

How To Guide

v1.1

IPS10.5_dgi_20180115

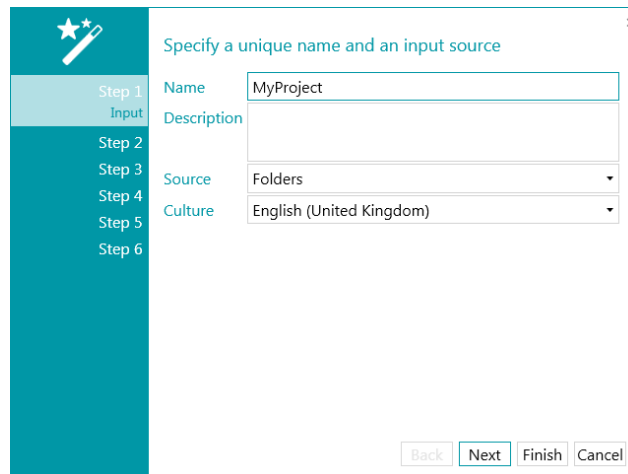
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How to Create Projects

To create a new project, click **FILE > Create** and double-click a template, e.g. **Wizard**.



The screenshot shows a dialog box titled "Specify a unique name and an input source". On the left is a vertical sidebar with a teal background and a white pencil icon at the top. The sidebar lists "Step 1 Input", "Step 2", "Step 3", "Step 4", "Step 5", and "Step 6". The main area of the dialog is white and contains the following fields:

- Name:** A text input field containing "MyProject".
- Description:** An empty text input field.
- Source:** A dropdown menu with "Folders" selected.
- Culture:** A dropdown menu with "English (United Kingdom)" selected.

At the bottom right of the dialog are four buttons: "Back", "Next", "Finish", and "Cancel".

Specify a unique **Name** and an input **Source: Scanner, Folders**, etc.

Then click **Finish** (or **Next** if you want to change other settings).

How to Add Image Samples

In order to define Image Processing or Data Extraction operations, an image sample is needed.

Select an image in the navigation explorer, and click **Copy**.

Go to **Designer > Images** and click **Paste**.

How to Use Image processing

To add an Image Processing operation, you need an [image sample](#).

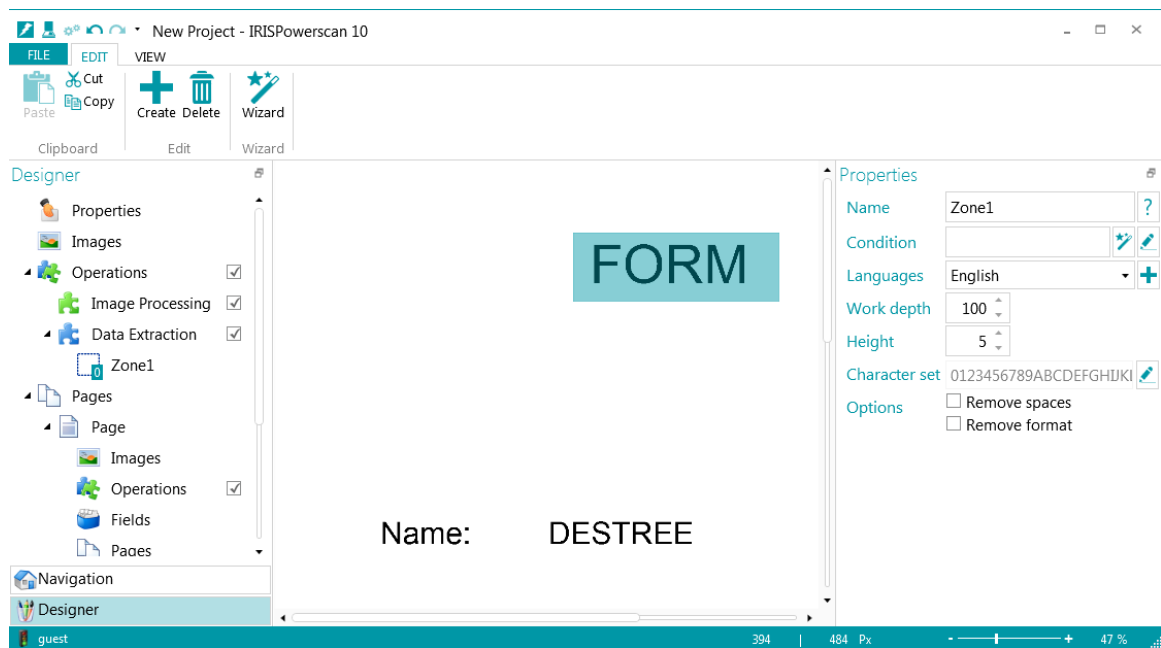
Go to **Designer > Operations > Image Processing** and click **Create**.

Note: in most cases, the image processing options you select in the settings of your scanner will be faster.

How to Use Data extraction

To define a Data Extraction operation, you need an [image sample](#).

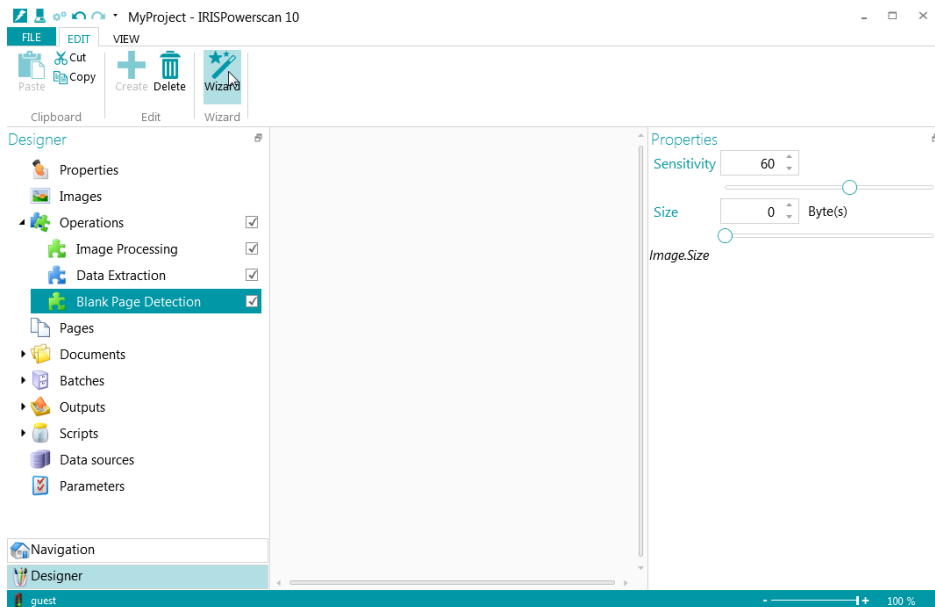
Go to **Designer > Operations > Data Extraction** and draw a zone.



The content of the zone (e.g. FORM) will be stored in the variable Image.Zone1.

How to Remove Blank Images

To remove blank images, it is strongly recommended to select the corresponding option at the scanner level, i.e. in the settings menu of your scanner. If this option is not available in your scanner settings, go to **Designer > Operations**. Click **Create** and select **Blank Page Detection**.

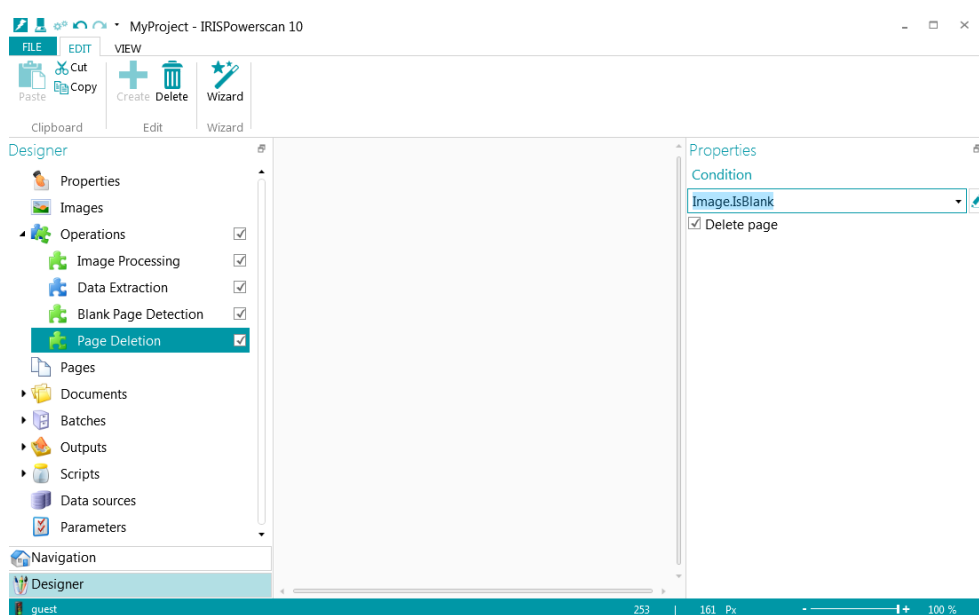


Adjust the **Sensitivity** or the **Size** (of the compressed buffer) until the image is detected as blank.

The variable `Image.IsBlank` is true when the current image is detected as blank.

The variable `Page.IsBlank` is true when both the front and rear images are blank.

To delete the blank images, go to **Designer > Operations**, click **Create** and select **Blank Page Detection**. Then click **Operations > Create** again, select **Page Deletion** and add the condition **Image.IsBlank**.



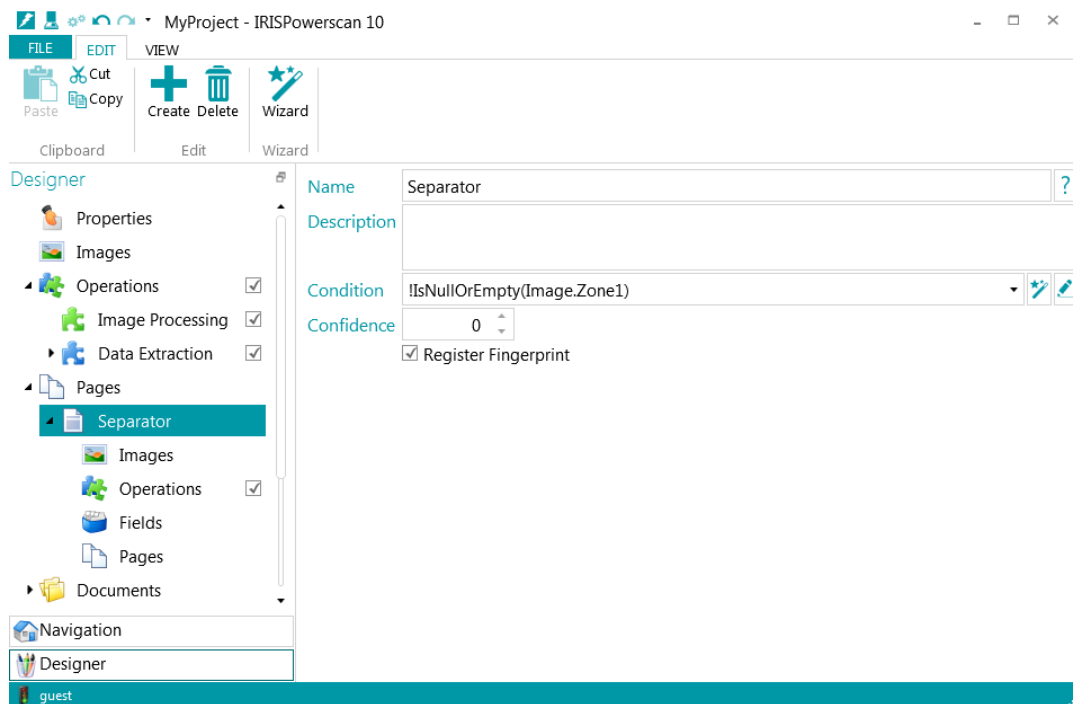
When the condition is true (e.g. `Image.IsBlank`), the current image is deleted.

Select the **Delete page** option to delete both the front and rear images.

How to Do Page identification

Go to **Designer > Pages**, click **Create** and specify a unique **Name** for the Page Type.

The Page Type is uniquely identified when the condition is true.



In the example above, a page is identified as **Separator** if the value of Zone1 is not empty.

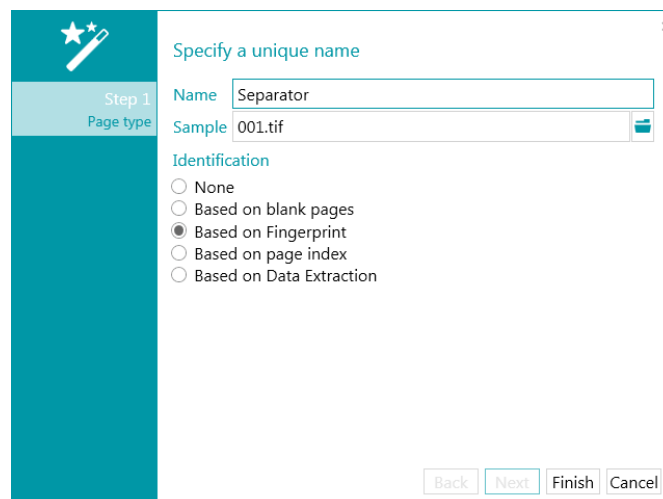
The Page Type (in this case **Separator**) is stored in the variable Page.Type.

The operations in **Designer > Pages > Separator > Operations** are applied only to the PageType called **“Separator”**.

Fingerprint

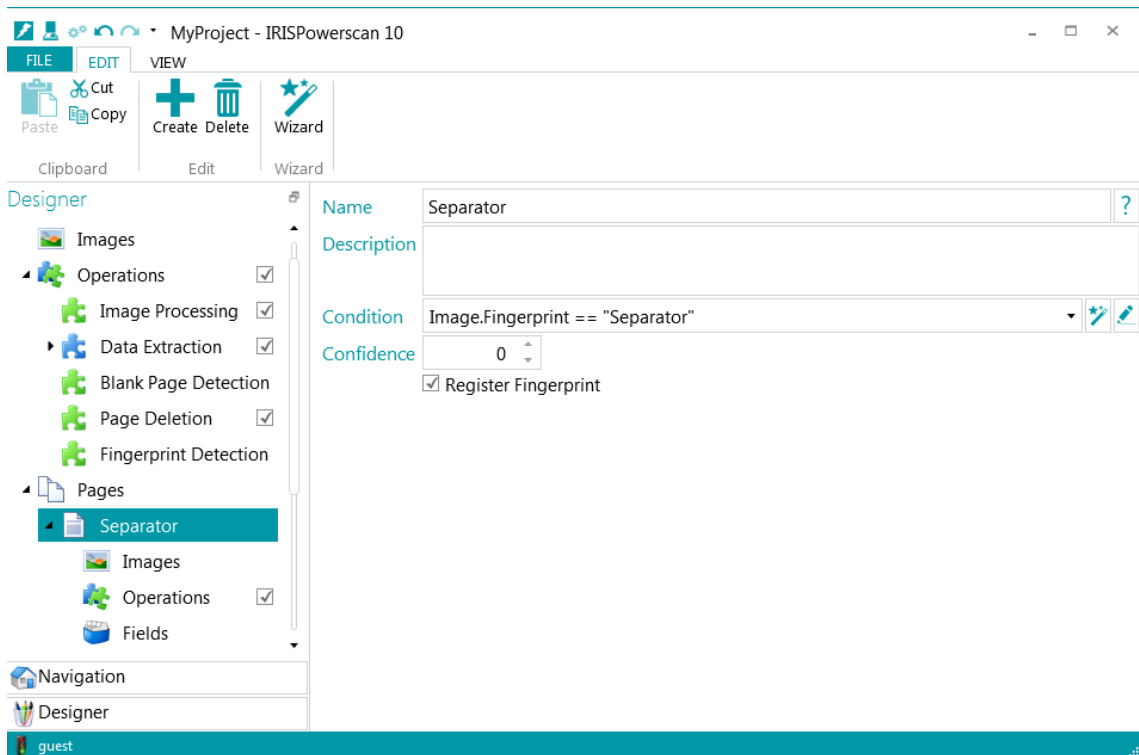
To enable Fingerprint Detection, go to **Designer > Operations**, click **Create** and select **Fingerprint Detection**. Then go to **Designer > Pages** and click **Create**.

Specify the name for the new Page Type, define the Identification method and provide an image sample.



The result of the Fingerprint detection is stored in the variable Image.Fingerprint.

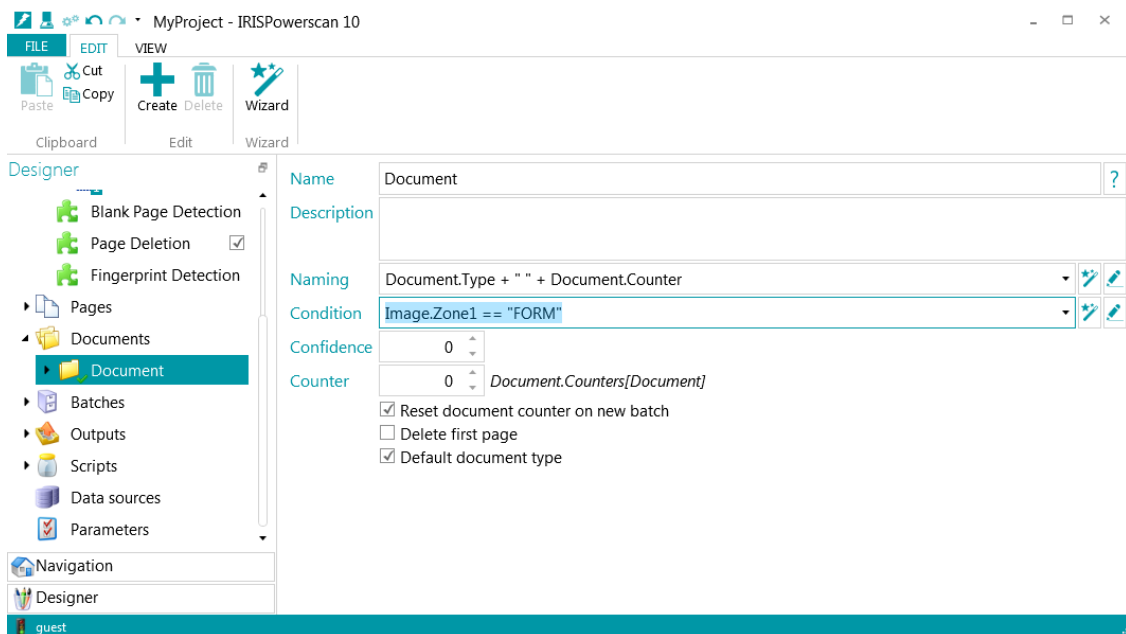
Additional image samples can be added in **Designer > Pages > Separator > Images**.



How to Separate Documents

To separate the pages into documents, go to **Designer > Documents > Document** and specify a **Condition**. A new document is created when the condition is true.

The name of the new document is based on the naming expression.



E.g. a new document is created when the content of the zone (Zone1) is "FORM". The name of the new document is the name of the document type (Document.Type) followed by a document counter (Document.Counter).

To create a document for each separator use the condition: Page.Type == "Separator".

To create a document for each input file use the following condition and naming:

Condition: Input.PageIndex == 1

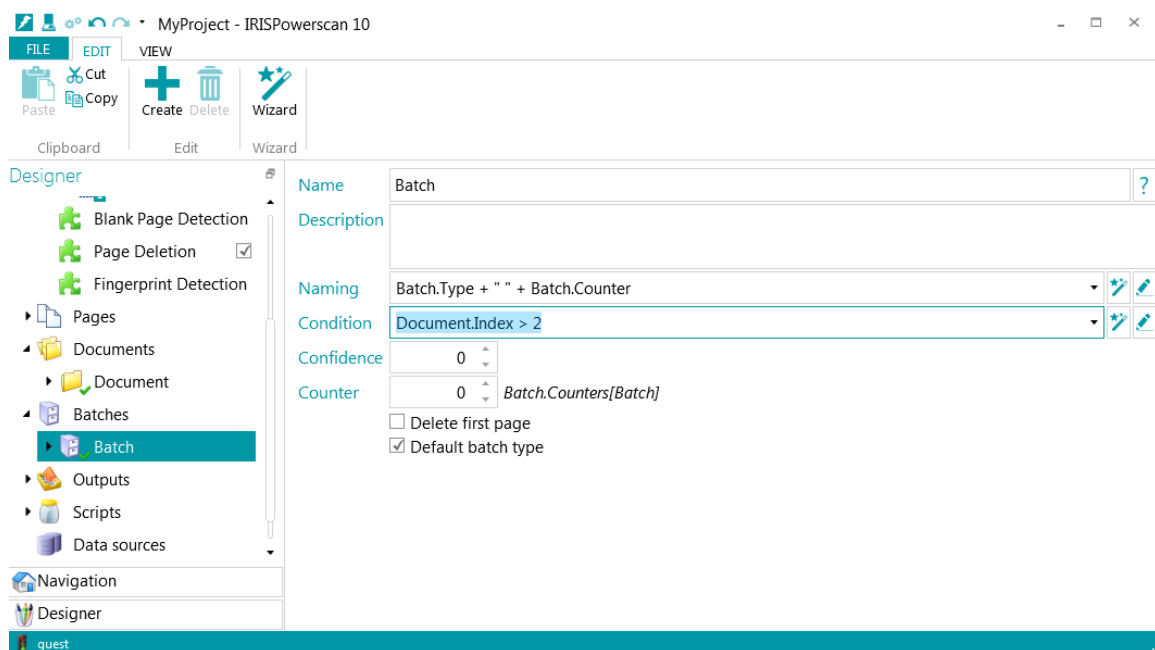
Naming: Filename(Input.Path)

Note: scripting can be used to define your own function (like Filename).

How to Separate Batches

To separate the documents into batches, go to **Designer > Batches > Batch** and specify a **Condition**. A new batch is created when the condition is true.

The name of the new batch is based on the naming expression.



E.g. a new batch is created on the third document. The name of the new batch is the name of the batch type (Batch.Type) followed by a batch counter (Batch.Counter).

Tip: when the Capture is being done by the Service, meaning you are using Watched Folders, enter the following condition in the **Condition** field on **Batch** level to create one batch per document in the Watched Folder: Input.PageIndex==1. Or simply click the Wizard icon next to the **Condition** field and select **On every file**.

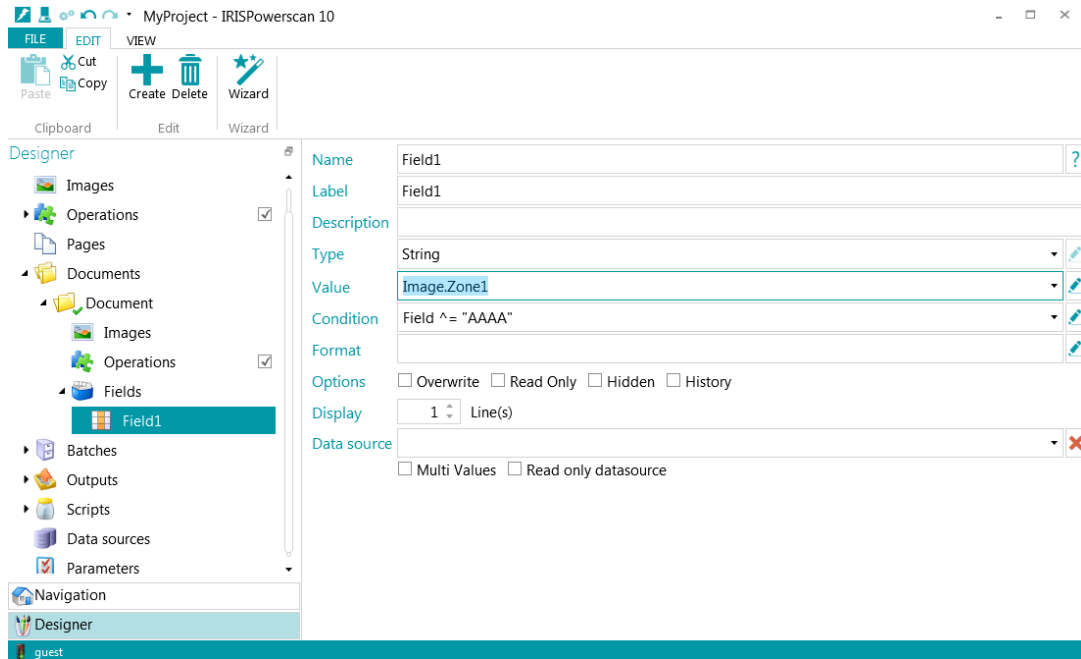
How to Do Indexing

To create a new field at batch level, go to **Designer > Batches > Batch > Fields** and click **Create**.

To create a new field at document level, go to **Designer > Documents > Document > Fields** and click **Create**.

Specify a unique **Name**, a **Type** and a default **Value**.

The condition is used to check the validity of the field.



E.g. the default value of Field1 will be the content of Zone1. The field is valid if it contains exactly 4 letters.

The value of the current field is stored in the variable Field.

Fields at batch level are stored in the variables <batch type>.<field name>.

Fields at document level are stored in the variables <document type>.<field name>.

E.g. Batch.Field1 and Document.Field1.

Matching operator

The matching operator (^=) is used to check a simplified or a regular expression.

	Simplified expressions	Regular expressions
One letter	A	\w
From zero to three letter(s)	A(3)	\w{0,3}
From one to three letter(s)	A[3]	\w{1,3}
One digit	9	\d
Any character	X	.

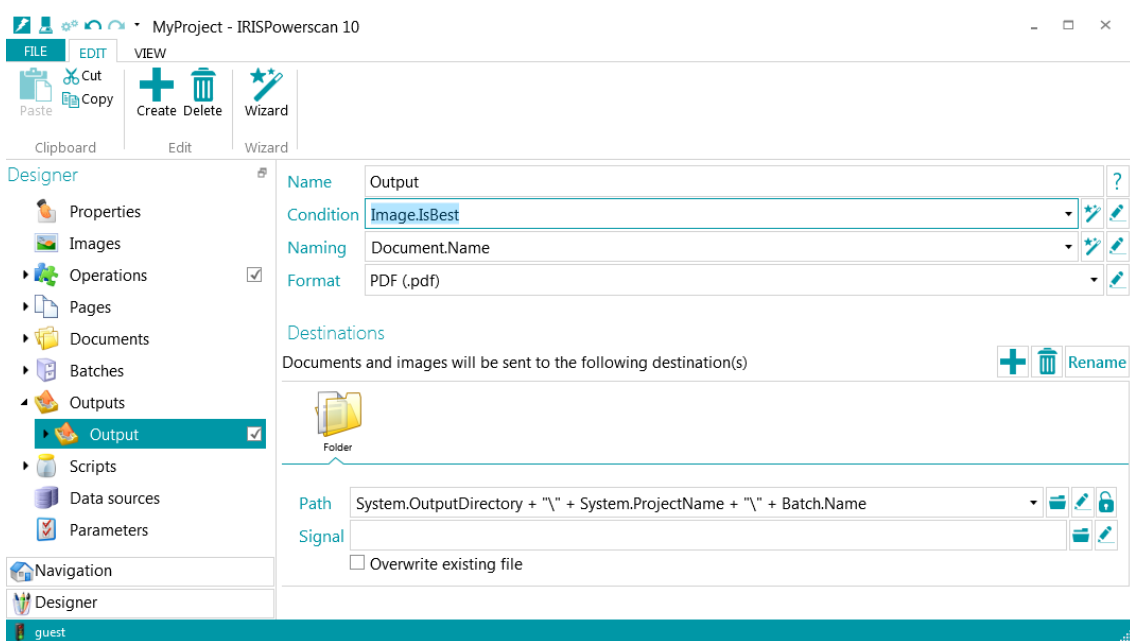
Literal values are enclosed between single quotes.

The logical operator or (|) can also be used.

E.g. Field ^= "AAAA|9999" means exactly four letters or exactly four digits.

How to Define Outputs

To define an output, go to **Designer > Outputs > Output** and specify a **Format**, a **Naming** expression and one or multiple **Destinations**.



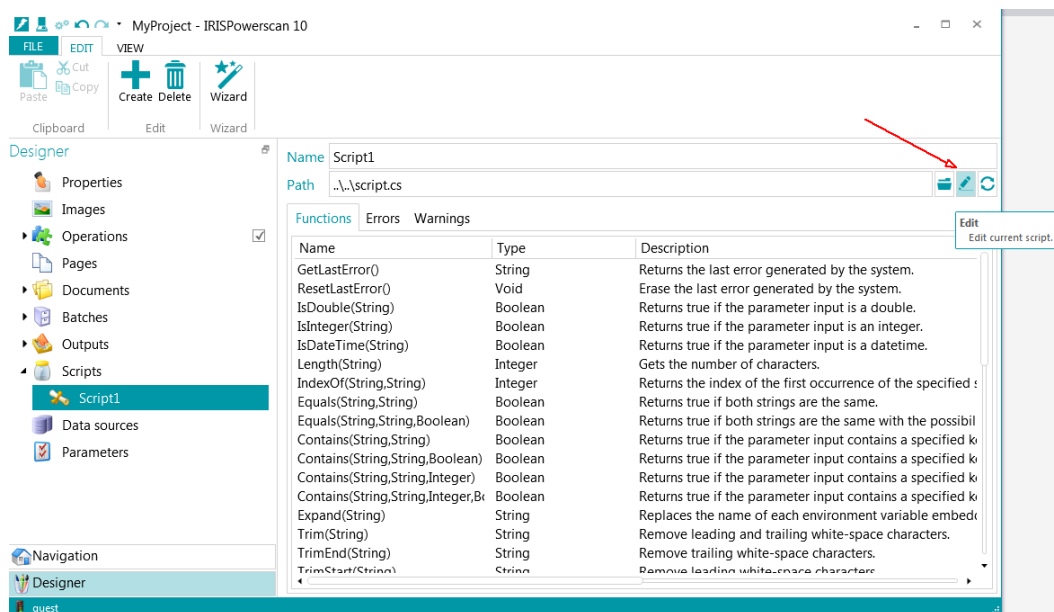
Images are exported when the condition is true.

To export only color images use the condition: `Image.IsColor`.

To export only the best images (in terms of bit per pixel) use the condition: `Image.IsBest`.

How to Use Scripts

To add your own function, go to **Designer > Scripts > Script** and click **Edit**.



By default, the file **script.cs** (%Appdata%\IPsx\script.cs) is shared by all the projects.

When you create your own script, it is strongly recommended to put the file in the project folder (e.g. %Appdata%\IPsx\Projects\MyProject).

How to add the content of Index Fields to the Indexes.xml output file using a Script

In some projects it might be required to store the content of Index Fields to the Indexes.xml output file.

Example:

IRIS Powerscan is used in Client-Server mode to scan and index incoming mails. On one IRIS Powerscan workstation the mails are scanned, one batch per mail. Once the scanning is done, another IRIS Powerscan workstation downloads the batches from the IRIS Powerscan Server and does the Index validation. Once the Index validation is done, the batches are sent back to the IRIS Powerscan Server for processing.

By means of a script, we make sure that the name of the Indexer will be stored in the Indexes.xml output file. We do this by creating an OnDownload event. As soon as the Indexer downloads a batch to do the Index validation, the required content will be inserted in the Indexes.xml output file.

Configuration:

- Set up a Client-Server architecture in which one IPS workstation scans the batches and one IPS workstation does the Index validation.
- In the default Document type, create the Index Field “**Indexer**” and link it to an extraction zone. Then enter **!NotNullOrEmpty(Field)** in the **Condition** field.
- Add one Output type in which your documents must be exported. Then add a second one and select **Indexes.xml** as **Format**. This file will contain the Indexer name.
- Write a script that contains the following content:

```
using System;
using System.ComponentModel;
using IPSx.Api;

namespace IPSx.Scripting
{
    public partial class Script : IEventListener
    {
        public bool OnEvent(string name, object parameter)
        {
            if (!string.Equals(name, "OnDownload", StringComparison.InvariantCultureIgnoreCase))
                return false;

            IPSxNode ipsxNode = parameter as IPSxNode;
            if (ipsxNode == null) return false;

            string currentUser = string.Empty;
            foreach (IPSxField ipsxField in ipsxNode.Fields)
            {
                if (string.Equals(ipsxField.Label, "CurrentUser",
                    StringComparison.InvariantCultureIgnoreCase))
                {
                    currentUser = (string)ipsxField.Value;
                    break;
                }
            }

            foreach (IPSxField ipsxField in ipsxNode.Fields)
            {
                if (string.Equals(ipsxField.Label, "IndexerWindows",
                    StringComparison.InvariantCultureIgnoreCase))
                    ipsxField.Value = Environment.UserName;
                if (string.Equals(ipsxField.Label, "IndexerIPSx",
                    StringComparison.InvariantCultureIgnoreCase))
                    ipsxField.Value = currentUser;
            }
            return true;
        }
    }
}
```

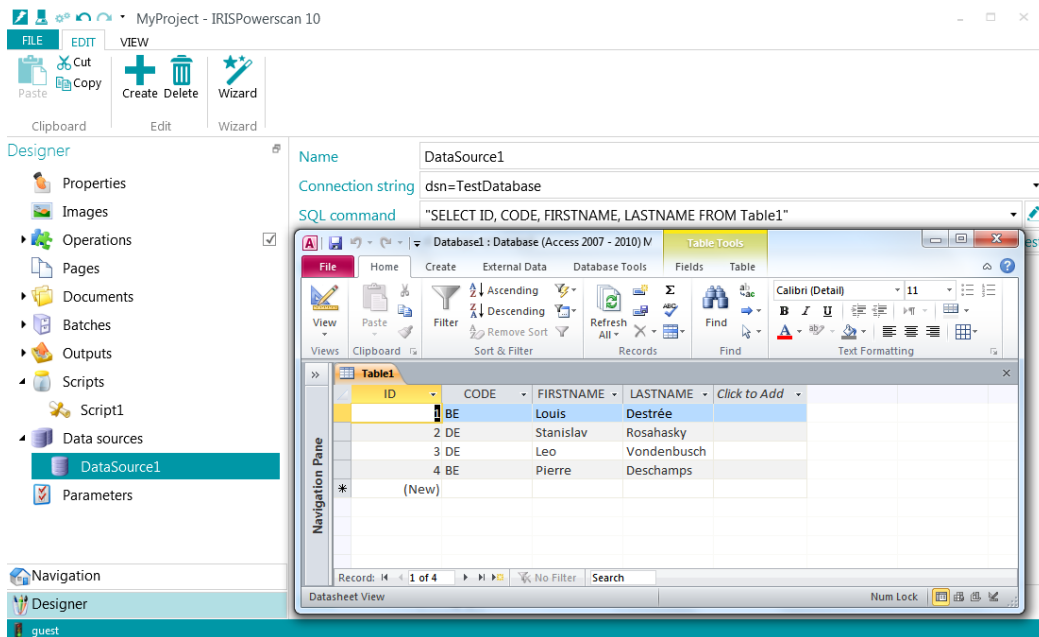
- Add the script you created to the IRIS Powerscan project.
- Scan and Index your documents.
- Go to the Output folder, open the Indexes.xml file and check if it contains the Indexer name.

How to use Data sources

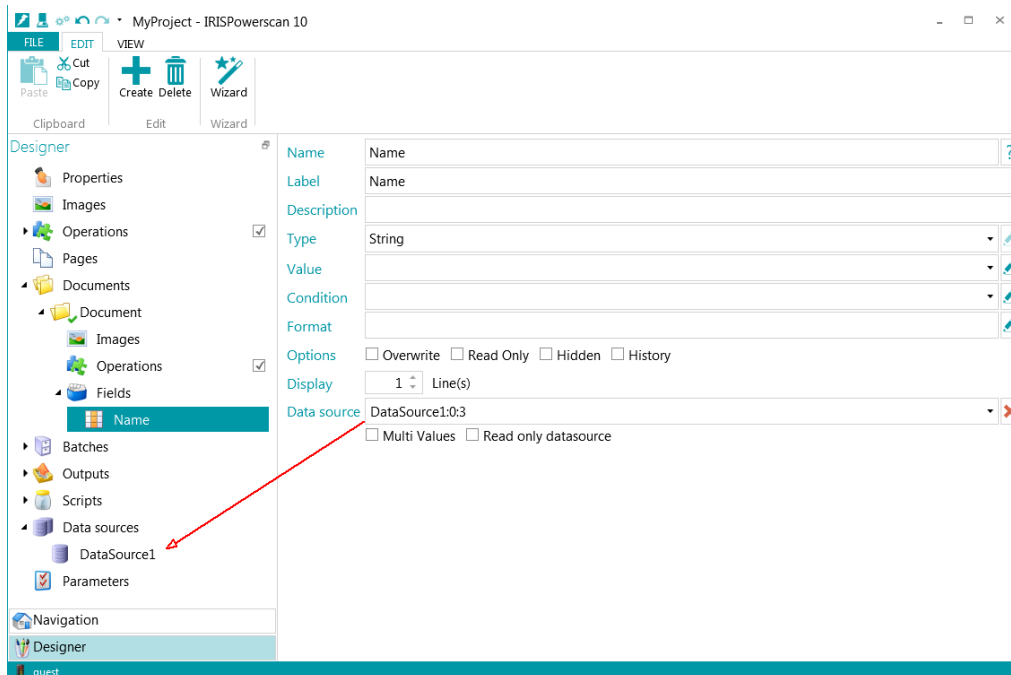
To create an ODBC datasource, go to **Designer > Data sources** and click **Create**.

Select **ODBC** as source.

Then specify a DSN **Connection string** and an **SQL command**.



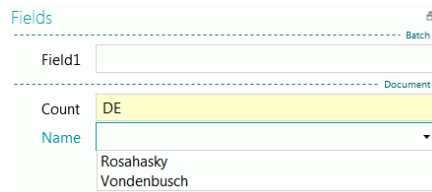
Create a field linked to the data source (DataSource).



DataSource1:0:3 means that the value in the first column (ID) will be stored (in Document.Name) and the value of the fourth column (LASTNAME) will be displayed.

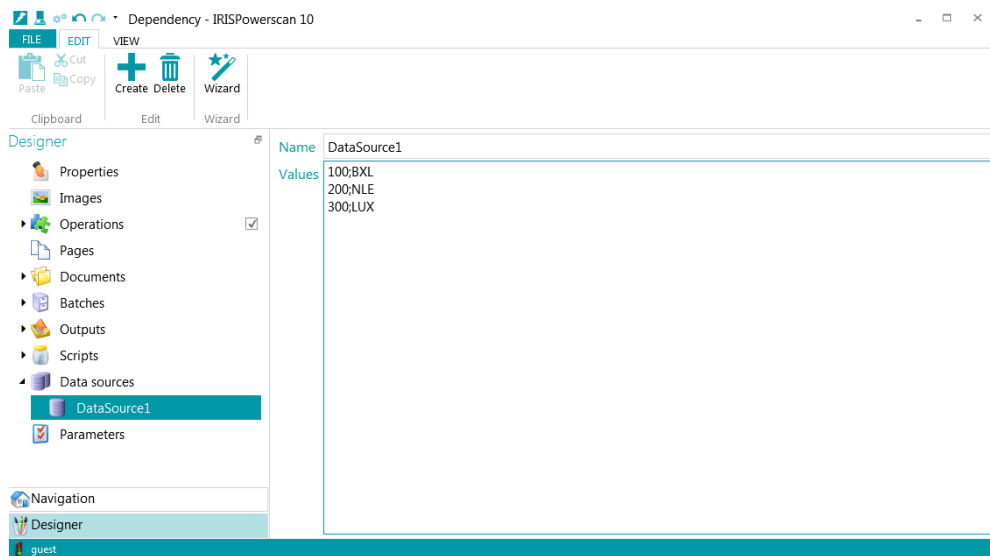
To narrow the search, create another field (e.g. Country) and change the SQL command to:

```
"SELECT ID, CODE, FIRSTNAME, LASTNAME FROM Table1 WHERE CODE = '" + Document.Country + """
```

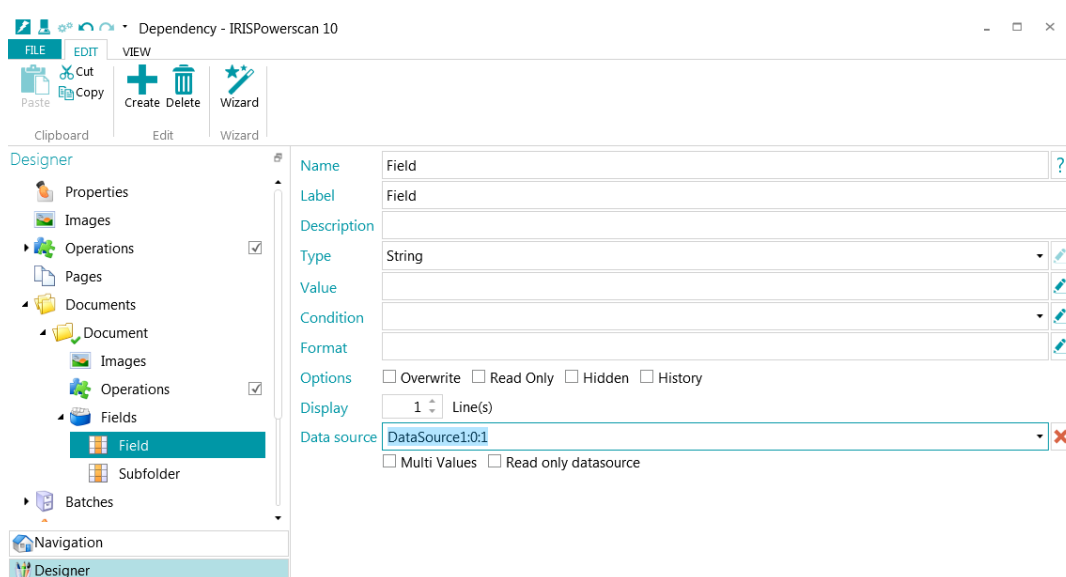


Dependency

Go to **Designer > Data sources** and create a Data Source of the type **List** and which contains two columns.



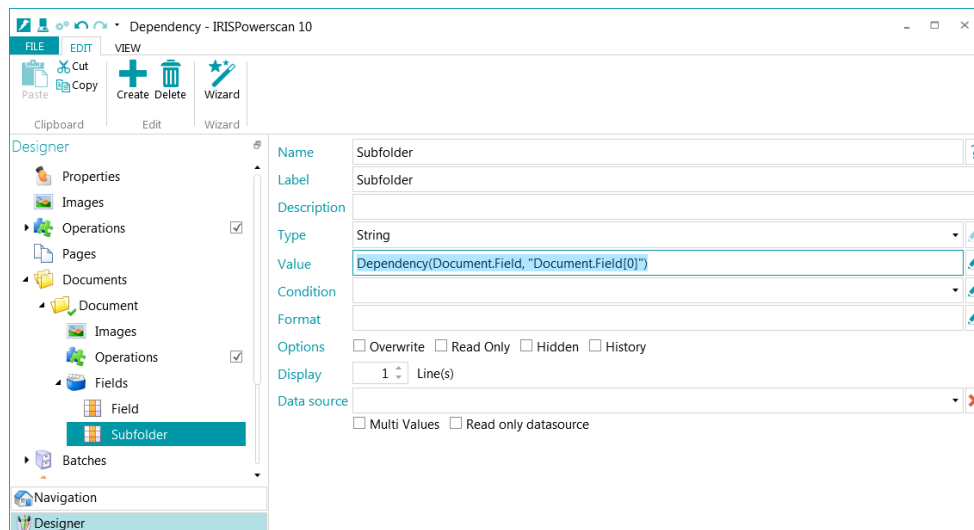
Link the data source to a Field (e.g. Field).



DataSource1:0:1 means that:

- a) The value in the first column (index = 0) will be stored.
- b) The value in the second column (index = 1) will be displayed.

Define another Field (e.g. SubFolder).



SubFolder depends on Document.Field. When Document.Field is changed, the value of SubFolder is updated by the first column of Document.Field.

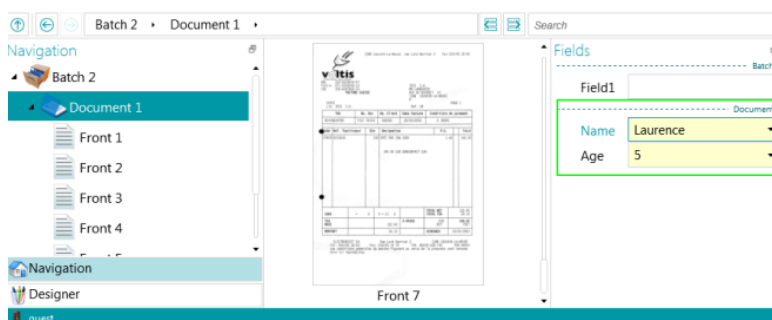
How to Use Cross-linked Index Fields

In this section we provide a more detailed example of how to use cross-linked Index Fields using an ODBC data source.

In our example we have created an Excel file containing a list of people and their age.

	A	B
1	Name	Age
2	Laurence	5
3	Martine	10
4	Harold	15
5	Eliott	20
6	Albert	25
7	Tom	30
8	Paul	35
9	Tony	40
10	Vicki	45

We will create two Index fields in IRIS Powerscan, called **Name** and **Age** and link those fields to the ODBC data source. By filling in their **Value** fields we make sure that the corresponding Age is displayed when a Name is selected and vice versa.



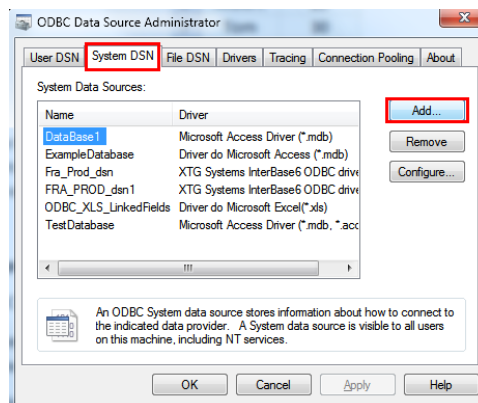
Preliminary steps

Create the ODBC data source:

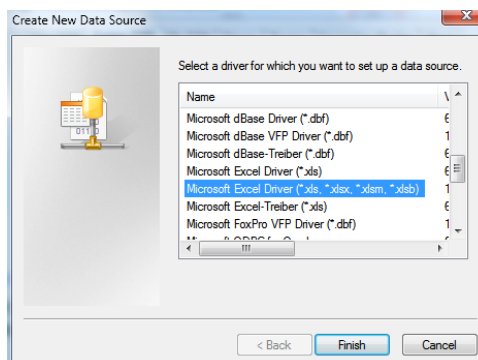
- Create an Excel file and name it **LinkedFields.xlsx**.
- Fill in the values as shown above.

Add the ODBC data source to your System DSN:

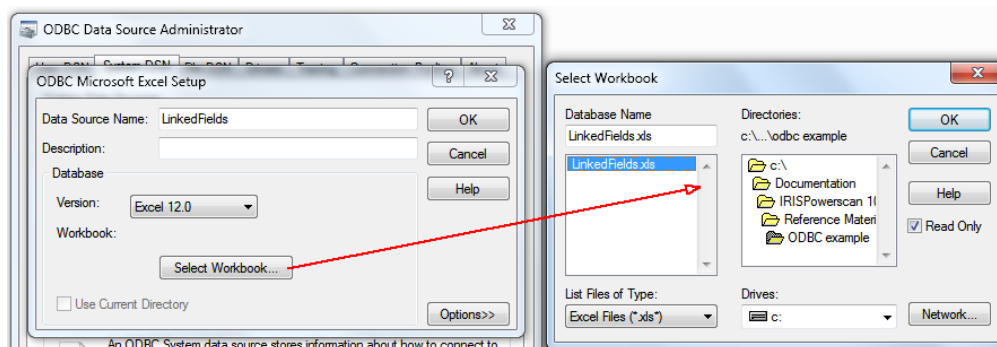
- Go to **Control Panel > Administrative Tools > Data Sources (ODBC)**.
Important: when using a 64-bit Operating System, start Data Sources (ODBC) from C:\Windows\SysWOW64\odbcad32.exe.
- Click the **System DSN** tab and click **Add**.



- Select **Microsoft Excel Driver (*.xls, *.xlsx, *.xlsm, *.xlsb)** and click **Finish**.



- Enter the **Data Source Name**. E.g. LinkedFields.
- Click **Select Workbook**, and then browse for the Excel file you created.
- Click **OK** to confirm.



Creating Cross-linked Fields in IRIS Powerscan

- Go to **Designer > Data sources**.
- Click **Create**.
- Name the data source **DataSource**, select **ODBC** as **Source** and click **Next**.

- In the **Connection string** list select the correct database. In our example **dsn=LinkedFields**.

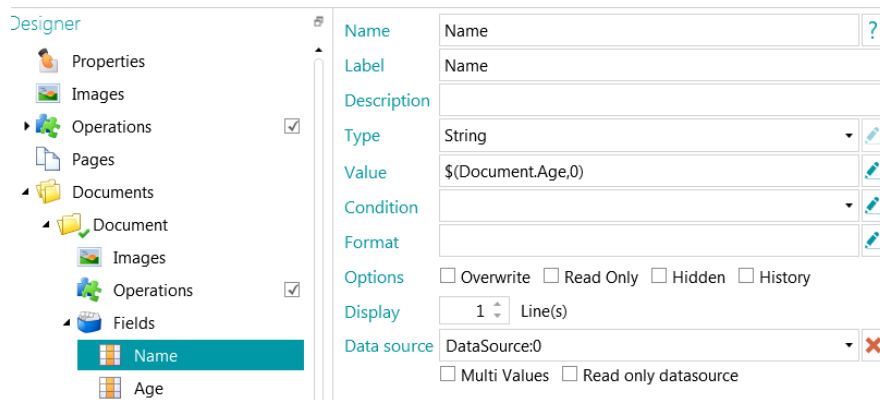
- Then enter the following **SQL command**: **"SELECT * FROM [Sheet1\$]"**
- Click **Test** to see if it works.

You should get the following results:

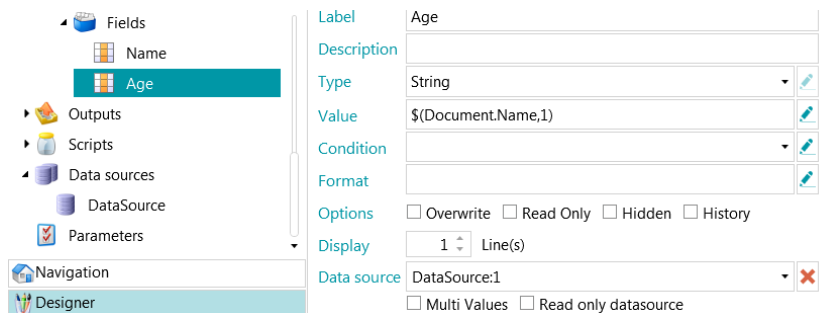
- Now create two index fields for the default Document type.
- Name the first one **Name**.
- Click the down arrow next to the Data source field, and select the data source you created. In our example **DataSource**.
- Enter **":0"** behind the Data source name: **DataSource:0**.
:0 stands for the first column of the Data source. I.e. the **Name** list in our example.

	0	1
	A	B
1	Name	Age
2	Laurence	5
3	Martine	10
4	Harold	15
5	Elliott	20
6	Albert	25
7	Tom	30
8	Paul	35
9	Tony	40
10	Vicki	45

- In the **Value** field enter **\$(Document.Age,0)**.

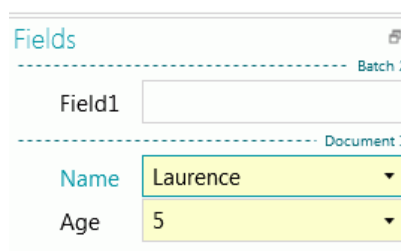


- Create the second index field and name it **Age**.
- Click the down arrow next to the **Data source** field, and select the data source you created. In our example **DataSource**.
- Enter “:1” behind the Data source name: DataSource:0.
:1 stands for the second column of the Data source. I.e. the Age list in our example.
- In the **Value** field enter **\$(Document.Name,1)**.



Test the results

- Switch to Navigation mode and scan some documents.
- Select a name in the **Name** field.
The correct corresponding Age should be displayed.
- Or select an age in the **Age** field.
In this case the correct corresponding Name should be displayed.



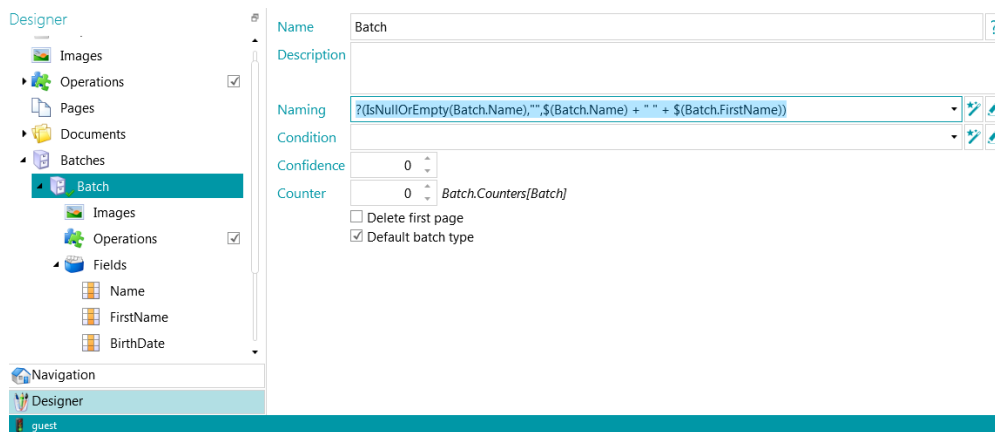
How to automatically rename a batch or documents when fields are changed

To automatically rename a batch or document when its fields are changed, use the **\$()** dependency function.

E.g. `?(IsNullOrEmpty(Batch.Name), "", $(Batch.Name) + " " + $(Batch.FirstName))`

This means that this naming formula depends on two fields: **Batch.Name** and **Batch.FirstName**. In other words, the naming formula must be reevaluated as soon as the fields **Batch.Name** or **Batch.FirstName** are manually changed.

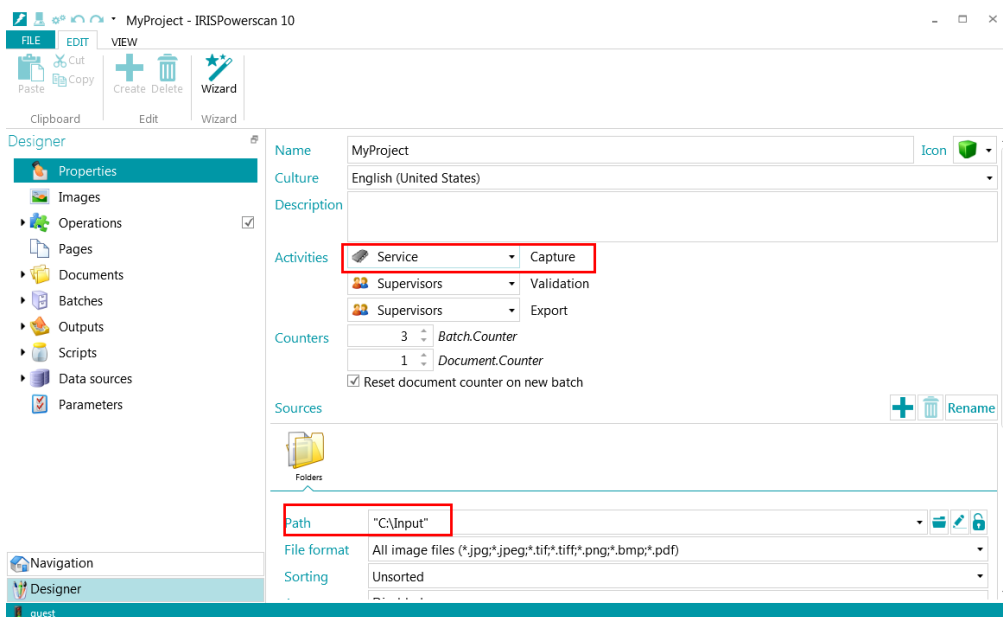
Note: the naming formula is evaluated only if the field **Batch.Name** is not null or empty. If this field is null or empty, the default batch or document name will be used.



How to Use Watched folders

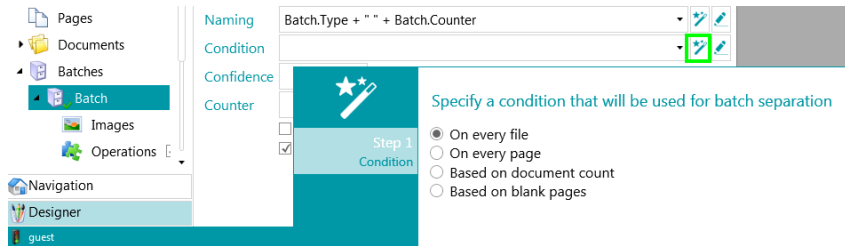
To define a watched folder, go to **Designer > Properties**, specify an input folder (e.g. C:\input) and assign the **Capture** activity to the **Service**.

Note: no add-on is required to do the Capture via the Service. Only to have the Export done by the Service the Background Processing add-on is required.



In Navigation mode, click **Open** to validate batches captured by the Service.

Note: in order to create one output file per input file when working with Watched Folders, click the Wizard icon next to the **Condition** field on **Batch** level and select **On every file**.

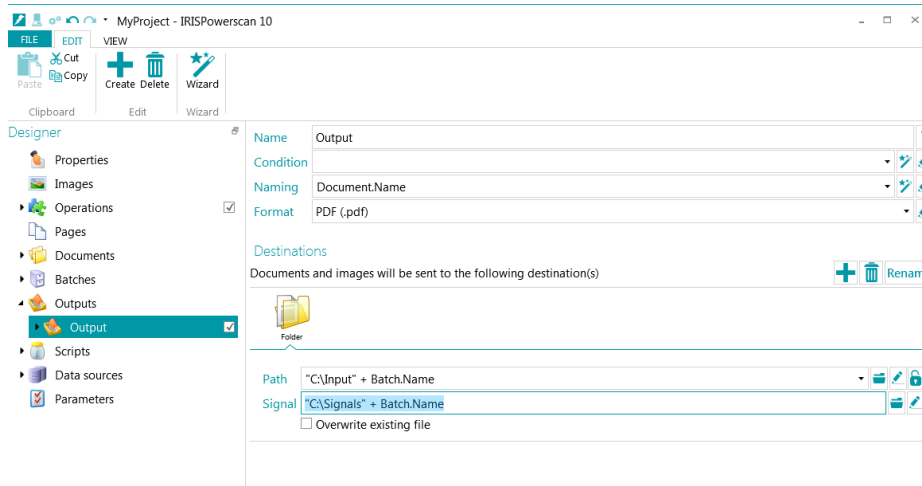


Not doing so will result in merged files. E.g. 5 PDF files of 2 pages will become one PDF file of 10 pages.

Signals

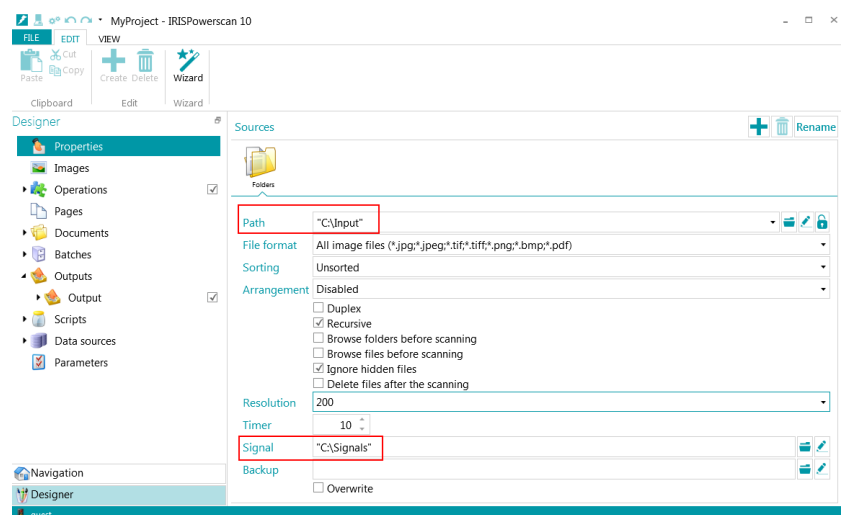
Signals are used to secure the import/export of documents scanned with one project and exported in the watched folder of another project.

Create a new project and define a **Path** for the Output and the Signals.



When all the PDF documents are exported, a signal file is created in the folder C:\signals.

Now, create another project and define a Watched Folder.

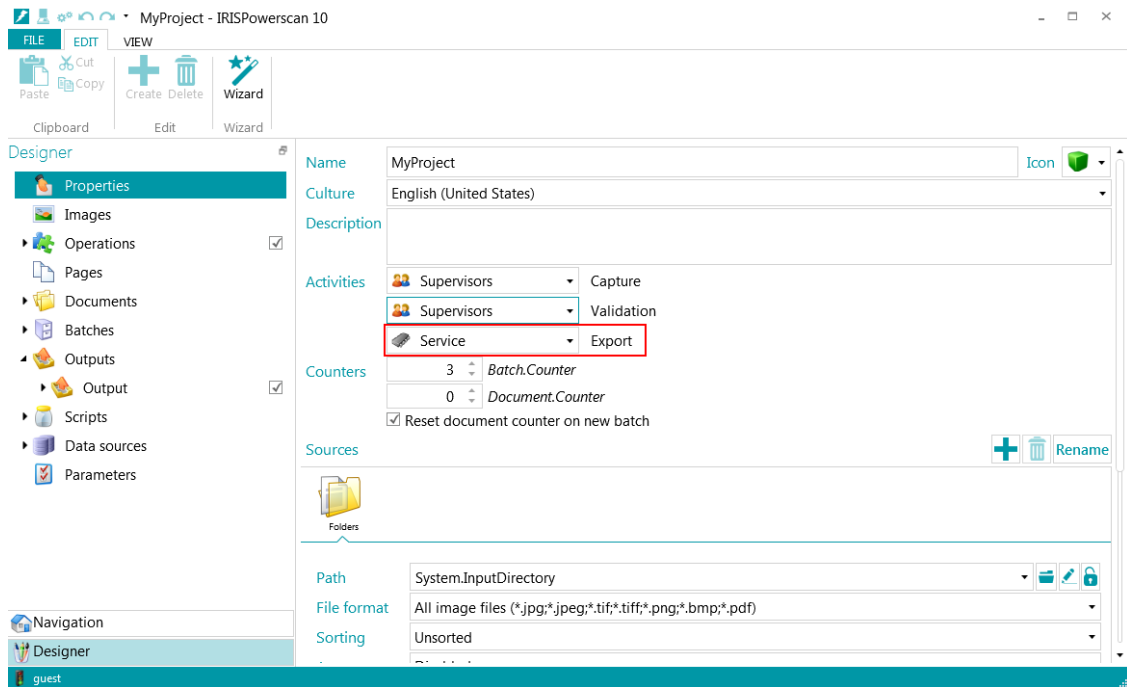


A subfolder (e.g. Batch 1) of the watched folder (C:\input) will be processed only if the signal folder (C:\Signals) contains a signal file with the same name (e.g. Batch 1).

How to Do Background processing

To export batches in the background, go to **Designer > Properties** and assign the **Export** activity to the **Service**.

Important: to do so, the **Background processing add-on** must be acquired and activated.



In the Navigation pane, click **Process** to send batches to the **Service**.

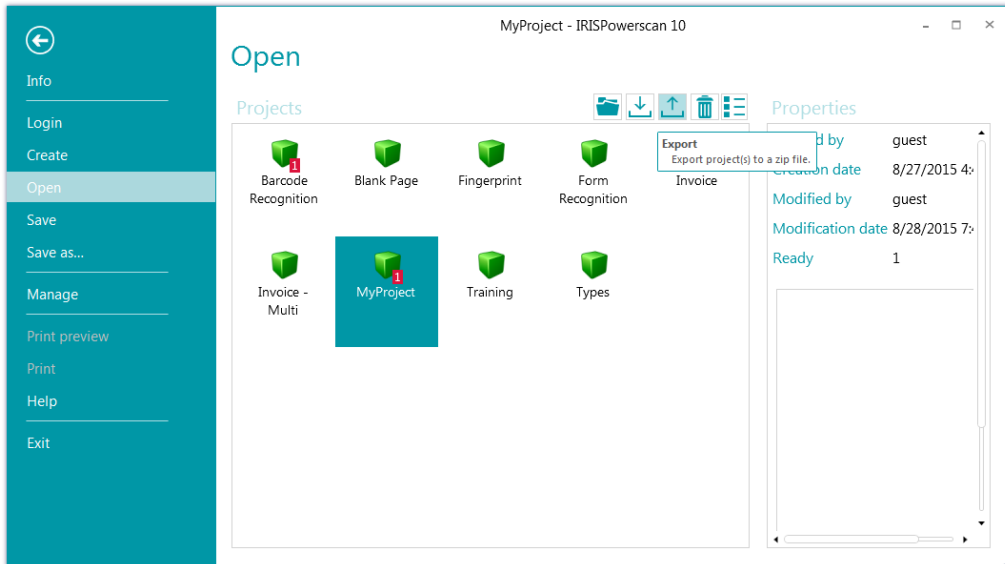
To follow the status of all the batches, click **FILE > Manage**.

How to Share Projects

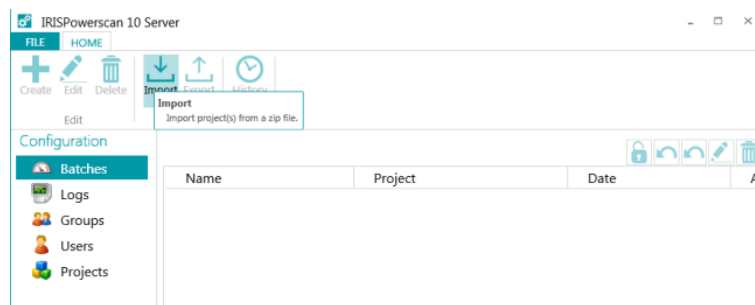
Install **IPSxServer** to share projects, batches, users and groups across multiple workstations.

Note: a “normal” IPS 10 activation code is needed.

Export the Project from a workstation.

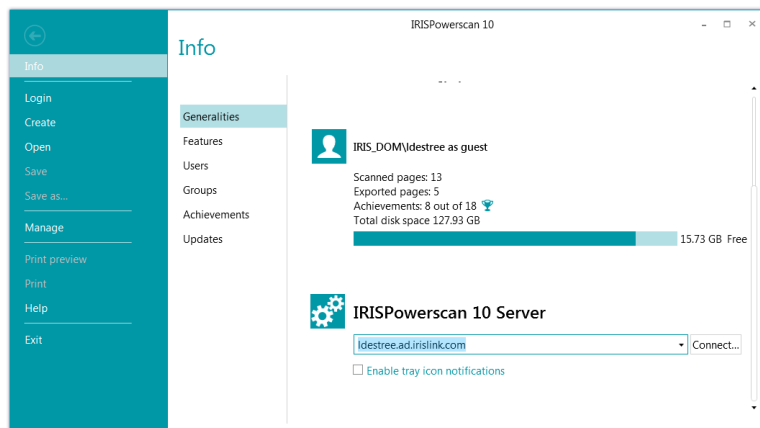


Import the Project into the IRIS Powerscan Server.



Note: in order to update a shared project, you have to export the modified project from an IRIS Powerscan workstation and re-import it into the IRIS Powerscan Server.

On each workstation, go to **FILE > Info > Generalities** and connect to the IRIS Powerscan Server.



Note: the **Central Management add-on** must be activated on each workstation.

How to Use Logs in IRIS Powerscan 10.4 and earlier

Only experts should enable the logs!

IRIS Powerscan 10

Open C:\Program Files (x86)\IRIS Powerscan 10\IRIS Powerscan.exe.config with NotePad.exe

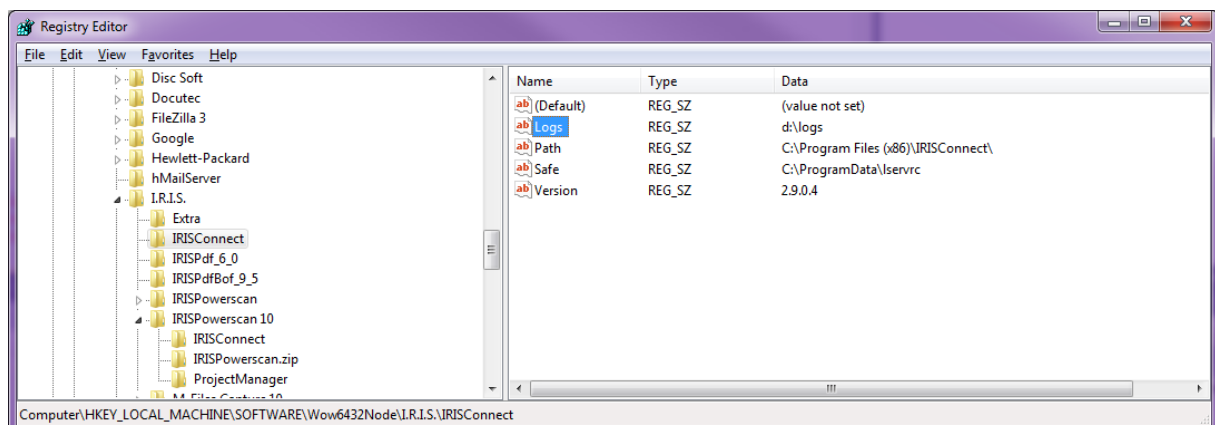
Edit the <system.diagnostics> node as follows:

```
<system.diagnostics>
  <switches>
    <!-- TraceLevel defines the level of tracing
         "0" Off,
         "1" Error: gives only error messages,
         "2" Warning: gives errors and warnings,
         "3" Info: gives more detailed error information,
         "4" Verbose: gives verbose trace information -->
    <add name="TraceLevel" value="4"></add>
    <add name="SourceLevel" value="All"></add>
  </switches>
  <sharedListeners>
    <add name="Console" type="System.Diagnostics.ConsoleTraceListener" initializeData="true"/>
    <add name="LogFile" type="System.Diagnostics.TextWriterTraceListener"
initializeData="c:\temp\IPsx.log"/>
    <add name="EventLog" type="System.Diagnostics.EventLogTraceListener" initializeData="I.R.I.S."/>
  </sharedListeners>
  <sources>
    <source name="IPsx" switchName="SourceSwitch" >
      <listeners>
        <add name="LogFile"/>
      </listeners>
    </source>
    <trace indentSize="4" autoflush="true" useGlobalLock="true">
      <listeners>
        <add name="Console"/>
        <add name="LogFile"/>
      </listeners>
    </trace>
  </sources>
</system.diagnostics>
```

IRIS Connect

Open the Registry (regedit.exe)

Add a String Value called “Logs” in the IRIS Connect registry key.



If the IRIS Connect key doesn't exist, create it yourself.

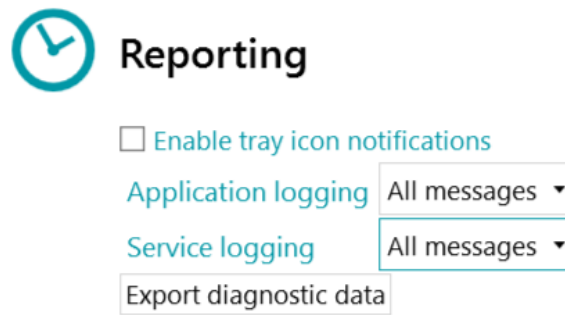
How to use logs in IRIS Powerscan 10.5

To access the logging features, click **File > Info > Generalities > Reporting**.

When full reporting is required select **All messages** in the **Application logging** and the **Service logging** drop-down lists.

Note: when you select All messages in the **Service logging** drop-down list, the application must be restarted.

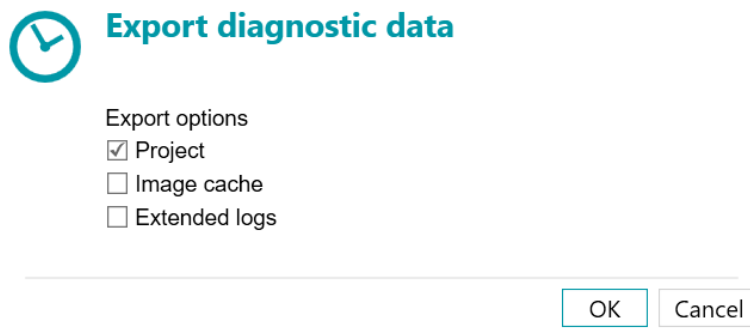
You can then use the **Export diagnostic data** button to export and save all your traces.



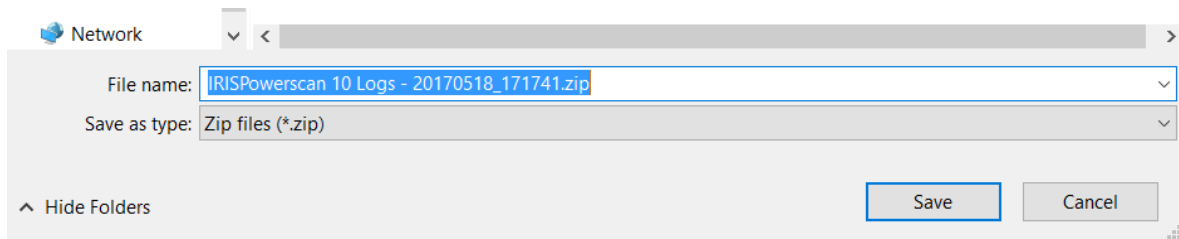
To export diagnostic data, click the **Export diagnostic data** button and select which data you wish to export:

- **Project:** exports the project settings.
- **Image cache:** exports the images that are visible in the Viewer.
- **Extended logs:** exports Windows Event Logs.
Logs are stored in C:\ProgramData\IPStx\LocalProjects\Loggs.

Note: if no project is open when you click **Export diagnostic data**, only the **Extended logs** option is available.



- When you are done, click **OK**.
- An **Export** window now opens.
Name your project and click **Save** to save it as .zip file.
- A second **Export** windows now opens to save the log file.
Note: if you selected **Extended logs**, it may take some time for all the data to be gathered. If you did not select **Extended logs**, a basic log file will be saved.
Name the log file and click **Save**.



Send email on error: select this option if you want the user to receive a warning email when a project is on error in a fully automatic configuration, i.e. when the scanning, validation and export are done by the Service or Server.

Batch on error: select this option if you also want the same user to receive a warning email when a batch is on error.

Enter the recipient in the **To** field.

Enter a recipient in Blind Copy in the **CC** field.

Enter the **Host** name and **Port** number.

Set the **Timeout** time after which IRIS Powerscan stops trying to send the email. The default time is 60 seconds.

If necessary select **Use SSL** to use a Secure Socket Layer.

Enter your **User name** and **Password**.

When you are done, click **Send test** to send a test email.

Note: when using IRIS Powerscan Server the same Reporting settings must be configured inside the IRIS Powerscan Server application.

How to Use XMailFetcher with IRIS Powerscan

Installation and Configuration of XMailFetcher

Preliminary Note: you need Administrator rights to the system on which you install and configure XMailFetcher.

Step 1: Install XMailFetcher

To install XMailFetcher, double-click **XMailFetcher.exe**.

Step 2: Activate XMailFetcher

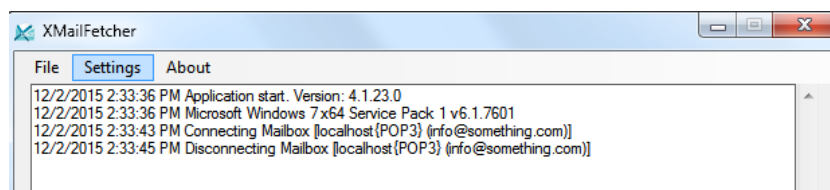
Start XMailFetcher. You are prompted to activate it. Send your **ID** to register-DE@iriscorporate.com.

You will receive the **Activation key** in return. Enter it in the required field.

Important: do not close the XMailFetcher application. Otherwise your ID will change.

Step 3: Configure XMailFetcher

Click **Settings**.



- Select your account type from the **Account-Type** list.
- Fill in all the fields that are required for the selected account type.
- Enter an **Output-Directory**.
This is the folder to which your emails will be sent. This folder must be used as **Input folder** when configuring XMailFetcher as **Source** in IRIS Powerscan.
- If all settings are correct this is indicated at the bottom of the screen.
- To test the account's connection, click **Test Account**.

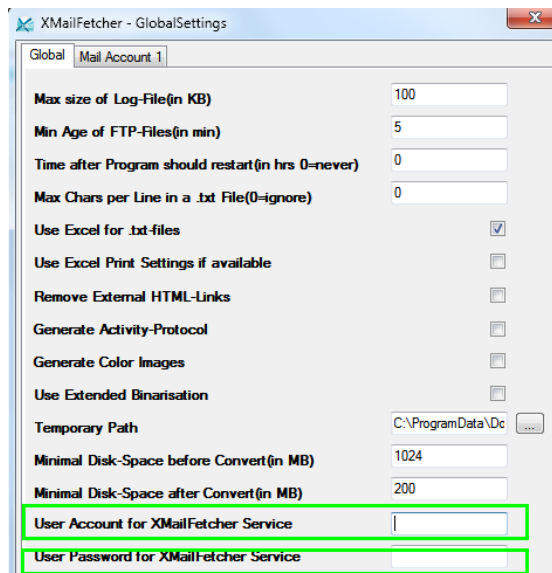
The screenshot shows the 'XMailFetcher - Settings' window for 'Account1'. The 'Account-Type' is set to 'POP3'. Other settings include 'Days to keep messages' at 0, 'Max number of e-Mails per connection' at 0, 'Mail-Server' as 'localhost', 'Mail-Server-PortNo.' as '110', 'User' as 'info@something.com', 'Password' masked with dots, 'Timer Interval (min)' as '1', and 'Output-Directory' as 'C:\input\'. There are four unchecked checkboxes: 'generate .msg-file', 'try to extract text-content', 'convert embedded attachments from pdf-files', and 'SSL'. At the bottom, there are buttons for 'New Account', 'Delete Account', 'Global Settings', 'Test Account', 'OK', and 'Cancel'. A status message at the bottom reads 'All account settings are correct'.

Now configure XMailFetcher to run as a Service. To do so, you need to configure at least one account for fetching emails:

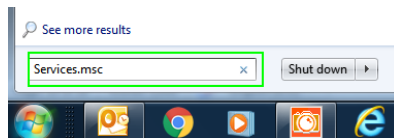
1. Click **Global Settings**.
2. Enter a user account and password in the indicated fields.
Then click the **Test account** button that appears.

Note that this account requires administrator rights to the Operating System you are working on.

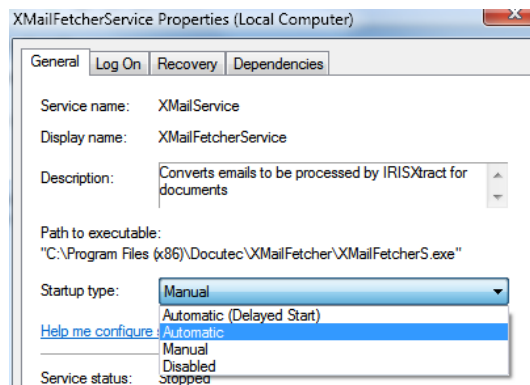
3. Click **OK** to close the Global Settings.



4. Close all dialog boxes of XMailFetcher.
5. Now type **Services.msc** in the Windows Search field.



6. Scroll down to **XmailFetcherService** in the list.
7. Right-click it and click **Properties**.
8. In the **Startup type** list select **Automatic**.
9. Click **Apply** to apply the settings.



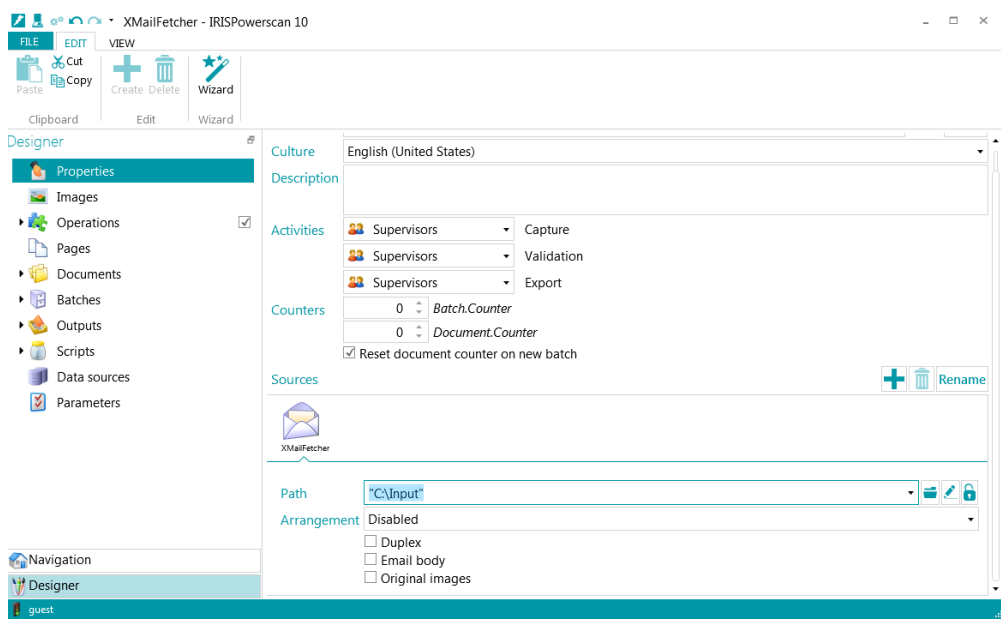
10. Click **Start** to start the service.

For detailed information on the configuration see the complete XmailFetcher User Guide.

Configuration in IRIS Powerscan

To add XMailFetcher as Source, go to **Designer > Properties** and click the plus sign next to **Sources**. Select **XMailFetcher** as Input Source.

Select the **Path** from which you will scan. This must be the **Output-Directory folder** you configured in the XMailFetcher application.



Scanning

Return to IRIS Powerscan and scan from within the XMailFetcher Project you configured. Your emails are now inserted into IRIS Powerscan.

Tip: to check the processes in XMailFetcher, start the application. Check the activities in the main window. When an email has been converted, the following activity is displayed:
Converting MailBody to Multipage TIFF done.

How to Parse QR Codes

Here we use an example to explain how to parse a QR Code using Scripts.

Import the following image into an IRIS Powerscan project:

Hubert de Brye sprl
entreprise d'aménagements extérieurs

Rue Abbessé, 80
1457 NUL-SAINTE-VINCENT
Tél. 010-65.79.21
Fax 010-65.78.72
E-mail: hubert.de.brye@skynet.be

SAIRIS
Rue du Bosquet 10
B - 1348 LOUVAIN-LA-NEUVE
TVA n° BE-430.824.708

FACTURE n° 12650 du 31/12/2012

Description détail devis	Unité/Taille	Quantité	PU €	Total HT €	TVA
Décembre 2012					
Travaux de salage et de déneigement	heure	1,00	38,75	38,75	
03/12 Salage	heure	1,00	38,75	38,75	
1/12 Salage	heure	1,00	62,00	62,00	
07/12	heure	1,00	38,75	38,75	
Déneigement					
Salage					

Base 0%	Base 6%	Base 12%	Base 21%	TVA	Total
172,25					178,25 €

TVA à acquitter par le cocontractant (A.R. 1, Article 20)

Echéance : Comptant

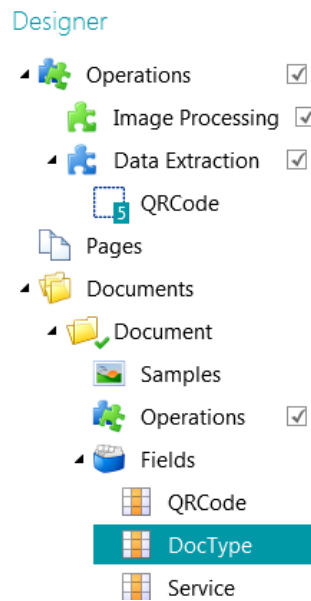
180 0501 020 103 1071 4938 8444 016 88 2428 885 198
011118 44111 1460 1070 2640 2 20000000 432 8891 100 1 2 2111
CORPUS 0210 1610 1000 1881 Agence: 107 010

This image contains a QR code that indicates the document type and the service: "DocType=Inv;Service=03".



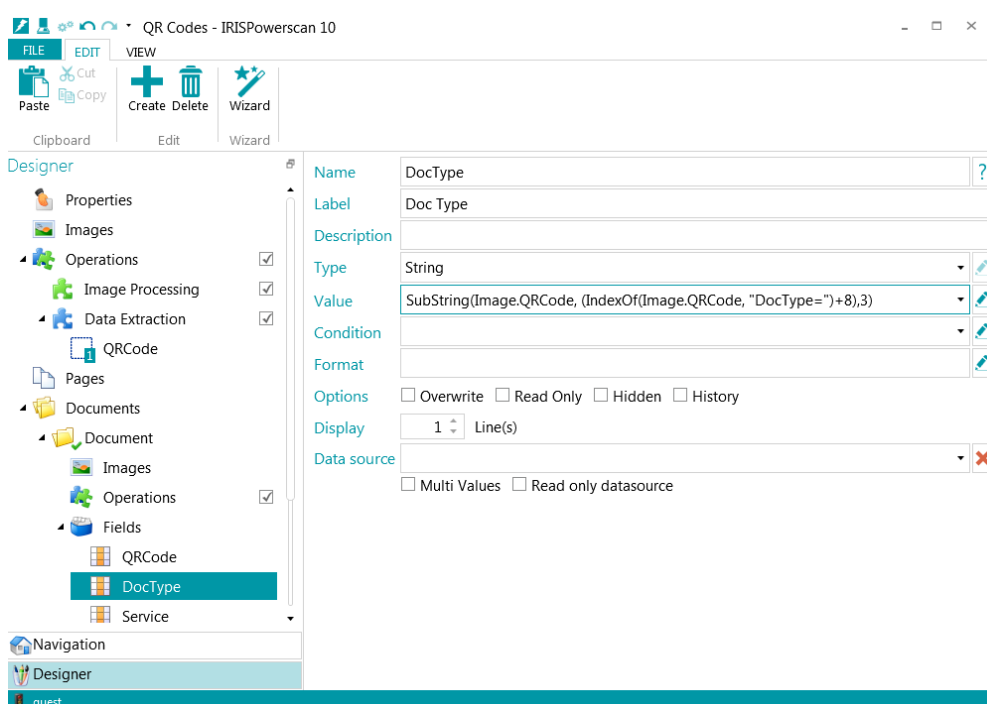
- Create a Data Extraction zone for the QR Code:
 - Go to **Designer > Images**. Add the image above.
 - In the Designer Explorer click **Operations > Data Extraction**.
 - Draw a frame around the QR code, select **Barcode** as **Type** and click **Next**.
 - Name the zone **QRCode** and click **Finish**.

- Now go to the default **Document** and create three index fields: **QRCode**, **DocType** and **Service**.



- Enter **Image.QRCode** in the **Value** field of QRCode.
- Enter the following script in the **Value** field of DocType:
`SubString(Image.QRCode, (IndexOf(Image.QRCode, "DocType=")+8),3)`

This means its value is obtained by taking the SubString of 3 characters that follows the label "DocType=" in the QR code.



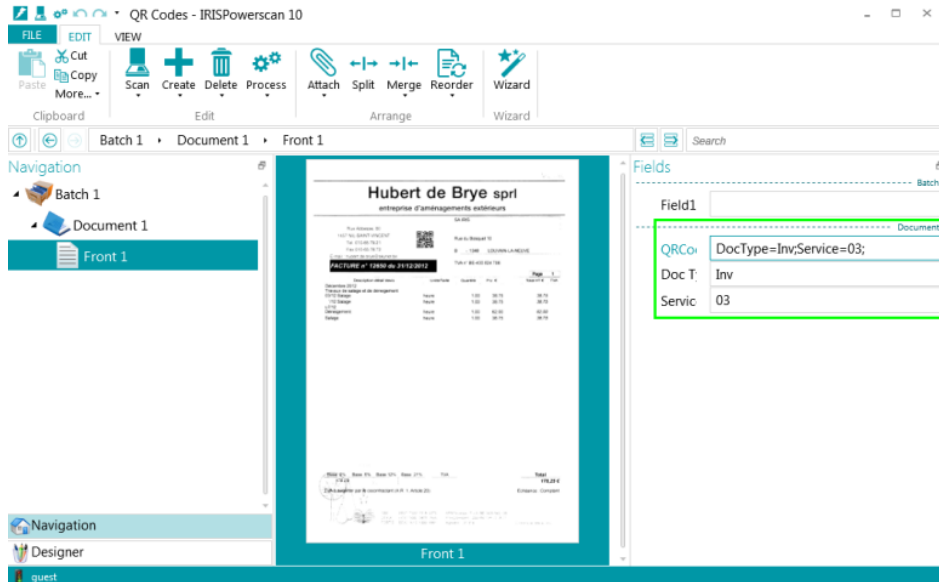
1. Enter the following script in the **Value** field of Service:
`SubString(Image.QRCode, (IndexOf(Image.QRCode, "Service=")+8),2)`

This means the value is obtained by taking the SubString of 2 characters that follows the label "Service=" in the QR Code.

Tip: click the pencil icon to open the Expression Editor to see the behavior of this script on the example.

2. Return to Navigation mode and click **Rescan**.

The result is that the Document index fields **DocType** and **Service** contain the respective values “Inv” and “03”, which have been extracted from the QR Code.



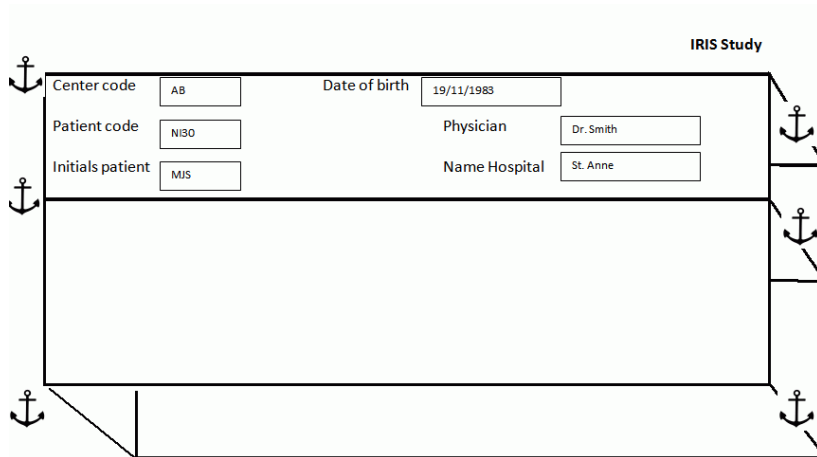
How to use Anchor Points Detection

By means of Anchor Points Detection you can make sure that recognition zones are positioned correctly, and therefore recognized correctly, even if the scanned images have shifted.

In a sense, Anchor points function the same way as boat anchors do; they keep something in place.

Note that distortions cannot be corrected in IRIS Powerscan, only shifts.

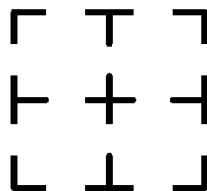
Important: IRIS Powerscan requires bitonal images to recognize Checkmark zones and Anchor shapes. If you are scanning color images, make sure to add the **Binarize** operation as **Image Processing Operation**.



What exactly is an anchor point?

An anchor point is made of the **intersection of 2 lines**. The various possibilities are the following:

- Top left corner
- Top right corner
- Bottom left corner
- Bottom right corner
- Cross
- Edge bottom
- Edge left
- Edge top
- Edge right

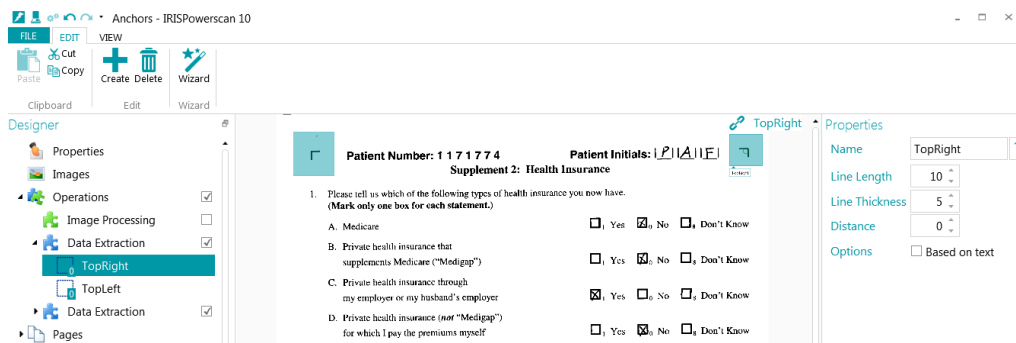


Note that you need at least 1, and ideally 4 or more anchor points on an image.

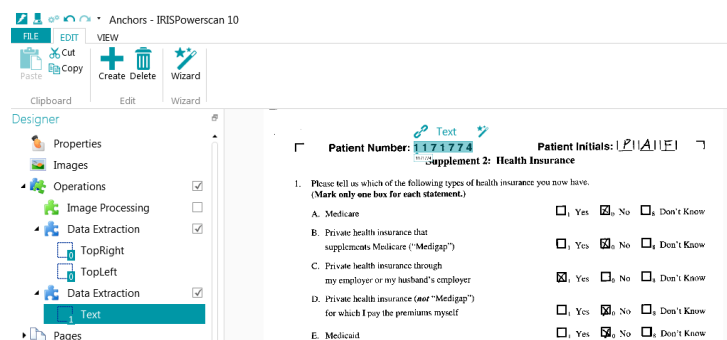
Note: Black squares are not supported as Anchor shapes.

Example of how Anchor Points Detection works

- In IRIS Powerscan click **FILE > Open**.
- Double-click the **Anchors** project to open it.
- Click the **Designer** tab in the bottom left corner to switch to Designer mode.
- Expand **Operations > Data Extraction** in the Designer tree.
- Notice that two anchor points have been defined.



- In the second Data Extraction set, one Text zone is defined. Without the Anchor Points, this Text zone would not be recognized correctly if the pages were to shift.



- To test this, uncheck the first **Data Extraction** set containing the Anchor Points.
- Switch to **Navigation** mode. You will be prompted to save the project. Click **Yes** to do so.
- Then click **Scan**.

When the scanning is complete, click each Document and check the **Patient ID** index field. You'll see that in most cases it has not been recognized correctly. This is because the sample images have shifted.



- Return to Designer mode and select the first Data Extraction set again.
- Return to Navigation mode, delete the batch you scanned and click **Scan** again. You'll see that the **Patient ID** index field is recognized correctly.



How to create Anchor Points in IRIS Powerscan

Preliminary note: in this section we assume you already have images or paper sheets that contain objects that can be used as Anchor Points.

If you do not, you can use the **Document Generator Tool** to create Anchor Point Documents. You can find it in **All Programs > IRIS Powerscan 10 > Tools > Document Generator**.

Image Processing Requirements

Anchor Points Detection is applied on binarized (black-and-white) images. If you are using color images, apply **Binarize** as **Image Processing Operation**.

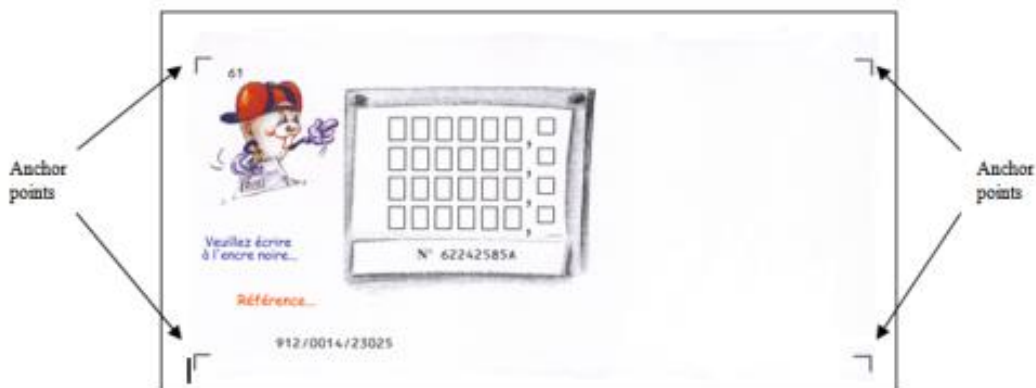
To do so, click **Wizard > Add an image processing operation > Binarize**. If you do not, a default binarization will be applied.

The image on which you are designing the Anchor Points should be of **perfect** design, so not skewed or having been deskewed.

To avoid that the images you will be scanning are skewed, apply **Deskew** as **Image Processing Operation**.

Positioning Recommendations

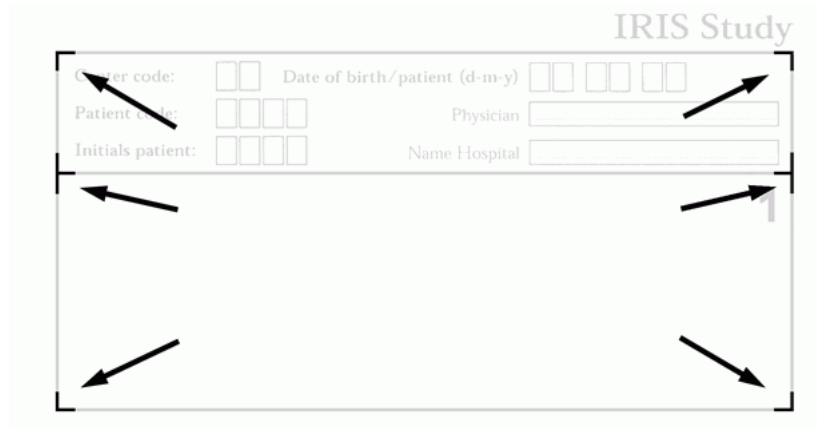
1. Spread out the Anchor Points evenly on the **entire image**. If you locate all the anchor points in the same area, the system will not be able to locate the information precisely.



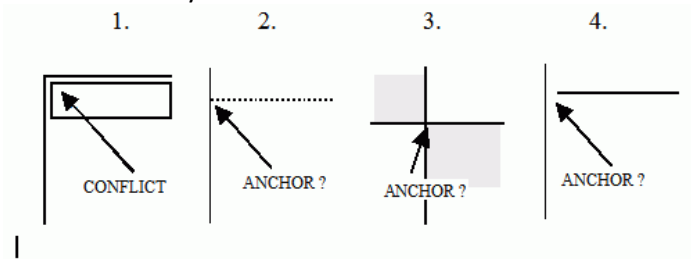
2. **Avoid perfect symmetry.** It would make document reorientation impossible.



3. If the image content is grouped into **tables and squares**, the intersection of their lines can be used as anchor points, provided they are 2 pixels thick.

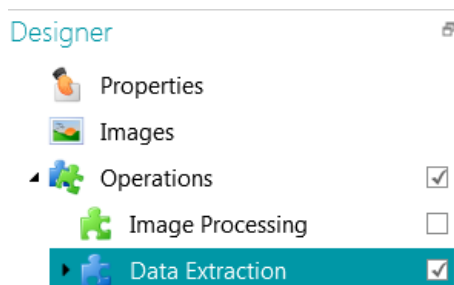


4. Do not position an anchor point close to an angle that could be interpreted by the system as an anchor point.
5. Do not use any dotted lines to design an anchor point.
6. Do not use grey shadowed areas near the anchor point.
7. Make sure the 2 lines actually touch each other and form an intersection.



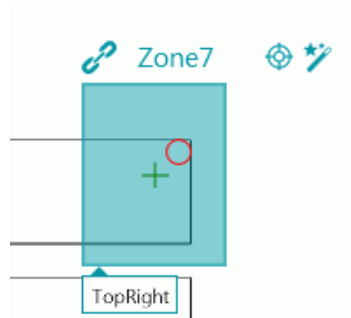
Creating Anchor Points in IRIS Powerscan

- Add your Anchor Points image to **Images** in the Designer tree.
- Expand **Operations** and select **Data Extraction**.



- Draw a frame around the area you want to use as Anchor Point.
- Select **Anchor point (shape)** and click **Next**.
- Determine the **Options**:
 - Enter a **Name** for the Anchor Shape zone.
 - **Line length**: minimum length of a line to be considered.
 - **Line thickness**: maximum thickness of a line to be considered.
 - **Distance**: minimum distance from the image border (in order to avoid detecting image borders as anchors.)
 - **Shape**: select the expected shape of the anchor point.
- When you are done, click **Finish**.
- The Anchor Shape Zone is now created on the image.
- Click the **Target** icon (🎯) to position the cross in the center of the circle.
This way the data extraction zone is centered on the detected anchor.

Note: the Wizard () is not used here.



Note: the red circle means an anchor has been detected. The green cross indicates the center of the Data Extraction Zone.

- Now repeat these steps for the other Anchor Points.

What happens during processing?

During processing IRIS Powerscan looks for any anchor of the indicated type in the data extraction zone.

For each anchor that is detected, an offset between its actual position and the position at design time is computed. Out of that, an average offset is computed. This average offset is used to shift all the other extraction data.

How to use Checkmark Detection

It is now possible to create Checkmark zones in IRIS Powerscan. Their value can be **checked** (1), **unchecked** (2) or **cancelled** (4).

The values of Checkmark zones can be used to fill in Index fields by using Expressions. How to do so will be explained below.

Important: IRIS Powerscan requires bitonal images to recognize Checkmark zones and Anchor shapes. If you are scanning color images, make sure to add the Binarize operation as Image Processing Operation.

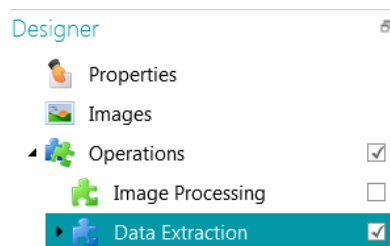
Creating Checkmark zones in IRIS Powerscan

- Create a new Project and switch to **Designer** mode.
- Right-click **Images** and add a sample image that contains the checkmarks you want to use.

Important: the checkmarks on the pages you will be scanning must be located at the exact same positions as on the sample image. Otherwise the recognition will not work.

Note that it is recommended to use **Anchor Points Detection** combined with Checkmark Detection, in case the scan should shift a little.

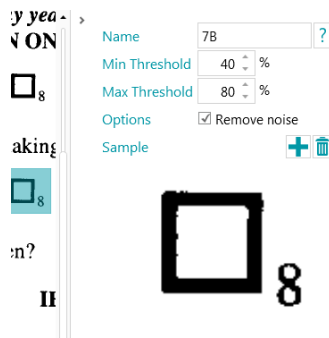
- Expand **Operations** and select **Data Extraction**.



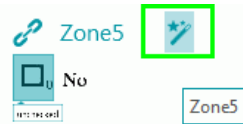
- Draw a frame around the area you want to use as Checkmark.
- Select **Checkmark shape** and click **Next**.
- Determine the **Options**:
 - Enter a **Name** for the Checkmark zone.
 - **Min Threshold**: This is the percentage of the zone that must be filled in order for the zone to be considered as checkmark zone. The default Minimum threshold is 30 %.
 - **Max Threshold**: If the zone is filled more than the Maximum threshold, the zone will be considered as crossed out, instead of checked.



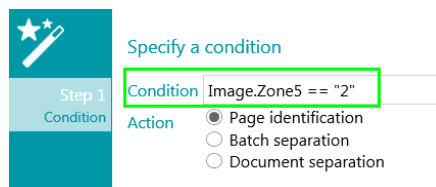
- **Remove noise**: Select **Remove noise** to have IRIS Powerscan to remove noise pixels from the zone.
- **Sample**: Adding a sample is recommended to increase the recognition accuracy. Without a sample, IRIS Powerscan examines the entire data extraction zone. With a sample, the pixels that are taken into account are only those inside the checkmark zone (checkmark included).



- Click the Wizard icon on the checkmark zone.



- Determine the value of the checkmark zone.
The value of a checkmark zone can be **1** (checked), **2** (unchecked) or **4** (cancelled).



- Repeat these steps for all the checkmark zones you want to use.

Filling in Index fields based on Checkmark zone values

Once you have created the required Checkmark zones and attributed a value to them, their value can be used to fill in index fields.

How this works will be explained by means of the **Checkmarks Demo project** in IRIS Powerscan.

- In IRIS Powerscan click **FILE > Open**.
- Double-click **Checkmarks** to open the project.
- Click **Scan** to scan the demo images.
- Notice that the Document index fields are filled in.

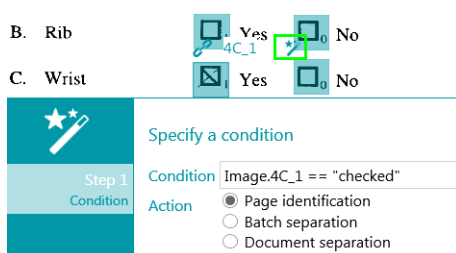


- Switch to Designer mode and expand **Pages > 0101 > Operations > Data Extraction**.
- Two checkmark zones have been created for Question 4 C.
The value of these checkmark fields were used to determine the value of the Index field **4C** (cf. image above).

4. Since the age of 45, have you broken any of the following bones?

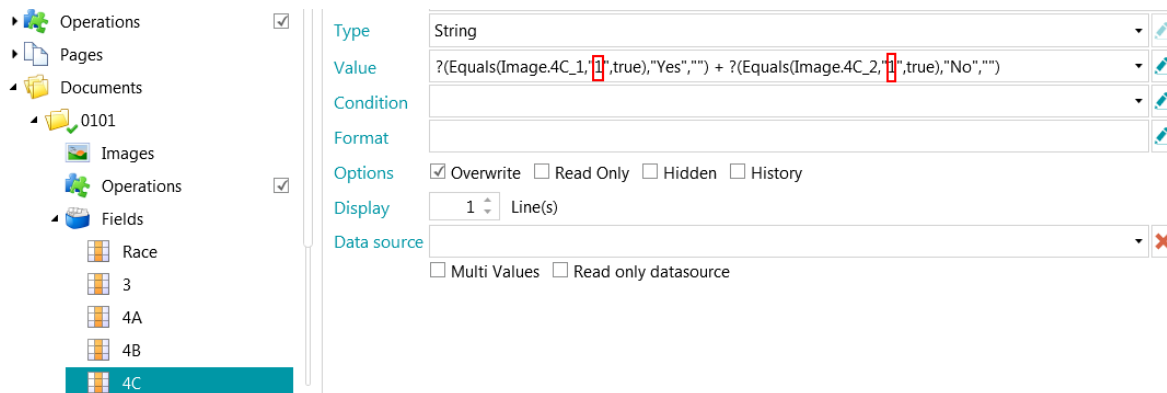
- A. Hip Yes No
- B. Rib Yes No
- C. Wrist Yes No
- D. Spine (backbone) Yes No

- Select a Checkmark zone and click the Wizard icon to check its value. You'll see that **Yes** has the tooltip "**checked**" and **No** "**unchecked**".



- The values of these 2 checkmark zones are used in an Expression to determine the **Value** of Index field **4C**.
- To check this, expand **Documents > 0101 > Fields > 4C**. Examine the expression:
The value is "**Yes**" if the checkmark zone **Image.4C_1** is checked (1) or the value is "**No**" if the checkmark zone **Image.4C_2** is checked (1).

Note: the value of a checkmark zone can be **checked (1)**, **unchecked (2)** and **cancelled (4)**.



Of course, much more complex expressions can be used. Check for instance the **Value** of the **Race** field.

How to use Debookletting

The Debookletting feature allows you to scan books faster. Instead of scanning two pages of a book at a time, remove the staples from the book and feed the entire batch of sheets into a duplex scanner. By means of the **Reorder** operation you can reorder the scanned pages in the right order.

Pages may either be Landscape or Portrait oriented.

Notes:

The Debookletting feature only works on Document level. It is not possible to reorder pages across different documents and batches.

The Debookletting feature only works on an **even** page count.

This is the only use case in which the **Reorder** operation can be used. The **Reorder** tool on the **Edit** tab of the main toolbar however also has other functions. See the corresponding section in the User Guide for more information.

Requirements:

Paper sheets must be of A4 or A3 size.

Your scanner must scan in **Duplex** mode.

Attention: do **not** use the Debookletting feature in Simplex mode when using a real scanner, for this will not work. When scanning from folders, the Duplex mode is not required.

Split horizontally must be selected as **Arrangement** option in the **Sources** settings.

The Debookletting can either be done automatically via the **Reorder Operation** or it can be done manually via the **Reorder tool**.

Automatic Reordering

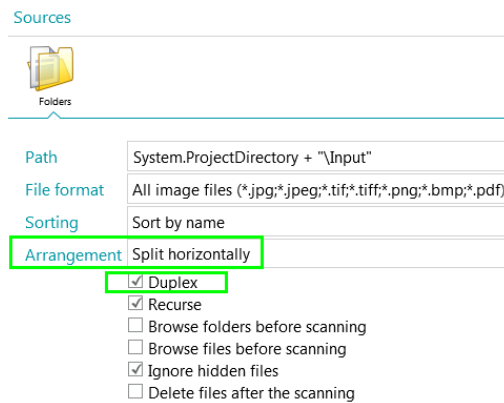
- Open a Project and click **Wizard**.
- Select **Add an operation > Reorder**.
- Switch to Designer mode and expand **Operations > Reorder**.
- Select **Automatic** and then select the **Mode**:

Important: in **Automatic** mode the reordering only occurs at the end of a document. This has implications for projects in which separators are used. In such projects the separator must be the first image that comes after the page arrangement.

- **Cover first:** if the cover page will be fed first into the scanner.
- **Cover last:** if the cover will be fed last into the scanner.



- Remove the staples from the book you want to scan and disassemble the sheets.
Important: keep the sheets in the right order and do not mix them up. If the order of the sheets is mixed up, you need to use OCR-based reordering (explained below).
- In Designer mode click **Properties**.
- Now select the **Source** you will be using.
 - Make sure the **Duplex** scanning mode is activated.
 - Select **Split horizontally** as **Arrangement**.



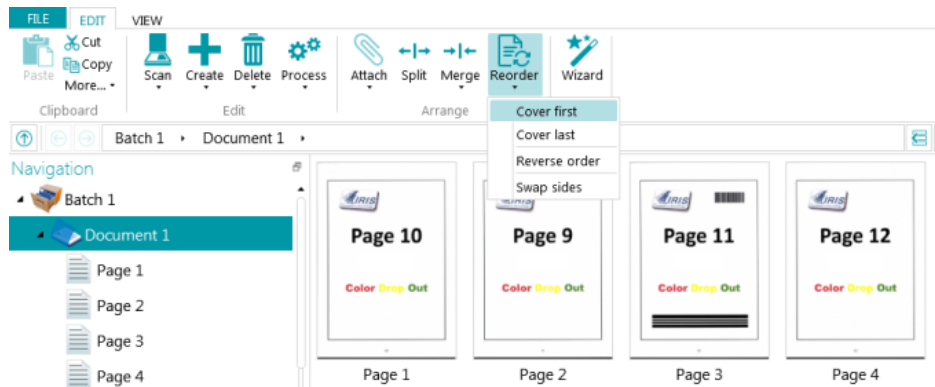
Example with Folders as Source

- Scan your documents. They should be reordered correctly.
Important: take into account the direction in which the text is read by the scanner. In some cases you may need to apply a **Rotate** operation in IRIS Powerscan.

Manual Reordering

- Remove the staples from the book you want to scan and disassemble the sheets.
Important: keep the sheets in the right order and do not mix them up. If the order of the sheets is mixed up, you need to use OCR-based reordering (explained below).
- In Designer mode click **Properties**.
- Now select the **Source** you will be using.
 - Make sure the **Duplex** scanning mode is activated.
 - Select **Split horizontally** as **Arrangement**.
- Scan your documents.
Important: take into account the direction in which the text is read by the scanner. In some cases you may need to apply a **Rotate** operation in IRIS Powerscan.

- In the Navigation tree select the Document that has been created.
- Then click the down arrow next to **Reorder** and select **Cover first** or **Cover last** depending on how you scanned your pages.



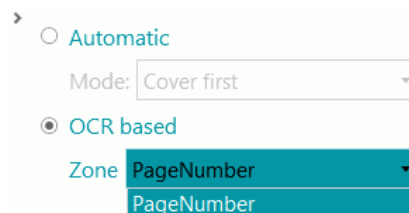
Tip: in case you selected the wrong option, use **Ctrl+Z** to undo the reordering.

OCR-based Reordering

If your pages are completely mixed up, you can always use OCR-based reordering, based on the page number.

Important: the same requirements apply as for the other Reordering modes.

- [Add one sample page](#) that contains a page number.
- [Create a Data Extraction zone](#) around the page number.
- Click **Wizard > Add an operation > Reorder**.
- Switch to Designer mode and expand **Operations > Reorder**.
- Select **OCR based** and then select the zone you created from the drop-down list.

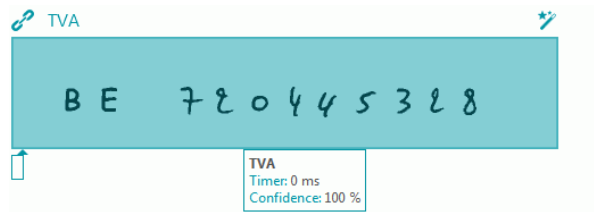


- Scan your pages in **Duplex** mode.
If the page numbers are recognized correctly, the pages should be reordered correctly as well.

Important: the number of pages you scan in a batch must be even. An odd number of pages cannot be reordered correctly.

Using Confidence Levels on Index Fields

IRIS Powerscan always computes a confidence level for Data Extraction zones. The Confidence level is shown in the Tooltip of the Data Extraction Zone.

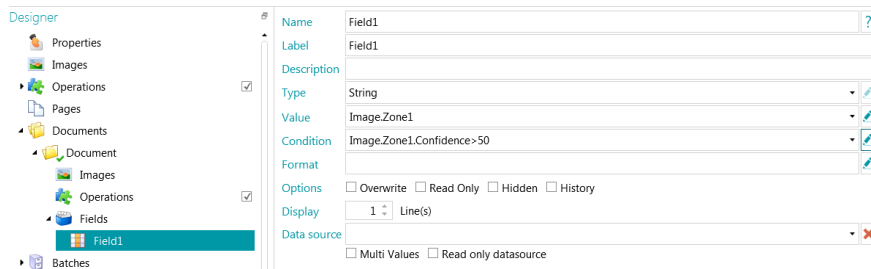


When Data Extraction Zones are linked to Index Fields, you can apply a **Confidence** Condition to the Index Field. This means that if the confidence in the recognition accuracy is below an indicated level, the Index Field will be flagged as inaccurate.

Note that the Data Extraction Zones must be of the type **Text**, **Hand-Print** or **Barcode**.

To use a confidence level on an Index field:

- Create a Data Extraction zone of the type Text, Hand-Print or Barcode. E.g. Zone1.
- Link it to the default Index field Field1 of the default Document type. To do so, enter **Image.Zone1** as **Value**.
- Then enter the Confidence **Condition**. In our example **Image.Zone1.Confidence>50**. In this case the field will be flagged as inaccurate if the confidence level of the Data Extraction Zone **Image.Zone1** is below 50. The confidence value must be an integer between 1 (very low confidence) and 100 (very high confidence).



- The Document and Batch containing the inaccurate index field will also be flagged as inaccurate and will require validation.
- Do the Validation and modify the results if necessary.

Note however that the color of the index field does not change, even when you have corrected it.

Note:

Confidence levels can also be applied on Page, Document, and Batch level.

The confidence level of a page is stored in the variables:

- Page.Confidence
- <Page.Type>.Confidence

The confidence level of a document is stored in variables:

- Document.Confidence
- <Document.Type>.Confidence

The confidence level of a batch is stored in variables:

- Batch.Confidence
- <Batch.Type>.Confidence

How to keep expressions with unknown variables from being processed

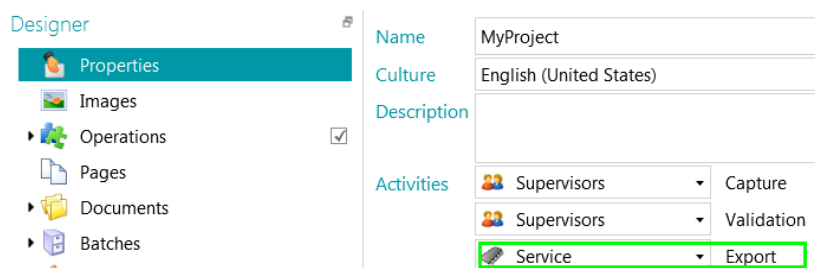
In IRIS Powerscan unknown variables are replaced by an empty string. For instance, if the variable Page.Index is unknown or not found in the expression "Page (" + Page.Index + ")", then the expression will be evaluated as "Page()".

To avoid that expressions which contain unknown variables are evaluation put a "?" in front of the expression and place the expression between parentheses.

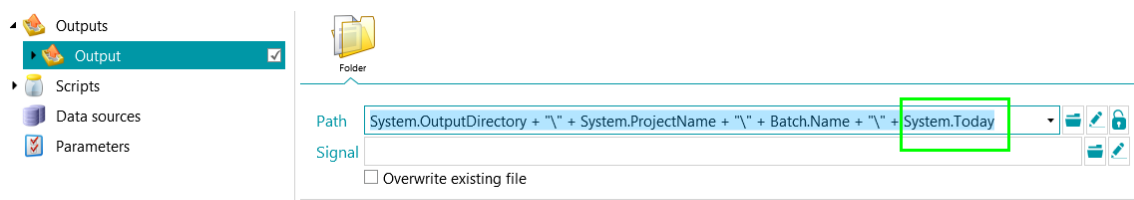
For instance, ?("Page (" + Page.Index + ")").

How to synchronize Date formats between IRIS Powerscan, your Windows System Account and Windows User Account

In projects where the Export is handled by the Service, and where you add the the Date to the Output path (by using the variables System.Today or System.Now) problems may occur when the Culture of your **Windows System Account** does not correspond to the language of your **Windows User Account**. In some cultures dates are formatted as dd/mm/yyyy while in others they are formatted as mm/dd/yyyy.



Export handled by Service

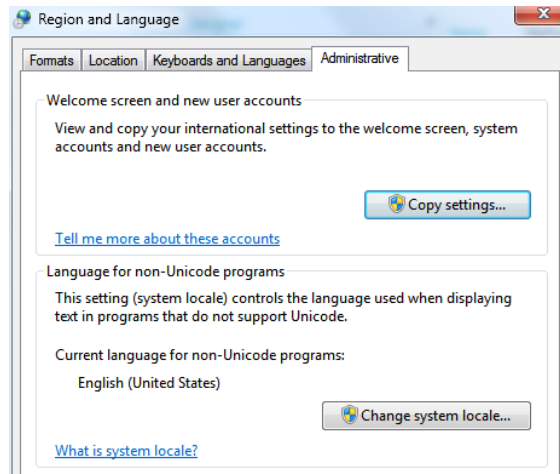


Date added to Output Path

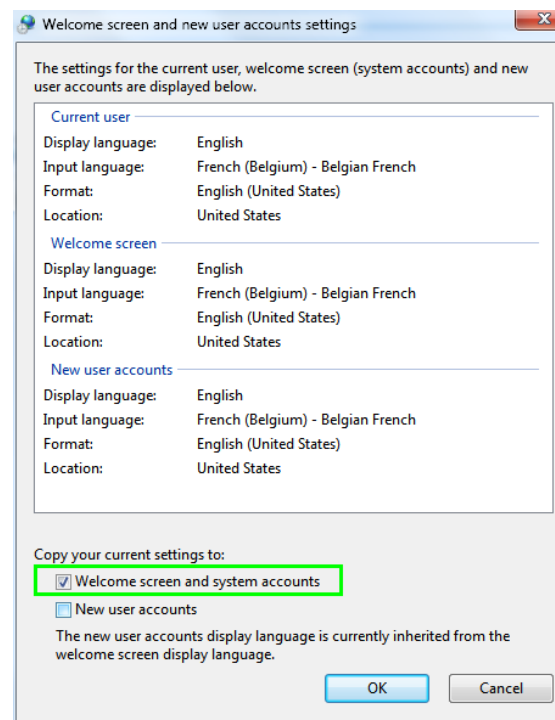
To synchronize both cultures:

- Go to **Control Panel > Region and Language > Administrative**.

- Click **Copy settings**.



- In the Window that appears select **Welcome screen and system accounts**.
- Click **OK** to confirm.



How to obtain a Reset Code

If you acquired a version of IRIS Powerscan that includes a professional connector, you are prompted to select the connector of your choice after you have activated IRIS Powerscan.

The selection of the connector is final. If you accidentally selected the wrong connector, you need to obtain a Reset Code.

To do so:

- Click **File > Info > Features**.
- Click **Copy to clipboard** in the bottom right corner.
- Paste this info into an e-mail and send it to activation@iriscorp.com.
- Explain in the e-mail that you need a Reset Code.
- Once you have obtained the Reset Code, go to **File > Info > Features** and click **Activate**.
- Enter the Reset Code in the **Activation Code** field and click **Activate**.
- Restart the application when prompted.
- Next time IRIS Powerscan starts you are again prompted to select a connector.
- Make sure to select the right connector this time.

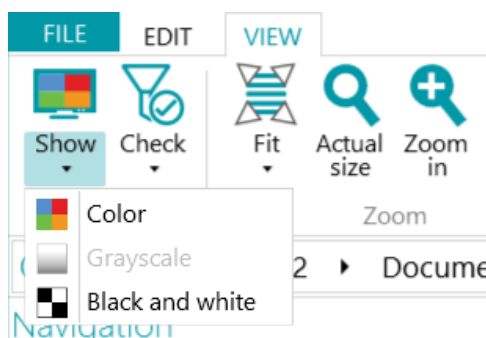
How to apply Image Filtering

When scanning multiple streams to IRIS Powerscan you can now choose which stream must be displayed and which stream must be exported for every image.

Example of how it works

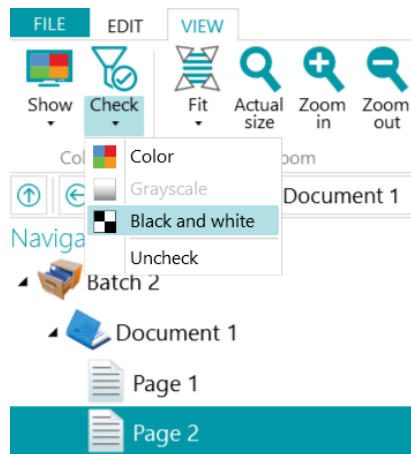
You are scanning both the black-and-white stream and the color stream of your images to IRIS Powerscan. You want the Color stream to be displayed for all Pages except for Page 2, and you want only the checked black-and-white image to be exported.

- Scan your images in multistream to IRIS Powerscan.
- Click the **View** tab.
- Click the down arrow-beneath **Show** and make sure **Color** and **Black-and-white** are available.

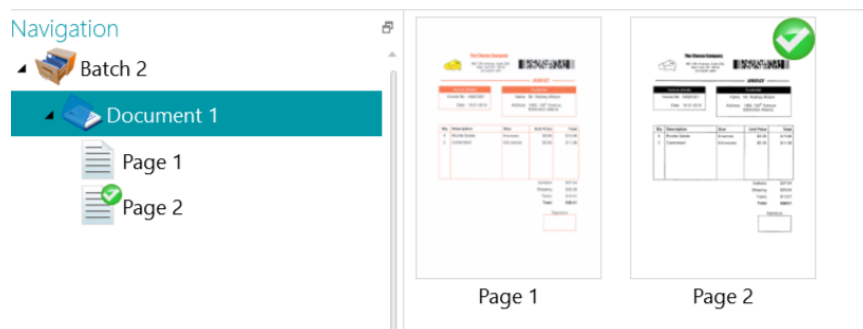


- Select **Color**.
The Color stream of your images is now displayed.
- Select the Page of which you want to display the Black-and-white stream. In our case Page 2.
- Click the down arrow beneath **Check** and select **Black-and-white**.

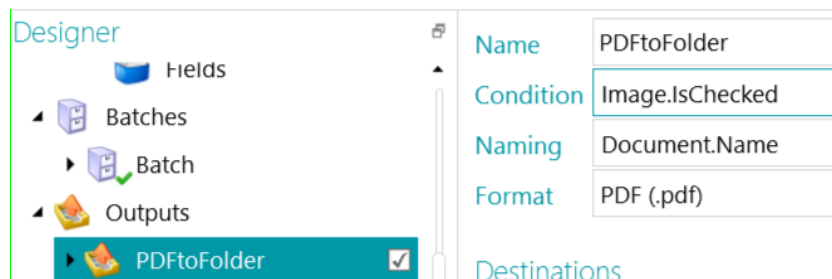
Note: you can also right-click on an image, point to **Check** and select the required stream for the selected image.



- A checkmark is placed on Page 2 in our example and Page 2 is displayed in Black-and-white.



- To filter the output, switch to Designer mode and expand the Output type you will be using.
- Enter **Image.IsChecked** as **Condition**.
In this case only the checked image will be exported.



- Click **Process**.
Only Page 2 should be exported to the configured destination.

Note that you can also use other Conditions of course. For instance **Image.IsBest**. This Condition is evaluated as true if the corresponding image/stream is checked and if the corresponding image/stream has the highest bits per pixel for that particular page. Or use **Image.IsVisible** to export only the visible (displayed) images.