

# IRIS Powerscan 10.5

User Guide

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## About this Documentation

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The aim of this documentation is to help you get up to speed with using IRIS Powerscan™ 10.5.

It covers IRIS Powerscan™'s installation and setup, the basic processing steps and the application's commands and working areas.

The descriptions in this documentation are based on the Windows® 7 or 10 Operating System.

All information is subject to change without prior notice.

## Legal Notices

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IRIS Powerscan™ integrates the following patent-granted I.R.I.S. technologies: US8068684; US8331706; US8666185; JP5501958; US8995780; EP2143039A2; BE1022166; BE1022635; US8913836; BE1022630; US8897600; BE1022636; US8811751; US8411940; BE1021013; US9058517; US9183636; US9311558; BE1025006; BE1022562; US9798943; BE1024194; US9836646; BE1024836.



# 1. About IRIS Powerscan™

## 1.1 What is IRIS Powerscan™?

---

IRIS Powerscan™ is a powerful **production scanning** and **document classification** solution. It is able to process large volumes of documents coming from any high-speed scanner and MFP (multifunction peripheral).

The documents you process with IRIS Powerscan™ can be fully indexed, hyper-compressed, converted into a wide range of editable and text-searchable output formats, and sent to any DMS (document management system), ECM (enterprise content management) or Cloud system you might already use. In other words, IRIS Powerscan™ turns paper documents into structured knowledge that is easily accessible.

### 1.1.1 General Features

---

#### [High-speed scanning](#)

IRIS Powerscan™ can scan up to 10,000 pages per computer per day. Its scanning speed can be unlimited and only depends on the scanning speed of your scanner.

IRIS Powerscan™ is compatible with Twain scanners and with MFPs. It supports simplex and duplex scanning, and also multi-stream scanning (where color and black and white images are scanned simultaneously).

IRIS Powerscan™ also supports scanning from folders and from the Cloud.

**WARNING:** when scanning documents to the Invoice Add-on (SPAP or Solution Package Accounts Payable), you must select the **Force Simplex** option of the Scan settings. This is because the Invoice module only supports front pages.

#### [Page Identification](#) and [Document Classification](#)

All paper documents / electronic files that are scanned in IRIS Powerscan™ are **classified** into a logical structure of **Batches, Documents** and **Pages**. For each of those elements, you can define different types. To distinguish between the types, various separation criteria can be used. For instance, blank pages, OCR zones, barcode zones, patch codes, etc. In fact, in IRIS Powerscan 10 each condition you configure can be used as separation method.

What's also new is that IRIS Powerscan™ can now also **uniquely identify page types**. That way, you can apply operations (like image processing, data extraction, page deletion etc.) only to those pages where they are required. Once IRIS Powerscan™ has identified the page types, you can separate documents based on those page types.

#### [Image Processing](#)

The scanned images can be enhanced with IRIS Powerscan™'s **Image Processing** features. IRIS Powerscan™ can for instance binarize, despeckle, deskew and rotate them. Enhancing scanned documents improves the recognition accuracy and generates documents that are smaller in size and easier to process.

The order in which IRIS Powerscan™ executes the image processing operations is no longer fixed, but can be user-defined. You can also choose to apply these operations only to specific batch/document/page types. You can also choose to apply these operations only to the front or rear side of a scanned page, or to both sides.

#### [Data Extraction](#) and [Document Indexing](#)

IRIS Powerscan™ offers powerful data extraction features: it can extract data from scanned documents through OCR (optical character recognition), BCR (barcode recognition), PCR (patch code recognition) and ICR (intelligent character recognition). The extracted data can be used in several ways: as variables to define a page/document/batch type, or to populate user-defined index fields, etc.

The index fields you create in IRIS Powerscan™ can be mapped to the index fields you already use in your DMS, ECM or Cloud system. Consequently, IRIS Powerscan™ can send fully indexed documents to those systems.

In terms of OCR, IRIS Powerscan™ recognizes typewritten data in up to 137 languages. All American and European languages are supported, including Central-European languages, Greek, Turkish, the Cyrillic and Baltic languages. IRIS Powerscan™ also recognizes 4 Asian languages (Japanese, Simplified Chinese, Traditional Chinese, Korean), Hebrew and Arabic.

### [Quality Control](#) and [Validation](#)

When documents have been scanned they are displayed in **Navigation mode**, where a full range of tools are available for post-scanning operations. You can rescan, rotate and rename them, rearrange them by using splitting, merging, drag and drop, cut and paste, etc.

All index fields can be validated and modified in Navigation mode.

### [Document Formatting and Compression](#)

IRIS Powerscan™ converts scanned documents into a wide range of output formats, such as searchable PDF, Word (in .docx and .rtf) and many more. The PDF documents you generate can be hyper-compressed with I.R.I.S.' proprietary and patented compression technology iHQC.

### [Output Destinations](#)

IRIS Powerscan™ can send processed documents to standard output destinations such as folders and email. You can also send them to various DMS, ECM and Cloud systems such as Therefore, Microsoft SharePoint, IRISNext, IRISXtract, FileNet, CMIS, Google Drive, OneDrive, box, Dropbox and Evernote. You can also set up customized destinations through IRISConnect™.

## 1.1.2 IRIS Powerscan™ Components

---

IRIS Powerscan 10 consists of the following three components:

- [IRIS Powerscan™ main application](#): is where you configure projects to scan and process batches of paper documents.
- [IRIS Powerscan™ Agent](#): alerts you when a new batch is awaiting user action. It can also be used to quickly open IRIS Powerscan™. The Agent is displayed in the System Tray on the Desktop.
- IRIS Powerscan Server™: is used to share projects, batches, user rights, groups and permissions among multiple workstations.

To access the **IRIS Powerscan Server™** documentation, open the **IRIS Powerscan Server™** application and click **File > Help**.

**Note:** if you wish to process invoices in IRIS Powerscan™ you need to install the [IRIS Powerscan™ Invoice Add-on](#).

## 1.2 Glossary

---

Before you get started with the IRIS Powerscan™ User Guide, it is recommended to familiarize yourself with the most important IRIS Powerscan™ concepts and terminology.

- **Project:** projects are the core of IRIS Powerscan™. Each project is a specific configuration to scan and process documents. Within a project, scanned documents are always divided into a **batch > document > page** structure.
- **Batch:** a batch is a collection of documents.
- **Document:** a document is a collection of pages.
- **Page:** a page is the scanned equivalent of **one side of a paper sheet**, or the equivalent of **one image** imported into IRIS Powerscan™. A Page is either Front or Rear.  
A Page may contain multiple streams, i.e. bitonal, color and grayscale.

**WARNING:** in the 10.3 versions of IRIS Powerscan 10, a page used to be the scanned equivalent of a **paper sheet**, i.e. containing both the Front and Rear side.  
This has implications for **Duplex scanning** projects where the variables Page.Index or Page.Count is used to separate Documents or Batches. Suppose you configured the project to start a new Document every 2 pages: Page.Index>2. Because of the new Page structure in IRIS Powerscan™ this must be changed to Page.Index>4.

- **Identification:** means uniquely identifying a page.
- **Classification:** means classifying (or separating) pages into a document and batch structure.
- **Expression:** an expression consists of literal values, variables, operators and functions.
- **Condition:** is a Boolean expression. Its value is either true or false. Conditions are used as identification and classification criteria.

**Tip:** see [Using Expressions](#) and [Using Scripts](#) for more information.

- **Unattended Mode:** an unattended mode project is a project for which all activities are executed 'as a [Service](#)' (Capture, Validation and Export).



*Unattended Mode*

## 1.3 New features in IRIS Powerscan™ 10.5.11

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This chapter highlights new features, improvements being dispatched at their right place throughout the full documentation.

### New parameter for Big Documents

For trouble-free exports, we strongly recommend that you limit large documents to no more than 1000 pages per document.

However, now that limit can be increased up to 4000 pages per document (200 or 300 dpi color) by adding and setting the new parameter **BigDocumentExport** to 'Yes'.

See **Chapter 5** > [Configuration Pane > Parameters](#)

## 1.4 IRIS Powerscan™ Add-ons

---

The following add-ons are available for IRIS Powerscan™ 10.5:

- [iHQC Add-on](#) (Volume based)
- [Invoice Add-on for IRIS Powerscan™](#) (Volume based)
- Additional connectors

## 1.4.1 iHQC Add-on

---

iHQC stands for **intelligent High-Quality Compression** and is I.R.I.S.' proprietary compression technology. It is designed to convert standard document images into hyper-compressed color (or black-and-white) PDF and XPS documents, without loss of image quality, for easy sharing and cheap storage.

### Volume Licenses

Several volume licenses are available for the iHQC add-on. Which add-on you should acquire depends on the number of pages you want to process per year.

The volume licenses are yearly renewable. They are reset automatically on the anniversary date of first use.

### Levels of iHQC

Four levels of iHQC are available for PDF documents, and one level for XPS documents.

In each level, you can use the Quality slider to favor quality over size and vice versa.

**Level 1** is available by default and does not require an add-on.

### Benefits

- Extremely small output images, saving you a lot of disk/server space.

## 1.4.2 IRIS Fingerprint Add-on

---

*(This add-on is by default enabled in the Corporate, Business, Enterprise and Production versions of IRIS Powerscan™ 10.5)*

Thanks to the Fingerprint add-on, IRIS Powerscan™ is able to examine the layout of the scanned images. That way it can uniquely identify pages. Once IRIS Powerscan™ has identified the page types, you can separate documents or batches based on those page types.

**Note:** in order to use Fingerprint detection you must provide IRIS Powerscan™ with binarized samples of the images that must be used for Fingerprint detection.

### Benefits

- Very fast separation of batches and documents.
- Easy to set up.
- No need for separator pages based on barcodes, patch codes or OCR zones.
- Efficient with bad quality OCR documents.

### Limitations

- The geometric elements must be constant: handwritten text and non-separable, overlapping items are not suited for Fingerprint recognition.

### 1.4.3 ISISDriver Add-on

---

*(This add-on is by default enabled in all versions of IRIS Powerscan™ 10.5)*

IRIS Powerscan™ natively supports TWAIN and TWAIN-VRS. Thanks to the **ISISDriver add-on**, you can also use **ISIS scanners** in combination with IRIS Powerscan™.

**ISIS** stands for **Image and Scanner Interface Specification**. The ISIS drivers provide scanner support for over 400 ISIS scanners.

#### Benefits

Below you find an overview of the benefits ISIS drivers provide compared to TWAIN drivers.

- ISIS drivers provide the most robust scan feature support.
- The driver interface is consistent from scanner to scanner. This is not the case with TWAIN drivers.
- ISIS drivers optimize the hardware scanner's performance, allowing it to always run at rated speed.
- ISIS drivers provide a consistent interaction with all ISIS scanners and vice versa.



## 1.4.4 Central Management Add-on

---

*(This add-on is by default enabled in the Professional versions of IRIS Powerscan™ 10.5)*

The Central Management Add-on allows you to connect IRIS Powerscan™ to IRIS Powerscan Server™.

By means of IRIS Powerscan Server™, Administrators can set up a **Client Server Architecture** between IRIS Powerscan Server™ and multiple IRIS Powerscan™ Workstations - or Clients on the same LAN network. This way the different activities of IRIS Powerscan™ - being **Capture**, **Validation** and **Export** - can be divided over different Clients and you can set up an entire workflow process. Some users take care of the scanning, while others do the index validation and still others do the export.

Note that on each computer you want to use as IRIS Powerscan™ Client you need to install an instance of the IRIS Powerscan™ application and activate the **Central Management Add-on**.

### Benefits

It is no longer necessary to configure each IRIS Powerscan™ station separately. Every scanning station can be synchronized automatically from the IRIS Powerscan Server™.

For more information see the IRIS Powerscan Server™ documentation.

**WARNING:** the Invoice Add-on module is not supported in this central management mode.

## 1.4.5 Background Processing Add-on

---

*(This add-on is by default enabled in the Corporate, Business, Enterprise and Production versions of IRIS Powerscan 10)*

The Background Processing Add-on enables IRIS Powerscan™ to have the **Export** done by the **Service**, i.e. in the background. This way, you don't have to wait for your batch to be processed before scanning the next batch.

**Note:** the Background Processing Add-on is not required to have the **Capture** and **Validation** done by the Service.

Also see [Processing Documents in IRIS Powerscan 10](#).

### Benefits

- Increased scanner productivity.

## 1.4.6 Invoice Add-on for IRIS Powerscan™

---

The **Invoice Add-on for IRIS Powerscan™** allows you to process invoices in IRIS Powerscan™.

For more information see the **Invoice Add-on for IRIS Powerscan™** documentation.

**WARNINGS:**

The Invoice Add-on is not compatible with the central management feature. You cannot use it in such configuration. The Invoice Add-on is for standalone single seat use only.

The Invoice Add-on is not designed to work in the [Unattended Mode](#) (all activities as a service).

## 1.4.7 Canon Barcode Module

The Barcode Module (III) is an add-on software program for adding the barcode reading function to the ISIS/Twain driver.

### Benefits

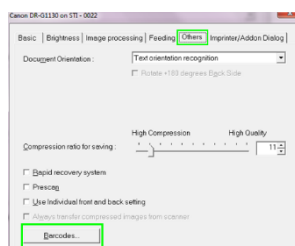
This optional barcode software can automate many workflow processes such as indexing, batch separation, etc.

### Activation

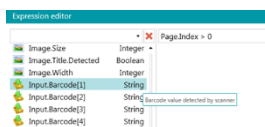
- Contact your Canon representative to obtain the Barcode Module.
- Run the corresponding **setup.exe** file to install it.

### Configuration

- Open your ISIS/Twain scan functionality.
- Click the **Others** tab.
- Click the **Barcodes** button.



- Select **Enable barcode detection** and select the barcode types the module must detect: **QR**, **PDF417** and **Data Matrix**.
- In the IRIS Powerscan Expression Editor, four new corresponding variables are now available. This means the module can read up to four barcodes per page.



- These new variables can be used inside [expressions](#) like any other variables.

## 2. Installation and Activation

### 2.1 System Requirements

---

**WARNING about Virtual Machines:**

Some virtual machines running on a laptop or small computer may not be usable. Some scanners are not recognized properly and the IRIS Powerscan™ installation may fail if the Virtual Machine is not up to date with the latest Windows updates. Also note that a Virtual Machine must have at least **4 virtual cores** (or vCPU). If your virtual machine has vSocket and vCore, you must multiply them to obtain the amount of vCPUs.

#### Minimum System Requirements

- 2.2 GHz processor (32- or 64-bit).
- 4 GB RAM.
- 5 GB free hard disk space.

#### Recommended System Requirements

- Processor Intel i5, i7 or similar. 2.6 GHz or faster (64 bit), with at least 2 cores.
- 8 GB RAM.
- 10 GB free hard disk space, preferably on a Solid State Disk drive.
- Internet connection.

#### Minimum System Requirements for Server

- 8 GB RAM
- 10 GB free hard disk space, preferably on a Solid State Disk drive.
- At least 4 processors or more.  
IRIS Powerscan™ will use all available resources. The more resources, the faster the processing.
- SSD drives are highly recommended.

#### Supported Operating Systems

- Windows 7 (32 and 64 bit)
- Windows 8 (32 and 64 bit)
- Windows 8.1 (32 and 64 bit)
- Windows 10 (32 and 64 bit) \*\* recommended
- Windows Server 2012 R2 (64 bits)
- Windows Server 2016 (64 bits) \*\* recommended

## 2.2 Supported Scanners

---

- IRIS Powerscan™ is compatible with virtually any Twain-based professional scanners. All the major scanner vendors are supported (Canon, Kodak, Panasonic, HP, Fujitsu, Inotec, Xerox, Epson...).
- IRIS Powerscan™ can be used in combination with ISIS-based scanners through the **ISIS-driver Add-on**.
- IRIS Powerscan™ is compatible with MFPs thanks to the scan from Folders functionality.

**Note:** when using a Twain-based scanner, at least **Twain version 1.9 or higher** is required.

## 2.3 Installing IRIS Powerscan™

**WARNING:** if you are upgrading from a previous version of IRIS Powerscan 10, follow the instructions in the **Installation and Activation Guide**.

- Download the IRIS Powerscan™ package from:
  - the I.R.I.S [Partner Portal](#)
  - our website [www.irislink.com/downloadcenterpro](http://www.irislink.com/downloadcenterpro).
- Run the **IRIS Powerscan 10.msi**.

**Note:** If you wish to share projects, batches, user rights, groups and permissions among multiple workstations, also run **IRIS Powerscan Server™.msi** to install IRIS Powerscan Server™. Note that the [Central Management add-on](#) is required to do so.

If you want to process invoices in IRIS Powerscan™, you need to install the **Invoice Add-on for IRIS Powerscan™**. See the separate **Invoice Add-on for IRIS Powerscan™ documentation** to learn how to do so.

Attention, IRIS Powerscan for Invoices is a stand-alone solution. It cannot be used in a Client/Server architecture.

- Click **Next** and follow the on-screen instructions.
- Click **Finish** to finish the installation.



## 2.4 Activating IRIS Powerscan™

**WARNING:** make sure to deactivate the anti-virus software on the computer before you try to activate IRIS Powerscan™. Once the activation is complete you may reactivate the anti-virus software.

- Double-click the IRIS Powerscan™ shortcut on the Desktop.



- Enter the **Activation code**.  
The activation code was sent to you by email. In case you have not obtained your activation code yet, contact I.R.I.S. at [activation@iriscorporate.com](mailto:activation@iriscorporate.com).
- Click **Activate**.  
Note that an internet access is required. If you cannot access the internet, do a **Manual activation**.

- Click **OK** when the code has been accepted.

### Connector Activation

If you have acquired a version of IRIS Powerscan™ 10.5 that includes a professional connector, you are prompted to select the connector of your choice.

**WARNING:** this choice is final. If you accidentally selected the wrong connector, see the topic **How to obtain a Reset Code** in the **How To Guide**.

- Select the connector of your choice.
- Then click **Next**, and **Finish**.

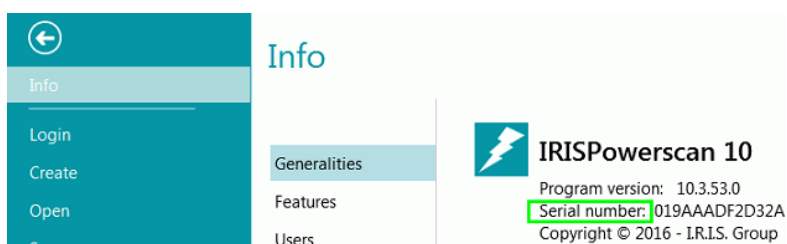


## Manual Activation

- In case the computer on which you are installing IRIS Powerscan™ does not have internet access, click **Manual activation**.
- Copy the **Computer ID** and the **Activation code** that was sent to you by email to a computer where you do have internet access.
- Send both codes to [activation@iriscorporate.com](mailto:activation@iriscorporate.com).  
In turn you receive the **License code**.

- Enter the **License code** and click **Activate**.
- Click **OK** when the code has been accepted.

**Note:** once IRIS Powerscan™ has been activated, its serial number can be found in the Application menu. Click **File > Info > Generalities**.



## Revocation of an activation code

Some typical cases require a license reset:

- Computer needs to be changed
- Computer is damaged or needs a reformatting
- Computer is lost or stolen -> you need to contact I.R.I.S

In those cases, you first need to revoke your current activation code. This procedure revokes the license on the old machine and allows I.R.I.S to add a new activation on that license. Failing to do so will prevent new activation.

Without proper revocation, no additional activation or license reset will be allowed.

**WARNING:** After a successful revocation on one computer, it will never be possible to activate again the same activation code on the same computer.

Procedure of revocation:

**Note:** An Internet connection is needed. If not available, contact I.R.I.S. at [activation@iriscorporate.com](mailto:activation@iriscorporate.com).

1. Go to **File > Info > Features**
2. Click **Revoke** in the right corner at the bottom of the screen



3. Follow the instructions on the screen

Revocation

Revocation

Activation code

Revoke

Please enter the activation code that you want to revoke.  
Once the revocation procedure is complete, you will not be able to activate the same license on this computer. The license will be reccredited with one activation for another computer.

OK

## 2.5 Activating Add-ons

Multiple add-ons are available for IRIS Powerscan 10.

**WARNING:** make sure to deactivate the anti-virus software on the computer before you try to activate features and add-ons in IRIS Powerscan™. Once the activation is complete you may reactivate the anti-virus software.

To activate the add-ons you have acquired:

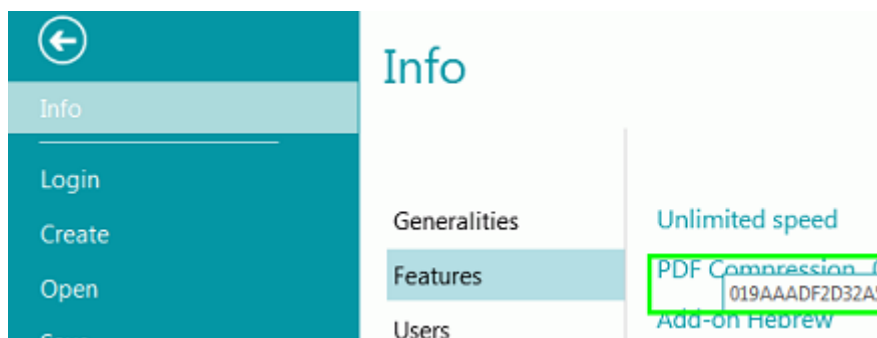
- Click **File > Info > Features**.  
The features you have already acquired are listed.
- Click **Activate**.
- Enter the **Activation code** to activate the add-ons.

**Tip:** you find your activation code on the packing slip you received from I.R.I.S. by email.

### Manual Activation

- In case the computer on which you are installing IRIS Powerscan™ does not have internet access, click **Manual activation**.
- Copy the **Computer ID**, and the **Activation code** that was sent to you by email to a computer where you do have internet access.
- Send both codes to [activation@iriscorporate.com](mailto:activation@iriscorporate.com).  
In turn you receive the **License code**.
- Enter the **License code** and click **Activate**.
- Click **OK** when the code has been accepted.

**Note:** when an add-on has been activated, you can retrieve its activation code in the Application menu. Click **File > Info > Features**. Now hover the cursor over your add-on to display its activation code.



## 2.6 Configuring your Anti-Virus Software

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The anti-virus installed on your PC scrutinizes all the files that are being written on your hard disk. This may dramatically slow down the writing speed of the images being scanned with IRIS Powerscan™ or simply prevent IRIS Powerscan™ from running. Your target production level may thus not be reached.

In order to avoid such problem, you must properly configure your anti-virus and exclude from the process the list of folders into which your images are being placed. This configuration depends on the anti-virus used. Please refer to your anti-virus manual to define the required settings.

In IRIS Powerscan™, the folders to be excluded are:

- %appdata%\IPSx
- %programdata%\IPSx
- C:\Program Files (x86)\IRIS Powerscan 10

**Note:** Some anti-virus do not support %FolderName% syntax. In those cases, enter the full path, i.e. C:\Users\YourName\AppData\Roaming\IPSx

And the executable to be excluded are:

- C:\Program Files (x86)\IRIS Powerscan 10\IPSxConsole.exe
- C:\Program Files (x86)\IRIS Powerscan 10\IPSxService.exe
- C:\Program Files (x86)\IRIS Powerscan 10\IRIS Powerscan.exe

If you are using the Watched Folder feature, you must add all the watched folders in the exclusion list.

## 2.7 Uninstalling IRIS Powerscan™

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- Close IRIS Powerscan™.
- Go to **Control Panel > Programs and Features**.
- Select **IRIS Powerscan™** from the list and click **Uninstall**.  
Then follow the on-screen instructions.

## 2.8 Product Support

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To get product support, please visit our website at [www.irislink.com/support](http://www.irislink.com/support) or at <https://supportcenter.iris.corporate.com>

## 3. Getting Started

### 3.1 Starting IRIS Powerscan™

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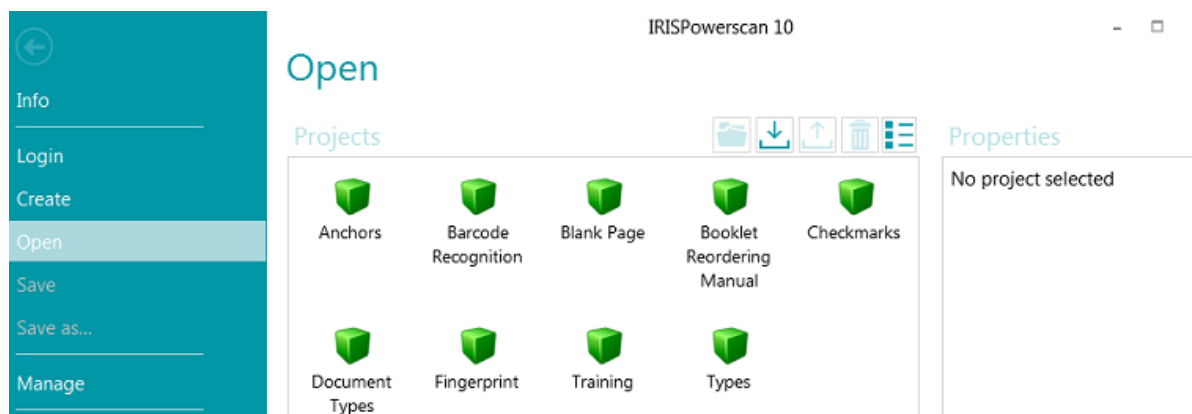
- Double-click the IRIS Powerscan™ shortcut on the Desktop.



**Tip:** you can also start IRIS Powerscan™ using the **IRIS Powerscan™ Agent** in the System Tray. This tool also alerts you when batches are awaiting user action.



- When you start IRIS Powerscan™ for the first time, you are prompted to open one of the Demo projects.



**WARNING:** it is recommended to explore the [Demo projects](#) to familiarize yourself with IRIS Powerscan™ 10.

## 3.2 Exploring the Demo Projects

The easiest way to familiarize yourself with IRIS Powerscan 10 is to explore the **Demo projects**. Demo projects are preconfigured projects that scan images from a sample folder and show different document classification methods in IRIS Powerscan™.

In each demo project there are several example index fields that are extracted automatically from the sample images.

**WARNING:** the Demo projects are just *examples* of what IRIS Powerscan™ can do. They are not intended to be used as starting point to configure projects. To configure your own projects, use the [Project templates](#) instead.

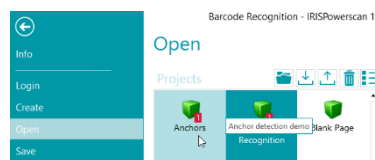
### 3.2.1 Accessing the Demo Projects

- On the main toolbar, click **File**.



- Click **Open**. The Demo projects are displayed.

**Tip:** hover the mouse cursor over each project to get a short description of each project.



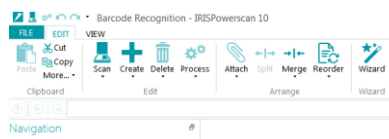
- Select the demo project of your choice, and click the **Open** icon.

### 3.2.2 Exploring a Demo Project

- Open a Project of your choice.

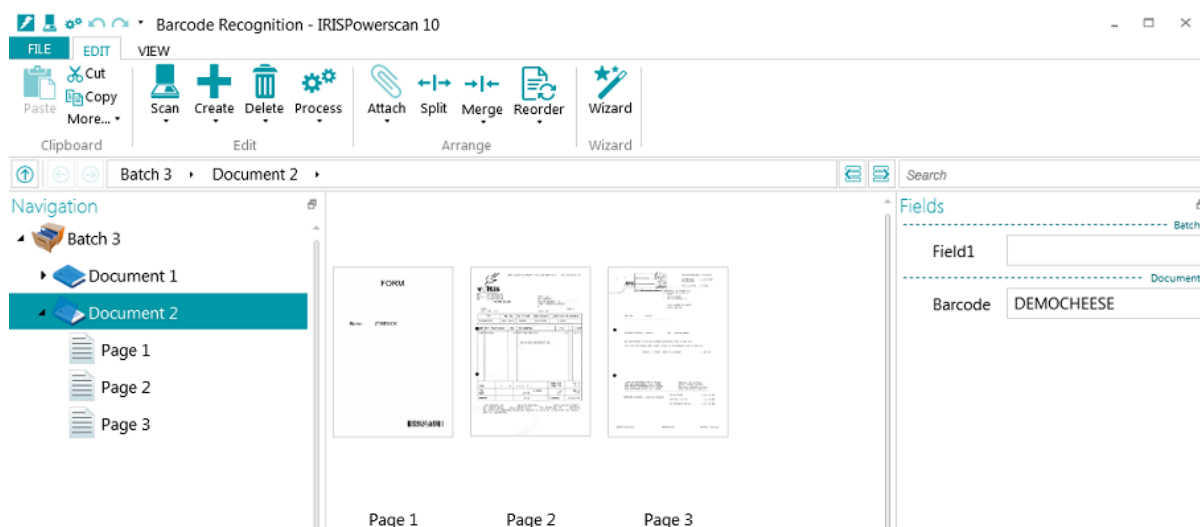
**Note:** we discuss the **Barcode Recognition** project here as example.

- The project opens in [Navigation mode](#).  
Navigation mode is the main working area of a project. It is used to scan and process documents.

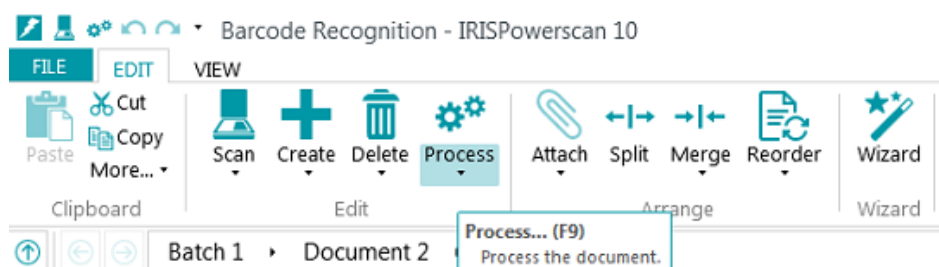


- Click **Scan** to scan some sample documents.  
The sample documents are scanned from the folder System.InputDirectory.
- The documents are separated into **Batches**, **Documents** and **Pages**, based on the separation mode of the project in question.



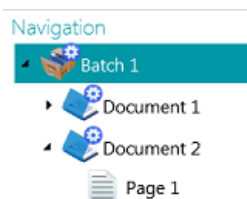


- Notice that a few example index fields are filled in on **batch** and **document** level. In Navigation mode you can validate the [index fields](#), edit them, create new ones, and link them to recognition zones.
- When you are done scanning - and you have carried out all necessary operations - click **Process** to export the processed documents.



- When IRIS Powerscan™ is done exporting the documents, a scan summary is displayed. Note that documents are by default sent to your Documents folder as text-searchable PDF files.

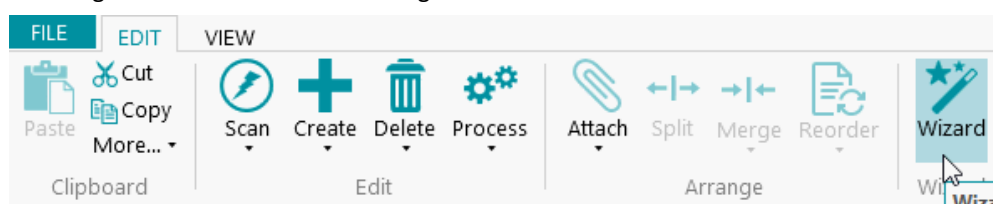
**Note:** an icon in the Navigation Explorer indicates which elements have been processed.



## Configuration in Navigation mode

In Navigation mode you also modify the project settings:

- You can [rearrange](#) the scanned documents, scan additional documents, modify the scan settings etc.
- You can also use the **Wizard** on the **Edit** tab to add operations that must be carried out on all scanned images. Examples of operations are image processing and data extraction. Further configuration must be done in Designer mode.



- To see the effects of any configuration changes you make, click the down arrow beneath **Scan**, and then click **Rescan**. The changes are then applied to the documents you have already scanned, and to any subsequent documents you scan.



## 4. Creating Projects

When you have explored the Demo projects and familiarized yourself with IRIS Powerscan™, you can start configuring projects. Projects are the core of IRIS Powerscan™ and determine how documents are classified and processed.

There are two templates to create projects:

- [Wizard](#)
- [Autodetection](#)

**Note:** when an Invoice Add-on has been activated, multiple Invoice templates are available as well. See the separate Invoice Add-on for IRIS Powerscan™ documentation for more information.



Once a project has been created, it can be fine-tuned in **Navigation** or **Designer** mode. A Wizard is again available to help you determine the settings. Any settings you apply in Navigation mode are also stored in **Designer** mode of IRIS Powerscan™. There, you can do a full configuration of the project.

**Note:** when you create a project and you choose to configure a DMS as destination for instance, index fields are automatically created. By default there is always one standard index field on Batch level and one on Document level. See [Creating index fields](#) to learn how to create and use index fields in IRIS Powerscan™.

### Exporting / Importing Projects

Once you have created a project, its configuration can be exported. That way you can import it into other IRIS Powerscan™ workstations or into the IRIS Powerscan Server™.

- Click **File > Open**.
- Select the project you want to export.  
Or Ctrl-click multiple projects to export multiple projects at once.
- Then click the up arrow to export the project(s) as .zip file.

**Note:** if you selected multiple projects, the .zip file will take the name of the project you selected first.



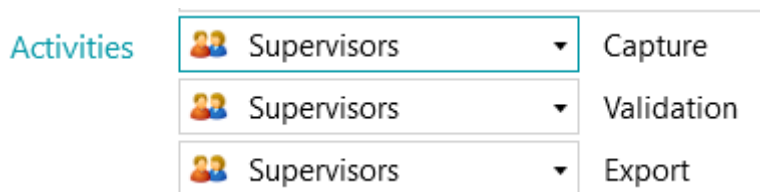
- To import a project into another IRIS Powerscan™ workstation, repeat the same procedure but click the down arrow to do the import.  
Or Ctr-click multiple projects to import multiple projects at once.

**Note:** if you are importing a .zip file that contains multiple projects, all projects inside the .zip file will be added separately to the projects list. If one or more projects of the same name already exist the newly imported projects will be renamed.

## Importing projects from an earlier version of IRIS Powerscan™

Projects are backward compatible since IRIS Powerscan 10.2.2. However, the new page architecture since IRIS Powerscan 10.4 may require small changes in your projects. When you are using separation based on Page count, you need to double the page count because from version 10.3 on one page corresponds **one side** of a sheet, instead of to two sides like in the previous versions. Therefore it is recommended to review your project settings and validate their behavior when using projects created in an earlier version of IRIS Powerscan.

**Note:** The capture, validation and Export activities are not imported if it was set to Service or if the group is unknown by the target system (See [Configuration pane](#)).

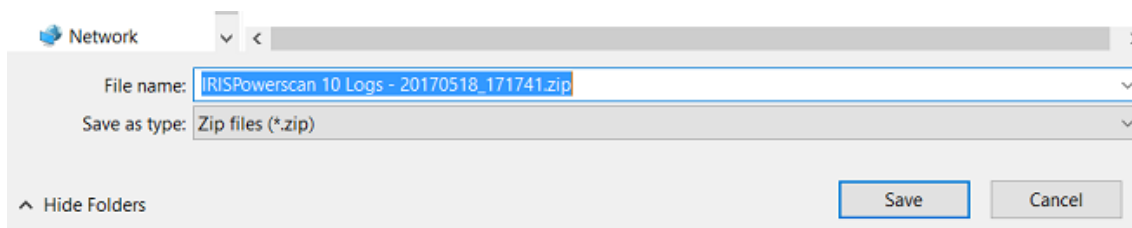


## Exporting Log Files and Image Cache

Besides exporting just the projects, you can now also export their corresponding log files and image cache.

- Select the project you want to export.  
Or Ctrl-click multiple projects to export multiple projects at once.
- Right-click and select **Export...**
- Select the data you want to export: **Image cache**, **Extended logs** or both.
- 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.

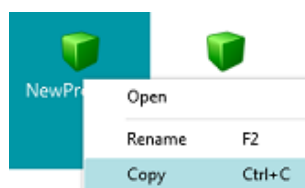
**Note:** if you selected **Extended log**, it may take some time for all the data to be gathered. If you did not select **Extended logs**, a basic log file will be saved.  
Name the log file and click **Save**.



## Cloning Projects

To clone one or more existing projects:

- Right-click the project, and select **Copy**.
- Or Ctrl-click multiple projects and then right-click and select **Copy**.
- Right-click again inside the project list and click **Paste**.



## 4.1 Wizard template

The Wizard template allows you to configure a project step by step. In the Wizard you determine the project properties, such as the name and input source, the image processing operations to apply, the batch and document separation criteria and the output formats and destinations.

### Notes:

It is not required to go through all the steps of the Wizard; you may click **Finish** after each step. IRIS Powerscan™ then applies default settings to the steps you have not configured.

The number of steps in the Wizard depends on the source you select. When you select **Folders** or a **Cloud** source, additional configuration steps appear in the Wizard.

### Starting the Wizard

- Click **File > Create**.
- Double-click **Wizard**.



#### Step 1

- Enter a project **Name** and **Description** that are meaningful to you.
- Select a **Source**: you can choose between [Scanner](#), [Folders](#), [XMailFetcher](#), [Box](#), [Dropbox](#), [OneDrive](#) and [SharePoint](#).
- Select a **Culture**: this option is crucial to obtain good recognition results; it defines the default language for OCR zones, makes sure the correct units for currency, figures, measurement, etc. are used in the indexing fields.

#### Step 2

When [Scanner](#) is selected as input source, you are prompted to specify the Scanner settings:

- Click the Settings icon to select the scanner driver.
- Then select your scanner model from the **Model** list.
- Select how you wish to split or merge the documents coming from the scanner in the **Arrangement** drop-down list:
  - **Disabled**: the pages will not be split.
  - **Split long edge**: splits pages along the long edge of the page.
  - **Split vertically**: splits pages vertically.
  - **Split horizontally**: splits pages horizontally.
  - **Fold and Split horizontally (IPS9)**: folds and splits A3 pages horizontally into two A4 pages.
  - **Merge long edge**: merges two subsequent pages along the long edge of the pages.
  - **Merge vertically**: merges two subsequent pages vertically.
  - **Merge horizontally**: merges two subsequent pages horizontally.

When [Folders](#) is selected, you are prompted to specify the **Folders** settings:

- Click the browse icon to browse for the input folder. Or click the pencil icon to change the default input folder value: System.InputDirectory.

- If the folder you want to scan from is protected by a password, click the padlock icon (🔒).
- Enter your (domain ) **User name**. E.g. IRIS\_DOM\MyName.
- Enter your **Password**.
- **Confirm** the password, and click **OK**.
- Determine the **File format** options: IRIS Powerscan™ by default searches for all files that end with the extensions \*.jpg, \*.jpeg, \*.tif, \*.tiff, \*.png, \*.bmp and \*.pdf. In case you only want to process input .pdf documents for instance, delete the other extensions from this field.
- Select the **Sorting** you want to apply: **Unsorted, by name, by creation date or by modification date**.
- Select how you wish to split or merge the images in the **Arrangement** drop-down list. The same options are available as when using a Scanner as source (see above).
- Set the other options:
  - **Duplex**: IRIS Powerscan™ processes the uneven pages as front pages and the even pages as rear pages. Select this option when scanning in Duplex mode.
  - **Recursive**: IRIS Powerscan™ also processes the files in the subfolders of the selected input folder.
  - **Browse folders before scanning** (not applicable when using a folder as Watched Folder): you are prompted to indicate the input folder each time you click **Scan**.
  - **Browse files before scanning** (not applicable when using a folder as Watched Folder): you are prompted to select one or more files each time you click **Scan**.
  - **Ignore hidden files**: when selected, hidden files will not be scanned.
  - **Delete files after scanning**: when selected, the files will be deleted after scanning.
- **Resolution**: When importing PDF files you can select the **Resolution** in which they will be imported. You can select a resolution ranging from 100 DPI to 600 DPI. Note that a resolution of 300 DPI is generally recommended. This option does *not* apply to image files nor does it change the resolution of your scanner.
- **Timer**: Indicate after how many seconds IRIS Powerscan™ must process the images in the folder.  

**Note**: this option only applies when using a folder as a [Watched Folder](#).
- **Signal**: the **Signal** option is used when using [Connected Projects](#). See the [corresponding topic](#) for more information.
- **Backup**: If you want to make a backup of your files, click the browse icon and select the folder to store the files in. Or click the pencil icon to use an [expression](#).

For more information about the available options see [Scanning from Folders](#).

When a [Cloud](#) source is selected: enter the **Username** and **Password** of your Cloud account.

### Step 3

Select the [Image Processing Operations](#) for IRIS Powerscan™ to apply. To select multiple operations at the same time **Ctrl**-click them.

### Step 4

Select a **Batch Separation Criterion**. This determines when IRIS Powerscan™ starts a new batch.

- **None**: IRIS Powerscan™ scans everything to one single default batch.
- **Based on document count**: indicate after how many documents IRIS Powerscan™ must start a new batch.
- **Based on blank pages**: IRIS Powerscan™ starts a batch when it detects a blank page.
- **Based on barcode**: IRIS Powerscan™ starts a new batch when it detects a barcode on a scan.
- **Based on patchcode**: IRIS Powerscan™ starts a new batch when it detects a patch code on a scan.
- Select **Delete separator** to have IRIS Powerscan™ delete the pages containing the blank page / barcode / patch code.

Obviously, the [batch separation criteria](#) can be refined.

**Step 5**

Select a **Document Separation Criterion**. This determines when IRIS Powerscan™ starts a new document.

The same separation criteria are available as for batch separation.

The [document separation criteria](#) too can be refined.

**Step 6**

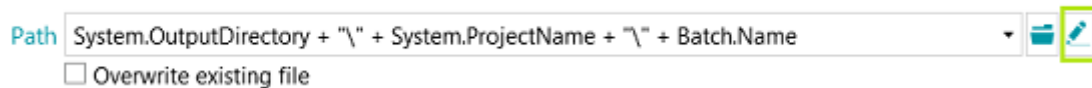
Select an output [Format](#) and [Destination](#). IRIS Powerscan™ is able to generate a large number of editable, text-searchable and compressed output documents to various target systems.

**Step 7**

When you select a **Folder** as Destination you are prompted to indicate the required **Path**. The default path is `System.OutputDirectory + "\" + System.ProjectName + "\" + Batch.Name`. This means IRIS Powerscan™ creates a folder structure within the user's Documents folder.

The default structure is: Documents > Project\_n > Batch\_n.

To select other variables, click the drop-down list. You can also customize the variables by using the Expression Editor. Click the pencil icon to open the [Expression Editor](#).



In case you don't want to use variables and use a fixed path instead, click the browse icon and select a folder. Or type in the path manually.

If the folder you want to scan to is protected by a password, click the padlock icon (🔒).

- Enter your (domain ) **User name**. E.g. IRIS\_DOM\MyName
- Enter your **Password**.
- **Confirm** the password, and click **OK**.

If the folder is part of a [Connected Project](#) use the **Signal** option. See the [corresponding topic](#) for more information.

**Step 8**

At the final step of the Wizard an overview appears of the settings you applied.

When you are done configuring the project, click **Finish** to open the project in Navigation mode. It is ready for use, but can also be fine-tuned both in Navigation and Designer mode.

## 4.2 Autodetection template

The Autodetection template is similar to the Wizard template. The difference is that the Autodetection template suggests batch and document separation criteria based on elements it finds on the scans. It detects for instance when a blank page, barcode or patch code is encountered and it prompts you whether to use them as separation criterion.

**WARNING:** Autodetection occurs only once, so make sure you select the right options. If you want to modify the Autodetection settings afterwards you need to do it in Designer mode, or start over using the Autodetection template.

### Starting the Autodetection

- Click **File > Create**.
- Double-click **Autodetection**.

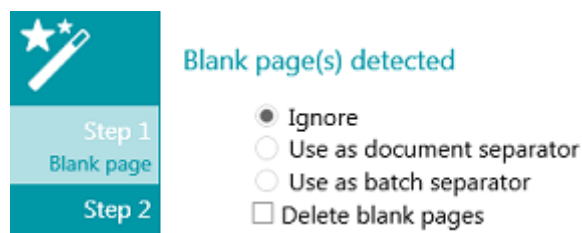


- Go through the steps like in the regular [Wizard](#).
- When you are done, click **Finish** to start the **Autodetection**.

**Note:** if you selected **Scanner** as source, the scanner now tries to initiate. Make sure the scanner is connected and powered on, and the scanner driver has been installed.

- If color or grayscale images are detected, you are asked whether to apply **binarization**, i.e. to convert them into black-and-white images on which the processing will be done.
- If **blank pages**, **barcodes** or **patch codes** are detected, you can choose to use them to separate documents or batches.

The settings you select here are applied to any additional batches you scan.



To apply the same settings to the first batch you had already scanned, click **Rescan** in Navigation mode.



**Note:** if different barcode types are detected, you are prompted for each barcode type whether to use it as separator.

- You can now process your documents in Navigation mode. And if necessary continue configuring the project both in Navigation and in Designer mode.



## 5. The IRIS Powerscan™ Interface

The IRIS Powerscan™ interface consists of two main modes and an Application menu. Click the links below for an overview.

### [1. Application menu](#)

The Application menu allows you to quickly access common tasks related to managing and sharing projects, configuring local users and groups, activating additional features, etc.

### [2. Navigation mode](#)

Navigation mode really is the main working area of IRIS Powerscan™. Navigation mode contains all commands and controls to process documents; in Navigation mode you scan documents, rearrange them, validate their index fields, generate output files and send them to the destinations of your choice. When a project is created or opened, it is by default displayed in Navigation mode.

### [3. Designer mode](#)

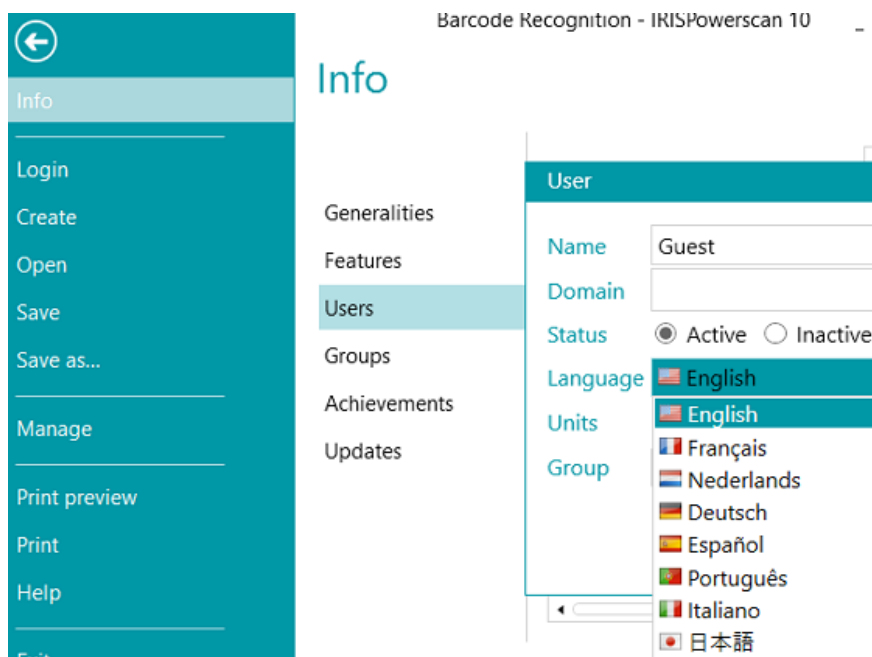
Designer mode allows you to design projects on an advanced level. Any configuration you do in Navigation mode is also stored in Designer mode where you can configure it more elaborately.

## Changing the Interface Language

The Interface Language is defined on user level and can be customized for each user.

### To change the Interface Language:

- Open a Project.
- Click **File > Info > Users**.
- Double-click the user who requires a different interface language.
- Select the required language from the **Language** list and click **OK**.
- Next time the user logs in, the interface is displayed in the selected language.



**WARNING:** the settings you change here are only valid for local users, using one and the same computer. If you are an IRIS Powerscan™ Administrator and want to change the interface language for different users who log in from different computers to the IRIS Powerscan Server™, you must change the interface settings for each user in the **IRIS Powerscan Server™** interface.

To access the **IRIS Powerscan Server™** documentation, open the **IRIS Powerscan Server™** application and click **File > Help**.

## 5.1 Application menu

The Application menu allows you to quickly access common tasks related to managing and sharing projects, configuring local users and groups, activating additional features, etc.

To access the Application menu click the **File** tab from either **Navigation** or **Designer** mode.

### Overview of the Application Menu Options

#### Info

The **Info** tab provides general information about the IRIS Powerscan™ installed on your system. It consists of four sections:

#### Generalities

Displays the program version, the logged user, the actions the user has accomplished, etc.

#### IRIS Powerscan Server™

Here you can also connect to the [IRIS Powerscan Server™](#) (if the [Central Management add-on](#) is activated).

To access the **IRIS Powerscan Server™** documentation, open the **IRIS Powerscan Server™** application and click **File > Help**.

#### Reporting

As of IRIS Powerscan™ 10.5 there are advanced **Reporting** options to configure.

Select **Enable tray icon notifications** if you want IRIS Powerscan™ to display notifications in the Windows System tray.

By default IRIS Powerscan™ saves **Error messages only** to the **Application log files** and to the **Service log files**. You can also choose to save **Error and warning messages** or save **All messages**.

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

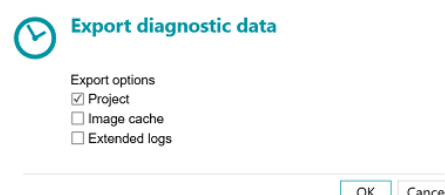
**Note:** when you select All messages in the **Service logging** drop-down list, the application must be restarted.



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

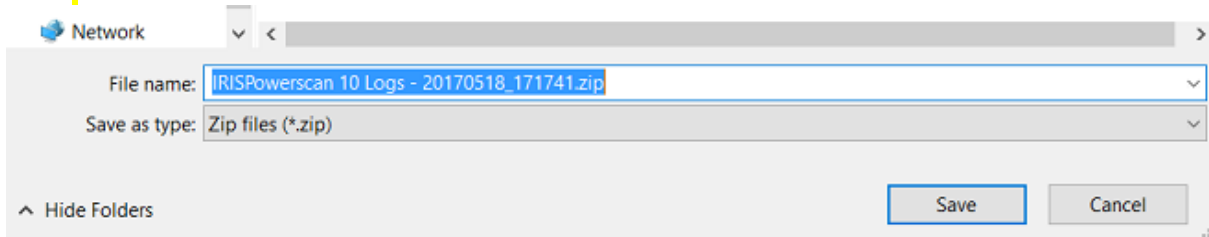
- **Project:** exports the project settings.
- **Image cache:** exports the images that are visible in the Viewer.
- **Extended logs:** exports Windows Event Logs.  
Logs are stored in C:\ProgramData\IPSx\LocalProjects\Logs.

**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** window 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**.



**WARNING:** If watched folders are active, a concurrent access error may occur when saving logs: stop the IPS service (via Windows Services or via the traffic light), export the logs and then restart the service.

**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.

## Features

Displays the features that are activated in the current version.

- Click [Activate](#) to activate more features.
- Click **Copy to Clipboard** to copy all license info to the Clipboard. Now you can easily paste it in a mail to contact [Product Support](#) for instance.

## Users

Allows you to [manage users](#) in IRIS Powerscan™. Click the plus sign to add users, or the pencil icon to edit existing users.

**WARNING:** the users you add here are *local users*, and can only log in on the current machine. To configure user profiles that can be used among multiple workstations, use the **IRIS Powerscan Server™**.

- **Groups:** allows you to [manage user groups](#) in IRIS Powerscan™. Click the plus sign to add user groups, or the pencil icon to edit existing groups.

**WARNING:** the groups you add here are *local groups*, and are only valid for the current machine. To configure groups that can be used among multiple workstations, use the **IRIS Powerscan Server™**.

- **Achievements:** displays a list of actions you are encouraged to do.
- **Updates:** allows you to check for software updates.

## Login

Here you can log in to IRIS Powerscan™ using your personal credentials. When you use IRIS Powerscan™ without logging in you are by default a 'guest' user.

When specific user rights have been attributed to the credentials, you will only be allowed to execute corresponding actions after logging in. See [Managing Users and Groups](#).

## Create

On the **Create** tab you can create new projects using one of the templates.

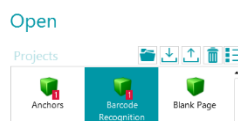
Also see **Getting Started** > [Creating Projects](#).

## Open

On the **Open** tab you can open demo projects and the projects you created. The projects can be displayed as icons or as detailed list. Click the list icon to switch to list view.

Projects can be exported as .zip files and then can be imported in other IRIS Powerscan™ stations.

Projects can also be cloned by right-clicking and copy-pasting them.



## Save

Saves all project settings, closes the Application menu and returns you to the project.

## Save as

Saves a copy of the current project with a new name.

## Manage

Allows you to manage the [batches in process](#). See [Processing in IRIS Powerscan 10](#).

**Note:** as of IRIS Powerscan 10.4, when you delete an Invoice batch from this section it will also be removed from the WebVerify Job list.

## Print preview

Displays a preview of how the selected Batch or Document will be printed. In order for the Print preview command to work you need to select a Document or Batch in the Navigation Explorer.

**Note:** the Print preview command is only available if Navigation mode is active, not when Designer mode is active.

## Print

Allows you to print Documents and Batches. In order for the Print command to work you need to select a Document or Batch in the Navigation Explorer. It is not possible to print individual pages.

**Notes:**

The Print command is only available if Navigation mode is active, not when Designer mode is active.

The Print feature does not work as a service.

## Help

Opens the documentation.

## 5.2. Navigation mode

Below you find an overview of Navigation mode and its commands.

### Tips:

Many [shortcuts](#) can be used. To view the key tips on the ribbon simply press Alt.

Any changes you make can be undone / redone using the undo / redo buttons on the [Quick Access toolbar](#).

### Overview of the Navigation mode

Navigation mode consists of the following elements:

#### 5.2.1 [Quick Access toolbar](#)

#### 5.2.2 [Main toolbar](#)

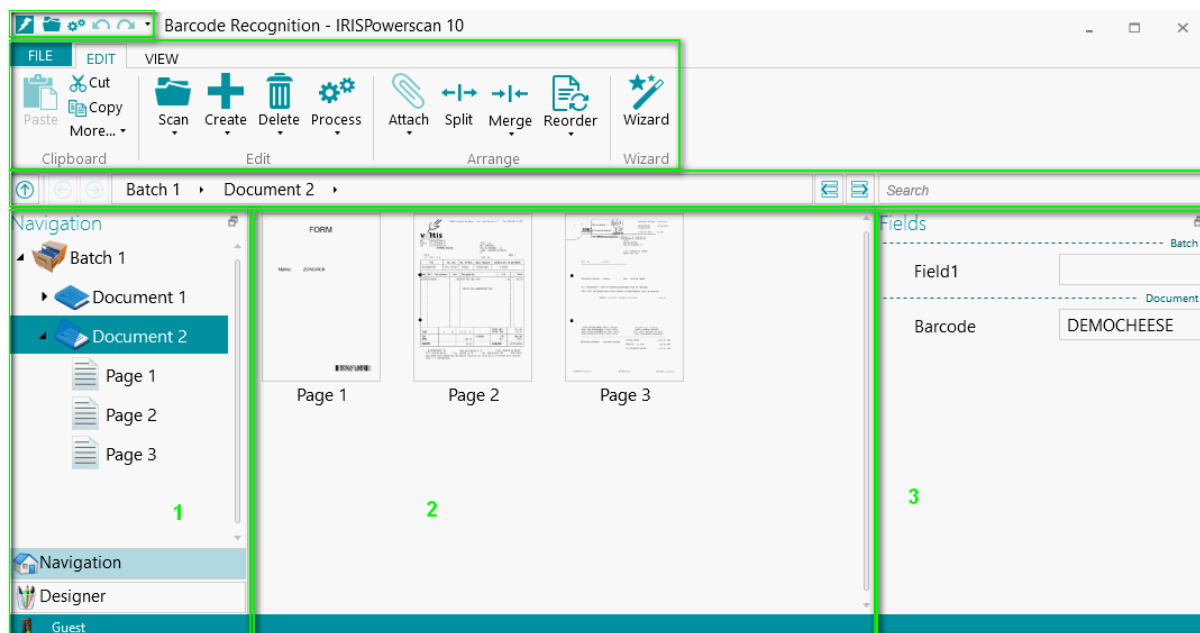
#### 5.2.3 [Navigation bar](#)

#### 5.2.4 [Navigation Explorer](#)

#### 5.2.5 [Viewer](#)

#### 5.2.6 [Fields pane](#)

#### 5.2.7 [Service activity](#)



### Ctrl+W shortcut

You can toggle the focus from the Navigation Explorer (1) to the Viewer (2), from the Viewer (2) to the Fields pane (3) and then back to the Navigation Explorer (1) using the keyboard shortcut **Ctrl+W**.

## 5.2.1 Quick Access toolbar

---

On the Quick Access toolbar you can do the following actions:

- Scan documents
- Process documents
- Undo actions
- Redo actions

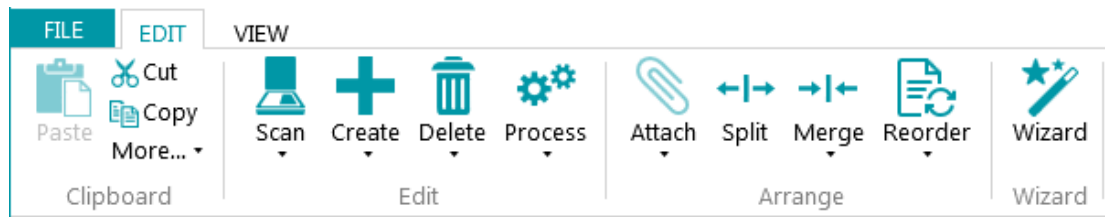
**Note:** other commands can be added to this toolbar. Right-click the required command and select **Add to Quick Access Toolbar**.



## 5.2.2 Main toolbar

---

The main toolbar contains all required commands to scan and process documents. It also allows you to configure projects.



The main toolbar consists of the following tabs:

- [File](#)
- [Edit](#)
- [View](#)

### 5.2.2.1 File tab

The **File** tab opens the [Application menu](#). The Application menu allows you to quickly access common tasks related to managing and sharing projects, configuring local users and groups, activating additional features, etc.

The Application menu is both accessible from Navigation and Designer mode.

### 5.2.2.2 Edit tab


The **Edit** tab is the most important tab in Navigation mode. Its commands allow you to scan and rearrange documents, modify scan settings, create new batches and documents, add operations using the Wizard, and export processed documents.

The **Edit** tab consists of the following groups:

- **Clipboard**
- **Edit**
- **Arrange**
- **Wizard**



**Note:** the commands of the **Edit** tab can also be used by means of keyboard shortcuts. Click [here](#) for an overview.





#### Clipboard

Cut/Copy/Paste	The <b>Clipboard</b> contains the standard <b>Cut</b> , <b>Copy</b> and <b>Paste</b> commands. You can cut pages, documents and batches from the Navigation Explorer or Viewer to the Clipboard and paste them to another location.
Select All	Selects all the pages, documents or batches currently displayed in the viewer.
	Allows you to go directly to the first/last page and the previous/next page.




#### Edit

The commands of the **Edit** group allow you to scan, edit and delete documents.

 Scan	<p>Click <a href="#">Scan</a> to scan documents from a configured input source. The input source may be a scanner, a folder or a Cloud repository.</p> <p>All documents you scan are by default added behind the last document.</p> <p>In case you want to insert documents before or after a certain position, select the position in the Navigation Explorer, click the down arrow beneath <b>Scan</b> and select <b>Insert before</b> or <b>Insert after</b>. Then click <b>Scan</b>.</p> <p>To apply any configuration changes you made to the documents that were already scanned, click the down arrow beneath <b>Scan</b> and then click <b>Rescan</b>. This way, you don't actually have to rescan them physically in order to apply changes.</p> <p><b>Note:</b> only Document names and fields are re-evaluated when using Rescan. Batch names and fields are not.</p> <p>To select the input source, click the down arrow beneath <b>Scan</b> and select the required source. Then click <b>Settings</b> to configure the selected input source.</p>
 Open	<p>This command is only available when the Input Source has been configured as <a href="#">Watched Folder</a>, and in Invoice projects.</p> <p>It allows you to open batches that were scanned automatically, or that have been verified in Web Verify respectively.</p>

 Create ▼	<p>This command either creates a new <b>Batch</b> or a new <b>Document</b>.</p> <p>Indicate the position in the Navigation Explorer where to add a new batch or document. Then click the down arrow beneath <b>Create</b> and select <b>Batch</b> or <b>Document</b>.</p> <p>Note that the structure batch &gt; document &gt; page is always maintained. This means documents or batches cannot be added between two pages. Nor can batches be added between two documents.</p>
 Delete	<p>To delete pages, documents and batches:</p> <ul style="list-style-type: none"> <li>• Select the element to delete, and then click <b>Delete</b>.</li> <li>• Or right-click an element and click <b>Delete</b> in the Context menu.</li> <li>• Or select an element and press the <b>Delete</b> key.</li> </ul> <p>Note that pages are not deleted immediately. Instead they are flagged 'for deletion' by a red cross. This way you can easily undo the deletion in case of a mistake. Pages that are flagged for deletion will not be processed.</p> <p>To undelete a page, first select a page that has been flagged for deletion. Then click the down arrow beneath <b>Delete</b> and click <b>Undelete</b>.</p>
Reorder ▼	<p>The <b>Reorder</b> tool should only be used to reorder images that were scanned in Debookletting mode. See <b>Operations</b> &gt; <a href="#">Reorder</a> for more information.</p>
 Process ▼	<p>Click <b>Process</b> to have IRIS Powerscan™ process your documents and send them to the configured destination.</p>
 Verify	<p>This command is only available in Invoice projects. It opens the WebVerify module in your default Internet browser.</p>

## Arrange

 <p>Attach</p>	<p>To mark a page as attached:</p> <ul style="list-style-type: none"> <li>• Select a page and click the <b>Attach</b> button.</li> <li>• Or right-click a page and select <b>Attach</b> in the Context menu.</li> <li>• Or select a page and press the <b>Insert</b> key.</li> </ul> <p>The variable Page.IsAttached can be used as condition for classification, indexing, export, etc.</p> <p>To detach a page:</p> <ul style="list-style-type: none"> <li>• Select a page, and then click the drop-down button and click <b>Detach</b> to detach it.</li> <li>• Or right-click a page and select <b>Detach</b> in the Context menu.</li> <li>• Or select a page and press <b>Ctrl+Insert</b>.</li> </ul> <p>The variable Page.IsAttached will be removed.</p>
 <p>Split</p>	<p>Click <b>Split</b> to split documents or batches.</p> <p><b>Important:</b> to split a document, select one of its pages and click <b>Split</b>. To split a batch, select one of its documents and click <b>Split</b>.</p>
 <p>Merge</p>	<p>Click <b>Merge</b> to merge two documents or batches.</p> <p>Click the down arrow beneath <b>Merge</b> and indicate whether to merge with the previous batch/document or the next.</p>

## Reorder

The **Reorder** tool allows you to reorder the scanned documents.

Note however that the first two commands - **Cover first** and **Cover last** - should only be used to reorder images that were scanned in Debookletting mode. See Operations > [Reorder](#) for more information.

### Reverse order

To reverse the order of all scanned pages:

- Click **Reverse order**.

Note that this only works on Document level. Only the order of pages inside a single document will be reversed.

### Swap sides

The **Swap sides command** allows you to swap pages and flip their sides.

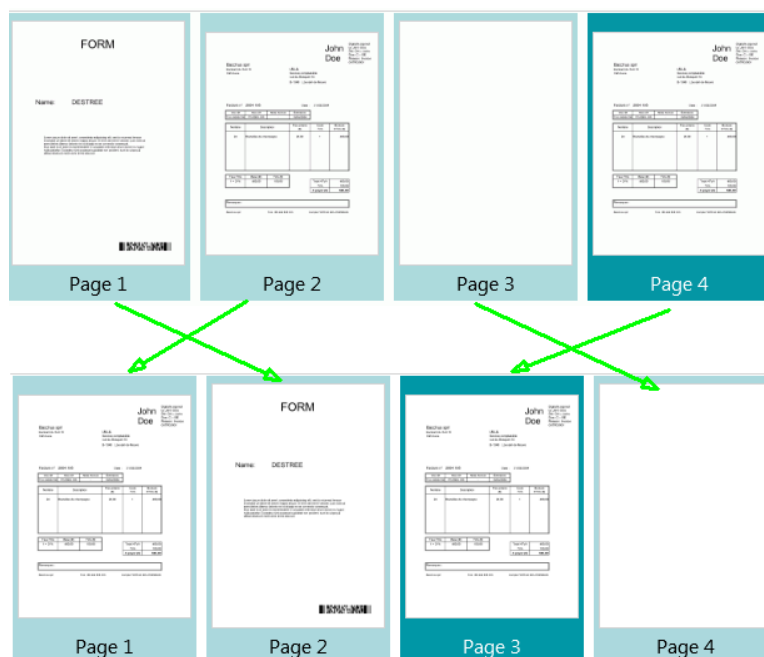
To swap pages from position, you need to select a pair number of pages.

#### Example:

When you select pages 1 to 4, page 1 and page 2 are swapped from position and page 3 and 4 are swapped from position. Their sides are also swapped, meaning Front becomes rear and vice versa.

**Note:** if you select 5 pages, the fifth page will not change position, but its side will simply be flipped.

**Tip:** hover the cursor over a page to check whether it is a Front or Rear side.




**Note:** you can select multiple pages across different documents and batches. Note however that the pages and sides stay within their original document and batch. They are not moved from one document or batch to another.

In case you only want to flip the side of a page, then select a single page and click **Swap sides**. You will notice that a Front becomes a Rear and vice versa. This needs to be done page per page.

**Tip:** to undo any unwanted changes use Ctrl-Z.

## Wizard

 <p>Wizard</p>	<p>Click <b>Wizard</b> to start the <a href="#">configuration wizard</a>.</p> <p>Through the Wizard you can add operations, page types, document types and batch types, output types and data sources.</p>
---	--

### 5.2.2.3 View tab



The **View** tab allows you to choose which images should be displayed, adjust the zoom of the displayed pages, rotate them, create data extraction zones, display or hide rulers and other layout tools.

It consists of the following groups:

- **Color**
- **Zoom**
- **Tools**
- **Zones**
- **Show/Hide**

**Note:** the commands of the **View** tab can also be used by means of keyboard shortcuts. Click [here](#) for an overview.





## Color

 <p>Show</p>	<p>The <b>Show</b> tool displays the available streams of the scanned image. You can choose to display the image in:</p> <ul style="list-style-type: none"> <li>• Color</li> <li>• Grayscale</li> <li>• Black and white.</li> </ul>
 <p>Check</p>	<p>The <b>Check</b> tool allows you to specify which stream of the selected image must be displayed and exported.</p> <p>To use it: click the down arrow beneath the <b>Show</b> tool and select which stream must be displayed. Then select one or more pages of which you want a different stream to be displayed and exported. Click the down arrow beneath <b>Check</b> and select the stream that must be used for the selected image(s). A checkmark icon is now added to the image thumbnail.</p> <p><b>Note:</b> you can also right-click on an image, point to <b>Check</b> and select the required stream for the selected image.</p> <div data-bbox="368 1778 574 1955"> <p>Navigation</p> <ul style="list-style-type: none"> <li>Batch 1           <ul style="list-style-type: none"> <li>Document 1               <ul style="list-style-type: none"> <li>Page 1</li> <li><b>Page 2</b></li> </ul> </li> </ul> </li> </ul> </div>

	<p>In Designer Explorer, open the <a href="#">Output type</a> you will be using. Enter <b>Image.IsBest</b> in the <b>Condition</b> field. The condition will be 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.</p> <p><b>Tip:</b> to export only the checked images use the condition <b>Image.IsChecked</b>. Or to export only the visible images, use <b>Image.IsVisible</b>.</p> <p>See the topic <b>How to apply Image Filtering</b> in the <b>How To Guide</b> for more information.</p>
--	--



## Zoom

(Only available at page level)

 <p>Fit</p>	<p>Click the down arrow beneath <b>Fit</b> and select whether to:</p> <ul style="list-style-type: none"> <li>• fit the entire page in the Viewer</li> <li>• fit the page to the width of the Viewer</li> <li>• fit the page to the height of the Viewer</li> </ul>
 <p>Actual size</p>	<p>Click <b>Actual size</b> to display the selected page in its actual size.</p>
 <p>Zoom in</p>	<p>Click <b>Zoom in</b> to zoom in on pages.</p>
 <p>Zoom out</p>	<p>Click <b>Zoom out</b> to zoom out from pages.</p>

## Tools




(Only available at page level)

 <p>Left</p>	<p>Click to rotate pages to the left.</p>
 <p>Right</p>	<p>Click to rotate pages to the right.</p>

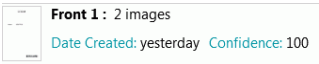


 Auto	Click to auto-rotate pages.
---	-----------------------------

## Zones

 Capture	<p>The <b>Capture</b> tool allows you to create data extraction zones.</p> <p>To use it: select a page. In the <a href="#">Viewer</a> draw a frame around the zone you to capture. Then click <b>Capture</b>.</p> <p>To automatically detect extraction zones, click the down arrow beneath <b>Capture</b>, and click <b>Analyze</b>.</p>
 Crop	<p>The <b>Crop</b> tool allows you to crop a page to a certain size.</p> <p>To use it: select a page. In the <a href="#">Viewer</a> draw a frame around the zone to which the page must be cropped. Then click <b>Crop</b>.</p>
 Fill	<p>The <b>Fill</b> tool allows you to cover up parts of a scanned image, to hide confidential information for instance.</p> <p>To use it: select a page. In the <a href="#">Viewer</a> draw a frame around the zone you want to cover up. Then click <b>Fill</b>. Multiple colors are available. Click the down arrow beneath <b>Fill</b> to select one.</p>

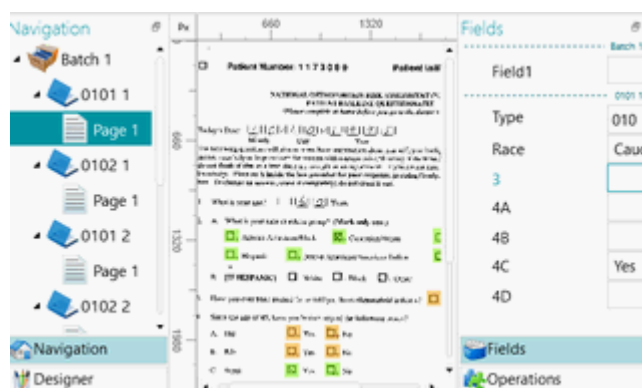
## Show / Hide

Ruler	Displays a ruler on page level. (Only available at page level)
Thumbnail	Displays a thumbnail of the scanned page in the top left corner of the Viewer, allowing easy navigation. (Only available at page level)
Speedometer	Displays a scanning speed indicator when scanning documents.
Details	<p>Displays details about the scanned image, such as the scan date, at the bottom of the screen.</p> 
Status	Displays the status of the scanned image at the bottom of the screen.
Advanced highlight	<p>By default, this option is disabled.</p> <p>When you click on a page, all the zones for which IPS has extracted data (or tried to) are highlighted.</p>

When you click on a field, all the searched zones for that field are highlighted whether there is a result or not. (A field value can contain multiple data extraction zones).

A color code is defined:

- green: result found and valid
- orange: no result found (empty) and valid
- red: invalid result



If you prefer dotted line rectangles instead of highlighting, then you can add the parameter **DottedLineHighlights** and set the value to 'Yes'. For more information on Parameters, go to [5.3.5.10 Parameters](#)

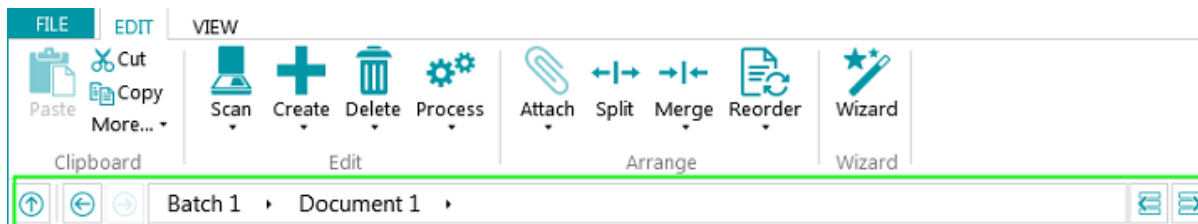
#### Auto zoom

By default, this option is disabled.

When a field/index is selected in the Fields pane, the Viewer shows you the highlighted zone corresponding to that field. If enabled, the Auto zoom makes a zoom on that zone to have it centered and visible. If you want to keep the previous zoom factor, this option should remain disabled.

## 5.2.3 Navigation bar

The **Navigation bar** allows easy navigation between the batches, documents and pages.

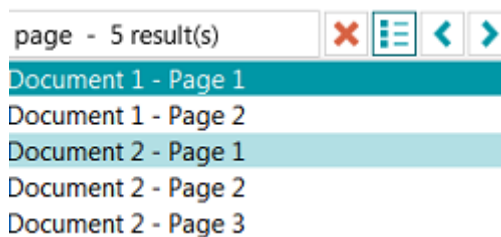


In the **Search** section of the Navigation bar you do text searches inside the current project.

Note that IRIS Powerscan™ searches for matching results within the batches and documents in the **Navigation Explorer** and within the **index fields**. It does not search the text inside the scanned images.

### To do a search:

- Click inside the **Search** field.
- Type in the word you want to search and press **Enter**.
- The number of matches is displayed in the **Search** section.
- Click the list icon to display all search results.  
Or use the arrows to toggle between the results.



- Click the red cross to end the search and start a new one.

## 5.2.4 Navigation Explorer

The **Navigation Explorer** displays the hierarchical structure of the scans: batches, documents and pages.

**WARNING:** in IRIS Powerscan 10.4, a page corresponds to **one side** of a scanned paper sheet. A page does no longer contain both the front and the rear side. It is now either a front side or a rear side. This makes it much easier to delete front sides and rear sides separately.

In the Navigation Explorer you can navigate across the different elements, rearrange them with Cut and Paste, Drag and Drop, and Split and Merge operations.

**Tips:**

Right-click inside the Navigation Explorer to display its Context menu.

Right-click and select **Expand all** to display each element, or select **Collapse all** to get an overview of all batches.

For more information on this see [Checking and Rearranging Scanned Documents](#).

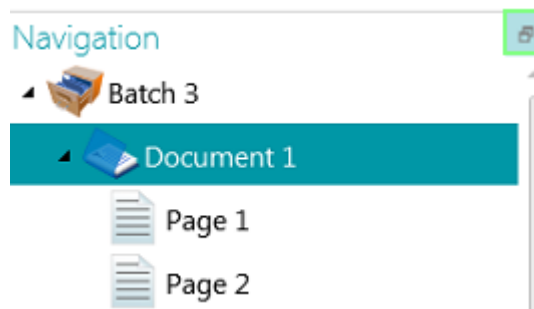
The Navigation Explorer can be resized horizontally and is now also dockable.

To resize the pane:

- Drag the divider to a different position.

To detach the pane:

- Click the Windows icon in the top right corner.



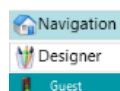
- Click **Detach**.  
The Navigation Explorer pane can now be moved to a different location.
- To restore its original position, click the X icon.

To hide the pane:

- Click the Windows icon and then click **Hide**.
- To make it reappear again click the Windows icon and click **Show**.

**Note:** elements in the Navigation Explorer that contain invalid index fields are indicated by a warning sign.

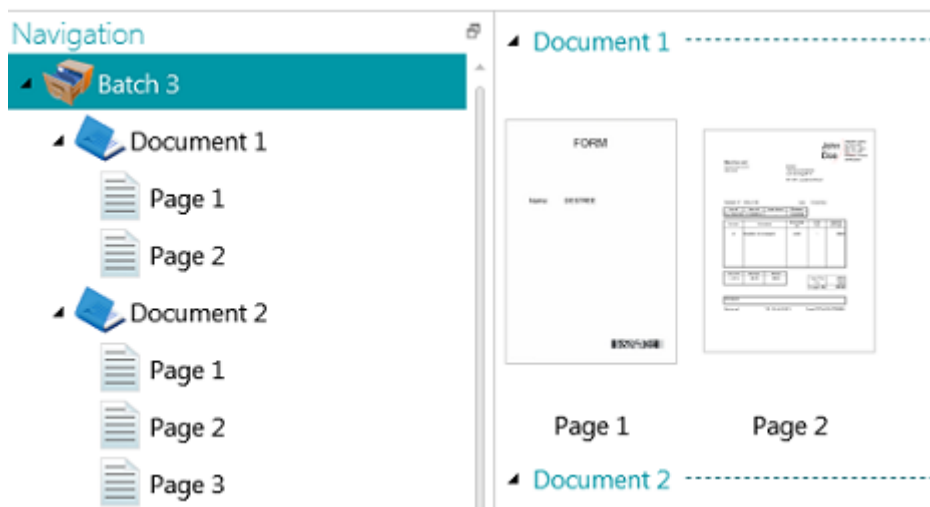
Note that the Navigation / Designer buttons at the bottom of the screen allow you to toggle between Navigation and Designer mode.



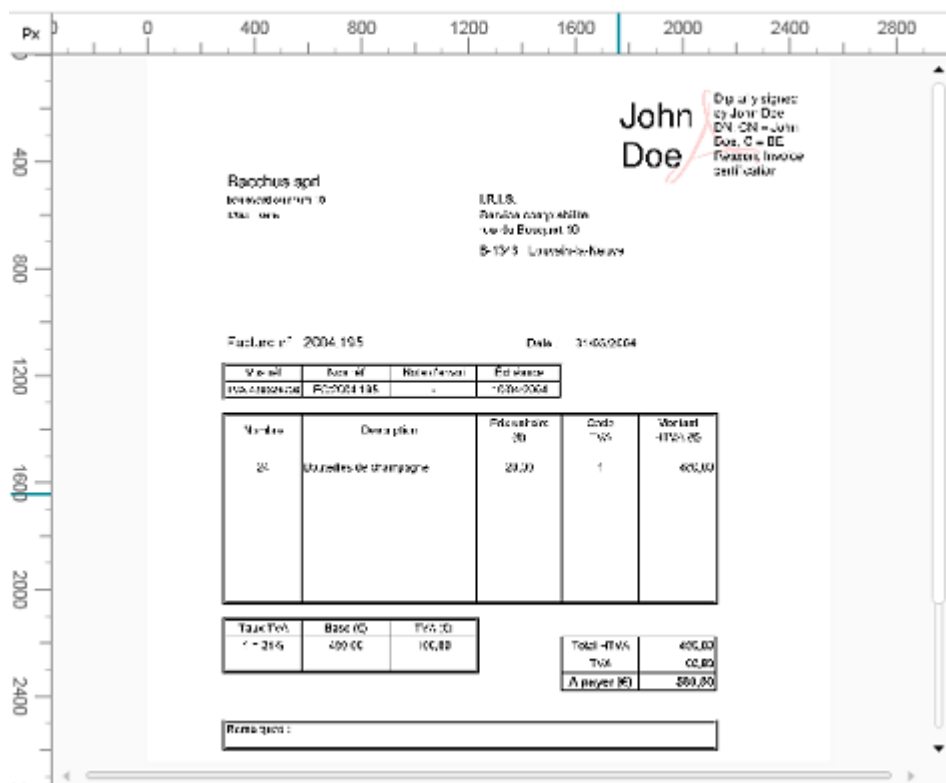
### 5.2.5 Viewer

The **Viewer** in Navigation mode displays the scanned batches, documents and pages.

When you select a batch, the underlying documents and pages are displayed as thumbnails.



When you select a page in the Navigation Explorer, the entire page is displayed as shown in the image below. Now you can edit the image using the commands of the [View tab](#).



Also see [Checking and Rearranging Scanned Documents](#).

## 5.2.6 Fields pane

---

The **Fields pane** displays the index fields that have been created on batch, document and page level.

As of IRIS Powerscan 10.4 the index fields on Batch, Document and Page level are displayed simultaneously.

The index fields have specific colors:

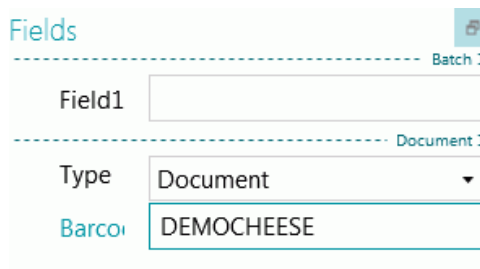
- Correct index fields are white.
- Manually edited index fields are yellow.
- Erroneous index fields are red.

The **Search** function allows you to search for text throughout the index fields.

### Dockable pane

This Fields pane is dockable:

- Click the Windows icon in the top right corner.



- Click **Detach**.  
The Fields pane can now be moved to a different location.
- To restore its original position, click the X icon.

To hide the **Fields** pane, click the Windows icon and then click **Hide**. To make it reappear again click the Windows icon and click **Show**.

## 5.2.7 Service activity

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A progress animation appears on the bottom ribbon when the service is working on a capture, an export, an upload or a download to/from the server. When the progress animation is active, we highly recommend you to keep your computer switched on.



## 5.3. Designer mode

Below you find an overview of Designer mode and its commands.

### Tips:

Many shortcuts can be used. Click [here](#) for an overview. To view the key tips on the ribbon simply press Alt. Any changes you make can be undone / redone using the undo / redo buttons on the [Quick Access toolbar](#).

### Overview of the Designer mode

Designer mode consists of the following elements:

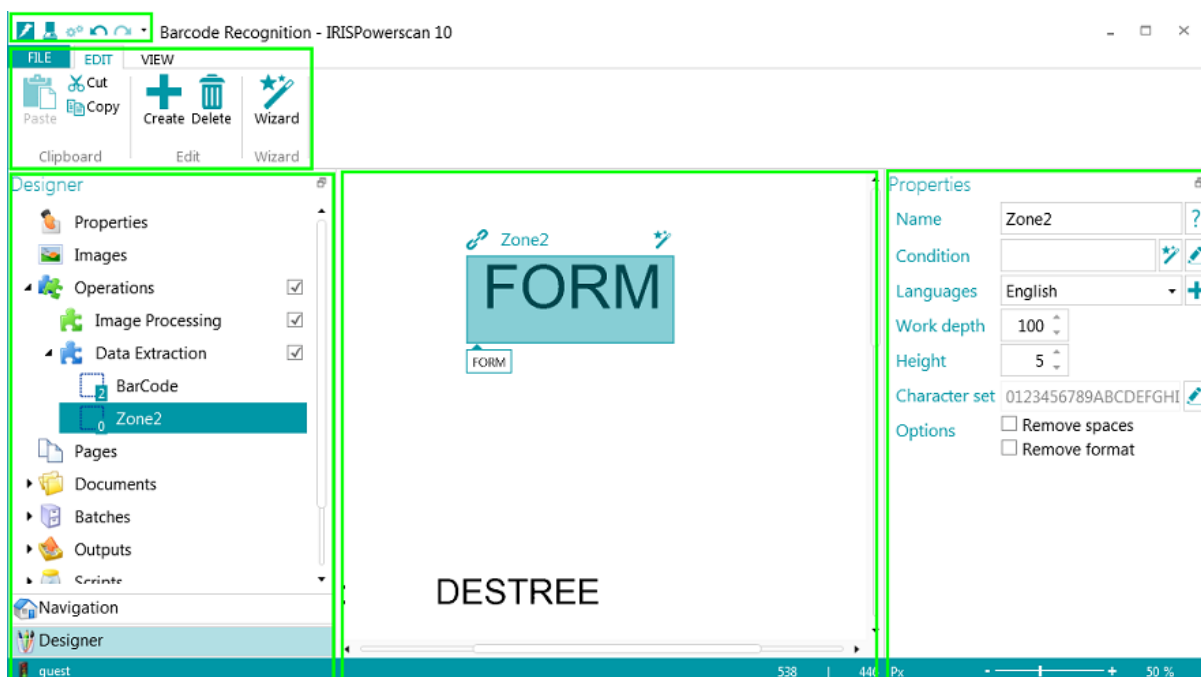
#### 5.3.1 [Quick Access toolbar](#)

#### 5.3.2 [Main toolbar](#)

#### 5.3.3 [Designer Explorer](#)

#### 5.3.4 [Viewer](#)

#### 5.3.5 [Configuration pane](#)





### 5.3.1 Quick Access toolbar

---

On the Quick Access toolbar you can do the following actions:

- Scan documents
- Undo actions
- Redo actions

**Note:** other commands can be added to this toolbar. Right-click the required command and select **Add to Quick Access Toolbar**.

### 5.3.2 Main toolbar

---

The **main toolbar** contains the commands required to add and modify configuration elements.



The main toolbar consists of the following tabs:

- [File](#)
- [Edit](#)
- [View](#)

### 5.3.2.1 File tab

The **File** tab opens the [Application menu](#). The Application menu allows you to quickly access common tasks related to managing and sharing projects, configuring local users and groups, activating additional features, etc.

The Application menu is both accessible from Navigation and Designer mode.



### 5.3.2.2 Edit tab

The commands of the **Edit** tab allow you to create or delete configuration elements. Note that the actual configuration is done in the [Designer Explorer](#) and the [Configuration pane](#).

The **Edit** tab consists of the following groups:



- **Clipboard**
- **Edit**
- **Wizard**

**Note:** the commands of the **Edit** tab can also be used by means of keyboard shortcuts. Click [here](#) for an overview.


#### Clipboard

The **Clipboard** contains the standard **Cut**, **Copy** and **Paste** commands.

#### Edit

 Create	<p>This command creates a new configuration element. E.g. a page, document or batch type, an operation, an output type, a script, a data source etc.</p> <p>Select the configuration element you want to create, and then click <b>Create</b>. The configuration element is added to the <a href="#">Designer Explorer</a> and can be configured in the <a href="#">Configuration pane</a>.</p>
 Delete	<p>Select any configuration element to delete. Then click <b>Delete</b>.</p>

#### Wizard

 Wizard	<p>Click <a href="#">Wizard</a> to start the configuration wizard.</p> <p>By means of the Wizard you can add operations, processing operations, page types, document types and batch types, output types and data sources.</p>
---	--

### 5.3.2.3 View tab

The **View** tab allows you to adjust the view of Sample images.





**WARNING:** the commands of the **View** tab in Designer mode are only available to change the view of Sample images. In order to use these commands, you must first add **Sample Images** at the required level: general, page level, document level, or batch level. Then click **Operations** at the required level.

The **View** tab consists of the following groups:


- **Zoom**
- **Tools**
- **Show/Hide**



**Note:** the commands of the **View** tab can also be used by means of keyboard shortcuts. Click [here](#) for an overview.

#### Zoom

 Fit	<p>Click the down arrow beneath <b>Fit</b> and select whether to:</p> <ul style="list-style-type: none"> <li>• fit the entire Image sample in the Viewer</li> <li>• fit the Image sample to the width of the Viewer</li> <li>• fit the Image sample to the height of the Viewer</li> </ul> <p>These commands are only available when viewing a sample in single image view.</p>
 Actual size	<p>Click to display the Image sample in its actual size.</p>
 Zoom in	<p>Click to zoom in on the Image sample.</p>
 Zoom out	<p>Click to zoom out from the Image sample.</p>

#### Tools

 Left	<p>Click to rotate the Image sample to the left.</p>
---	--

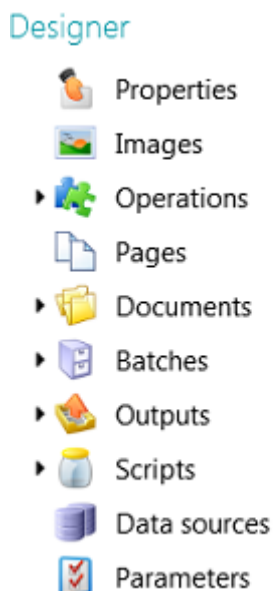
 Right	Click to rotate the Image sample to the right.
 Auto	Click to auto-rotate the Image sample.

**Show / Hide**

Ruler	Displays a ruler.
Thumbnail	Displays a miniature of the sample in the top left corner of the Viewer, allowing easy navigation.

### 5.3.3 Designer Explorer

The **Designer Explorer** gives an hierarchic overview of all the configuration elements. Click each element to display its properties. Also click the triangle in front of the elements to expand them and display their underlying elements (or right arrow on the keyboard).



There are different ways to add configuration elements:

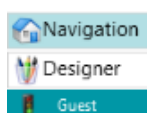
- Right-click the element of your choice and click **Add**. Its properties are displayed in the [Configuration pane](#).



- Or select an element, and click **Create** on the **Edit** tab.
- Or use the [keyboard shortcuts](#).

The different parts of the Designer Explorer and their options are explained in the section [Configuration pane](#).

Note that the Navigation / Designer buttons at the bottom of the screen allow you to toggle between Navigation and Designer mode.



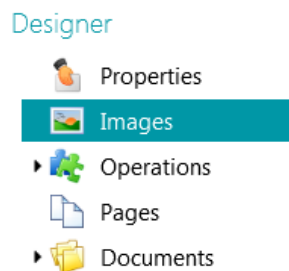
## 5.3.4 Viewer

---

The **Viewer** in Designer mode displays image samples you have added to the project.

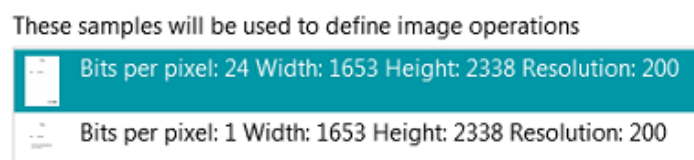
### To display samples in the Viewer:

- Add at least one sample image.  
This may be at general level, page, document or batch level.
- Click **Images** at the correct level.



*Example: Image samples at general level*

- Double-click the sample of your choice to display it in the Viewer.



- When the sample image is displayed you can add [Image Processing Operations](#).



### 5.3.5 Configuration pane

The Configuration pane displays the settings of the configuration element you select in the [Designer Explorer](#). The settings vary depending on the selected element.

The Configuration pane displays the settings for a selected configuration element. The settings are as follows:

- Name:** Scan Project
- Culture:** English (United States)
- Description:** (Empty text box)
- Activities:**
  - Supervisors: Capture
  - Supervisors: Validation
  - Supervisors: Export
- Counters:**
  - Batch.Counter: 0
  - Document.Counter: 0
- Sources:**
  - Scanner (with +, trash, and Rename icons)

See the topics below for an overview of each configuration element.

Note that the operations you configure are executed top-down.

#### 5.3.5.1 Properties

The **Properties** section displays the properties of the current project. It also displays the **Sources** from which documents are scanned to the project. The settings you apply here are applied to the entire project.

**Name:** contains the name of the project.

**Culture:** this option defines the default language for OCR zones and indexing fields.

**Description:** enter a description of the project that is meaningful to you. E.g. a description of the main settings.

**Activities:** select which user group is allowed to carry out the activities **Capture**, **Validation** and **Export**.

By default, these 3 activities may be carried out by **Supervisors**.

Note that these activities can also be automated on the current workstation (by selecting **Service**) or on the server (by selecting **Server**). To use the Server the [Central Management add-on](#) is required. See [Processing Documents in IRIS Powerscan 10](#) for more information.

When the **Capture** activity is done by the **Service/Server** and you selected a **Folder** as source, the folder now functions as [Watched Folder](#).

When the **Validation** activity is done by the **Service/Server**, index fields do not need to be validated manually by a user.

When the **Export** activity is done by the **Service/Server**, the documents are exported automatically to the configured destination as soon as the processing is done.

**Note:** in order for the **Export** to be executed by the **Service**, the [Background Processing add-on](#) is required.

**Counters:** IRIS Powerscan™ by default starts counting from 1 at every batch and document. This number can be changed by clicking the arrows.

## Sources

Click the plus sign to add a source. To delete a source, select it and click the trash icon.

**Note:** you can add multiple sources inside a single project and switch between those sources if necessary.

**WARNING:** it is strongly advised to use only one scanner protocol per project (either Scanner or Scanner Isis). Having both selected within the same project can lead to errors. If you need to switch between those two protocols, then turn off and turn on again your scanner in between.



### Folders

The corresponding options are explained in [Scanning from Folders](#).

### Scanner

Click **Scanner** to see all scanner models for which a driver is installed on your computer.

Select a model from the list and click the settings icon to configure it. Also see [Using a Scanner](#).

### Box, Dropbox, OneDrive, SharePoint

See [Scanning from the Cloud](#).

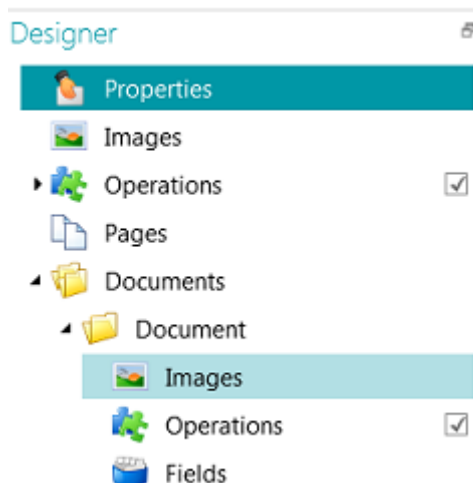
## 5.3.5.2 Images

In the [Images](#) section you can add samples of the documents you will be scanning.

To add samples, click the plus sign at the right side of the screen, and browse for the images to add.

**Note:** In case you want to add samples for a specific page, document or batch type: expand the required type in the Designer Explorer, and click **Images** on that level.

Note that sample images added at Page level can be used to train the Fingerprint recognition.



**Tip:** you can rename the samples images by clicking **Rename**.

### 5.3.5.3 Operations

In the **Operations** section you can add operations. These operations generate variables that can be used in any expression / condition, typically to do [page identification](#), [document and batch separation](#), [indexing](#), etc.

To add an operation:

- Right-click **Operations** and select **Create**.
- Select the required operation from the list and click **Finish**.

**Note:** the operations you add at general level are applied to all the pages you scan inside the project. Note however, that you can also [add operations](#) on page, document and batch level and even to specific **types** of pages, documents and batches. In the later case you can configure IRIS Powerscan™ to carry out certain operations only when it encounters specific types, which speeds up the processing.

**Tip:** you can scroll the samples images by clicking the arrow buttons <>, or by using the keyboard shortcut Alt + down/up arrow.

### 5.3.5.4 Pages

In the **Pages** section you can create different **Page Types** you will be scanning.

This provides a number of advantages:

- The identified page types can be used to separate documents.
- Operations can be applied to specific page types, which avoids IRIS Powerscan™ having to apply them to all scanned pages.

See [Identification of Pages](#) for more information.

### 5.3.5.5 Documents

In the **Documents** section you can create different **Document Types** you will be scanning.

To add a document type:

- Select **Documents** in the Designer Explorer and click **Create** on the main toolbar.

To learn how to configure a document type, see [Separation of Documents and Batches](#).

### 5.3.5.6 Batches

In the **Batches** section you can create different **Batches Types** you will be scanning. Creating Batch Types works in the same way as creating Document Types.

Also see [Separation of Documents and Batches](#).

### 5.3.5.7 Outputs

In the [Outputs](#) section you can determine in which **output format** and to which **destination** the processed documents must be sent.

### 5.3.5.8 Scripts

In the [Scripts](#) section of each project a default script is available that offers a number of functions. The functions of the script can be used in Conditions and Expressions.

To access the default script:

- Expand **Scripts**.
- Click the default **Script**.  
The available functions are now displayed.
- To edit the script, click the pencil icon.

**Tip:** hover with the mouse over a script to display a short description of its functionality.

### 5.3.5.9 Data Sources

In the Data Sources section you can add lists of values. These values must be entered manually, or can be retrieved automatically from external ODBC data sources like Microsoft Access. These values can be linked to the index fields in IRIS Powerscan™. This way you can choose from the Data Source content when filling in index fields in IRIS Powerscan™.

See [Indexing Scanned Documents](#) > [Using a Data Source](#) for more information.

### 5.3.5.10 Parameters

#### Visible parameters

In the **Parameters** section you can specify the following advanced parameters:

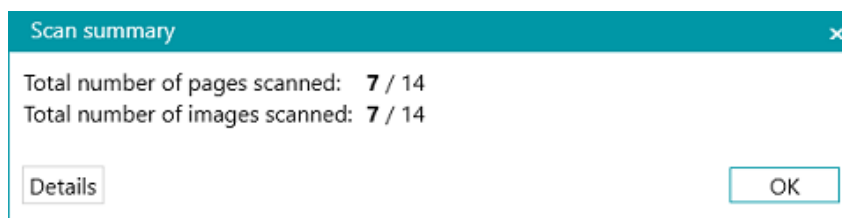
**WARNING:** every time you change a parameter, you need to Save the project and re-open it for the changes to be taken into account.

**Note:** some parameters are only available when you have created an Invoice project. They are mentioned at the end of the parameter list below.

**ShowLogs:** if set to 'Yes', displays detailed logs after each scan.

**ShowScanSummary:** if set to 'Yes', displays a scan summary after each scan.

The Scan summary displays the total number of pages scanned and the total number of images scanned. The first digit indicates the number of pages scanned during the last scan (7 in our example below), while the second digit indicates the number of pages scanned since the opening of the application (14 in our example).



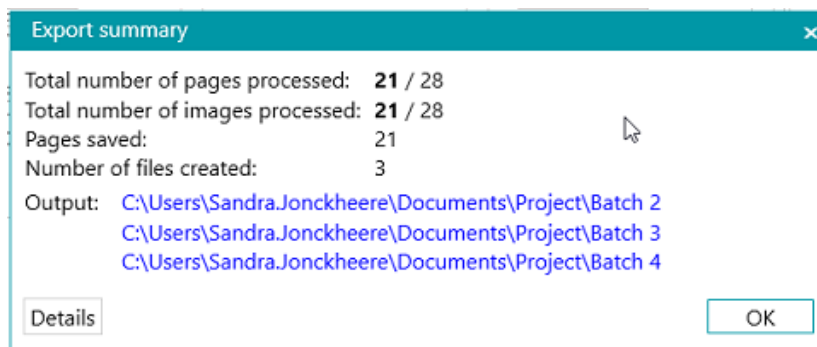
*Example Scan Summary*

**ShowExportSummary:** if set to 'Yes', displays an export summary after each export.

The Export summary displays the total number of pages processed and the total number of images processed. Again the first digit indicates the number of pages processed during the last processing (21 in our example)

below), while the second digit indicates the number of pages processed since the opening of the application (28 in our example).

The Export summary also displays the number of pages saved, the number of files created and the Output folder.



**JpegQuality:** modifies the quality of JPEG images coming from the scanner. The default value is set to -1. This is the value of the scanner. You can modify this value between 0 and 100. The higher the value, the higher the JPEG quality.

**AutoSelectInvalid:** if set to 'Yes', the cursor is automatically placed inside the first invalid index field, so you can correct it immediately.

**AutoZoom:** if set to 'Yes', IRIS Powerscan™ zooms in to the page on the linked data extraction zone when you click inside the corresponding index field.

**AutoCapture:** if set to 'Yes', the zone you have drawn in Navigation mode will be kept in the project for future scans.

**AutoProcess:** if set to 'Yes', all batches in cache will be automatically processed and exported to the configured destination without needing to click the **Process** button.

**History:** allows you to determine the history depth of index fields inside a project. You can determine how many values are supported and whether they will be stored on disk.

The default value is 0. This means the number of values is unlimited but the values are never stored on disk. In other words the projects will be cleaned up automatically.

If the parameter is greater than 0, the values are limited to the indicated integer and are stored on disk.

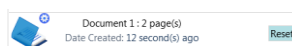
If the parameter is less than 0, the values are also limited to the indicated integer but are never stored on disk.

Note that you can define the history depth for each field individually. To do so, add a new parameter and add the index field for which you want to define the history. E.g. Document.Barcode.History.

**ResetVariables:** if set to 'Yes', this parameter allows IRIS Powerscan™ to reset all working variables after scanning. These variables may have an impact on the manual creation of Batches and Documents.

**ResetExportFlag:** by default this parameter is set to 'No'. If set to 'Yes' this parameter makes sure that the 'IsExported' status and its variables are reset to false just before the export on Document and Batch level.

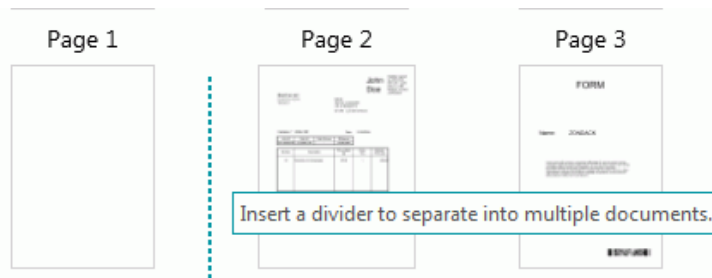
**Note:** the IsExported status can also be updated manually in the **Details** panel. To do so, select a batch or document that has already been exported. In the [Details](#) panel below the Viewer, click **Reset**.



**StrictIndexValidation:** if set to 'Yes' batches that contain an invalid index field cannot be processed. The default value is 'No'.

**StrictIndexEvaluation:** by default this parameter is set to 'Yes'. This means that when an unknown variable is encountered, the expression will not be evaluated. If this parameter is set to 'No', then 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()'.

**AllowSplitMergeInViewer:** by default this parameter is set to 'Yes', meaning you can insert a divider between pages in the Viewer to separate a single document into multiple documents. When set to 'No' you are not able to insert a divider, to avoid accidental separation.



**LineItems:** if set to 'Yes', Line Items are displayed in the IRIS Powerscan interface and WebVerify interface. This parameters can only be used when the **Invoice Add-on** has been installed and activated.

**ScanAfterValidation:** this parameter is by default set to 'Yes'. This means users are allowed to add scans to Batches which are already in Validation or Export status.

**ExportAll:** if set to 'Yes' all the different streams of the image will be exported. The default value is 'No'. This means that only the last stream is used.

**Note:** if the condition Image.IsBest is used only the best stream will be used if this parameter is set to 'Yes'.

## Parameters for Invoice projects

The parameters below can only be used when you have created an Invoice project. Most of them must be created manually as **Custom parameter**, as explained below.

**SkipWebVerify:** if set to 'Yes', you can skip the WebVerify step in the invoice processing workflow and validate the extraction results within IRIS Powerscan™ itself.

**ExportXtractErrors:** this parameter must be set to 'Yes' when using the **SkipVerify** parameter. Erroneous fields will be flagged in IRIS Powerscan™.

**UseMasterData:** this parameter is by default set to 'Yes' in Invoice projects. Set it to 'No' if you don't want IRIS Powerscan™ to use Master Data. In this case you need to fill in all index fields manually.

**OrderNumberKeywordSearch:** if set to 'Yes' the search order number is based on keyword and regular expressions. If set to 'No' - which is the default value - the search is based on the database (i.e. Master transactions table).

**AutoValidateInvoiceNumber:** if set to 'Yes' the invoice number is not flagged to be approved by the user. It is validated automatically. The default value is 'No', which means the user must approve the invoice number.

**AutoValidateDocumentType:** if set to 'Yes' the document type is not flagged to be approved by the user. It is validated automatically. The default value is 'No', which means the user must approve the document type.

**TaxAmount3:** if set to 'Yes' 3 tax rates are used in the Invoice Add-on: **Net Amount 3**, **VAT Rate 3** and **VAT Amount 3** are visible in Verify. Note that the FSController must be restarted. The default value of the parameter is 'No'. To set this parameter to 'Yes' you must first create it as explained below and then enter 'Yes' as value.

**DocumentType:** this parameter is set to 'Yes' by default. This means the document type is activated and visible in Verify. To set this parameter to 'No' you must first create it and then enter 'No' as value.

**ValueOfGoods:** this parameter is set to 'Yes' by default. This means the fields **Value of goods**, **Discount**, **Incidental costs 1**, **2** and **3** are activated and visible in Verify. To deactivate these fields in Verify, create the parameter and set its value to 'No'.

**Search1:** if set to 'Yes' the field **Search1** is activated and visible in Verify. To deactivate this field, create the parameter and set its value to 'No'.

**Search2:** if set to 'Yes' the field **Search2** is activated and visible in Verify. To deactivate this field, create the parameter and set its value to 'No'.

**WebVerifyPort:** this parameter is set to 8082 by default. If you need to define a different TCP port for WebVerify, simply enter another value.

## Adding Custom Parameters

Custom parameters can also be used to translate the labels of index fields.

Suppose you created the index field 'Invoice number' in English and you want its label to be translated in French when a user chooses French as interface language:

- Click the plus sign in the top right corner.
- In the **Name** field, enter the name of the label of the index field. For instance **Labels.InvoiceNumber[EN]**.
- In the **Value** field, enter the value of the label. For instance **Invoice number**.
- Repeat these steps for the French label:
- Click the plus sign in the top right corner.
- In the **Name** field, enter the name of the label of the index field. In our example **Labels.InvoiceNumber[FR]**.
- In the **Value** field, enter the value of the label. In our example **Numéro de facture**.

When the user changes the interface language to French, the label of the index field above will be displayed in French.

## Using Custom Parameters to create Custom Error Messages

As of IRIS Powerscan™ 10.5 custom parameters can be used to create custom error messages.

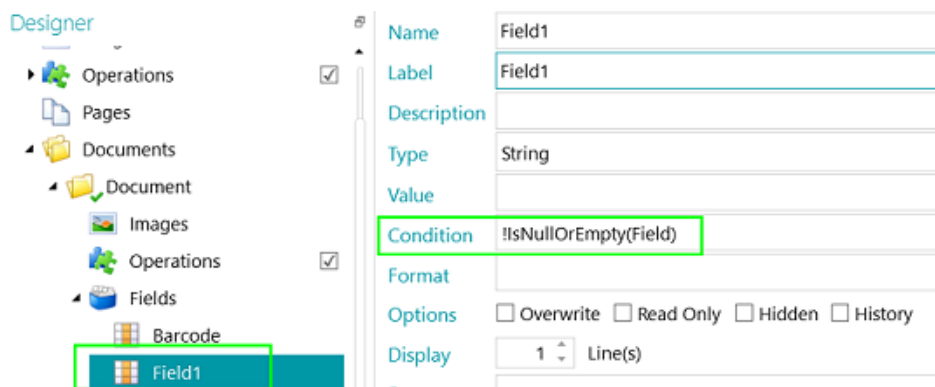
- Switch to Designer mode and click **Parameters**.
- Click the plus sign in the top right corner.
- In the **Name** field, enter the name of the field for which you want to create a custom error message, preceded by the prefix '**Conditions.**' and followed by the language code between brackets.  
For example: Conditions.Field1[EN].

**Note:** these parameters may be composed of different elements. For example Conditions.DOCUMENTTYPE.FIELDNAME[LL] or Conditions.PAGETYPE.FIELDNAME[LL] or Conditions.BATCHTYPE[LL].

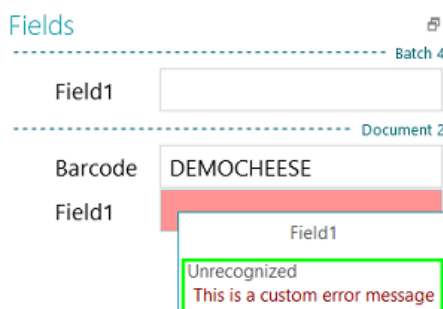
**Note:** thanks to the language code, the error message can be translated in all supported languages. The following language codes are available:

EN: English  
FR: French  
NL: Dutch  
ES: Spanish  
PT: Portuguese  
IT: Italian  
JA: Japanese  
HU: Hungarian  
CS: Czech

- In the **Value** field, enter the value of the error message.  
For example, 'This is a custom error message'.
- Go to the field that requires a custom error message, and apply a **Condition**.  
For example, !NullOrEmpty(Field).



- Scan a test document.  
If the condition is not met for the field, the custom error message will be displayed when you move the cursor over the field.



## Additional Parameters

The parameters below can be added manually if you want to change their default value.

**CleanTemporaryScanFolder:** this parameter is set to 'Yes' by default. When using a scanner as source, the images are temporary saved in %AppData%/ipsx/scan folder. After a scan run, all images are deleted. This parameter allows you to prevent the deletion if you set the value to 'No'.

**DisableEnhancedNaming:** this parameter is set to 'No' by default. If your project is not behaving as before because of a backward compatibility issue, you may set it to 'Yes'. It disables additional naming and counter expressions evaluation at document creation, transferring counters values in separation module from core context to global context and other enhancement.

**DisableRefactorInDesign:** this parameter is set to 'No' by default. If you set it to 'Yes', it disables the refactor method when working in the Designer. If the zones (fields, checkmarks or fingerprints) of your page types exceed the number of 100, then it is recommended to set this parameter to YES. The refactor method will then be executed when leaving the Designer.

**SkipInvalidImages:** this parameter is set to 'No' by default. If you set it to 'Yes', then the import will not be stopped if the capture encounters non-supported or corrupted image files. This is mainly useful when importing files in unattended mode. In case of single images, only the invalid ones are skipped. In case of multipages (.tif or .pdf), the invalid multipage is skipped entirely and renamed with a trailing "\_skipped" in the input folder. Use this parameter at your own risk. Skipping pages can lead to mis information or to miss a corrupted file that could actually be needed.

**DottedLineHighlights:** this parameter is set to 'No' by default. If set to 'Yes', then the extracted data zones are shown with dotted line rectangles instead of color highlight.

**BigDocumentExport:** this parameter is set to 'No' by default. If set to 'Yes', it forces iDRS to use only one thread to format PDF document. It does allow big document to be exported despite memory limitations (up to 4000 pages per document).



## Restoring Deleted Parameters

In case you decided to delete a parameter and want to restore it:

- Click the plus sign in the top right corner.
- Enter the exact name of the parameter in the **Name** field.  
The names of the default Parameters are listed above.
- Then enter the values **Yes** or **No** based on your requirements.

These values are case-sensitive.

Note however that the drop-down list that allows you to switch from Yes to No will no longer be available for restored parameters.

## 6. Configuring Projects using the Wizard

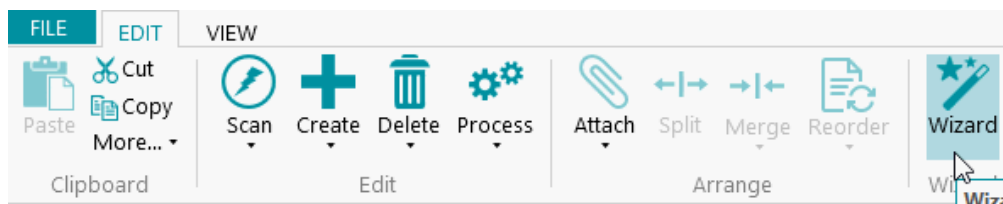
The easiest way to configure projects in IRIS Powerscan™ is by using the Wizard. By means of the Wizard you can quickly define the page, document and batch types you will be scanning, how page types must be identified, how documents and batches must be separated, which image processing operations must be applied, in which output format the scans must be converted and to which destination they must be sent.

You can access the Wizard from anywhere in the interface by pressing **F12** on the keyboard. You can also start the Wizard both from **Navigation** and **Designer** mode by clicking the **Wizard** command on the **Edit** tab.

### Notes:

The Wizard contains the same operations whether you start it from Navigation or Designer mode.

All actions that are available in the Wizard can also be done manually in Designer mode.



### Purpose of the Wizard

The Wizard tries to provide answers to the questions you might have when configuring a project. For instance, how do I separate batches, documents and pages? Which separation method would I use; blank pages, barcodes, patch codes, OCR zones, etc. Will I scan different types of documents? And do I want to store the different document types in the same location, or send them to different destinations? Do I want IRIS Powerscan™ to apply image processing images to all scanned images? Or only to images belonging to a certain type, and so on.

**Tip:** also see [Parameters to Consider](#) to have an idea of which parameters to take into account when configuring a project.

The great novelty of the Wizard is that you can configure projects along the way, while you may be scanning documents already. You just start the Wizard - without needing to quit your project or enter a Project Setup - apply the settings you need. Then you use **Rescan** to apply the changes to the documents you have already scanned. Any subsequent documents are scanned under the same conditions.

### Wizard Actions

By means of the Wizard you can do the following actions:

- [Add images to samples](#).
- Define the [page types](#), [document types](#) and [batch types](#) you will be scanning, and how they must be separated.
- Determine [identification](#) and [separation](#) methods. You do so by adding Operations.
- Select [Image Processing Operations](#) that must be carried out on all scanned pages.
- Select the [Output formats](#) and configure the [Destinations](#) to which scanned documents must be sent.
- Add [Data Sources](#) to link IRIS Powerscan™ index fields to the ones you have in a list or in external databases such as ODBC.

## 6.1 Parameters to Consider

---

In order to configure a project efficiently, it might be a good idea to take the following parameters into account before you get started.

### The types of documents to be processed...

- Are there several types of documents to be dealt with?
- Do they contain blank pages?
- Should the document types be sorted automatically?
- Should there be any image processing such as AutoRotation, Despeckling, Deskewing, etc.

### The types of files to be generated...

- Which output files do you want to generate: PDF, compressed PDF, Word files, etc.
- Where do you want to send the processed documents to: to a folder, via mail, to SharePoint, etc.

### The hierarchical structure...

- How should the document structure of batches, documents, pages be organized?
- What should be the maximum size of a batch/document?
- After how many pages should a new document/batch start?
- How should the batches, documents and pages be named?

### The page identification method...

- Should pages be uniquely identified, so you can apply certain operations only to certain page types?

### The separation method...

- Do the documents contain a barcode, an OCR zone, or a patch code that could be used to separate them?
- Could their layout be used?
- Could blank pages be used as separators?
- Should the separation be done based on page count?

### The indexing values...

- What should be the indexing values of each type of batch/document/page?
- Should they be extracted from barcodes or from OCR zones?
- Should there be special default values?

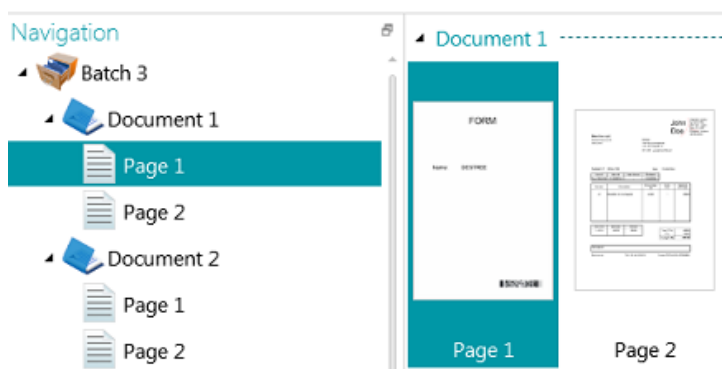
## 6.2 Add an Image to Samples

**WARNING:** in order to add an image to Samples via the **Wizard**, you first need to scan pages to the current project.

### Purpose of adding samples

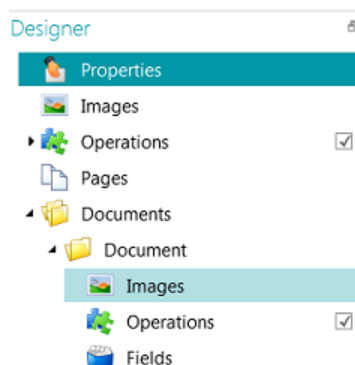
One of the great novelties of IRIS Powerscan 10 is its ability to do identification on page level. In other words, IRIS Powerscan™ can uniquely **identify** each page that is scanned. That way, certain operations (like image processing, data extraction, etc.) can be applied only to particular pages, which increases the processing speed. But in order to do that IRIS Powerscan™ needs at least one **sample** of the different pages that will be scanned.

- Scan at least one page to your project.
- In **Navigation mode**, select the page you want to add to samples.  
You can select the page either from the **Navigation Explorer** or from the **Viewer**.



*Image selected in Viewer*

- Start the **Wizard** (F12).
- Click **Add an image to samples**. Then click **Next**.  
**Note:** if you have not selected a page, the operation **Add an image to samples** will not be visible in the Wizard.
- Enter a **Name** for the sample.
- Select on which level you want to add it: to the Samples collection or to one particular page / document / batch type.
- Then click **Finish**.
- To check which images have been added to samples, switch to **Designer mode** and click **Images** in the Designer Explorer. Or in case you added a sample to a particular Batch/Document/Page type, select the correct type and click **Images**.



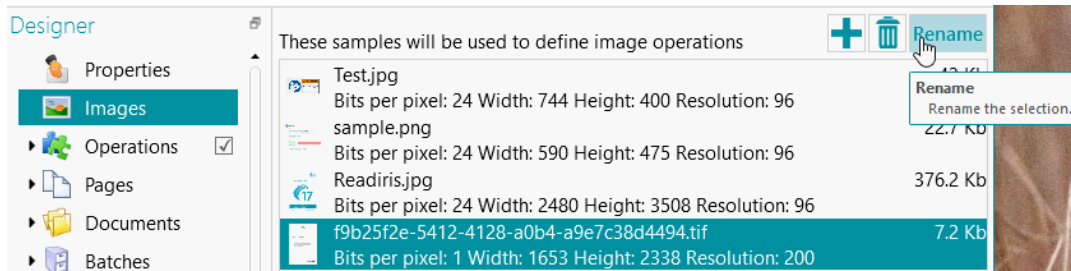
*Sample images on Document type level*

**Note:** besides using the Wizard, you can also simply copy-paste images to **Images**. Copy the image file you want to add, right-click **Images** at the desired level and click **Paste** to add it.

## Renaming the samples

To rename the **Images** from the **Designer mode**:

- Select the image from the list
- Click **Rename**
- In the pop-up window, enter a new name
- Click **OK**



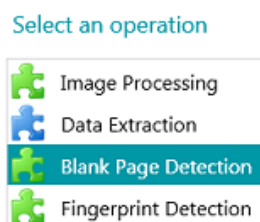
## 6.3 Add an Operation

### Purpose of adding operations

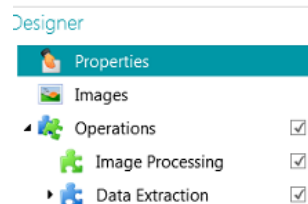
The operations you add via the Wizard are used among others to configure the [page identification](#), [document and batch separation](#), [image processing operations](#), etc.

**WARNING:** if you already scanned documents in your project and add an operation afterwards, make sure to click **Rescan** (beneath **Scan**) on the **Edit** tab to see how the newly added operations affect the document classification. The operations will be applied to any subsequent documents you scan.

- Start the **Wizard** (F12).
- Click **Add an Operation**. Then click **Next**.
- Select the operation you want to add.



**Note:** the first two operations in the list - **Image Processing** and **Data Extraction** - are by default applied in each project. They are displayed in the Designer Explorer.



With the [Image Processing](#) operations set you can determine which image processing operations must be carried out on all scanned documents.

With **Data Extraction** you can configure which data must be extracted from the scanned documents. Those data can be filled in in index fields, but it can also be used as separation method. You can for instance separate elements based on barcode zones and OCR zones.

See section [Operations](#) for more information.

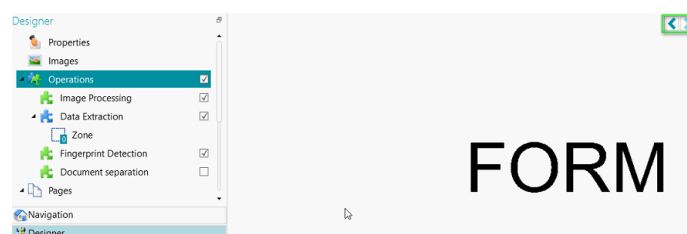
### Scrolling the sample images

To scroll the sample images:

- Go to **Operations** in the Designer Explorer
- Use the Arrow buttons left or right < >

Or

- Use the keyboard shortcut Alt+ down/up arrow



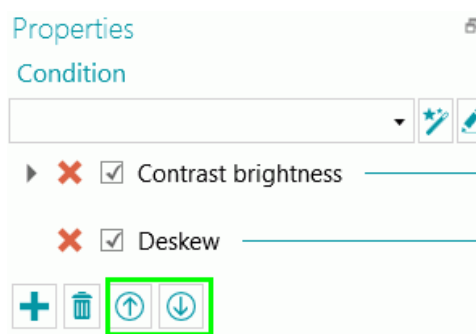
## 6.4 Add an Image Processing Operation

### Purpose of adding image processing operations

In the Wizard you can not only activate the Image Processing operations set (explained in [Add an Operation](#)), but you can also apply specific image processing operations directly. These operations enhance the quality of the scans, which leads to better processing results.

**WARNING:** if you already scanned documents in your project and add an operation afterwards, make sure to click **Rescan** (beneath **Scan**) on the **Edit** tab to see how the newly added operations affect the document classification. The operations will be applied to any subsequent documents you scan.

- Start the **Wizard** (F12).
- Click **Add an image processing operation**. Then click **Next**.
- Select the operation you want to add.  
Note that you can only select one operation at a time. Once you have added it you can return to the Wizard and add a new one.
- The order in which you select the operations is also the order in which they will be executed, but this can be changed afterwards by means of the up/down arrows.



**Note:** the image processing operations you select through the Wizard are applied to all scanned pages. In Designer mode it is also possible to apply certain operations to specific pages, documents and batches only. See [Image Processing](#) for more information.

## 6.5 Add a Page Type

### Purpose of adding page types

As already mentioned in this documentation, one of the great novelties of IRIS Powerscan 10 is its ability to [uniquely identify pages](#). By uniquely identifying pages, you can apply operations (like image processing, data extraction, page deletion, etc.) only to the pages where they are required, which increases the processing speed of IRIS Powerscan™.

When adding page types via the Wizard, the identification can be done in several ways. Note that when using Fingerprint detection, IRIS Powerscan™ examines the layout of the scanned images. When using Data Extraction, IRIS Powerscan™ examines the data extraction zones you have created and checks if the content matches the condition you defined.

- Start the **Wizard** (F12).
  - Click **Add a Page Type**. Then click **Next**.
  - Name the Page Type. E.g. PageType1 in our example.
  - Browse for an image to use as sample.
  - **WARNING:** if you select a page in the Navigation Explorer, you automatically add that page as sample. You cannot browse for another image.
  - Select the **Identification Method**:
    - **None:** no automatic identification will be done.
    - **Based on blank page:** IRIS Powerscan™ adds the Condition **Page.IsBlank** to the PageType. If the condition is met, a Page will be considered of this PageType.
    - **Based on Fingerprint:** IRIS Powerscan™ examines the layout of the sample. If scanned pages have a similar layout they will be recognized as belonging to the same page type.
    - **Based on page index:** IRIS Powerscan™ adds the Condition "**Page.Index==**" to the PageType. If a Page matches the Index you indicate here, it will be considered of this PageType.
    - **Based on Data Extraction:** IRIS Powerscan™ examines the data extraction zones you have defined on your pages.
      - Select the Data Extraction zone you want to use.
      - Select the **Operator**.
      - Then enter a **Value**.
- In the example image below, the Page Type will be recognized as PageType1 if the content of the selected Data Extraction zone equals "Bacchus".

Specify a condition that will be used for identification

Image.Zone1

Operator Equals (==)

Value Bacchus

☐ Match Case

Once you have [identified page types](#), you can use them to separate document types. You can either do this through the Wizard, or manually in Designer mode. Also see [Add a Document Type](#) and [Separation of Documents and Batches](#) for more information.

**Note:** Page Types can be further configured in **Designer** mode. You can for instance define operations that should be carried out only to certain page types or under certain conditions.



## 6.6 Add a Document Type

### Purpose of adding document types

IRIS Powerscan™ classifies each stream of images/scans into a logical **Batch > Document > Page** structure. By default, you have 1 batch type, 1 document type and 1 page type. All pages you scan are added to the same document type.

By adding document types you can customize IRIS Powerscan™ to fit the structure of your documents. You can also choose to apply certain operations only to certain document types.

- Start the **Wizard** (F12).
- Click **Add a Document Type**. Then click **Next**.
- Name the Document Type.
- Select the separation method:
  - **None:** IRIS Powerscan™ doesn't carry out any document separation when it encounters this document type.
  - **Based on page count:** IRIS Powerscan™ starts a new document after the indicated number of pages.
  - **Based on blank pages:** IRIS Powerscan™ starts a new document every time it encounters a blank page.
  - **Based on page type:** IRIS Powerscan™ starts a new document every time it encounters the selected page type. This option is only available if you have defined at least two page types. See the previous section [Add a Page Type](#).
  - **Based on Data Extraction** IRIS Powerscan™ examines the data extraction zones you have defined on your pages. If the content of the extraction zones matches the one you have defined, IRIS Powerscan™ starts a new document.
  - **Delete first page:** this option is available when you selected **Based on blank pages** or **Based on Data Extraction**. It deletes the first page of the document.
- Configure the **Naming** options.  
 The default naming items are Prefix + Document.Counter. For instance DocumentType2.  
 The naming options can be a combination of a prefix, the value of a recognition zone, a date and time, a delimiter and a counter. Click the down arrow next to these fields to customize the naming options.  
 In Designer mode you can also use the [Expression Editor](#) to configure more complex Naming options.

Select naming item(s)	
Naming	Document.Type + " " + Document.Counter
Prefix	Document1
Add zone	<none>
Add date	<none>
Add time	<none>
Delimiter	<Space>
<input checked="" type="checkbox"/> Add counter	

**Note:** document types can be further configured in Designer mode. You can for instance [create index fields](#) on document level and define operations that should be carried out only to certain document types or under certain conditions.

Also see [Separation of Documents and Batches](#).

## 6.7 Add a Batch Type

---

### Purpose of adding batches

IRIS Powerscan™ classifies each stream of images/scans into a logical **Batch > Document > Page** structure. By default, you have 1 batch type, 1 document type and 1 page type. All pages you scan are added to the same document type.

By adding batch types you can customize IRIS Powerscan™ to fit the structure of your batches. You can also choose to apply certain operations only to certain batch types.

- Start the **Wizard** (F12).
- Click **Add a Batch Type**. Then click **Next**.
- Name the Batch Type.
- Select the separation method:
  - **None:** IRIS Powerscan™ doesn't carry out any batch separation when it encounters this batch type.
  - **Based on document count:** IRIS Powerscan™ starts a new batch after the indicated number of documents.
  - **Based on blank pages:** IRIS Powerscan™ starts a new batch every time it encounters a blank page.
  - **Based on Data Extraction** IRIS Powerscan™ examines the data extraction zones you have defined on your pages. If the content of the extraction zones matches the one you have defined, IRIS Powerscan™ starts a new batch.
  - **Delete first page:** this option is available when you selected **Based on blank pages** or **Based on Data Extraction**. It deletes the first page of the batch.

**Note:** batch types can be further configured in Designer mode. You can for instance [define index fields](#) on document level and define operations that should be carried out only to certain document types or under certain conditions.

Also see [Separation of Documents and Batches](#).

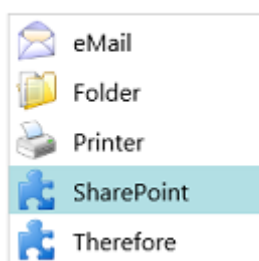
## 6.8 Add an Output Type

---

IRIS Powerscan™ can send scanned documents in a wide range of output formats and to many possible destinations. By adding an Output Type via the Wizard you can quickly select the required [output format](#) and configure the [destination](#) for your documents.

- Start the **Wizard (F12)**.
- Click **Add an Output Type**. Then click **Next**.
- Enter a **Name** that is meaningful to you.
- Select the required [output format](#) from the list. Then click **Next**.  
If you have defined multiple Document Types you will be asked whether to apply the output to a particular document type or to all document types. Make your choice. Then click **Next**.
- Now select a [destination](#) from the list, and click **Next** to configure it.

### Select a destination



- When you select **eMail** you are prompted to enter the recipient's address and configure the email settings.
- When you select **Folder** you are prompted to enter a **Path**. The default path is the Documents folder.
- When you select a **Cloud** destination you are prompted to enter the **Server** and/or **User Name** and **Password**.

## 6.9 Add a Data Source

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By adding a Data Source via the Wizard you can link the index fields in IRIS Powerscan™ to a list of values or to an external ODBC database, like Microsoft Access.

How to use it is explained in [Indexing Scanned Documents](#) > [Using a Data Source](#).

## 7. Processing Documents in IRIS Powerscan™

### Main Processing Steps

Documents go through **three main steps** when being processed in IRIS Powerscan™:

1. **Capture**
2. **Validation**
3. **Export**

Depending on your [user rights](#), you will be able to carry out one or more of these processing steps - or activities.

**Note:** each of these three processing steps can also be run in the background. See [Background Processing](#) below.

#### 1. Capture

The **Capture** can be done by means of a [scanner](#), by [scanning from folders](#) and from the [Cloud](#).

#### 2. Validation

When documents have been scanned they are displayed in **Navigation mode**, where a full range of tools are available for post-scanning operations. You can now validate the images and the [index fields](#) you have created.

#### 3. Export

When the documents and their index fields have been validated they are ready for export. IRIS Powerscan™ can export documents in numerous [output formats](#) to various [target systems](#).

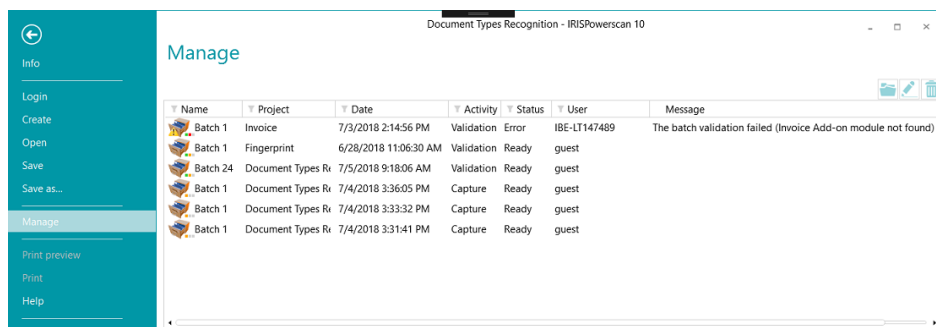
**Tip:** in order to export only the documents and batches that were not already exported previously, you can use the conditions `!Document.IsExported` and `!Batch.IsExported`. Also see [Using Expressions](#).

Name	Document
Description	
Naming	Document.Type + " " + Document.Counter
Condition	!Document.IsExported

### Managing Exported Batches



During processing, the status of the batches in process can be checked in the Application menu. To do so, click **File > Manage**.

There you get an overview of which batches are being processed, in which project and by which user, what their status is, which activity has been carried out on them. An error message is displayed in case of failure.



## Checking the history of batches

- Select a batch and click the **History** icon .

Batch 11 <span>✕</span>				
History  				
Date	Activity	Status	User	
7/25/2018 10:23:38 AM	Capture	Ready	Guest	
7/25/2018 10:23:40 AM	Capture	Completed	Guest	
7/25/2018 10:23:40 AM	Validation	Ready	Guest	

## Unlocking batches

When a user - or the Service - executes an activity on a batch, the current batch is locked until the user/Service exports it. In case a batch should stay locked, it can be unlocked manually:

- Right-click the batch you want to unlock.
- Then click **Unlock**.



### Notes:

This feature is meant as a recovery method. It should only be used for diagnostic purposes and not in standard procedures.

If the unlock feature is unavailable, this means the batch has already been unlocked.

## Resending batches

When a batch has the status "On Error", which means some errors have been encountered, the user can retry the processing:

- Select a batch and click the **History** icon .
  - Select the required activity from the list.
  - Click the retry icon .
- The status of the batch is now changed to "Ready" and the batch can be processed again in Navigation mode.

## Browsing batches

This function allows you to open the batch directly in the right project when you are in a different project.

- Click the browse to open the corresponding project and import the selected batch.
- Or right-click the batch and select **Open**.

**Note:** if the browse function is unavailable, this means you have no batches in process in other projects, or the batches are still locked.

## Deleting batches

- Select a batch you want to delete.
- Click the delete icon to delete the selected batch.
- Or right-click a batch and select **Delete**.

**Note:** as of IRIS Powerscan 10.4, when you delete an Invoice batch from this section it will also be removed from the WebVerify Job list.

## Background Processing

When carrying out an activity in the background, the activity is done by the IRIS Powerscan™ service called **IPSxService**.

The IRIS Powerscan™ service is responsible for starting and stopping the IPSxConsole processes to handle the Capture, Validation and Export when they are being done by the Service.

Depending on the resources available, and on the project settings (when the Capture is done by the Service), several IPSxConsoles may be started at once.

The Service can be used for free for general tasks, Capture and Validation. In order for the Export to be done by the Service however, the [Background Processing add-on](#) needs to be activated.

Note that the Service uses as much resources as your computer allows. The more cores your computer has, the more parallel processing the Service will be able to execute.

### To run any of the activities in the background by the Service:

- Open a project and switch to Designer mode.
- Click **Properties**.
- In the **Activities** section you see which user groups are allowed to carry them out. By default the **Supervisors** group is allowed to do each activity. To learn how to customize the local user groups and users, see [Managing Users and Groups](#).



- Select the required activity, and then select **Service**.

When the **Capture** activity is done by the Service and you selected a **Folder** as source, the folder now functions as [Watched Folder](#).

When the **Validation** activity is done by the Service, index fields do not need to be validated manually by a user.

When the **Export** activity is done by the Service, the documents are exported automatically to the configured destination as soon as the processing is done.

**Note:** you can also use the IRIS Powerscan Server™ to carry out these activities. In that case it is no longer your *local* IRIS Powerscan™ station that executes them, but the central Server.

**Note:** in a Client/Server context, the IRIS Powerscan™ service executes different tasks:

- It synchronizes projects and user rights between the Clients and the Server.
- It manages the Batch statuses between the Client and the Server.
- It manages the Batch transfers between the Client and the Server.

To access the **IRIS Powerscan Server™** documentation, open the **IRIS Powerscan Server™** application and click **File > Help**.

## 7.1 Managing Groups and Users

In IRIS Powerscan 10 you can create **local** users and **local** groups and define their permissions. When a user logs in using the credentials you provided him with, he is only able to execute the tasks for which he has the necessary permissions.

**Note:** If you want to configure users and groups that can log on to the IRIS Powerscan Server™, this must be done in the IRIS Powerscan Server™ application. To access the IRIS Powerscan Server™ documentation, open the IRIS Powerscan Server™ application and click **File > Help**.

To access the local users and groups settings in the IRIS Powerscan™ main application, click **File > Info > Users/Groups**.



### Defining Groups

The user permissions are defined in the **Groups** section. Each user belonging to the same group has the same permissions. This way you avoid having to determine the permissions for each user separately.

There are 2 default groups in IRIS Powerscan™: **Operators** and **Supervisors**.

The **Supervisors** group has access to all permissions. In other words, Supervisors can do all configuration actions. The permissions of the Supervisors group *cannot* be modified.

The **Operators** group is by default allowed to scan and process documents in IRIS Powerscan™ but cannot do advanced configurations. The permissions of the Operators group *can* be modified.

You can also create customized groups for which you determine the permissions of your choice:

- Enter a **Name** for the new group.
- To change the default user icon, select another icon from the icon list.
- Select the permissions a user belonging to this group is allowed to do. Only the corresponding commands will be available in the interface.
- Then click **OK** to confirm.

### Defining Users

There are 2 default Users in IRIS Powerscan™: **guest** and **SysAdmin**. Both belong to the **Supervisors** group and therefore have all **Permissions**.

To add or edit a user:

- Click the plus sign.
- Enter a **Name** for the new user.
- To apply a password, click **Change password**.
  - If this is the first time you attribute a password, leave the **Old Password** field empty, enter the password in the **New Password** field, and confirm it.
- To change the default user icon, select another icon from the icon list.
- If the user is/should be part of a domain, enter the domain in the **Domain** field.
- The **Status** of the new user is by default set to **Active**.
  - To deactivate the user later on, return to this menu and select **Inactive**.



- Select the interface language from the **Language** list.  
When the user logs in, the interface is displayed in the selected language.
- Select the **Unit** in which measurements must be displayed: centimeter, inch or pixel.
- Select the **Group** to which you want to add the user.  
The default groups are **Supervisors** and **Operators**.  
To add the user to a different group, first create it in the **Groups** section.

The screenshot shows a 'User' configuration window with a teal header and a close button. The form contains the following fields and options:

- Name:** A text field containing 'User' and a 'Change password' button with a user icon.
- Domain:** An empty text field.
- Status:** Radio buttons for 'Active' (selected) and 'Inactive'.
- Theme:** A dropdown menu showing 'Default' with a pencil icon for editing.
- Language:** A dropdown menu showing 'English' with a flag icon.
- Units:** Radio buttons for 'Centimeter', 'Inch', and 'Pixel' (selected).
- Group:** A dropdown menu.

An 'OK' button is located at the bottom right of the window.

## 8. Scanning Documents

Once you have created a project and know how to navigate inside it, you can start scanning documents.

**WARNING:** in IRIS Powerscan 10 it is possible to change the configuration of a project as you go along, even when you have already scanned multiple documents. Just use **Rescan** to apply any changes to the documents you have scanned.



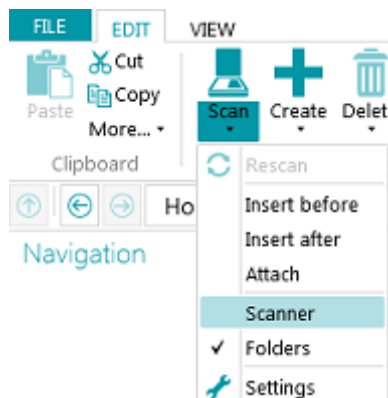
There are different ways to scan documents in IRIS Powerscan 10:

- [Using a Scanner](#)
- [Scanning from Folders](#)
- [Scanning from the Cloud](#)
- [Scanning from XMailFetcher](#)

### Switching between Sources in Navigation mode

When you have configured multiple input sources, you can switch between them in Navigation mode:

- Click the down arrow beneath **Scan** on the **Edit** tab.
- Select the source of your choice.

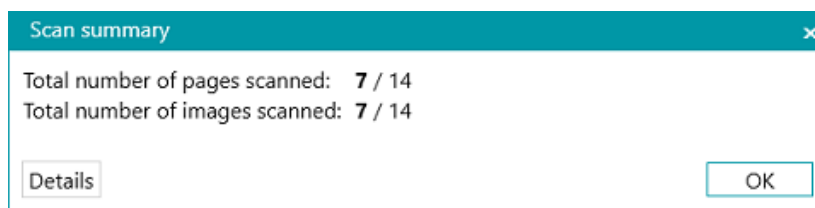


- Click **Settings** to access the settings of the source.

### Displaying the Scan Summary

If you want to display a Scan summary after each scan, set the **ScanSummary** parameter to 'Yes' in [Configuration pane > Parameters](#).

The Scan summary displays the total physical pages scanned and the total number of images scanned. The first digit indicates the number of pages scanned during the last scan (7 in our example below), while the second digit indicates the number of pages scanned since the opening of the application (14 in our example).



## 8.1 Using a Scanner

IRIS Powerscan™ is compatible with virtually any Twain-based scanner that uses Twain version 1.9 and higher.

If you are using an ISIS-based scanner, make sure the **ISIS-Driver Add-on** has been activated.

### WARNING:

Before you try to use a scanner in combination with IRIS Powerscan™, make sure the scanner is powered on and its driver is installed on your system.

If you are using multi-streams – and especially 3 streams i.e. color, grayscale and black-and-white - you must use compressed images. Uncompressed images may lead to issues or very slow scanning.

### Configuring a scanner as scan source

In a new project:

- [Create](#) a new project using the Wizard.
- Select **Scanner** as **Source**.  
Continue with the steps of the Wizard until you are done.
- The project opens in Navigation mode. On the **Edit** tab, click the down arrow below **Scan** and click **Settings**.
- Click the settings icon to select the driver.
- Then click the drop-down list to display the available scanners.
- **Note:** if the list is empty, there are no scanners configured on your system.
- Select a scanner from the list. Then click **OK**.

#### Specify Scanners settings



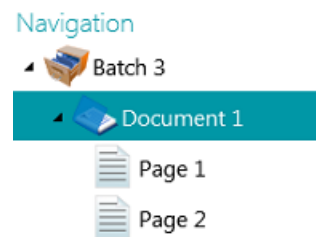
- Select how you wish to split or merge the documents coming from the scanner in the **Arrangement** drop-down list:
  - **Disabled:** the pages will not be split.
  - **Split long edge:** splits pages along the long edge of the page.
  - **Split vertically:** splits pages vertically.
  - **Split horizontally:** splits pages horizontally.
  - **Fold and Split horizontally (IPS9):** folds and splits A3 pages horizontally into two A4 pages.
  - **Merge long edge:** merges two subsequent pages along the long edge of the pages.
  - **Merge vertically:** merges two subsequent pages vertically.
  - **Merge horizontally:** merges two subsequent pages horizontally.
- If you want the scanner to scan one-sidedly only, select **Force Simplex**.
- **WARNING:** when scanning documents to the Invoice Add-on (SPAP or Solution Package Accounts Payable), you must select the **Force Simplex** option of the Scan settings. This is because the Invoice module only supports front pages.
- **Imprinter** (this option is only displayed if your scanner supports it): enter a value you want the scanner to add to your scans.

**In an existing project (which does not have a scanner as source yet):**

- Open your project and switch to Designer mode.
- Click **Properties**.
- Click the plus sign next to **Sources**.
- Select **Scanner** and click **Create**.
- Click the settings icon to select the driver.
- Then click the drop-down list to display the available scanners.
- **Note:** if the list is empty, there are no scanners configured on your system.
- Select a scanner from the list. Then click **OK**.  
The same settings as explained above are available.

**Start Scanning**

- Click **Scan** or the large scanner icon to start scanning.  
Your documents are divided into batches, documents and pages.



## 8.2 Scanning from Folders

Although IRIS Powerscan™ is a scanning solution it is not required to use a scanner. You can also scan from folders.

To scan from folders you can either:

- [Create](#) a new project and select **Folders** as source.
- Add **Folders** as Source to an existing project.

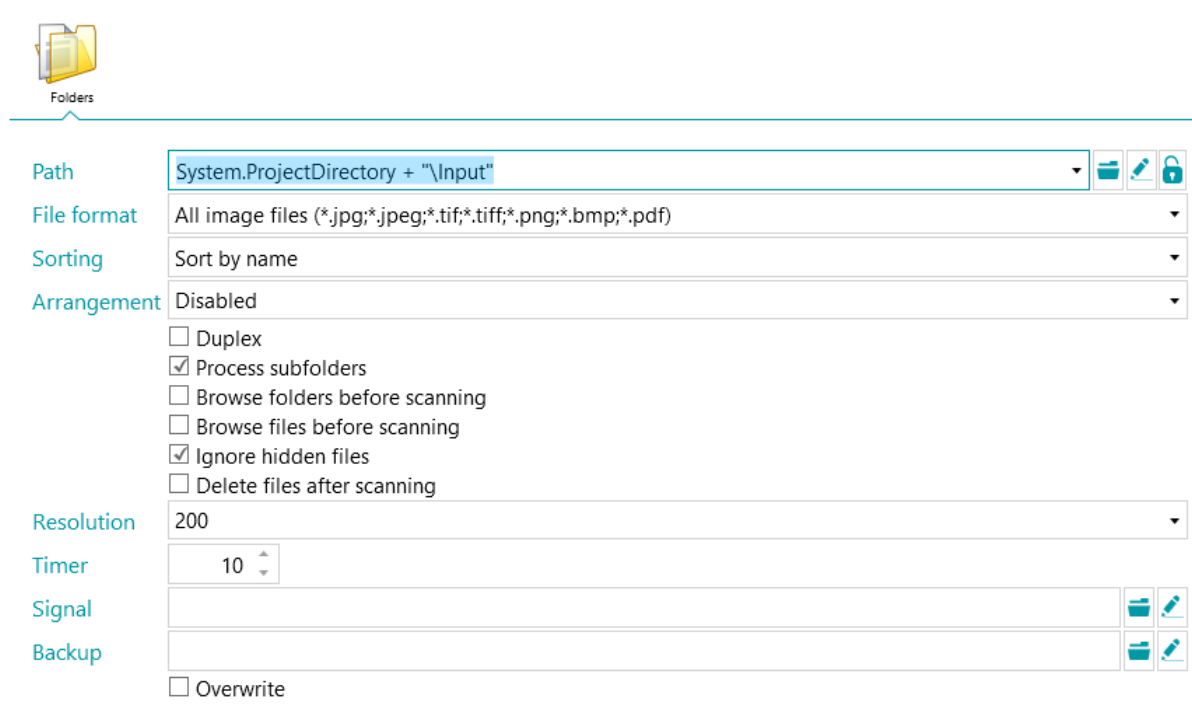
### Configuring a Folder as source

**In a new project:**

- [Create](#) a new project using the Wizard.
- Select **Folders** as **Source**.
- Click **Next** to define the **Folder** settings.  
These settings are described at the bottom of this topic.
- Proceed with the next steps of the Wizard and click **Finish**.

**In an existing project (which does not have a Folder as source yet):**

- Open your project and switch to Designer mode.
- Click **Properties**.
- Click the plus sign next to **Sources**.
- Select **Folders** from the list and click **Add**.  
**Folders** is now added as source.





The screenshot shows the 'Folders' configuration window. At the top, there is a folder icon labeled 'Folders'. Below it, the settings are organized into sections:

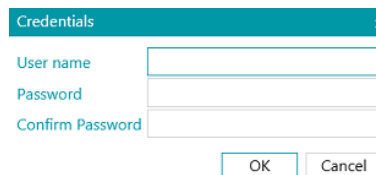
- Path:** A text field containing 'System.ProjectDirectory + "\Input"' with a dropdown arrow and icons for folder, edit, and lock.
- File format:** A dropdown menu showing 'All image files (\*.jpg;\*.jpeg;\*.tif;\*.tiff;\*.png;\*.bmp;\*.pdf)'.
- Sorting:** A dropdown menu showing 'Sort by name'.
- Arrangement:** A dropdown menu showing 'Disabled'.
- Options:** A list of checkboxes:
  - ☐ Duplex
  - ☒ Process subfolders
  - ☐ Browse folders before scanning
  - ☐ Browse files before scanning
  - ☒ Ignore hidden files
  - ☐ Delete files after scanning
- Resolution:** A dropdown menu showing '200'.
- Timer:** A numeric input field showing '10' with up and down arrows.
- Signal:** An empty text field with folder, edit, and lock icons.
- Backup:** An empty text field with folder and edit icons.
- Overwrite:** A checkbox labeled 'Overwrite'.

### The Folder Settings

**Path**

- Click the browse icon (📁) to select the scan folder.

- To customize the expression click the pencil icon (  ) to open the [Expression Editor](#).
- WARNING:** when customizing the expression, make sure to put '+' '\'+ between the different elements. Note that you can also use fixed values between double quotation marks. For example "C:\Images".
- If the folder you want to scan from is protected by a password, click the padlock icon (  ).
  - Enter your (domain ) **User name**. E.g. IRIS\_DOM\MyName.
  - Enter your **Password**.
  - Confirm** the password, and click **OK**.



A screenshot of a 'Credentials' dialog box. It has a title bar with 'Credentials' and a close button. Inside, there are three input fields labeled 'User name', 'Password', and 'Confirm Password'. At the bottom right, there are 'OK' and 'Cancel' buttons.

### File Format

IRIS Powerscan™ by default searches for all files that end with the extensions \*.jpg, \*.jpeg, \*.tif, \*.tiff, \*.png, \*.bmp and \*.pdf.

### Sorting

Select how the scanned files must be sorted: by name, creation date, modification date or unsorted.

### Arrangement

- Disabled:** pages will not be split.
- Split long edge:** splits pages along the long edge of the page.
- Split vertically:** splits pages vertically.
- Split horizontally:** splits pages horizontally.
- Fold and Split horizontally (IPS9):** folds and splits A3 pages horizontally into two A4 pages.
- Merge long edge:** merges two subsequent pages along the long edge of the pages.
- Merge vertically:** merges two subsequent pages vertically.
- Merge horizontally:** merges two subsequent pages horizontally.

### Other options

- Select **Duplex** to make IRIS Powerscan™ process the uneven pages as front pages and the even pages as rear pages. Select this option when using a duplex scanner.
- Select **Recursive** to make IRIS Powerscan™ also process the files in the subfolders of the selected input folder.
- Browse folders before scanning** (not applicable when using a folder as Watched Folder): you are prompted to indicate the input folder each time you click **Scan**.
- Browse files before scanning** (not applicable when using a folder as Watched Folder): you are prompted to select one or more files each time you click **Scan**.
- Ignore hidden files:** when selected, hidden files will not be scanned.
- Delete files after scanning:** when selected, the files will be deleted after scanning.

### Resolution

When importing [PDF files](#) you can select the **Resolution** in which they will be imported. You can select a resolution ranging from 100 DPI to 600 DPI. Note that a resolution of 300 DPI is generally recommended.

This option does *not* apply to image files nor does it change the resolution of your scanner.

### Timer

Indicate after how many seconds IRIS Powerscan™ must process the images in the folder.

**Note:** this option only applies when using a folder as a **Watched Folder**. See below.

## Signal

The **Signal** option is used when using [Connected Projects](#). See the [corresponding topic](#) for more information.

## Backup

If you want to make a backup of your files, click the browse icon and select the folder to store the files in. Or click the pencil icon to use an [expression](#).

To overwrite files with the same name, select **Overwrite**.

## Drag-and-drop files to a project

You can also drag-and-drop documents from a file folder or from your e-mail application to a project.

### 8.2.1 Using a Folder as Watched Folder

---

You can also have IRIS Powerscan™ monitor a folder as Watched Folder. Whenever IRIS Powerscan™ spots a new document inside one of the Watched Folders, it processes it.

Thanks to the Watched Folders feature IRIS Powerscan™ can easily be combined with MFPs.

#### Rules of thumb when using Watched Folders

- The Watched Folders feature is designed to handle a maximum of 10 Watched Folders.
- One project can watch one folder at a time.  
So if you configure multiple Watched Folder projects, make sure that a single Watched Folder is not being monitored by several projects.
- It is recommended not to insert big files in a Watched Folder. Files in any format should be limited to 300 MB.  
Bigger files will go through but will decrease overall performances.
- It is better to use image files like TIFF, multiTIFF and JPEG as opposed to PDF.  
PDF also works well but it requires more processing power to be decompressed and treated.
- The more cores your computer has, the better and faster the processing will be.
- Separation based on barcodes and Fingerprint can also affect the overall performances.  
In a worst case scenario using complex separation schemes may decrease the overall speed to half of the normal speed.
- The output format you select plays an important role as well. iHQC output can vary from 100% speed to 10% speed depending on the Quality factor.

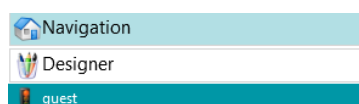
#### Configuring a project with a Folder as Watched Folder

**Before you configure projects with a Folder as Watched Folder:**

- Click the traffic light icon in the bottom left corner of the interface to stop the Service.

When the Service has been stopped, the traffic light is red.

**WARNING:** if you do not stop the Service and Copy-Paste projects to create several Watched Folders, the Service may start watching the same folders and unpredictable results may occur.

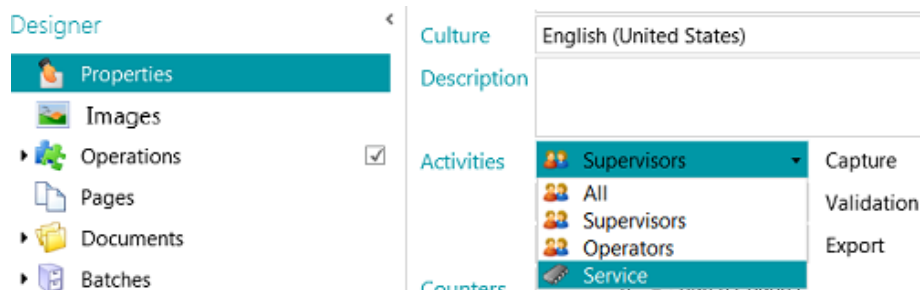


- Now configure the Watched Folder as explained below.
- When you are done, save your project and click the traffic lights icon again to restart the Service.

#### To use a Folder as Watched Folder:

- Switch to Designer mode in your project.
- Click **Properties**.
- Set the **Timer** to the required number of seconds. (See the Folder Settings above).
- In the **Capture** drop-down list next to **Activities**, select **Service**.

**Note:** you don't need the **Background Processing add-on** to have the **Capture** done by the **Service**.



**Note:** if you also select **Validation** and **Export**, the scanned documents go through IRIS Powerscan™ automatically and they are sent to the configured destination without requiring user intervention. If you want users to do a manual index validation, *do not* select **Service** in the **Validation** drop-down list.

**WARNING:** in order to have the **Export** done as a **Service**, the **Background Processing add-on** must be activated.

**Note:** you can also configure the **IRIS Powerscan Server™** to carry out the **Capture**. In that case, it is not the local instance of IRIS Powerscan™ that monitors the Watched Folder, but the **IRIS Powerscan Server™**.

When you are done configuring Folders as input source, click **Scan** to start scanning documents.

**Tip:** for more information and best practices, see the **Technical Note** on Watched Folders.

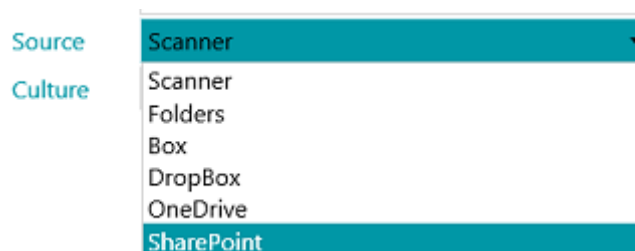


## 8.3 Scanning from the Cloud

IRIS Powerscan 10 can scan documents from Cloud services such as SharePoint, OneDrive, box and Dropbox. In order to do so, you must have a valid account and configure the connection correctly.

**To configure a Cloud repository as source:**

- [Create](#) a project and select one of the Cloud source.  
Or in an existing project: switch to **Designer mode > Properties**. Click the plus sign next to **Sources** and select one of the Cloud sources.



- Enter the server and/or credentials of your Cloud account.

### Configuring SharePoint

- Select **SharePoint** and click **Next**.

#### Step 1

- Enter the **Server** url.
- Enter the **User name** and **Password**, if required.  
Whether or not a user name and/or password are required depends on your SharePoint configuration. If necessary, contact your System Administrator.  
If your computer is located in a domain, you may need to add the domain name followed by a back slash in front of the User name. E.g. Your\_Domain\jsmith.
- Click **Next** to establish the connection.

#### Step 2

- If the connection is successful, and if your SharePoint server contains any libraries, the list of available libraries is displayed.
- Select a library from which you want to import the documents, and click **Next**.

#### Step 3

- Now you can select a specific folder inside the library from where the documents will be imported. If you do not select a folder, the documents are imported from the root of the library.

#### Step 4

- Now select a content type.
- Follow the remaining steps of the Wizard.

### Configuring OneDrive, Box and Dropbox

- Select your source and click **Next**.
- Enter your credentials and click **Next**.
- Select a folder and click **Next**.

**Note:** if you do not select a folder, the documents are imported from the root.

## 8.4 Scanning from XMailFetcher

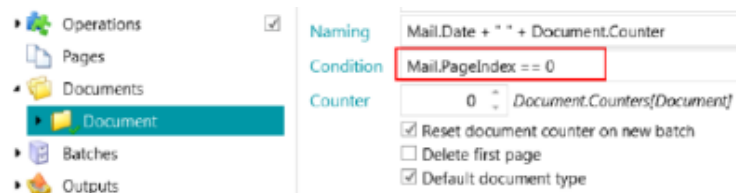
**WARNING:** in order to scan from **XMailFetcher**, XMailFetcher must be installed and configured on your computer. Contact I.R.I.S. or your Canon representative to acquire XMailFetcher and its documentation.

### Introduction

XMailFetcher is an easy to operate software application that monitors incoming emails and transfers them to an existing system, in this case IRIS Powerscan™. The emails and their attachments are converted into Tiff files and sent to an output folder which in turn is monitored by IRIS Powerscan™.

By default, IRIS Powerscan™ adds all emails to a single batch and document. All attachments are also added to the same batch and document.

**Tip:** in case you want IRIS Powerscan™ to create one document per email, use the condition `Mail.PageIndex == 0` on Document level. The separation of emails works in the same way as 'regular' documents, the only difference is that you use Mail variables instead of Document variables. See [Using Expressions](#) for more information about the available variables.



In case you want IRIS Powerscan™ to create one document per attachment, use the condition `Input.PageIndex == 1` on Document level.

### Configuring a XMailFetcher as source in IRIS Powerscan™

#### In a new project:

- [Create](#) a new project using the Wizard.
- Select **XMailFetcher** as **Source**.
- Click **Next** to define the **XMailFetcher** settings. These settings are described at the bottom of this topic.
- Proceed with the next steps of the Wizard and click **Finish**.

#### In an existing project (which does not have a XMailFetcher as source yet):

- Open your project and switch to Designer mode.
- Click **Properties**.
- Click the plus sign next to **Sources**.
- Select **XMailFetcher** from the list and click **Add**. XMailFetcher is now added as source.

### The XMailFetcher Settings

#### Path

- Click the browse icon (🔍) to select the scan folder.

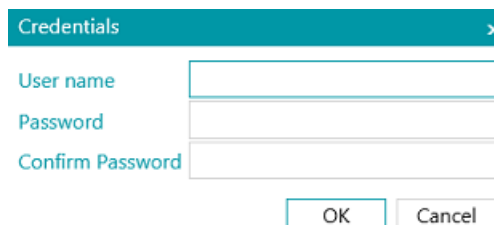
**WARNING:** the input folder must be the **Output-Directory** folder you configured in the XMailFetcher application.

- To customize the expression, click the pencil icon (✎) to open the [Expression Editor](#).

**WARNING:** when customizing the expression, make sure to put '+' '\ ' + between the different elements.

Note that you can also use fixed values between double quotation marks. For example "C:\Images".

- If the folder you want to scan from is protected by a password, click the padlock icon (🔒).
  - Enter your **Domain User name**. E.g. IRIS\_DOM\MyName.
  - Enter your **Password**.
  - **Confirm** the password, and click **OK**.


 A dialog box titled "Credentials" with a close button (X) in the top right corner. It contains three input fields: "User name", "Password", and "Confirm Password". Below the fields are two buttons: "OK" and "Cancel".

### Arrangement

- **Disabled:** pages will not be split.
- **Split long edge:** splits pages along the long edge of the page.
- **Split vertically:** splits pages vertically.
- **Split horizontally:** splits pages horizontally.
- **Fold and Split horizontally (IPS9):** folds and splits A3 pages horizontally into two A4 pages.
- **Merge long edge:** merges two subsequent pages along the long edge of the pages.
- **Merge vertically:** merges two subsequent pages vertically.
- **Merge horizontally:** merges two subsequent pages horizontally.

**Duplex:** select this option to process the uneven pages as front pages and the even pages as rear pages.

**Email body:** select this option to retrieve the Email body from XMailFetcher. The Email body is added as first page of the document.

**Original images:** select this option to retrieve the original images instead of the converted Tiff images.

**Delete files after scanning:** select this option to delete the files once the signal file of the processed e-mail has the extension ".scanned".

The following files will be deleted:

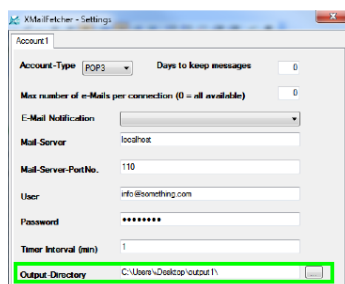
.\Data\MailXXXX\

.\Signal\MailXXXX.scanned

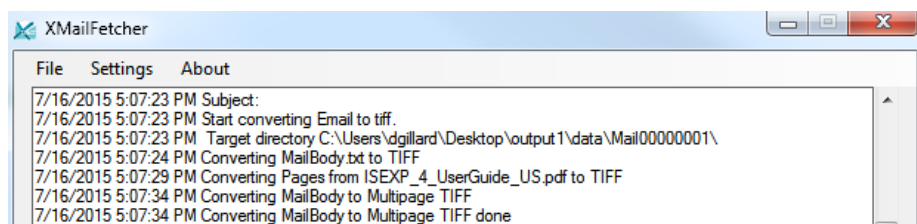
**Note:** if this option is not selected, no files will be deleted and the signal file of the processed e-mail keeps the extension ".scanned".

### The Scanning

- Make sure emails are being sent to the Output-Directory you configured in XMailFetcher.

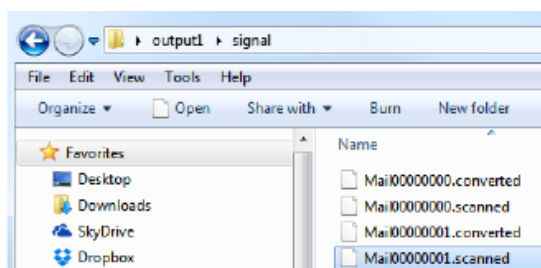

 A dialog box titled "XMailFetcher - Settings". It contains various configuration options for an email account. The "Output Directory" field at the bottom is highlighted with a green border and contains the path "C:\Users\...\Desktop\output\". Other fields include "Account-Name", "Account-Type" (set to POP3), "Days to keep messages", "Max number of e-mails per connection", "E-Mail Notification", "Mail Server", "Mail-Server-PortNo.", "User", "Password", and "Timer Interval (min)".

- Start the **XMailFetcher** 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.**



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

**Tip:** in case you should need to reprocess a batch coming from the XMailFetcher, go to the Output-Directory you configured and open the **Signal** folder. Delete the **".scanned"** file of the email you want to reprocess. Then click **Scan** again in IRIS Powerscan™. If you do not delete the **".scanned"** file, the email cannot be reprocessed.



## 9. Operations

### 9.1 Image Processing

IRIS Powerscan™ offers a wide range of image processing features, which aim to obtain the best possible scan results. After all, the higher the quality of the scans, the higher the processing accuracy will be.

There are different ways to apply **Image Processing Operations**:

- During the [creation](#) of a project.

**WARNING:** the operations you apply during the creation of a Project are applied to all images you scan within the project. If you need to perform some image processing operation on one or a subset of images within a batch, add those operations via the **Operations pane** in **Navigation mode** and click **Save**.

- Through **Operations** in **Navigation mode**.

The operations you add in Navigation mode are meant to be applied to one or a subset of images within a batch. Once the image operations are applied, the specific settings are lost.

- By means of the [Wizard](#) > [Add image processing operation](#).
- Through [Operations](#) in **Designer mode**.

**WARNING:** when adding operations via the Wizard or through Operations in **Designer mode** you can choose on which level you want to apply the operations: to all scanned images, or to specific batch, document or page types. The latter possibility increases IRIS Powerscan™'s processing speed: operations can be applied only where they are strictly necessary, and it is no longer necessary to apply them to all scanned pages.

It is also possible to apply these Operations to specific [OutputTypes](#).

An overview of the different Image Processing Operations can be found in [9.1.5 Overview of the Image Processing Operations](#) below.

#### 9.1.1 Adding Operations during the creation of a project

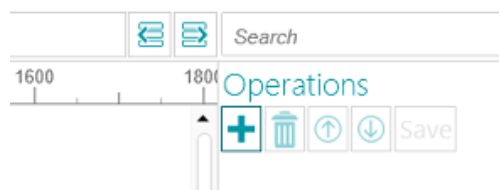
See [Creating Projects](#) > [Wizard](#).

#### 9.1.2 Adding Image Processing Operations through the Operations pane in Navigation mode

- Scan a batch of documents.
- Check the scanned images.
- If there are specific images on which Image Processing Operations need to be applied, select a page and then click the **Operations** tab in the bottom right corner.

**Note:** the **Operations** tab is only visible on Page level. It is not visible when you select a Document or a Batch.

- Click the plus sign and add the operations of your choice.



- Now Ctrl-click the images in the Navigation explorer to which you want to apply these operations, and click **Save**. Once the images are saved, the image processing settings are lost.

- The operations you configured are now only applied to the images you selected.

**Tip:** in case you need to undo the operations, press Ctrl-Z or click the Undo icon.

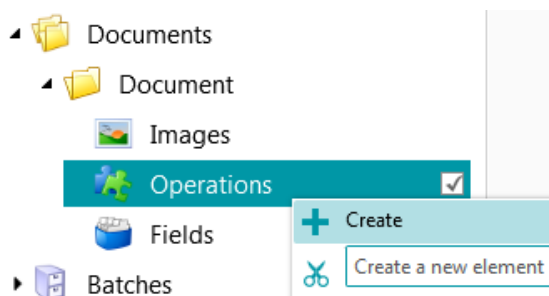


### 9.1.3 Adding Image Processing Operations through the Wizard

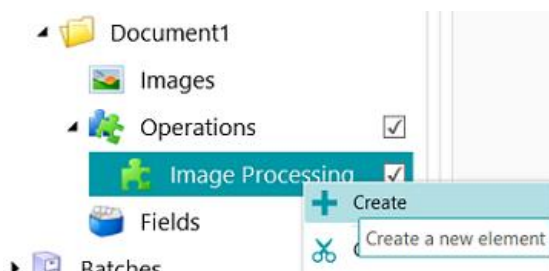
See [Configuring Projects using the Wizard](#) > [Add an Image Processing Operation](#).

### 9.1.4 Adding Image Processing Operations manually in Designer mode

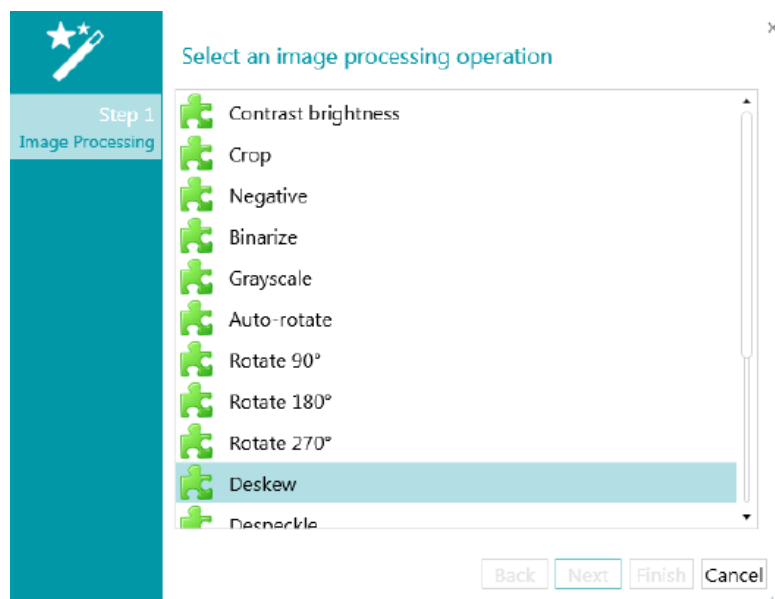
- Switch to Designer mode.
- Determine on which level you want to add image processing operations: to all scanned images, or to a specific page, document or batch type.
- Right-click **Operations**, and click **Create**.



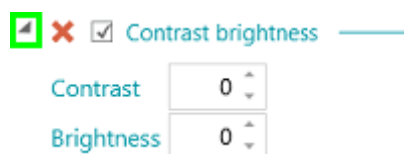
- Select **Image Processing**, and click **Finish**.  
Image Processing is now added to the Designer Explorer.
- Select **Image Processing** in the Designer Explorer, and click the plus sign in the **Properties** pane to add the required operations.  
Or right-click **Image Processing** and click **Create**.



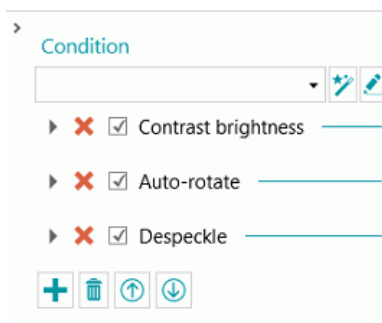
- Select the required(s) operation from the Wizard and click **Finish**.  
Note that you can apply multiple image processing operations on each level in IRIS Powerscan™. Simply select them one at a time in the Wizard and click **Finish**.



- The operations you add are displayed in the **Properties** section. Expand the operation to display its settings.



- You can add as many image processing operations you want. When you add multiple operations, use the up/down arrows to sort them. This way you can determine which operations IRIS Powerscan™ executes first. You can for instance tell IRIS Powerscan™ to first binarize the scanned color images and afterwards despeckle the binarized images.



- The different operations and their properties are discussed below.

Note that you can apply a **Condition** to the Image Processing operations. This way you can choose to apply operations only to color, grayscale or black-and-white image for instance. Or only to the front or rear side of pages.

To apply a condition, click the Wizard icon. Then select to which kind of images you want to apply the operations.

You can also use the [Expression Editor](#) (  ) to build advanced expressions.

Specify a condition

Filter

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Color           | <input checked="" type="checkbox"/> Front |
| <input checked="" type="checkbox"/> Grayscale       | <input checked="" type="checkbox"/> Rear  |
| <input checked="" type="checkbox"/> Black and white |   |

## 9.1.5 Overview of the Image Processing Operations

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### Contrast Brightness

**Contrast Brightness** can only be applied to color and grayscale images, not to black-and-white images.



When scanning low-quality documents, adjusting the **Contrast** level is sometimes required to obtain an optimal scan result.

- Enter a value for **Contrast**. The value can range from -50 to +100. The higher the value, the higher the contrast.

When you are scanning dark, blurry images, or extremely light images, it may be necessary to adjust the **Brightness** settings.

- Enter a value for **Brightness**. The value can range from -100 to +100. The higher the value, the higher the brightness.

### Crop

**Crop** allows you to define the area to which the scanned image must be cropped.

- Enter a value for the Top, Left, Right and Bottom margins you want to crop. Note that the value is in pixels.
- To crop to a percentage of the image, select Percentage.

**Tip:** scan a few test documents to see if the settings fit your requirements.

### Negative

**Negative** inverts the colors of the scanned documents.

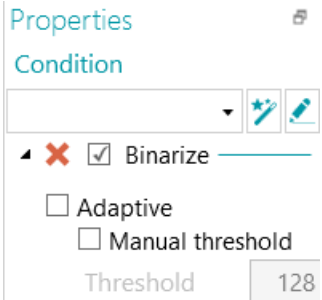
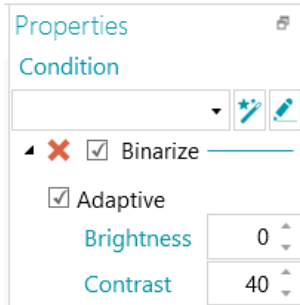


## Binarize

**Binarize** turns color and grayscale images into binary (black-and-white) images on which IRIS Powerscan™ then executes its image processing operations.

**Binarize** can therefore only be applied to color and grayscale images, not to black-and-white images.

**IMPORTANT TIP:** Data extraction requires black and white images. From a color image, IRIS Powerscan™ automatically generates a black-and-white image with a binarize image processing. This default and implicit setting is the '**auto threshold**' (it corresponds to the '**Adaptive binarize**' being unchecked when you manually add a binarized image processing into the designer). In some cases of colored text or colored area, binarization with '**auto threshold**' may result in loss of text or black area. We recommend that you carefully select the appropriate binarization for your documents. Not manually adding '**Adaptive binarize**' at image processing level, and therefore using '**auto threshold**', could result in less efficient data extraction. The implicit binarization used by IRIS Powerscan™ is the fastest, but in some cases not the best.

 <p><i>Implicit Binarization: Auto Threshold</i></p>	 <p><i>When adding Binarize image processing manually, then Adaptive binarization is selected per default.</i></p> <p><b>Recommended.</b></p>
--	--

- At this level, the option **Adaptive (binarization)** is selected by default. It determines the local thresholds.
  - The **Brightness** is set to 0. The higher the values, the darker the results will be.
  - The **Contrast** is set to 40. The **Contrast** enhances the image by increasing/decreasing the difference between image elements and their background. The lower the **Contrast** value, the darker the result.

**Tip:** when scanning QR codes, set the **Contrast** level to 90 to obtain optimal results.

- To select a manual threshold, clear the **Adaptive** option, and select **Manual threshold**. Then set the **Threshold** value.
- The **Smoothing** option removes image noise from the scans. The higher the value, the more noise will be removed.
- The **Color dropout** option allows you to remove the colors that cause problems during the binarization.
  - Tolerance:** this is the precision to obtain the correct color. The smaller the value, the higher the precision.
  - Hue:** enter a value, spin the wheel or select one of the color squares to change the hue.
  - Min value:** a high value limits the dropout to light colors.
  - Min saturation:** A high value limits too intense colors.

## Grayscale

**Grayscale** converts color images you scan into grayscale images.

## Auto Rotate

**AutoRotate** rotates images automatically.

Select the **Method** based on which IRIS Powerscan™ will do the rotation:

- **barcode**: images are rotated based on the orientation of the barcodes.
- **text**: images are rotated based on the orientation of the text.
- **barcode+text**: first the orientation of the barcodes is examined, if no barcodes are found then the orientation of the text is used to rotate images.
- **text+barcode**: first the orientation of the text is examined, if no text is found then the orientation of the barcodes is used to rotate images.

## Rotate

**Rotate** can rotate scanned documents by 90°, 180° and 270° degrees.

## Deskew

**Deskew** deskews images that were scanned skewed.

## Despeckle

**Despeckle** can only be applied to bitonal images. Despeckling removes little parasitic dots that may appear on your documents.

- Enter the **Size** of the dots you want IRIS Powerscan™ to remove. The higher the value the bigger the dots that will be removed.
- Enter the **Dilatation** degree. The higher the value the more isolated pixels will be removed and objects will be smoothened.

## Line Removal

**Line removal** removes lines from scanned images. **Note**: it only works on bitonal images.

When **Line removal** is activated IRIS Powerscan™ by default removes horizontal and vertical lines. You can also choose to remove only vertical or only horizontal lines.

- **Orientation**: the orientation of the lines that must be removed.
- **Clean radius**: the radius around the lines to be cleaned.
- **Dilate**: the dilate parameter helps the detection of vertical lines, especially for thin and/or skewed vertical lines.
- **Max gap**: maximum line gap to close (in case of broken, interrupted lines).
- **Max thickness**: maximum thickness of the lines to remove.
- **Min length**: minimum length of the lines to remove.

## Line Removal (vertical)

Removes vertical lines from scanned images.

The same options apply as for general **Line Removal**.

## Line Removal (horizontal)

Removes horizontal lines from scanned images.

The same options apply as for general **Line Removal**.

## Black Border Removal

**Black border removal** removes black borders (or dark surroundings) from bitonal images.

- **Border:** default value is 122. A pixel that touches the border is considered as dark if its gray-value is below the DarkBorder parameter.
- **Inside:** default value is 122. The dark surrounding is composed of the dark pixels that touch the border of the image and the pixels connected to those pixels with a gray-value below the value of the Inside parameter.
- **Delta:** default value is 30. A pixel is considered connected to another pixel, if the difference between its gray-value and the gray-value of the other pixel is below the value of the Delta parameter.

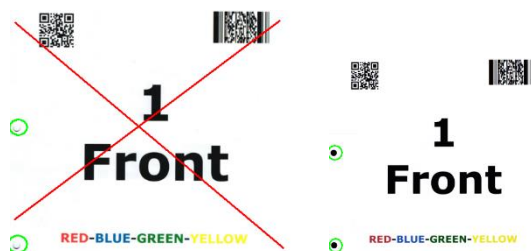
## Remove holes

Removes punch holes from images.

This operation can be applied to color, grayscale and black-and-white images.

**WARNING:** your scanner should generate black punch holes in order for them to be removed correctly. Removing whitish punch holes is not supported.

**Tip:** if your scanner also has a Punch hole removal option, choose where you want to enable it: in your scanner settings or in IRIS Powerscan™, but don't activate both.



## Remove dither

Removes unwanted dither (noise) from images.

This operation can only be applied to black-and-white images. So if you are scanning in color, make sure to use the **Binarize** operation first.

## Stamp

**Stamp** is used to add stamps to scanned images. Stamps may contain the user name of the operator, the scanning date, etc.

- Enter the text that the stamp must include. This may be a variable or an expression.
- Determine the position of the stamp on the X and Y axes.

- Enter the size of the stamp.

The stamp is displayed on the sample image you select.

## Stamp (Image)

Besides a Text Stamp, IRIS Powerscan™ can add an Image Stamp.

- Determine the position of the stamp on the X and Y axes.
- Click the plus sign and browse for the image you want to use as stamp.

## Stamp (Barcode)

Besides a Text Stamp, IRIS Powerscan™ can add a Barcode Stamp.

- Determine the type of barcode to be printed.
- Enter the value of the barcode. This may be a variable or an expression.
- Determine if the content of the barcode is printed above or below or simply hidden.
- Determine the position of the stamp on the X and Y axes.
- Determine the width:
  - In case of 1D barcode, this refers to the ratio wide bars to narrow bars. Only valid for some types of barcode.
  - In case of 2D barcode, this refers to the width of the barcode. The height is automatically adjusted.
- Determine the height.
  - In case of 1D barcode, this refers to the height of the bar. Only valid for some types of barcode.
  - In case of 2D barcode, this option is hidden because irrelevant.
- Click the plus sign and browse for the image you want to use as stamp.

**WARNING:** Once the barcode is printed on the image, you cannot remove it anymore. Therefore we recommend to use this plug-in as an **output operation**

## Downscale

**Downscale** is used to resize scanned images. Images can be downscaled up to factor 8.

## Perspective correction

Corrects the perspective distortions of an image taken with a camera. If you mix images from camera and from scanners, we recommend to separate them into different page types or document types.

The '**Fit document with image boundaries**' option is checked by default and will straighten the captured image to make it stick to the border of the image.

## 9.2 Data Extraction

IRIS Powerscan™ offers powerful data extraction features: it can extract data from scanned documents through OCR (optical character recognition), BCR (barcode recognition), PCR (patchcode recognition) and ICR (intelligent character recognition). The extracted data can be used in several ways: as variables to identify page types, as a separation method to separate documents and batches, and to fill in index fields.

Note however that when you identify pages by means of Data Extraction, the identification depends on the data recognition. If part of the data extraction zone is not recognized, the identification will not work.

### 9.2.1 Creating Data Extraction Zones



There are two ways to create data extraction zones: in **Navigation** mode and in **Designer** mode. The data extraction zones you create in Navigation mode apply to all scanned images. In Designer mode on the other hand, you can choose on which level and for which specific batch, document and page type you want to create data extraction zones.

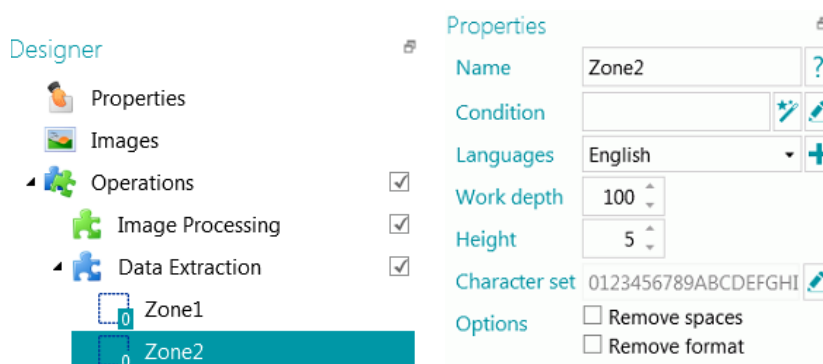
#### Creating Data Extraction Zones in Navigation Mode

- Open a project.
- Scan some documents.
- Click any page you scanned.
- Use the mouse to drag a frame around the zone you want to add.  
A temporary zone is now created.  
The **zone type** is detected automatically. The content extracted from the zone is shown in tiny characters below the zone.



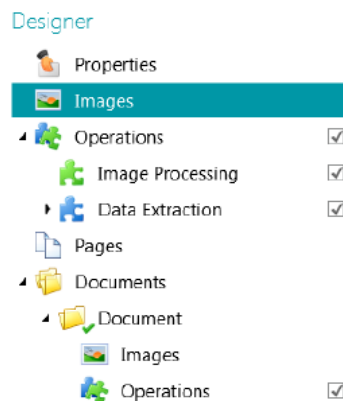
**Tip:** if you need to create many zones, right-click the image and click **Analyze**. This function detects all possible zones on the scanned page.

- To confirm the zone, either press Enter or click the **Capture** icon (  ).  
**Tip:** to use the content of the zone in a Condition (to do Page Identification or Document/Batch Separation), click the Wizard icon (  ).
- The zone is now added to the **Data Extraction** module in the Designer Explorer. There you can define its **Properties** (see below).

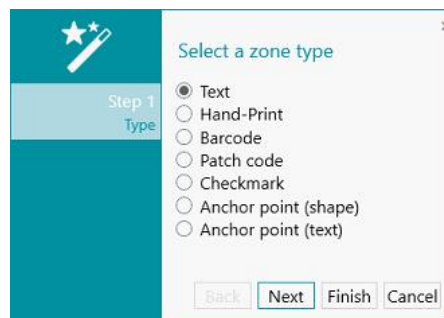


## Creating Data Extraction Zones in Designer Mode

- Open a project.
- Switch to Designer mode.
- Double-click any of the sample images you added to your Project. This may be at the general level (applied to all scanned images) or for a specific page, document or batch type.



- Select **Data Extraction** and use the mouse to drag a frame around the zone you want to add.
- A pop-up window appears where you can immediately select the zone type.
- Select the required zone type and set its properties.

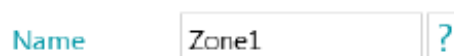


### 9.2.2 Defining Zone Properties

IRIS Powerscan™ can extract data from the following types of zones:

- Text zones
- Hand-print zones
- Barcode zones
- Patchcode zones
- Checkmark zones
- Anchor point (shape)
- Anchor point (text)

**Note:** click the question mark icon to display the variables that will be updated for that particular zone.



**WARNING:** IRIS Powerscan™ requires binarized 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.

## Text and Hand-print Options

- Select the **Language** of the zone.  
You can add an additional language by clicking the plus sign.  
Selecting the correct language is also crucial to obtain good recognition results.

- Condition:** a condition can be added to the zone for **blob filtering**.

Blobs are the smallest elements returned by the OCR and Barcode engines.


The blobs returned by the OCR engine are rectangles containing each individual letter.

The blobs returned by the Barcode engine are rectangles containing each individual barcode.



*Blob examples*

- Click the Wizard icon to specify a condition.

You can also use the Expression Editor (  ) to build advanced expressions.

- Enter the **Mask** you want to use.

**Note:** when you have entered a mask, the Match Operator "Blob ^" is added to the condition. E.g. Blob ^= "AAAA". In this example only a blob containing exactly 4 characters will be kept.

Masks are used to validate the value detected in the zone. A mask is made of characters that correspond to different values:

A = alphabetic character (including space)

9 = a digit (from 0 to 9)

D = a digit (similar to \d in Regex)

X = any character

W = alphabetic character (not including spaces and similar to \w in Regex)

S = a space (similar to \s in Regex)

?= any alphanumeric character (so a digit or an alphabetic character)

E.g. if the mask value is AA99, then the zone value is valid if it starts with two alphabetic characters followed by two digits.

A portion of the mask might have to match a literal expression. This literal expression must then be written between quotes.

E.g. if the mask value is AA"CONTRACT"99, then the zone value is valid if it starts with two alphabetic characters followed by the literal expression "CONTRACT", followed by two digits.

### Number type mask characters

9 = numeric

E.g. 9(3) => Numbers containing 0 to 3 digits.

E.g. 999 => Numbers containing exactly 3 digits. E.g. 453 or 123 or 657, etc.

**Tip:** to keep only numbers and remove the letters from an OCR zone, use Blob ^= "9".

- **Confidence:** set the value that the OCR engine must return for the zone to be considered as valid. The default value is 100.
- **Index:** select which recognition zone should be used. When you have multiple zones on an image you can choose to use first, last or other. When you select other you can enter the number of the zone that must be used.
- Select the **Position** on the page where the zone is located: top, left, right or bottom.
- Set the minimum and maximum values for the **Width** and **Height** of the zone.
- Click **Next** in case you want to configure the **Format** options. The Format options allow IRIS Powerscan™ to search for specific words.  
To skip the **Format** options click **Finish**.
  - Select the **Format** in which the **Label** is typed: **Bold**, **Italic**, **Subscript**, **Superscript** or **Underlined**.
  - In the **Label** field select the word IRIS Powerscan™ must search for.
  - In the **Position** list select where the **Label** is located on the page: **Top**, **Left**, **Right** or **Bottom**.

#### Specify a format

**Format** ☐ Bold  
☐ Italic  
☐ Subscript  
☐ Superscript  
☐ Underlined

**Label**

**Position**

- **Work depth:** the depth of the detection. The higher the value, the higher the precision.
- **Minimum height:** use the slider to adjust the minimum line height in order to avoid bad OCR results. The Default value is 20 (in 1/100 of an inch).
- In case the zone contains special characters, click the browse icon next to **Character set** and select **Custom character set**.  
Then add the special characters you need to recognize.  
Note that you can also leave out unnecessary characters.

Ocr character set ✕

☐ Custom character set Reset

0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz!#\$%&'()\*+,-./:;<=>?@[\_]`~«»€\$©®±·™£¥¢

Unrecognized character



- **Options:**
  - Select **Remove spaces** to remove spaces and tabulation characters by spaces.
  - Select **Remove format** to remove line breaks.

## Barcode Options

- **Condition:** a condition can be added to the zone for blob filtering. See the information above at [Text and Handprint Options](#).
- Select the **Barcode type**.  
IRIS Powerscan™ supports the following barcodes: Australian post, Australian post parcel, Aztec, Codabar, Code 11, Code 16K, Code 25, Code 25 ni, Code 39, Code 39 Ext, Code 39 HIBC, Code 39 OOS, Code 93, Code 93 Ext, Code 128, Code 128 OOS, Code 128 GS1, Databar, Datamatrix, Datamatrix GS1, Deutsche Post Ident code, Deutsche Post Leitcode, EAN 13, EAN 8, EAN 14, I2OF5, Italian Post 25, IATA2OF5, ISBN, ISSN, ISMN, ITF 14, ITF 6, Matrix 2 of 5, PDF 417, Micro PDF 417, Macro PDF 417, Compact PDF 417, One Code, OPC, Pharmacode, Planet, Postnet, Postnet 32, Postnet 52, Postnet 62, PZN, QR Code, Micro QR Code, RM4SCC (Royal Mail 4 State Customer), SSC14, SSCC18, Standard 2OF5, SwissPostParcel, UCC128, UPCA, UPCE, MSI, MSI PH, VIN.

**Note:** when using QR codes it is recommended to boost the **Contrast** level. Add [Binarize](#) as Image Processing operation. Then set its **Contrast** value to 90.

**Tip:** in this case do not use the Contrast Brightness settings to boost the contrast.

- For each Barcode type we can activate multiple alternatives. The alternatives are tested sequentially in a top down order. The search is stopped as soon as a barcode is found.

Barcode

PDF417	+
PDF417 #1	×
PDF417 #2	×

**Note:** it is also possible to combine multiple barcode types within a single zone.

- **Work depth:** the depth of the detection. The higher the value, the higher the precision.
- **Threshold:** when the **Full page** option is not activated, the Threshold value is used to speed up the barcode recognition based on the contrast of the zone. If the density of the pixels is higher than the **Threshold** value then IRIS Powerscan™ tries to decode the barcode. If it is lower, IRIS Powerscan™ skips the barcode.
- Select the **Direction** of the barcode: **Any**, **Horizontal** or **Vertical**.
- Set the minimum and maximum values for the **Length** and **Height** of the barcodes.
- **Options:**
  - Select **Full page** to have IRIS Powerscan™ look for barcodes on the entire page.
  - Select **Detect Orientation** to detect in which direction the barcode is printed.
  - Select **Partial detection** to have IRIS Powerscan™ recognize the barcode even if only part of it is detected.
  - Select **Significant skew** for IRIS Powerscan™ to accept skewed barcodes.
  - Select **Remove spaces** to remove spaces and tabulation characters by spaces.
  - Select **Remove format** to remove line breaks.

## Patch Code Options

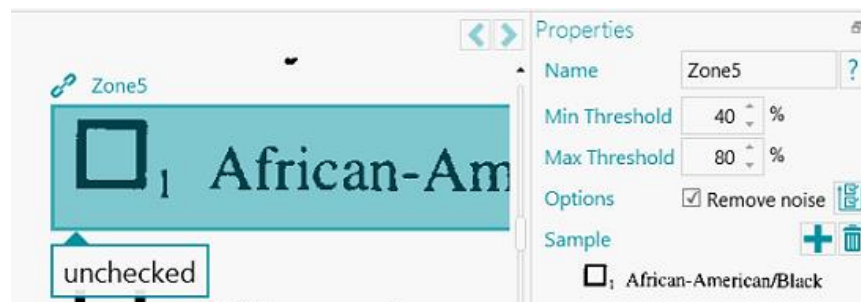
- Select the Patch Code **Type**: IRIS Powerscan™ supports Patch I, Patch II, Patch III, Patch IV, Patch VI, Patch T.
- **Work depth:** the depth of the detection. The higher the value, the higher the precision.


- **Options:**
  - Select **Detect Orientation** to detect in which direction the patch code is printed.
  - Select **Significant skew** for IRIS Powerscan™ to accept skewed patch codes.

## Checkmark Options

**WARNING:** checkmark detection only works on binarized images.

- Set the **Minimum 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 %.
- Set the **Maximum threshold**.  
If the zone is filled more than the Maximum threshold, the zone will be considered as crossed out (cancelled), instead of checked.
- Select **Remove noise** to have IRIS Powerscan™ to remove noise pixels from the zone.
- Click the plus sign to add a **sample image**.  
Adding a sample is recommended to increase the recognition accuracy. Without a sample, IRIS Powerscan™ examines the entire data extraction zone (indicated in green). With a sample, the pixels that are taken into account are only those inside the actual checkmark (checkmark included).



**Tip:** if you want to apply the same properties values (both thresholds, noise removal and sample image) to all checkmarks in a same group of Data Extraction, you can click on 'Apply to all checkmarks' icon .

## Anchor point (shape) Options

**WARNING:** Anchor shapes detection only works on binarized images.

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

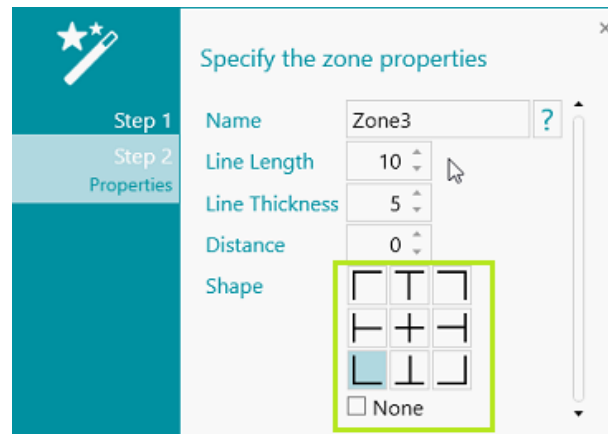
Note that you need at least 1, and ideally 4 or more anchor points on an image.

Black squares are not supported as Anchor shapes.

**WARNING:** use the type **Anchor point (shape)** if your anchor points *do not* contain text. If they do contain text, use the type **Anchor point (text)**.

### Options

- **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. It increases the precision of its detection when multiple patterns are found in the same zone..



### Anchor point (text) Options

- Enter a **Name** for the Anchor point (text) zone.
- Enter the **Text** the Anchor point (text) zone will contain.  
Note that this settings is optional and serves to improve the recognition result.
- Select the **Language** of the zone.  
You can add an additional language by clicking the plus sign.  
Selecting the correct language is also crucial to obtain good recognition results.
- Select the **Work depth**, i.e. the depth of the detection. The higher the value, the higher the precision.
- Use the arrows to adjust the minimum line height in order to avoid bad OCR results. The Default value is 5 (in 1/100 of an inch).
- In case the zone contains special characters, click the browse icon next to **Character set** and select **Custom character set**.  
Then add the special characters you need to recognize.  
Note that you can also leave out unnecessary characters.

## 9.2.3 Using Data Extraction as Identification method

Below you find an example of how Data Extraction can be used as Identification method.


- Scan at least one page.
- Select the page in the Navigation tree.
- Draw a frame around the content you want to use as Data Extraction zone.
- Then click the Wizard icon in the top right corner of the zone.



- Select **Page Identification** as **Action**.

**Tip:** as you can see, Data Extraction can also be used to separate Documents and Batches.

Specify a condition

Condition	Image.Zone == "The Cheese Company" 
Action	<p><input checked="" type="radio"/> Page identification</p> <p><input type="radio"/> Batch separation</p> <p><input type="radio"/> Document separation</p>

- Click **Finish**.  
Next time IRIS Powerscan™ detects the same content in the indicated area, the page will be identified.

## 9.3 Blank Page Detection

Blank Page Detection is obviously used to detect blank pages. It can also be used to [separate Document and Batch Types](#).

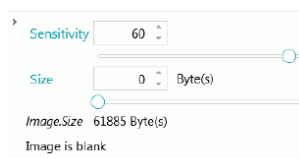
To apply Blank Page Detection:

- Add **Blank Page Detection** as [Operation](#) via the Wizard.
- If you configured multiple [Page Types](#), you can choose to apply the Blank Page Detection to one particular page type or to every page. Select the option of your choice.
- Then go to Designer mode to configure the detection options: in the Designer Explorer, select **Operations > Blank Page Detection** on the correct level (the general level or a particular Page Type).

**WARNING:** the **Sensitivity** and **Size** fields cannot be combined. You must use one or the other.

- **Sensitivity:** the higher the value, the sooner IRIS Powerscan™ detects speckles on the image. The lower the value the sooner a page is considered blank.
- **Size:** set the size below which the image is considered blank. Note that the size of your sample page is indicated right below this field.

**Note:** the variable Image.IsBlank is true if the image is blank. The variable Page.IsBlank is true only if both the front and rear images are blank.

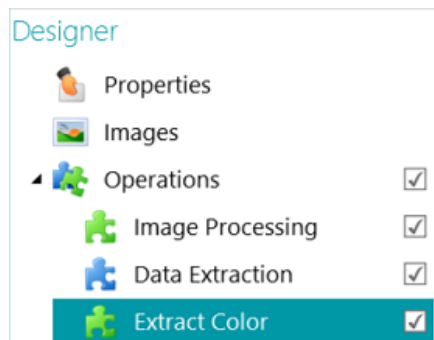



## 9.4 Extract Color

The **Extract Color** operation allows you to extract a **color code** from an image. The color code can be used in variables to separate documents: you can configure IRIS Powerscan™ to start a new document each time the color code of a scanned image matches the color code of the sample image.

To apply the **Extract Color** operation:

- First add a [sample](#) image.  
The color code of this image will be used as reference.
- Click **Wizard > Add an operation > Extract Color**.
- In Designer Explorer, expand **Operations** and click **Extract Color**.



- Click the **Color picker** icon  and click inside the sample image.
- When the color code matches, the value changes from 0 to a value between 70 and 80.

**Note:** if the value doesn't change, click a different element in the Designer Explorer and then return to **Extract Color**.

- Click the Wizard icon to automatically detect the background color.



- When you use the Color picker and the Wizard, the values of **Tolerance**, **Hue**, **Min value** and **Min saturation** change automatically based on the color you picked. You can also change them manually:
  - **Tolerance:** this is the precision to obtain the correct color. The smaller the value, the higher the precision.
  - **Hue:** enter a value, spin the wheel or select one of the color squares to change the hue. The hue is the property of light by which the color of an object is classified as red, blue, green, or yellow in reference to the spectrum.

- **Min value:** a high value limits the dropout to light colors.
- **Min saturation:** A high value limits too intense colors.
- **Work depth:** the depth of the detection. The higher the value, the higher the precision.

**To use a color code in a variable:**

- Enter **Color.Matching>70** in any **Condition** field.

The screenshot shows the 'Designer' window with a left-hand navigation pane and a right-hand configuration pane. The left pane has categories: Properties, Images, Operations (with sub-items Image Processing, Data Extraction, and Extract Color), Pages, and Documents (with a sub-item Document). The right pane is titled 'Document' and contains the following fields:

- Name:** Document
- Description:** (empty)
- Naming:** Document.Type + " " + Document.Counter
- Condition:** Color.Matching > 70 (this field is highlighted with a green box)
- Confidence:** 0
- Counter:** 0, with a dropdown menu showing 'Document.Counters[Document]'
- ☒ Reset document counter on new batch
- ☐ Delete first page
- ☒ Default document type

*Example of document separation based on color matching*

## 9.5 Fingerprint detection

The main feature to identify pages is **Fingerprint Detection**. By means of Fingerprint Detection, IRIS Powerscan™ examines the layout of the scanned images. If the layout of a scanned page matches the layout of the [sample](#) you added to your project for your particular [Page Type](#), then the scanned page will be considered as being of that page type.

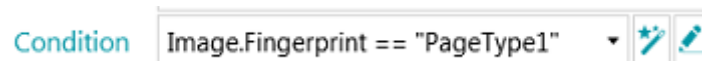
The easiest way to identify a Page Type, is to add the Page Type via the Wizard and apply **Fingerprint detection**.

- Start the **Wizard** (F12).
- Click **Add a Page Type**. Then click **Next**.
- Name the Page Type. E.g. PageType1 in our example.
- Browse for an image to use as sample.

**WARNING:** if you select a page in the Navigation Explorer, you automatically add that page as sample. You cannot browse for another image.

- Select **Based on Fingerprint** as **Identification method**.

**Tip:** the condition used to apply Fingerprint detection is `Image.Fingerprint == <YourPageType>`. Switch to Designer mode and go to the configured Page Type to check it.



- Click **Finish**.

Next time you scan a page and its layout matches the one of the sample, it will be recognized as the page type you defined.

**WARNING:** The Fingerprint engine requires black and white (binarized) images. If your sample image is in color, IPS creates a binarized image with the default settings ('auto threshold', not adaptive). Yet in the image processing operation, the default settings of the binarization are using adaptive binarization.

For best results with Fingerprint, we recommend to use the same binarization for your sample images that the one you will use in your project.

The easiest way is to scan some images with the binarization enabled and copy/paste these black and white images in the sample image.



*If sample image is in color, include first the binarize image processing*



## **9.6 Swap front and rear**

---

This operation swaps front and rear sides. A front side will become a rear side and vice versa.

## 9.7 Reorder

The **Reorder** operation serves as **Debookletting** feature. 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.

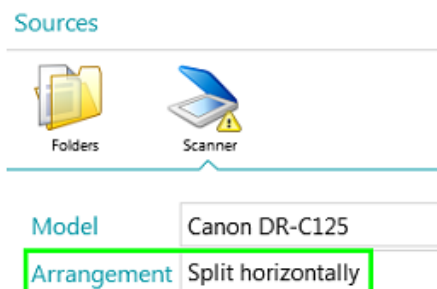
This is the only use case in which the **Reorder** operation can be used. The Reorder tool on the [Edit](#) tab of the main toolbar however also has other functions. Click the [link](#) for more information.

### Requirements:

- Paper sheets must be of A4 or A3 size.
- Your scanner must scan in **Duplex** mode.

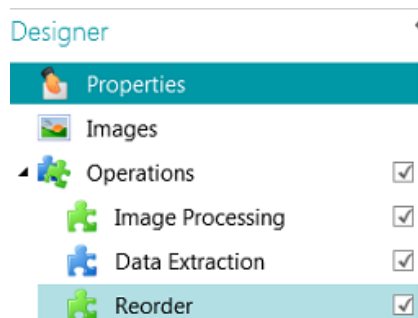
**WARNING:** do *not* use the Debookletting feature in **Simplex mode** when using a real scanner, for this will not work. When scanning from folders, the **Duplex mode** is not required.

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



### To use the Reorder operation:

- Start the Wizard (F12), select **Add an operation > Reorder**.
- The **Reorder** section is added to the Designer Explorer.



- Select **Automatic** if you will be scanning your pages in the right order.

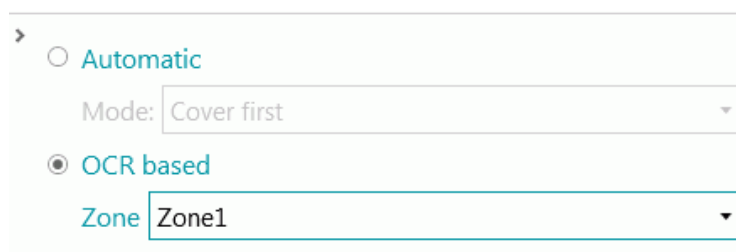
**WARNING:** in **Automatic** mode the reordering only occurs at the end of a document. This has implications for projects in which separators are used. In such projects the separator must be the first image that comes after the page arrangement.

- Select **Cover first** if the cover page will be fed to the scanner first.
- Select **Cover last** if the cover page will be fed to the scanner last.



**Note:** instead of using the **Reorder** operation you can also use the **Reorder** tool in the main toolbar. The same scanning requirements apply.

- Select **OCR based** if your pages will not be scanned in the right order. In this case they can be reordered based on their page number:
  - [Add one of your pages as Sample](#).
  - [Create a Data Extraction zone](#) around the page number.
  - Select the zone you created in the **Zone** drop-down list.



- Scan your pages in **Duplex mode**. They should be reordered correctly.

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

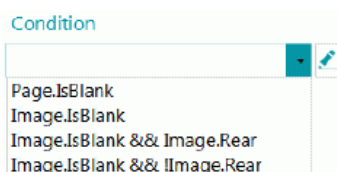
For more information on the Debookletting feature, see the **How To Guide**.

## 9.8 Page Deletion

---

In case you want to delete certain pages from your documents use **Page Deletion**.

- Add **Page Deletion** as [Operation](#) via the Wizard.
- If you configured multiple [Page Types](#), you can choose to apply the Page Deletion to one particular page type or to every page. Select the option of your choice.
- Go to Designer mode to configure the **Page Deletion** options: in the Designer Explorer, select **Operations > Page Deletion** on the correct level (the general level or a particular Page Type).
- Select one of the suggested conditions from the **Condition** drop-down list.
  - Page.IsBlank: both the front and rear side of the page must be blank for the page to be deleted.
  - Image.IsBlank: the page will be deleted if the image is blank.
  - Image.IsBlank && Image.Rear: the page will be deleted if the Rear image is blank.
  - Image.IsBlank && !Image.Rear: the page will be deleted if the Front image is blank.



- Or click the pencil icon to open the [Expression Editor](#) to build advanced expressions.

## 9.9 Blank Page Deletion

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In case you want to delete blank pages from your documents use **Blank Page Deletion**.

- Add **Blank Page Deletion** as [Operation](#) via the Wizard.
- If you configured multiple [Page Types](#), you can choose to apply the Blank Page Deletion to one particular page type or to every page. Select the option of your choice.

**Note:**

The Condition **Page.IsBlank** is applied automatically.

To check this, go to the Designer Explorer, select **Operations > Page Deletion** on the correct level (the general level or a particular Page Type).



Condition

Page.IsBlank ▼ 

☒ Delete page

## 9.10 Image Deletion

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Image Deletion functions in the same way as [Page Deletion](#).

## 9.11 Blank Image Deletion

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Blank Image Deletion functions in the same way as [Blank Page Deletion](#).

## 9.12 Page Attachment

By means of the Page Attachment operation a page is flagged as "Attached" if the condition you configured is met. If the condition is not met, the page is considered "Not attached".

By flagging pages as "Attached" you can for instance sort the images during export; you can send the pages that are attached to one destination, and the ones that are not to another destination. Or you can configure IRIS Powerscan™ to consider all pages that follow an Attached page as appendices that do not require processing for example. Again, the possibilities are vast.

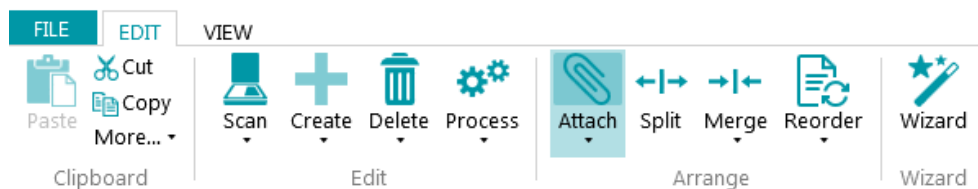
**Note:** when sending documents to IRISXtract, pages that are flagged as attached in IRIS Powerscan™ are also flagged as attached in IRISXtract.

**To use the Page Attachment operation:**

- Start the Wizard (F12), select **Add an operation > Page Attachment**.
- The **Page Attachment** section is added to the Designer Explorer.
- Enter a condition that must be met for the page to be considered attached.

**Example:** suppose all images that *do not* contain a barcode must be considered Attached. The pages that do contain a barcode must not be Attached. In that case enter the condition `IsNullOrEmpty(Image.Barcode)` and make sure you have a data extraction zone that covers the barcode.

**Tip:** you can also Attach and Detach pages using the **Attach** tool on the main toolbar.



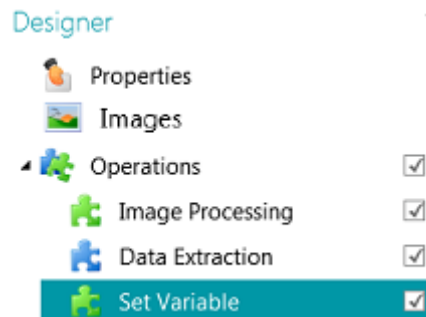


## 9.13 Set Variable

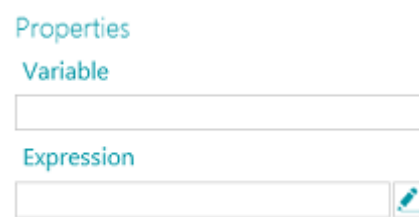
---

The Set Variable operation can be used to define your own variables.

- Start the Wizard (F12), select **Add an operation > Set Variable**.
- The **Set Variable** section is added to the Designer Explorer.



- Enter a name for the variable in the **Variable** field.
- Then enter the expression you want to use.

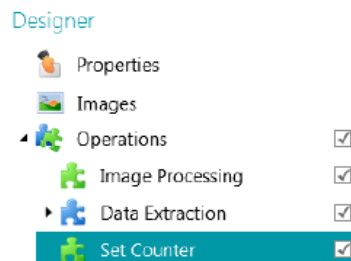
A screenshot of the 'Set Variable' configuration dialog. The dialog has a title bar and a main area with two sections: 'Variable' and 'Expression'. The 'Variable' section has a text input field. The 'Expression' section has a text input field and a small icon to its right.

## 9.14 Set Counter

---

The **Set Counter** operation is used to determine in which variable the counter will be stored, when the counter will be incremented and when it will be reset.

- Start the Wizard (F12), select **Add an operation > Set Counter**.
- The **Set Counter** section is added to the Designer Explorer.



- Enter a name for the variable in the **Variable** field.  
E.g. MyCounter. The counter will be stored in this variable.
- Specify a boolean **Condition**.  
E.g. Image.IsBlank. This way the counter will be incremented when the current image is blank.
- Set the value of the counter. The default value is 0.
- Determine when the counter must be reset: **Never**, **Every day** or **Every batch**.

## 9.15 Batch Naming

This operation allows you to rename batches.

- Start the Wizard (F12), select **Add an operation > Batch naming**.
- The **Batch naming** section is added to the Designer Explorer.
- Click the pencil icon next to **Condition** to configure a condition.
- Click the pencil icon next to **Name** to configure the naming options.
- If the condition is met, the batch will be renamed.

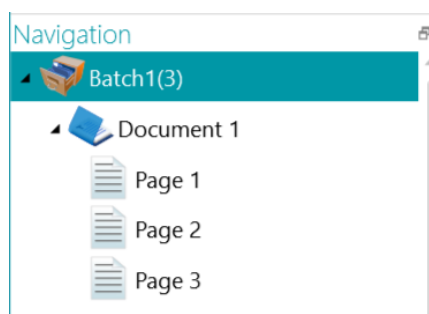
### Example:

- Enter `Page.Index>2` as **Condition**.
- Enter `"Batch "+Batch.Index+"("+Page.Index+")"` as **Name**.



The screenshot shows the 'Properties' window with the 'Condition' and 'Name' sections expanded. The 'Condition' field contains the text 'Page.Index>2' and the 'Name' field contains the text '"Batch "+Batch.Index+"("+Page.Index+")"'. Both fields have a pencil icon to their right, indicating they are editable.

- Scan a number of images.
- The batch will be renamed based on the index.



## 9.16 Batch Separation

---

This operation allows you to separate batches.

- Before you start, make sure you have [created different Batch types](#).
- In Designer explorer, right-click **Operations** and click **Create**.
- Select **Batch separation** and click **Next**.
- Now select the Batch type you want IRIS Powerscan™ to create, and then click **Finish**.
- Click the pencil icon next to **Condition** to configure a condition.
- Each time the condition is met, a batch of the type you selected will be created.

**Example:**

- Create a new Batch type "New Batch".
- Follow the steps above.
- Enter `Page.Index>4` as **Condition**.
- Scan at least 5 images.  
IRIS Powerscan™ starts a new batch after the fourth image.

**Note:** the Batch naming, Batch separation and Batch identification operations can be combined of course.

## 9.17 Batch Identification

---

This operation allows you to change batch types into other batch types.

- Before you start, make sure you have [created different Batch types](#).
- In Designer explorer, right-click **Operations** and click **Create**.
- Select **Batch identification** and click **Next**.
- Now select the Batch type to which a batch must be changed if the condition is met, and then click **Finish**.
- Click the pencil icon next to **Condition** to configure a condition.
- Each time the condition is met, the type of the current batch is changed into the one you selected.

## 9.18 Document Naming

---

This operation allows you to rename documents.

- Start the Wizard (F12), select **Add an operation > Document naming**.
- The **Document naming** section is added to the Designer Explorer.
- Click the pencil icon next to **Condition** to configure a condition.
- Click the pencil icon next to **Name** to configure the naming options.
- If the condition is met, the document will be renamed.

**Tip:** see [Batch Naming](#) for an example.

## 9.19 Document Separation

---

This operation allows you to separate documents.

- Before you start, make sure you have [created different Document types](#).
- In Designer explorer, right-click **Operations** and click **Create**.
- Select **Document separation** and click **Next**.
- Now select the Document type you want IRIS Powerscan™ to create, and then click **Finish**.
- Click the pencil icon next to **Condition** to configure a condition.
- Each time the condition is met, a document of the type you selected will be created.

### Example:

- Create a new Document type "New Document".
- Follow the steps above.
- Enter Page.Index>4 as **Condition**.
- Scan at least 5 images.  
IRIS Powerscan™ starts a new document after the fourth image.

**Note:** the Document naming, Document separation and Document identification operations can be combined of course.

## 9.20 Document Identification

---

This operation allows you to change document types into other document types.

- Before you start, make sure you have [created different Document types](#).
- In Designer explorer, right-click **Operations** and click **Create**.
- Select **Document identification** and click **Next**.
- Now select the Document type to which a document must be changed if the condition is met, and then click **Finish**.
- Click the pencil icon next to **Condition** to configure a condition.
- Each time the condition is met, the type of the current document is changed into the one you selected.



## 10. Identification of Pages

As already mentioned previously in this documentation, one of the great novelties of IRIS Powerscan 10 is its ability to **uniquely identify pages**. By uniquely identifying pages, you can apply operations (like [image processing](#), [data extraction](#), [page deletion](#), etc.) only to the pages where they are required, which increases the processing speed of IRIS Powerscan™.


The **main feature** to identify pages is [Fingerprint Detection](#). By means of Fingerprint Detection, IRIS Powerscan™ examines the layout of the scanned images. If the layout of a scanned page matches the layout of the [sample](#) you added to your project for your particular [Page Type](#), then the scanned page will be considered as being of that page type.

Note however that you can also use other operations such as [Data Extraction](#), [Blank Page Detection](#), etc. to identify Page Types.

In fact, any **Condition** can be used as page identification method. A few examples are given below.

### Identification Conditions Examples

To apply page identification conditions:

- Switch to Designer mode.
- Go to a Page Type you want to configure (or [create it](#) if necessary).
- Next to the **Condition** field, click the **Expression Editor** ()
- Select a **Variable** from the list, then select an **Operator** and if necessary enter a **Value**.

For instance:

If a Page Type only contains color images: **Image.IsColor** (for 24bit images) and **Image.IsTrueColor** (for 32bit images)

If a Page Type exceeds a certain width: **Image.Width** > <YourWidth>

If a Page Types exceeds a certain amount of bits per pixel: **Image.Bpp** > <NumberOfPixels>

Needless to say, these are only a few examples as the possibilities are extremely vast. Also see [Using Expressions](#).

Once Page Types have been defined they can also be used to [separate Document Types](#).

## 11. Separation of Documents and Batches

IRIS Powerscan™ classifies each stream of images/scans into a logical **Batch > Document > Page** structure. By default, you have 1 batch type, 1 document type and 1 page type. All pages you scan are added to the same document type.

By adding document and batch types you can customize IRIS Powerscan™ to fit the structure of your scans. You can also choose to apply certain operations only to certain document or batch types.

### Adding Document Types via the Wizard

This is the easiest way to add Document Types.

- Start the **Wizard** (F12).
- Click **Add a Document Type**. Then click **Next**.
- Name the Document Type.
- Select the separation method:
  - **None:** IRIS Powerscan™ doesn't carry out any document separation when it encounters this document type.
  - **Based on page count:** IRIS Powerscan™ starts a new document after the indicated number of pages.
  - **Based on blank pages:** IRIS Powerscan™ starts a new document every time it encounters a blank page.
  - **Based on page type:** IRIS Powerscan™ starts a new document every time it encounters the selected page type. This option is only available if you have defined at least two page types. See the previous section [Add a Page Type](#).
  - **Based on Data Extraction** IRIS Powerscan™ examines the data extraction zones you have defined on your pages. If the content of the extraction zones matches the one you have defined, IRIS Powerscan™ starts a new document.
  - **Delete first page:** this option is available when you selected **Based on blank pages** or **Based on Data Extraction**. It deletes the first page of the batch.
- Complete the Wizard as explained in [Add a Document Type](#).

### Creating Document Types manually in Designer mode

- Switch to Designer mode.
- Right-click **Documents** in the Designer Explorer and click **Create**.
- Enter a **Name** and **Description** for the Document Type.
- Configure the **Naming** Options as explained in [Add a Document Type](#) or click the pencil icon to open the [Expression Editor](#) to configure more complex naming options.
- Configure the **Condition** manually by means of the Wizard or [Expression Editor](#) to define when IRIS Powerscan™ needs to start this new Document Type.

#### Tips:

To reproduce the input document structure, use Input.PageIndex as Condition.  
 To give your files the name of the input files, use one of the GetName functions:  
 GetFileNameWithoutExtensions(Input.Path) or GetFileName(Input.Path).

- **Confidence:** indicate a Confidence level between 1 (very low) and 100 (very high). If the recognition accuracy is not met for any child of the document, the entire document will be flagged as inaccurate and must be corrected manually.

IRIS Powerscan™ always computes a confidence level for Data Extraction zones, Pages, Documents and Batches. In the **Confidence** field you can decide whether the Confidence level should be taken into account or not.

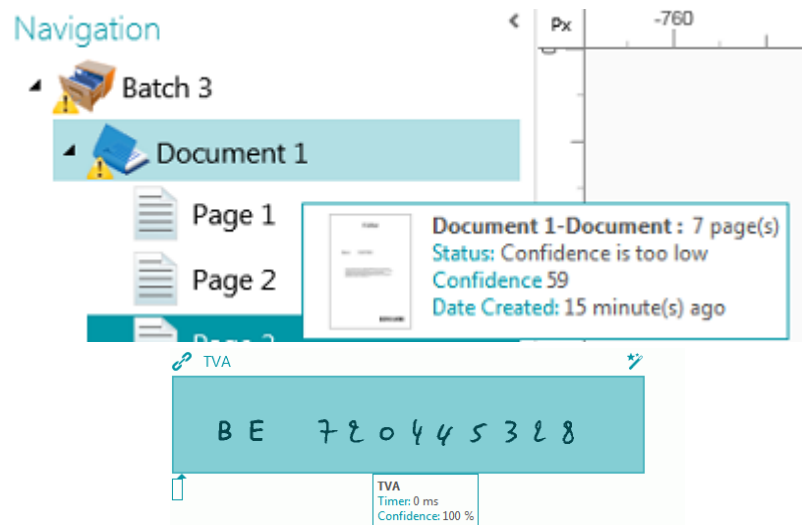
The Confidence level of a Page is the minimum Confidence level of the Data Extraction zones defined on that Page.

The Confidence level of a Document is the minimum Confidence level of its underlying Pages.

The Confidence level of a Batch is the minimum Confidence level of its underlying Documents.

If you enter 0 (default value) as **Confidence** value, then the Confidence level will not be taken into account.

**Tip:** the Confidence level is displayed in the Tooltip of each Page, Document and Batch in the Navigation tree and also in the Tooltip of each Data Extraction zone.



- **Counter:** By default IRIS Powerscan™ starts counting from 1 at every batch and document. This number can be changed by entering another value or clicking the arrows.
  - **Reset document counter on new batch:** when this option is selected, IRIS Powerscan™ resets the counter to the specified value on a new batch.
  - **Delete first page:** select this option in case you want to delete the first page of each new document.
  - **Default document type:** select this option to select this document type as default document type.

The same instructions apply to separate Batch Types.

Also see the next topic to see an [example](#) of how **Page Type identification** can be used to separate documents.

## 11.1 Example of Document Separation

---

In this example all our documents have the following structure: each document consists of a cover page, multiple body text pages, and an appendix containing schematics. Each of these three elements has a distinctive layout so we use Fingerprint detection to identify each Page Type.

Then we use the Page Type to create three corresponding Document Types (Cover, Body and Appendix).

Finally we create a separate Output Type for each Document Type. The Cover will be converted to PDF, the Body to Word, and the Appendix to Multipage Tiff on which no recognition is done.

### Step 1: Create three Page Types: Cover, Body and Appendix by means of the Wizard

- Start the Wizard and click **Add a page type**.
- Name it "**Cover**".
- Add a **sample image** of a cover page.
- Select **Based on Fingerprint** as **Identification method**.
- Do the same for the other two Page Types.

### Step 2: Create the three corresponding Document Types by means of the Wizard

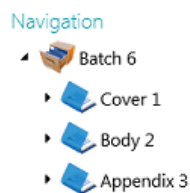
- Start the Wizard and click **Add a document type**.
- Also name it "Cover".
- Select **Based on page type** as **Separation method**.
- Complete the Wizard, and then do the same for the other two Page Types.

### Step 3: Create the three corresponding Output Types by means of the Wizard

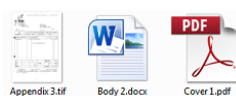
- Start the Wizard and click **Add an output type**.
- In our example name the Output "Cover" and select PDF as **Format**.
- Select a **Color Filter**.
- Then select **This output will be applied to one particular document type**.
- Select "Cover" as document type.
- Select a **Folder** as Destination.
- Complete the Wizard, and then do the same for the other two Output Types.

### Step 4: Scan and Process your documents

- When you scan your documents, IRIS Powerscan™ creates the three document types you configured.

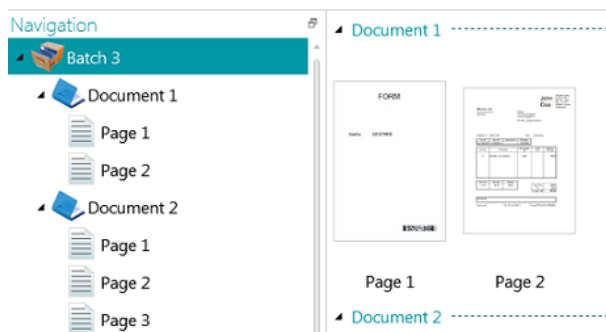


- When you process the documents, separate output files will be created for each document type.



## 12. Checking and Rearranging Scanned Documents

Once documents have been scanned into a project they are displayed in Navigation mode.



### 12.1 Checking Scanned Documents

#### Multi-stream images

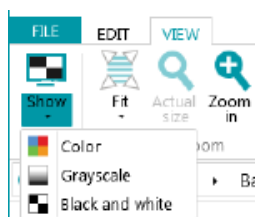
If your scanner generates multi-stream images - meaning a color, black-and-white and/or grayscale version of the same scan - the multi-stream images are also maintained in IRIS Powerscan™.

Click a document to view the underlying pages. Pages that contain multi-stream images are indicated by slight shadow underneath them.



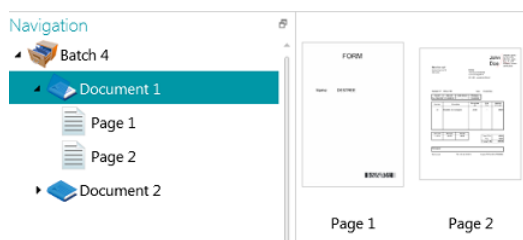
To switch between the different streams:

- Click the **View** tab and click the down arrow beneath **Show**.
- Then select the required stream.



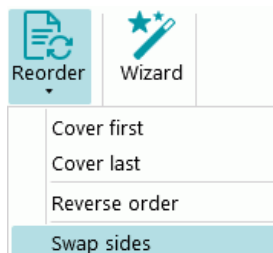
#### Duplex images

If you are using a duplex scanner and the **Duplex** function is activated in IRIS Powerscan™, IRIS Powerscan™ alternates between Front sides and Rear sides correctly.



In case sides must be swapped:

- Ctrl-click the Front and Rear side you want to swap.
- Click the down arrow beneath **Reorder** and click **Swap sides**.



Note that it is now possible to select multiple pages simultaneously and swap sides. See **Reorder Documents** below.

## 12.2 Rearranging Scanned Documents

---

Scanned documents can be rearranged in several ways in Navigation mode:

- Rearrange them in the Navigation Explorer.
- Rearrange them in the Viewer.
- Use the Navigation bar for easy navigation.

Pages can be moved to different documents and batches. Documents can be moved to different batches. And batches can be switched from position.

Note however that the structure batch > document > page must always be maintained.

The following operations are available both in the Navigation Explorer and in the Viewer:

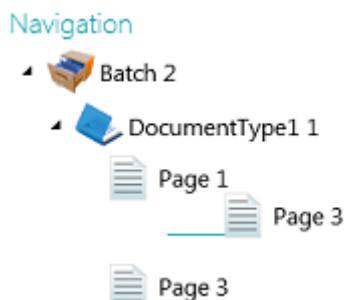
- Drag-and-drop
- Cut-and-paste
- Split and Merge
- Reorder elements
- Manually create new batches and documents
- Rotate Pages

You can also:

- Crop pages
- Fill up parts of scanned pages, in case of confidential information for instance.

### Drag-and-Drop documents

The batches, documents and pages can be dragged and dropped to other positions, both in the Navigation Explorer and in the Viewer.



## Cut, Copy and Paste documents

The batches, documents and pages can also be moved to another position by means of Cut and Paste.

- Right-click the element you want to move, and click **Cut** or **Copy**.
- Point the cursor to the position where you want to paste the element, and click **Paste**.

## Split and Merge documents

Batches and Documents can also be split or merged with neighboring batches and documents respectively.

### To split a batch/document:

- Select it and click **Split** on the **Edit** tab.
- Or right-click it and select **Split**.

### To merge batches/documents:

- Select the batch/document you want to merge with the next batch/document, and click **Merge** on the **Edit** tab.
- Or right-click it and select **Merge**.

## Reorder elements

### Reorder

The **Reorder** tool allows you to reorder the scanned documents.

Note however that the first two commands - **Cover first** and **Cover last** - should only be used to reorder images that were scanned in Debookletting mode. See Operations > [Reorder](#) for more information.

### Reverse order

To reverse the order of all scanned pages:

- Click **Reverse order**.

Note that this only works on Document level. Only the order of pages inside a single document will be reversed.

### Swap sides

The **Swap sides** command allows you to swap pages and flip their sides.

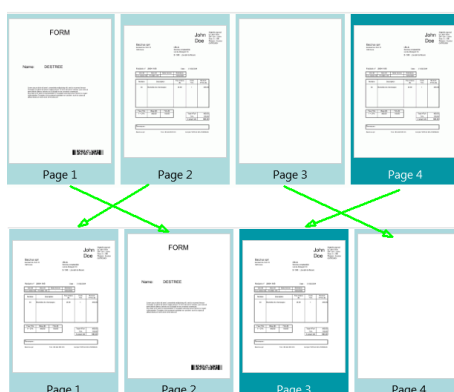
To swap pages from position, you need to select a pair number of pages.

### Example:

When you select pages 1 to 4, page 1 and page 2 are swapped from position and page 3 and 4 are swapped from position. Their sides are also swapped, meaning Front becomes rear and vice versa.

**Note:** if you select 5 pages, the fifth page will not change position, but its side will simply be flipped.

**Tip:** hover the cursor over a page to check whether it is a Front or Rear side.



**Note:** you can select multiple pages across different documents and batches. Note however that the pages and sides stay within their original document and batch. They are not moved from one document or batch to another.

In case you only want to flip the side of a page, then select a single page and click **Swap sides**. You'll notice that a Front becomes a Rear and vice versa. This needs to be done page per page.

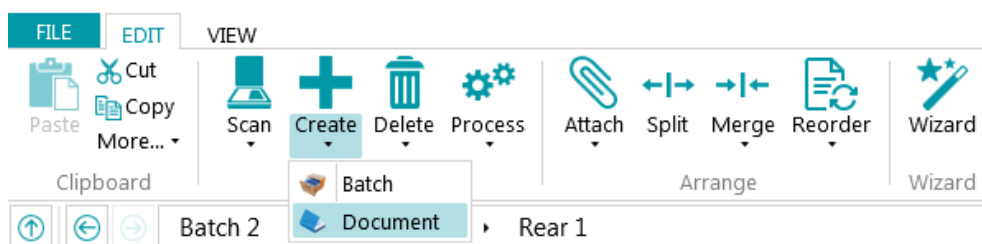
**Tip:** to undo any unwanted changes use Ctrl-Z.

## Manually create a new batch/document

- Point the cursor to the position where you want to create a new batch/document.

**Note:** new batches are always inserted at the end of the previous batch, not in the middle of documents.

- Click the down arrow beneath **Create** on the **Edit** tab.



- Select **Batch** or **Document**.
- Name the Batch / Document.
- Start scanning** is selected by default.  
When the new Batch / Document is created IRIS Powerscan™ automatically starts scanning.

## Rotate pages

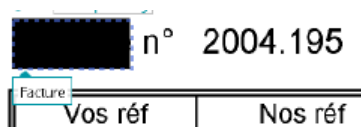
- Select a page you want to rotate.
- Click the **View** tab and select one of the rotation options.

## Crop pages

- Select a page you want to crop.
- Draw a frame around the area to which you want to crop the page.
- On the **View** tab, click **Crop**.

## Fill pages

- Select a page on which you want to cover up certain parts.
- Draw a frame around the area you want to cover up.
- On the **View** tab, click the down arrow below **Fill** to select a fill color.
- Then click **Fill**.





## 13. Indexing Scanned Documents

IRIS Powerscan™ is a powerful indexing solution. It allows you to define index fields on batch, document and page level. If you have defined multiple batch or document types, you can also create specific index fields for those types.

The indexing values can be extracted directly from the scanned documents, based on Data Extraction elements such as OCR zones, barcode zones and ICR zones. The purpose of having powerful indexing features after all is not having to fill them in manually and/or to define strict validation criteria.

When index fields are filled in automatically by IRIS Powerscan™, you can choose to have the user validate them, or automate the index validation. In the latter case no user intervention is required. (See [Processing Documents in IRIS Powerscan 10](#)).

In IRIS Powerscan™ you can also link index fields to external ODBC databases, like Microsoft Access. That way you can have a list of values to choose from when filling in index fields.

The index fields you create in IRIS Powerscan™ can be mapped to the index fields you already use in your DMS or Cloud system. That way you can export fully-indexed documents from IRIS Powerscan™.

**In this chapter we explain how to:**

- [Create Index Fields](#)
- [Link Data Extraction Zones to Index Fields](#)
- [Use Confidence Levels on Index Zones](#)
- [Map IRIS Powerscan™ index fields to the index fields in your DMS / Cloud System](#)
- [Use a Data Source](#)
- [Validate Index Fields](#)

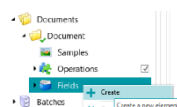
## 13.1 Creating Index Fields

---

As of IRIS Powerscan 10.4 index fields can only be created in Designer mode.

### Creating Index Fields in Designer mode

- Open a project.
- Switch to Designer mode.
- Determine on which level, and for which Batch/Document/Page type to create index fields.
- Right-click **Fields**, and click **Create**.



### 13.1.1 Index Field Options

---

When adding an index field you can define the following options:

**Name:** enter a name that is meaningful to you.

**Label:** the label identifies the index field. The label is the name of the field as it appears in the interface.

**Description:** enter a description that is meaningful to you.

**Type:** select one of the types from the list. The following index field types are available:

- **String:** text string
- **Boolean:** yes or no
- **Integer:** integer number
- **Double:** decimal value
- **Number:** number with or without decimal. Click the pencil to access its options.
- **Currency:** monetary value. Click the pencil to access its options.
- **Percentage:** percentage value. Click the pencil to access its options.
- **DateTime:** time value. Click the pencil to access its options.
- **TableField:** allows you to create line item fields.

In order to recognize line items, IRIS Powerscan™ requires 3 essential elements: the **quantity**, the **unit price** and the **total price**. The quantity multiplied by the unit price must be equal to the total price.

- Click the plus sign to add a Table Field.
- All the field types listed above are available as Table Field.

**Value:** this expression defines which value is filled in in the index field by default.

Example: suppose you created an extraction zone called "Zone1." If you select the variable Image.Zone1, then the content of that zone will be filled in in the index field.

#### Tip:

To extract a value on a particular page, you can use the ternary operator. E.g. `?(Page.Index==2, Image.Zone1, "")`. This extracts a value on Page 2.

In case you want to extract only certain words from an OCR zone, you can use the SubString or SubStrings functions combined with Blob filtering. E.g. `SubString(Image.Zone3, "AA9")`. In this case only two letters followed by 1 digit will be kept.

**Condition:** this boolean expression defines the **validity** of the index field.

Example: the Field variable contains the value of the current index field. As condition you can use **Field == "abc"** or **! IsNullOrEmpty(Field)**. The index field will only be valid if it contains "abc" or if its content is not empty.

**Format:** this expression is computed each time the field is manually edited by the user to adjust the content of the index field.

**Tip:** click [here](#) for more information about the **Expression Editor**.

#### Options:

- **Overwrite:** when selected, this option re-evaluates the default value even if the field already has a value. This could be useful to evaluate an expression on every page.
- **Read Only:** field is visible but user cannot edit it.
- **Hidden:** this option hides the index field in Navigation mode. Select this option when the index field is not meant to be validated.
- **History:** this option shows the last five values entered in the index field when you click the field's drop-down list.

**WARNING:** the History option is **not** available if you choose to display more than one line as **Display** option (below).

#### Display:

The **Display** options vary depending on the **Type** you select.

- **x Line(s):** determines how many lines are displayed.

**WARNING:** if you choose to display more than one line, the **History** option (above) will not be available.

**Data Source:** by [adding a Data Source](#) via the Wizard you can link the index fields in IRIS Powerscan™ to a list or predefined values or to an external ODBC database, like Microsoft Access.


- **Multi values:** when you select this option the index field may contain one or multiple values.
- **Read only data source:** when you select this option, IRIS Powerscan™ only takes the values from the data source into account.

When you have defined the settings of the different index fields you must [link them to Data Extraction zones](#) on the scanned documents. Otherwise the index fields cannot be filled in automatically.

## 13.2 Linking Data Extraction Zones to Index Fields

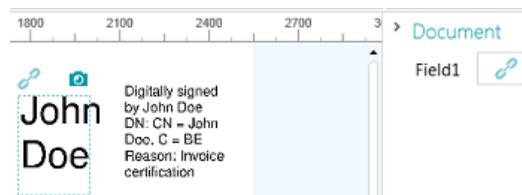
The content of data extraction zone can be filled in in index fields. In order to do that, you must first create at least one Data Extraction zone and link it to an index field.

- Create a Data Extraction zone as described in [Data Extraction](#).

**WARNING:** make sure to **Capture** (  ) the data extraction zone before trying to link it. If you don't capture the zone, it is only a temporary zone. Its contents will be filled in in the index field but it is not linked to the index field.

- Drag the paperclip icon from the zone to the content of the index field you want to link it to. By default there is 1 index field on Batch level and 1 index field on Document level.

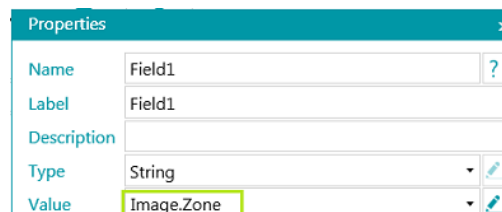
**Tip:** you can also drag the paperclip icon to the Document / Batches pane directly, to create a new index field and link the zone to it immediately.



- When the zone is linked to the index field, the index field is filled in.



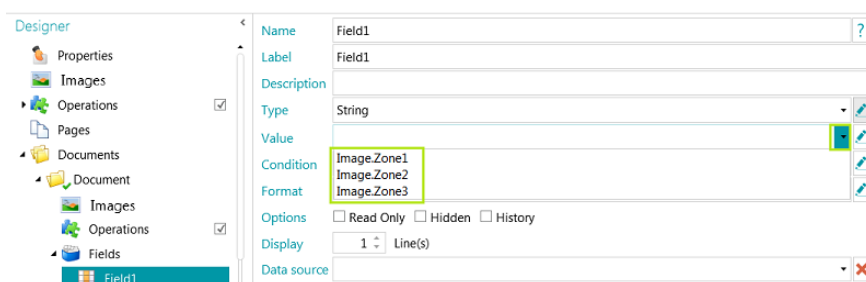
**Tip:** right-click the index field name and click **Properties**. Notice that Image.<YourZone> is now used as Value.



### In Designer mode

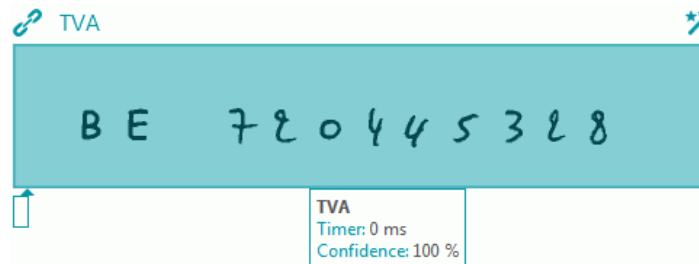
- Switch to Designer mode.
- Expand a Document/Batch type in the Designer Explorer.
- Expand fields.
- Then click an existing field or create a new one.
- Click the down-arrow to see the list of available values.

**Note:** if there are no data extraction zones in your project, the list will be unavailable.



### 13.3 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.

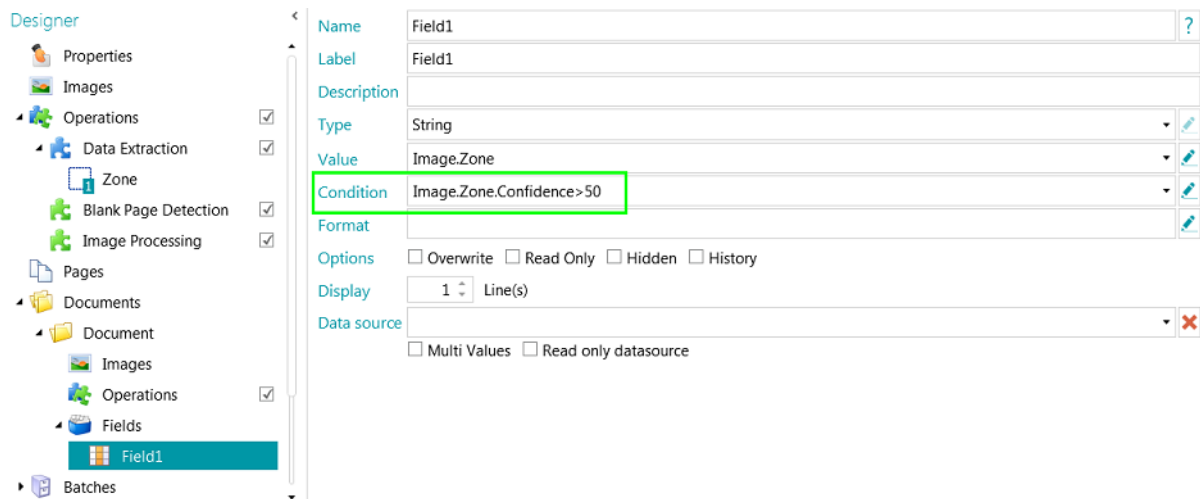


When Data Extraction Zones are linked to Index Fields, you can apply a **Confidence** Condition to the Index Field. This means that if the confidence in the recognition accuracy is below an indicated level, the Index Field will be flagged as inaccurate.

**Note:** 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 that 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:

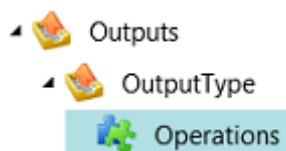
- Batch.Confidence
- <Batch.Type>.Confidence

## 13.4 Mapping IRIS Powerscan™ index fields to DMS / Cloud System Fields

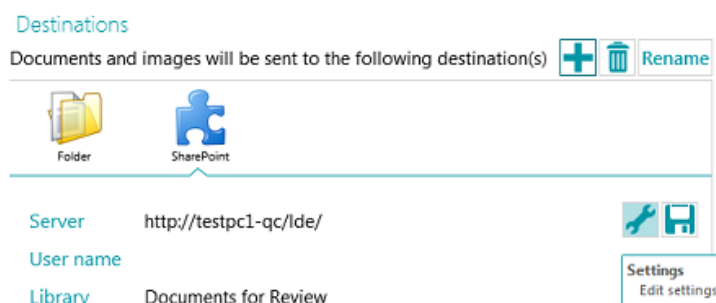
The index fields you create in IRIS Powerscan™ can be mapped very easily to any index fields you might already use in our Document Management or Cloud System. This way IRIS Powerscan™ can export fully-indexed documents.

**To map index fields:**

- Switch to Designer mode.
- Expand **Outputs** in the Designer Explorer.
- Select the **OutputType** you configured, or add a new one by right-clicking **Outputs** and selecting **Create**.



- If you already configured a DMS or Cloud system as Destination, click the settings icon to access its settings.
- If you have not configured a destination yet, click the plus sign to add a destination.



- Enter or confirm the **Server**, **User Name** and **Password**.
- Specify the exact destination, and click **Next** until you reach the field mapping window.

**Note:** the steps you go through differ depending on the DMS / Cloud system.

- The list of index fields that are used in your Destination system are displayed.
- Select a field you want to map to an IRIS Powerscan™ index field.
- Click the down arrow at the right, and select to which IRIS Powerscan™ field to map it.



- Repeat these steps for all the fields you want to map, and then click **Finish**.

**Note:** if you use the Wizard to create a new project and you select a DMS destination, the index fields are created automatically to reflect the available fields in the DMS. The mapping between the IRIS Powerscan™ index fields and the DMS index fields is also defined automatically.

## 13.5 Using a Data Source

By adding a **Data Source** via the Wizard you can link the index fields in IRIS Powerscan™ to a list of values or to an external ODBC database, like Microsoft Access.

**WARNING:** It is highly recommended to limit the number of items to 10000 in the data sources. In addition, in order to work smoothly with drop down lists in the Navigation mode (cf. **Dependent fields** below), the number of items should not exceed 1000.

Below we explain how to add a Microsoft Access database as data source. Our example database contains one table and four columns.

Table1				
ID	Value1	Value2	Value3	Click to Add
1 LD1		ldestree1	AAA	
2 LD2		ldestree2	BBB	
3 LD3		ldestree3	BBB	
*(New)				

### Adding a Data Source using the Wizard

- Start the **Wizard** (F12).
- Select **Add a data source**. Then click **Next**.
- Enter a **Name** that is meaningful to you.
- Select the **Source** of the Data Source - **list**, **odbc** or **excel** - and click **Next**.
- The Data Source is now added to the Designer tree.  
Switch to Designer mode to continue configuring it.

### Configuring the Data Source in Designer mode

- Click **Data sources** in the Designer Explorer.
- Select the Data source you added.

#### ODBC

- Select an example **Connection string** from the drop-down list.

Name	DataSource1
Connection string	
SQL command	dsn=FRA_PROD_dsn1 dsn=Fra_Prod_dsn dsn=ExampleDatabase
	The ConnectionString property has not been initialized. <button>Test</button>

- Enter a correct **SQL command**, and click **Test** to test the connection.
- The **Rows** option at the bottom allows you to indicate how many rows may be retrieved. The standard value is 0, which means the number of rows is unlimited.



## List

- Type in the values manually and press Enter after each value.

Name	DataSource2
Values	Value 1
	Value 2
	Value 3

## Excel

- Enter the **Path** to the Excel data source file, or click the browse button to browse for it. You can choose to use an absolute or relative path.

**Note:** the Excel data source file is *not* copied to the project folder.

Name	Accounts
Path	Accounts.xlsx
Sheet	PCMN UK
Key	B
Label	C
Filter	I
Values	60 Purchases (except 603) 601 Inventory item purchases - Raw materials (and supplies) 6011 Materials (or group) A 6012 Materials (or group) B 6017 Supplies A, B, C... 602 Inventory item purchases - Other consumables 6021 Consumable materials 60211 Materials (or group) C 60212 Materials (or group) D 6022 Consumable supplies 60221 Fuels 60222 Maintenance products 60223 Workshop and factory supplies 60224 Store supplies 60225 Office supplies

- In the **Sheet** drop-down list select the worksheet you want to use.
- In the **Key** drop-down list, select the column of which you want to use the values.
- If your Excel file is made up of a Key column - which contains article codes for instance - and a Label column - which contains the article descriptions, also select the latter column in the **Label** drop-down list.

In the example below, column B is the Key column, while column C is the Label column.

	B	C	D	E	F	G	H	I
	60	Purchases (except 603)						
	601	Inventory item purchases - Raw materials (and supplies)						
	6011	Materials (or group) A					X	
	6012	Materials (or group) B					X	
	6017	Supplies A, B, C...					X	
	602	Inventory item purchases - Other consumables						
	6021	Consumable materials						
	60211	Materials (or group) C					X	
	60212	Materials (or group) D					X	
	6022	Consumable supplies						
	60221	Fuels					X	
	60222	Maintenance products					X	
	60223	Workshop and factory supplies					X	
	60224	Store supplies					X	
	60225	Office supplies					X	

Example Excel file

- The values of the **Key** column and **Label** column are displayed in the **Values** field. Click **Test** to test the values.

- In case you do not want all values displayed you can apply a **Filter**.  
Select which column you want to use as **Filter**. Then enter a value in the **Equals** field. In the example above, only the lines for which there is an "X" in the "I" column will be displayed.

When you are done, link the Database to your index fields.

## Linking the Data source to an index field

- [Create index fields](#) on the required level: page, document or batch.
- Click the down arrow next to the **Data source** field, and select the data source you created.

Name	Field1	?
Label	Field1	
Description		
Type	String	
Value		
Condition	!IsNullOrEmpty(Field)	
Format		
Options	<input type="checkbox"/> Overwrite <input type="checkbox"/> Read Only <input type="checkbox"/> Hidden <input type="checkbox"/> History	
Display	1	Line(s)
Data source	<div> <div></div> <div>DataSource1</div> <div>DataSource2</div> <div>DataSource3</div> </div>	

- A drop-down list is now available in the selected index fields, from which you can select the Data source values.

**Note:** when you are using an Excel data source, use the Data source name to display the values of **Key** column or add ":0:1" to the Data source name to display the values of the **Label** column.

- When scanning documents, the fields from the database are available as index field in IRIS Powerscan™.

Fields

Batch 1

Field1

Document 1

Field1

Value 1

Value 2

Value 3

### 13.5.1 Creating Dependent Fields when using an ODBC Data Source

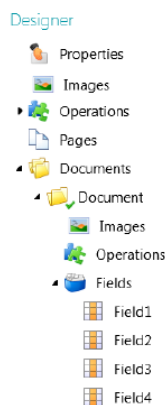
When using an ODBC Data Source you can create **Dependent Fields** in IRIS Powerscan™. This way, when the content of a field is modified, the content of the fields that depend on it will be modified automatically.

Hereunder we give an example of how to create dependent fields.

- Create an Access Database with the following content:  
In our example the Database is named **Database1**.

ID	Value1	Value2	Value3	Click to Add
1 LD1	ldestree1	AAA		
2 LD2	ldestree2	BBB		
3 LD3	ldestree3	BBB		
(New)				

- Go to **Control Panel > Administrative Tools > Data Sources (ODBC)**.  
**WARNING:** 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 Access Driver (\*.mdb, \*.accdb)** and click **Finish**.
- In IRIS Powerscan™ create four Index fields of the type **String** on Document level.  
See [Creating Index Fields](#) if necessary.



- Add a Data Source of the type ODBC as described [above \(13.5\)](#).
- Click the down arrow in the **Connection string** list and select the Database you created. (DataBase1 in our example).

<b>Name</b>	DataSource1
<b>Connection string</b>	dsn=DataBase1
<b>SQL command</b>	dsn=FRA_PROD_dsn1 dsn=Fra_Prod_dsn dsn=ExampleDatabase dsn=DataBase1

- Enter the following **SQL command**: "SELECT Value1, Value2 FROM Table1 WHERE Value3 = '" + **Document.Field1** + """
- Click **Test** to test the expression.  
This expression uses **Field1** of the document type Document.
- In **Field2** we will display the second column of the Database:
  - In Designer mode, go to **Documents > Document > Fields > Field2**.
  - Type "**DataSource1:1**" in the **Data source** field.  
:1 stands for the second column of the Data source named "**DataSource1**".

- Now we link Field3 to Field2. Field3 will become a dependent field of Field2 and its value will be updated when the value of Field2 is updated.

To do so:

- In Designer mode, go to **Documents > Document > Fields > Field3**.
- Enter the following value in the **Value** field: **\$(Document.Field2, 0)**  
Field3 is now linked to the first column of the DataSource of Field2.

**Tip:** to link Field3 to a different column - let's say column 2 - replace **\$(Document.Field2, 0)** by **\$(Document.Field2, 1)**

- In Field4 we will use key/value pairs. The keys will be stored and exported. The values will be displayed.

To do so:

- In Designer mode, go to **Documents > Document > Fields > Field4**.
- Enter the following value in the **Value** field: **DataSource1:0:1**.  
This means the keys are in the first column and the values are in the second column.

To check the results:

- Scan the samples from the [default Folders source](#): **System.InputDirectory**.
- Select **Document 1** in the Navigation tree.  
The Index fields are now empty.

Fields	
Field1	
----- Document 1	
Field1	
Field2	
Field3	
Field4	

- Now enter a value in Field1: either AAA or BBB (as in the Database we created).  
The lists of Field2 and Field3 are now updated and contain values.

Fields	
Field1	AAA
----- Document 1	
Field1	AAA
Field2	ldestree1
Field3	LD1
Field4	

- Now select a value from the list in Field2.  
The value of Field3 (the dependent field) will be updated.
- Select **Indexes.xml** as [Output Format](#), and click **Process** to check how the values are exported.

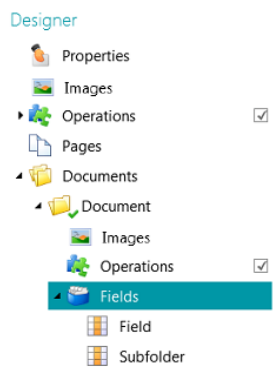
### 13.5.2 Creating Dependent Fields when using a List Data Source

When using a **List** Data Source you can create dependent fields using the **Dependency** operator.

Below you'll find an example of how to create such dependent fields.

- Add a Data Source of the type **List** as described [above \(13.5\)](#).
- Go to **Designer > Data sources > DataSource1**.

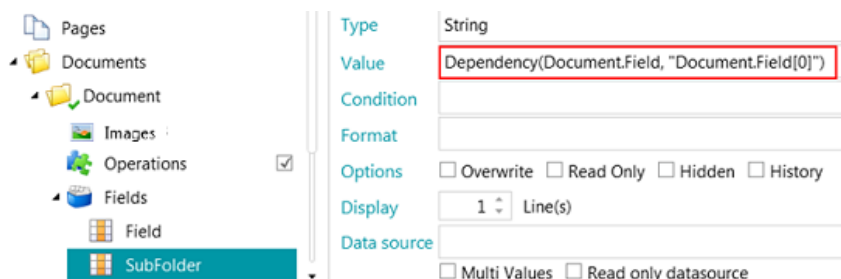
- Create two columns of Values.  
In our example:  
100;BXL  
200;NLE  
300;LUX
- Create two Index fields of the type **String** on Document level.  
See [Creating Index Fields](#) if necessary.



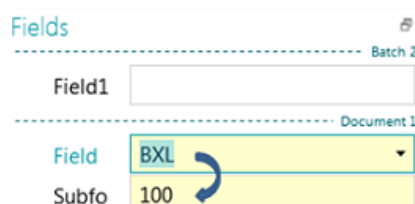
- Now link the first index field to the Data Source:
  - Select the field in the Designer tree.
  - Click the down arrow next to the **Data source** field and select the Data source you created.
- Add **:0:1** to the name of the Data source. ":0:1" means the following:
  - The value in the first column (index=0) will be stored.
  - The value in the second column (index=1) will be displayed.



- Now go to the second index field you created, and enter the following **Value: Dependency(Document.Field, "Document.Field[0]")** or **\$(Document.Field, "Document.Field[0]")**



- The index field Subfolder is now dependent on Document.Field.  
The value of the field Subfolder will be the first column of Document.Field.  
And the value of SubFolder is updated as soon as the value of Document.Field is changed.



## 13.6 Validating Index Fields

When index fields have been linked to data extraction zones or mapped to input Cloud systems in the right way, they are filled in automatically during scanning in IRIS Powerscan™ and they are ready for validation.

**WARNING:** when processing invoices, the validation is done in Web Verify, and cannot be done directly in IRIS Powerscan™.

Fields	
Field1	
Type	TVA
TVA	BE720445328
ZoneC	144136
ZoneC	1317212
ZoneE	464331
Zone5	285263
Zone5	53782
Zone7	231481
Trime	1
Annee	2002

Example index fields in Navigation mode

- Correct values are marked in white.
- Manually modified fields are marked in yellow.
- Invalid values are marked in red.

### To switch between index fields:

- Press the Tab key to go to the next index field.
- Press Shift + Tab to go to the previous field.

### To switch between the different *invalid* index fields:

- Click the backward/forward buttons.



### To modify an index field:

- Manually type in a new value.
- Use **drag and drop OCR**: click inside the index field, then draw a data extraction zone on the image in the Viewer.

The content of the zone will be filled in in the index field.

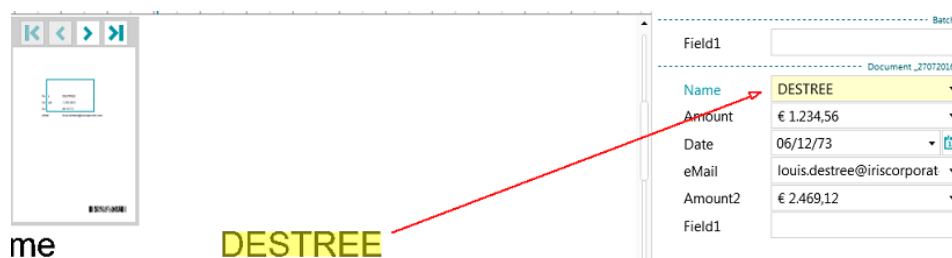
**Tip:** to concatenate several values into the same index field, press and hold on the Ctrl key and use **drag and drop OCR** as many times as needed..

Fields	
Field1	
Type	Document
Field1	FORMName:DESTREE

FORM

Name: DESTREE

- Use the **Double-click Text Selector**: click inside the index field, then double-click a word in the image to add to the index field. Or Ctrl-double-click to enter an entire line of text.



- Click the down arrow next to the index field and select one of the values. IRIS Powerscan™ remembers the 5 values that were last entered.

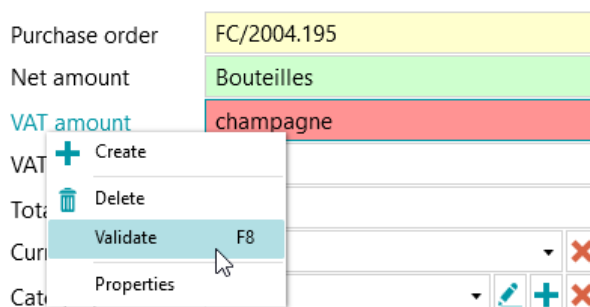
**Note:** the values in the drop-down list may also come from a [Data source](#) (in case you configured one).

#### To undo/redo operations:

- Use the undo/redo arrows on the [Quick Access toolbar](#).

#### To validate an index field:

- Press F8. Pressing F8 or selecting **Validate** when right-clicking on the label of the field will force the validation of an incorrect value marked in red. The field is then marked green as the pre-defined rules are overridden. Attention, after using F8, the validation cannot be undone.



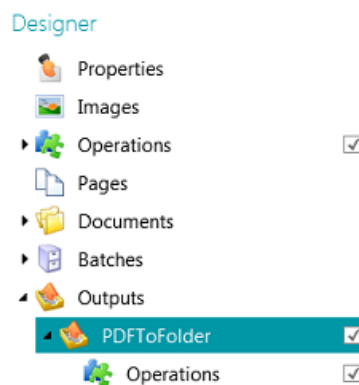
## 14. Configuring the Output

IRIS Powerscan™ converts scanned documents into a wide range of output formats and can send them to many possible destinations.

The **Output** can be selected either when [creating](#) a project or in **Designer** mode.

### Accessing the Output settings in Designer mode

- Switch to Designer mode.
- In the Designer Explorer, expand **Outputs**, and select the OutputType you want to configure.
- To add a new OutputType, right-click Outputs and click **Create**.



**Note:** as you can see in the image, you can also apply **Operations** to specific output configurations. This works in the same way as adding Operations on general, page, document and batch level, except that you cannot use the Wizard.

### Output Options

#### Name

Enter a name for the OutputType.

#### Condition

If necessary you can apply conditions to the OutputType.

##### Example:

Suppose you defined multiple Document Types inside a project. In that case you can choose to export only a certain document type in a certain output format. Let's say the document type "Body" contains the text you want to convert to compressed text-searchable PDF. And the document type "Appendices" only contains images you want to save as TIFF files. In that case use a condition that says the Document.Type must equal "Body":

- Click the Wizard icon next to **Condition**.
- Select the **Filter**: Color, Grayscale, Black and white, Automatic, Front and Rear.
- Select "Color" in our example.



- Choose to apply the condition to one particular document type, and click **Next**.
- Select the document type. "Body" in our example.
- Click **Finish**.  
The following condition is added to the Condition field: `Image.IsColor && Document.Type == "Body"`
- Now do the same for the document type Appendix.



## Naming

Determine how the output documents must be named.

You can either type in a fixed name between quotation marks and add a counter or click the Wizard icon to create a Naming formula.

**WARNING:** it is recommended to add a counter to the Naming options. Otherwise IRIS Powerscan™ might overwrite the files that are already in the destination folder.

### Select naming item(s)

Naming	"OutputType1" + " " + String(Document.Index)
Prefix	OutputType1
Add field	<none> ▼
Add date	<none> ▼
Add time	<none> ▼
Delimiter	<Space> ▼

☒ Add counter

**Prefix:** enter a prefix that must be added in front of each output document name.

**Add field:** the content of data extraction zones can also be added to the name.

**Note:** in order to add a zone, you must have created at least one data extraction zone inside your project.

**Add date:** select the date format you want to add from the list.

**Add time:** select the time format you want to add from the list.

**Delimiter:** select by which delimiter the different parts of the name must be separated.

## Format

Select the required [Format](#) from the list. Then click the pencil to determine its settings.

## Destination

Click the plus sign to add a [Destination](#).

## 14.1 Select the Output Format

### 1. PDF

- Select **PDF** from the list.
- Click the pencil icon to access the options.



#### Generalities tab

##### Type

##### Image

This type of PDF file contains the scanned image. It does not contain recognized text. You cannot search for text inside this file type.

##### ImageText

This file type is most commonly used. It contains two layers: the recognized text, and the original image on top of the text. This way, you have both access to the recognized text and you still see the original image. Another advantage of ImageText files is that they can be indexed by a file system such that a file search can find files *containing* the search text, in addition to finding files by the name of the file.

##### TextImage

This file type is the opposite of PDF Image-Text. It contains the original image in the background, and the recognized text on top of the image.

##### Text

This file type contains the recognized text, but does not contain the original image of your document. Any images in the original document are included as graphics in the PDF file.

##### Version

Select which PDF **Version** you want to generate:

- 1.4: Adobe Acrobat 5.0 or higher is required to open these PDF files.
- 1.4.A1a: this is a constrained form of Adobe PDF version 1.4 intended to be suitable for long-term preservation of page-oriented documents for which PDF is already being used in practice. Level A conformance (PDF/A-1a) indicates complete compliance with the ISO 19005-1 requirements, including those related to structural and semantic properties of documents.

- 1.4.A1b: this is also a constrained form of Adobe PDF version 1.4 intended to be suitable for long-term preservation of page-oriented documents for which PDF is already being used in practice. Level B conformance (PDF/A-1b) indicates minimal compliance to ensure that the rendered visual appearance of a conforming file is preservable over the long term.
- 1.5: Adobe Acrobat 6.0 or higher is required to open these PDF files.
- 1.6: Adobe Acrobat 7.0 or higher is required to open these PDF files.
- 1.7: Adobe Acrobat 8.0 or higher is required to open these PDF files.
- 1.7-A2a: this is a constrained form of Adobe PDF version 1.7 intended to be suitable for long-term preservation of page-oriented documents for which PDF is already being used in practice. Level A conformance (PDF/A-2a) indicates complete compliance with the ISO 19005-2 requirements, including those related to structural and semantic properties of documents.
- 1.7-A2b: this is a also constrained form of Adobe PDF version 1.7 intended to be suitable for long-term preservation of page-oriented documents for which PDF is already being used in practice. Level B conformance (PDF/A-2b) indicates minimal compliance to ensure that the rendered visual appearance of a conforming file is preservable over the long term.
- 1.7.3: extension level 3 of PDF 1.7. For more information consult the Adobe website.
- 1.7.5: extension level 5 of PDF 1.7. For more information consult the Adobe website.
- 1.7.8: extension level 8 of PDF 1.7. For more information consult the Adobe website.

## Languages

Select the language of your documents. Selecting the right language is essential to obtaining good recognition results.

To add a secondary language, click the plus sign, then select the required language. Languages that cannot be combined with the primary language you selected are grayed out. The recognition can combine up to four languages.

## Options

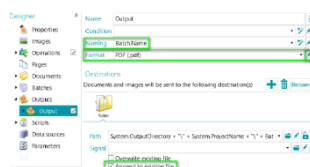
The available options depend on the PDF **Type** and **Version** you select.

**Create bookmarks:** bookmarks are types of links inside a PDF document, which contain representative information about the section they are linked to. Bookmarks give structure to your PDF documents. They are grouped in the **Bookmarks** panel in the Navigation pane of your PDF viewer.

If you define the **Output** settings as follows:

- **Naming:** Batch.Name
- **Format:** PDF > Edit Options > Create bookmarks (checked)
- **Destinations:** [Append to existing file](#) (checked)

then one PDF is created per batch and the batch's documents define the bookmark name and location in the final PDF.



*Creating PDF bookmarks per batch*

**JPEG 2000 compression:** when saving files in PDF, IRIS Powerscan™ can apply JPEG 2000 compression to the color-grayscale images stored inside those files.

**Include graphics:** includes graphics in the output documents.

**Retain colors of text:** keeps the original color of the text in your source documents.

**Embed fonts:** embeds - or includes - the original fonts of your documents in the PDF file. This way, other users will always see the documents in their original fonts on their computer, even if they don't have the particular font you used installed on their computer.

**JPEG Quality slider:** when the option JPEG 2000 compression is selected, you can determine the JPEG Quality with the slider. Move the slider to the left to decrease the JPEG Quality. Move the slider to the right to increase it.

## Security tab

The PDF documents you generate with IRIS Powerscan™ can be password-protected. You can set a password to open the documents, and a password that restricts modifications to the documents.

- When you set an **open document password**, you will be prompted to enter that password when opening the PDF output.
- When you set a **permissions password**, you will only be able to perform the actions specified in the security settings. If you do want to change these settings, you must enter the permissions password.

The IRIS Powerscan™ security settings are similar to the standard protection features offered by Adobe Acrobat.

Note that in IRIS Powerscan™ the **open document password** and **permissions password** must be different.

## Signature

The PDF documents you generate with IRIS Powerscan™ can be digitally signed. Digital signatures identify the person who created the PDF documents; they authenticate the identity of the author, certify a document and help prevent unwanted changes to PDF documents.

Note, however, that IRIS Powerscan™ does not generate digital signatures. You need to have a digital signature at your disposal to generate signed documents with IRIS Powerscan™. You can create digital signatures with Adobe Acrobat or obtain them from companies like VeriSign.

## Metadata tab

Enter the PDF document properties and keywords you want the output files to contain. These metadata will be embedded in the PDF files, and can be used to index these files.

## 2. PDF iHQC (intelligent High Quality Compression)

- Select **PDF iHQC** from the list.
- Click the pencil icon to access the options.

## Generalities tab

### Version

The same options are available as for PDF. See the [PDF section](#) above.

### Type

Select the iHQC level you want to generate:

- Level I: This level offers the lowest compression, but it is compatible with PDF version 1.4 - and its two subtypes - and higher.
- Level II\_a: This is the default compression level. It is compatible with PDF version 1.5 and higher.
- Level II\_b: This level offers the second highest compression. It is compatible with PDF version 1.5 and higher.
- Level III: This level offers the highest compression. It is compatible with PDF version 1.5 and higher.

For each level you can move the slider to choose between different Good size and Good quality options. Try the different settings to obtain optimal results.

## Languages

The same options are available as for PDF. See the [PDF section](#) above.

## Options

**Create bookmarks:** See the [PDF section](#) above.

**Image-only:** select this option to generate image-only PDF iHQC documents, without text recognition.

## Security tab and Metadata tab

The same options are available as for PDF. See the [PDF section](#) above.

## 3. XPS

Similar options are available as for PDF. See the [PDF section](#) above.

## 4 XPS iHQC

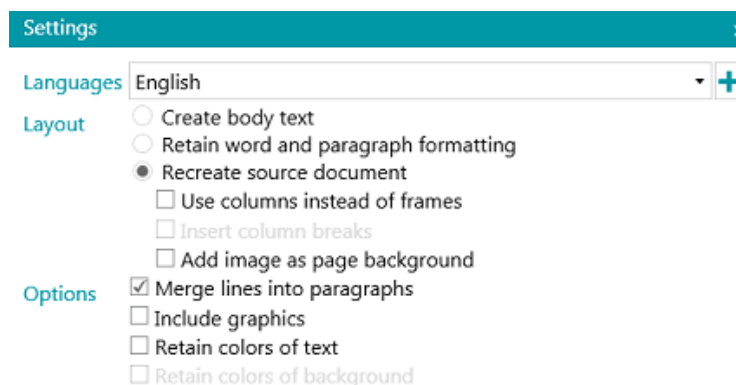
Similar options are available as for PDF iHQC. See the [PDF iHQC](#) section above.

## 5. Text Documents

IRIS Powerscan™ can generate **Word** (.docx) and **RTF** documents.

Several layout settings are available for Word and RTF documents. Again, a slider is available that allows you to obtain the best possible compression ratio.

Note that Text documents do not have any layout or compression options. They only contain recognized text with no images.



## Languages

Select the language of your documents. Selecting the right language is essential to obtaining good recognition results.

To add a secondary language, click the plus sign, then select the required language. Languages that cannot be combined with the primary language you selected are grayed out. The recognition can combine up to four languages.

## Layout

- The option **Create body text** generates a continuous, running line of text. The result is a document without any formatting. The formatting is to be done manually, by the user.
- The option **Retain word and paragraph formatting** keeps the general format structure of your scanned document.

The font type, size and type style are maintained across the recognition process.

The tabs and the alignment of each block are recreated.

The text blocks and columns aren't recreated; the paragraphs just follow each other.

Tables are recaptured correctly.

Pictures are not captured.

- The option **Recreate source document** tries to stay as close to the original layout as possible.

The text blocks, tables and pictures are re-created in the same place as the original.

The word and paragraph formatting are maintained.

Hyperlinks are re-created too.

- The option **Use columns instead of frames** creates columns instead of text frames to position the information on the page.

Columnized texts are easier to edit than documents containing multiple frames: the text flows naturally from one column to the next.

**Note:** should IRIS Powerscan™ be unable to detect columns in the source document, then frames are still used as substitute solution.

**Tip:** use this option when generating Word documents.

- The option **Insert column breaks** inserts a hard column break at the end of each column, which maintains the format of the text. Any text you edit, add or remove, remains inside its column; no text flows automatically across a column break.

**Tip:** disable this option (**Insert column breaks**) when you have body text that contains columns. You'll ensure the natural flow of the text from one column to the next.

- The option **Add image as page background** places the scanned image as page background beneath the recognized text.

**Note:** this option increases the file size of the output files substantially.

The format **PDF Text-Image** modifies PDF files in the same manner.

To avoid the file increase discussed above, select the option **Retain colors of background** in the **Options** section. This provides a similar but less drastic, more compact alternative.

## Options

- The option **Merge lines into paragraphs** enables automatic paragraph detection.  
IRIS Powerscan™ wordwraps the recognized text until a new paragraph starts, and reglues hyphenated words at the end of a line.
- The option **Include graphics** does exactly what it says; it includes images in your output documents.  
Clear this option in case you only need lay-outed text.
- The option **Retain colors of text** keeps the original color of the text in your source documents.
- The option **Retain colors of background** recreates the background color of each document.

## 6. Indexes (.xml)

- Select **Indexes (.xml)** from the list.
- Click the pencil icon to access the options.
  - Select the **Encoding**: ASCII, UTF8 or UTF16.
  - Select when the index file must be created: per **batch** or per **document**.

## 7. Indexes (.csv)

- Select **Indexes (.csv)** from the list.
- Click the pencil icon to access the options.
  - Select the **Encoding**: ASCII, UTF8 or UTF16.
  - Specify the content of the header. The default value is Document.Fields.Header.
  - Specify the content of each row. The default value is Document.Fields.Value.

These values create a csv file that contains the names and values of all index fields. Note that any other variables can be used. See [Using Expressions](#).

- Specify the frequency of a file creation: per batch or per document.

## 8. Indexes (.xlsx)

- Select **Indexes (.xlsx)** from the list.
- No options can be configured via the pencil icon. The options are fixed:
  - One file is created per batch.
  - Document fields of the [type TableField](#) are not exported. All other types are.
  - All fields are exported to the first worksheet of the Excel file.
  - The field names are entered on the first line of the Excel file.
  - The document indexes are entered from the second line onward. One document index is entered per line.

**Note:** if the project parameter **CollisionHandlingAppend** is set to **Yes**, IRIS Powerscan™ appends the new content if an existing file of the same name is encountered.

## 9. Image Files

IRIS Powerscan™ can generate the following image files: JPEG, PNG, BMP, Single Page TIFF and Multipage TIFF.

### Image Types

#### JPEG

JPEG is a compressed image file format. JPEG images can contain colorful, high-resolution image data. Note however, that JPEG is a lossy format. If the images are compressed too much, the image quality decreases.

JPEG images are often used on the Web.

#### PNG

PNG stands for Portable Network Graphic. It is a lossless format, which means it doesn't lose any detail when it is compressed. PNG uses indexed colors and supports up to 48-bit color or 16-bit grayscale.

#### Single page TIFF and Multi page TIFF

TIFF stands for Tagged Image File Format. TIFF is a high-quality graphics format that supports color depths from 1 to 24-bit. It is designed to be a standard image format for storing high-quality color images, such as photos, on multiple computer platforms.

Single page TIFF files contain only one page, while Multi page TIFF files can contain multiple pages.

TIFF images can be compressed in several ways. See **Image Settings** below.

## BMP

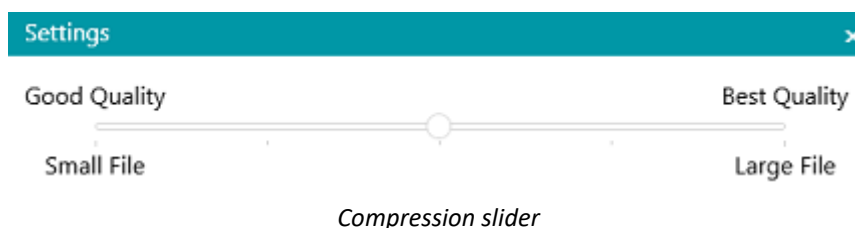
BMP is short for bitmap. It is an uncompressed raster image made up of a rectangular grid of pixels. The BMP format stores color data for each pixel in the image without any compression. This method of storing allows for crisp, high-quality graphics but also produces large image files.

BMP images are often used for printable images.

## Image Settings

### JPEG and TIFF

A slider is available that allows you to obtain the best possible compression ratio.



### TIFF settings

More advanced compression options are available for TIFF files.

IRIS Powerscan™ can compress the color, grayscale and black-and-white image inside the documents.

### Grayscale and color image compression options

- **TIFF JPEG compression**

TIFF JPEG compression is a lossy form of compression. The degree of compression can be adjusted allowing a selectable trade-off between storage size and image quality.

- **LZW compression**

LZW compression is a universal lossless data compression algorithm. This means it produces no loss of image quality at all. This form of compression results in somewhat bigger output files.

- **Packbits**

Packbits is a fast and lossless compression scheme for run-length encoding of data.

- **Uncompressed**

Uncompressed avoids compression altogether.

### Black and white image compression

- **TIFF Group 4 compression**

TIFF Group 4 compression is a method of image compression used in Group 4 fax machines. It is only used for monochrome (black and white) images. Group 4 compresses files at a rate of 20:1.

- **TIFF Group 3 compression**

TIFF Group 3 compression is an older fax compression.

- **LZW compression**



LZW compression is a universal lossless data compression algorithm. This form of compressions results in somewhat bigger output files.

- **Packbits**

Packbits is a fast and lossless compression scheme for run-length encoding of data.

- **Uncompressed**

Uncompressed avoids compression altogether.

## 14.2 Select the Destination

If necessary, see [Configuring the Output](#) to learn how to access the Output Formats.

**WARNING:** for **trouble-free exports**, we strongly recommend that you limit large documents to no more than 1000 pages per document.

If really needed, that limit can be increased up to 4000 pages per document (200 or 300 dpi color) by adding and setting the parameter **BigDocumentExport** to 'Yes'. See [Configuration Pane > Parameters](#)

### 14.2.1 Overview of the Destinations

#### Email

##### To:

- Or choose an e-mail address. Enter the recipient in the **To** field, or click **To** to select a recipient from one of your address lists.
- Or choose an expression. Enter your expression in the **To** field, or click the pencil button to select an expression from the [Expression editor](#).

**WARNING:** the e-mail address must be between double quotation marks. E.g.  
"john.smith@iriscorporate.com".

**Cc:** enter a recipient in Carbon copy. Or click **Cc** to select a recipient from one of your address lists.

**Subject:** the subject of the email is set to the document name by default. Note that **Document.Name** is simply the variable that makes sure the right document name is used. You can also use other variables.

**Body:** the body content of the email is set to "The Document.Name is attached" by default. Again, you can also use other variables.

**Size:** enter the maximum size an email may have. The default size is 2048 Kb.

**Split:** select **Split** to send one email per document.

**Options** (Email protocol): **mapi** (default, to send from your local mail client) or **Smtp (for Webmail)**.

When **Smtp** is selected:

- 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**.

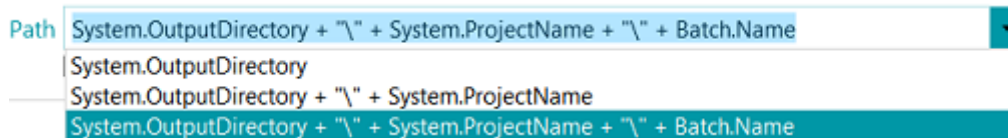
**WARNING:** when the Export is being done by the Service, Mapi cannot be used. Only SMTP works in that configuration.

## Folder

### Path

The default folder is set to **System.OutputDirectory + "\ + System.ProjectName + "\ + Batch.Name**.

- **System.OutputDirectory** corresponds to the user's Documents folder.
- **System.ProjectName** corresponds to the name of the current project.
- **Batch.Name** corresponds to the name of the exported batch.



To customize the expression click the pencil icon to open the [Expression Editor](#).

**WARNING:** when customizing the expression, make sure to put '+' + "\" + ' between the different elements.

Note that you can also use fixed values between double quotation marks. For example "C:\Images".

**WARNING:** should you add the variables System.Now or System.Today to the Path, make sure the Culture of your Windows System Account corresponds to the language of your Windows User Account. After all, in some cultures dates are formatted as dd/mm/yyyy while in others they are formatted as mm/dd/yyyy. To do so, see **How to synchronize Date formats between IRIS Powerscan™, your Windows System Account and your Windows User Account** in the **How To Guide**.

To select a different folder, click the browse icon and then browse for the folder.

**Tip:** to put the default folder back, just press Esc and IRIS Powerscan™ completes the default location. This works for every expression.

If the folder you want to scan to is protected by a password, click the padlock icon (🔒).

- Enter your (domain ) **User name**. E.g. IRIS\_DOM\MyName.
- Enter your **Password**.
- **Confirm** the password, and click **OK**.

### Signal

Enter a path in the **Signal** field if you want to use **Connected Projects** on a single IRIS Powerscan™ workstation. See [Using Connected Projects](#) for more information.

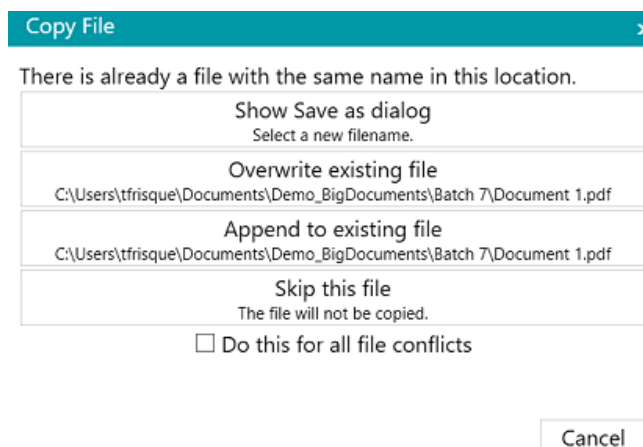
### Options

**Overwrite existing file:** when this option is selected and a file of the same name is encountered in the output folder, IRIS Powerscan™ will overwrite the existing file with the new one.

**Append to existing file:** when this option is selected and a file of the same name is encountered in the output folder, IRIS Powerscan™ will add the new content to the existing file.

- The **Append** option is available for the following output formats: PDF, PDF-iHQC, TIF, XLSX, CSV and DOCX. However, using the DOCX format with large files or with files including images might lead to errors. In this case, we recommend that your file does not exceed 500 pages.
- The **Append** option cannot be used on signed PDF files.
- The **Append** option and the **Overwrite** option cannot be selected at the same time. You must select one or the other. If neither of these two options is selected, and a file of the same name is encountered in the output folder, a **Copy File** window is displayed in which you can choose whether to save the file under a new name, overwrite the existing file, append to the existing file or skip the file.

**Note:** the **Do this for all conflicts** option only applies to the current output format. If you are exporting in multiple output formats and an existing file is encountered for one of the other output formats the **Copy File** window will be displayed again.



## Printer

**WARNING:** Output to a Printer is not supported as a [Service](#)

- Select a printer from the drop-down list.
  - Click the settings icon to access the printer options.
  - Select the options of your choice. When you are done, click **Finish** to close the printer options.
- Select the **Scaling** options:
  - **Actual size:** this option keeps the absolute size of the image. E.g. an A4 image will match the size of an A4 printer sheet, regardless the printer and image resolutions.
  - **Fit the page:** this option makes the image fit the printer sheets, whatever their size is.
  - **Actual pixel:** this option prints the image pixel for pixel, regardless the printer and image resolutions.
- Select **Show Preview** if you want IRIS Powerscan™ to show a preview of the print result before actually sending the results to the printer.

## SharePoint

### Step 1

- Enter the **Server** url.
- Enter the **User name** and **Password**, if required.

Whether or not a user name and/or password are required depends on your configuration. If necessary, contact your System Administrator.

If your computer is located in a domain, you may need to add the domain name followed by a back slash in front of the User name. E.g. Your\_Domain\jsmith.

- Click **Next** to establish the connection.

#### Step 2

- If the connection is successful, and if your server contains any libraries, the list of available libraries is displayed.
- Select a library to which you want to send the documents, and click **Next**.

#### Step 3

- Now you can select a specific folder inside the library where the documents will be sent. If you do not select a folder, the documents are stored in the root of the library.

#### Step 4

- Select a content type.  
The scanned pages will be stored as this type of object.

#### Step 5

- The index fields you have defined for the selected content type in your target system are displayed.
- You can now map them to your IRIS Powerscan™ index fields.



- When you are done, click **Finish**.

### Therefore, IRISNext, CMIS, FileNet

- Enter the **Server** url.
- Enter the **User name** and **Password**, if required.

Whether or not a user name and/or password are required depends on your configuration. If necessary, contact your System Administrator.

If your computer is located in a domain, you may need to add the domain name followed by a back slash in front of the User name. E.g. Your\_Domain\jsmith.

- Click **Next** to establish the connection. Then follow the steps of the Wizard.

### Box, Dropbox, Google Drive, OneDrive

- Enter the **User name** and **Password** of your account.
- Click **Next** to establish the connection and to optionally select a subfolder.  
If you do not select a subfolder, the scans are sent to the root directory.
- When you are done, click **Finish**.

### Evernote

- Enter the **User name** and **Password** of your account.
- Click **Next** to establish the connection and select a subfolder.  
Note that you cannot send documents to the root of Evernote.
- When you are done, click **Finish**.

## IRISXtract™

- Browse for the folder that will be used as Input folder by IRISXtract™.

### Notes:

When sending documents to this folder, the necessary **Signal** and **Data** folders (required by IRISXtract™) are created automatically.

The **para.dat** file inside the **Signal** folder contains the index fields per document.

## IRISConnect™

By means of IRISConnect™ you can configure other destinations that the ones for which you have a specific connector in IRIS Powerscan™.

### If you already have an IRISConnect .xml configuration file:

- Click the browse icon and select the file.
- Now click the pencil to access the IRISConnect™ interface.

You can now continue the configuration. For instance to map the fields of your destination file system to the fields you created in IRIS Powerscan™.



### If you do not have a configuration file yet:

- Click the plus icon.
- Select a target from the list and click **OK** to continue.  
Now you can do the configuration.

For information on how to do the configuration, see the **IRISConnect™ documentation**.

## 15. Using Expressions and Scripts

### 15.1 Using Expressions

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#### Expressions

Expressions are evaluated at run time in IRIS Powerscan™ and are used for batch and document naming, indexing, etc.

An expression consists of literal values, variables, operators and functions.

Literal values are either numeric (e.g. 123) or alphanumeric (e.g. "abc").

Note that string literals are delimited by double quotation marks.

Variables are updated by operations.

#### Examples

The operation Blank Page Detection updates the variables Image.IsBlank and Page.IsBlank.

The operation Attach Page updates the variable Page.IsAttached.

The operation Extract Data updates multiple variables for each OCR or BCR zone.

The operation Set Variable can be used to create new variables.

New functions can easily be added by means of [scripting](#).

**Note:** these expressions are not related to standard regular expressions (RegEx). However, standard regular expressions can be added via functions and scripting.

#### Conditions

A condition is a Boolean expression, which means an expression whose value is either true or false.

Conditions can for instance be used to [uniquely identify pages](#), [separate documents and batches](#), [check the validity of index fields](#), [filter output types](#), etc.

Conditions can be created by means of the **Wizard** (✎) and the [Expressions editor](#) (✎).

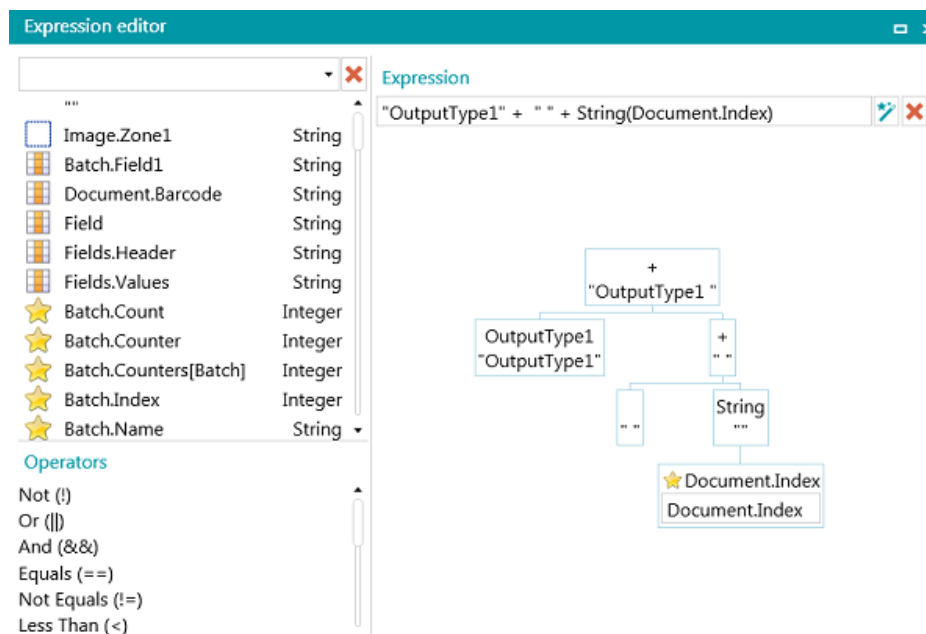


#### Use of Expressions

Expressions can be used in IRIS Powerscan™ to configure naming options, conditions, formulas, etc. The **Expressions Editor** is indicated by a pencil icon. Click the icon to open it.



In the Expression Editor you can build complex expressions.



### 15.1.1 Overview of the available variables

The list below is the default list. Notice the different elements within the Expression Editor:

- Variables are marked by a yellow star.
- Index fields are marked by an orange grid.
- Data Extraction zones are marked by a white square.
- Functions are marked by a scroll.

Note that any data extraction zones you create are added to the variables list.

Zone variables	Description
Batch.Field1	Default index field of the batch
Document.Field1	Default index field of the document
Field	Value of the current index field*.
Fields.Header	Fields header (CSV format) = new Document.Fields.Header
Fields.Values	Fields values (CSV format)= new Document.Fields.Values
Batch variables	Description
Batch.Confidence	Confidence level between 1 (very low) and 100 (very high)
Batch.Count	Batch count
Batch.Counter	Number of batches
Batch.Counters[Batch]	Number of batches of a particular batch type. The number is indicated between the brackets.
Batch.Index	Batch index
Batch.IsExported	True if the current batch has already been exported.
Batch.Name	Name of the current batch
Batch.Type	Type of the current batch (after classification)



Batch.Fields.Header	Fields Header of the batch (CSV format)
Batch.Fields.Values	Fields Header of the batch (CSV format)
<b>Document variables</b>	<b>Description</b>
Document.Confidence	Confidence level between 1 (very low) and 100 (very high)
Document.Count	Document count within the current batch
Document.Counter	Number of documents
Document.Counters[Document]	Number of documents of a particular document type. The number is indicated between the brackets.
Document.Index	Document index within the current batch
Document.IsExported	True if the current document has already been exported.
Document.Name	Name of the current document
Document.Type	Type of the current document (after classification)
Document.Fields.Header	Fields Header of the Document within the current batch (CSV format)
Document.Fields.Values	Fields Values of the Document within the current batch (CSV format)
<b>Image variables</b>	<b>Description</b>
Image.Bpp	Bits per pixel
Image.Count	Image count within the current page
Image.Endorser	The printed value that IRIS Powerscan receives from the imprinter functionality of the scanner
Image.Front	True if the current image is on front side
Image.Height	Height of the current image
Image.Index	Index of the image
Image.IsBest	True if the current image is the best image (highest BPP)
Image.IsBitonal	True if the current image is bitonal
Image.IsBlackAndWhite	True if the current image is black and white
Image.IsBlank	Is only available when a Blank Page Detection operation has been defined. Image.IsBlank is true if the image is blank.
Image.IsColor	True if the current image is a color image (Bpp == 24)
Image.IsGrayscale	True if the current image is grayscale
Image.IsLandscape	True if the current image is in landscape mode
Image.IsOriginal	True if the current image is original (not modified)
Image.IsPortrait	True if the current image is in portrait mode
Image.IsTrueColor	True if the current image is in true color
Image.Rear	True if the current image is on rear side
Image.Resolution	Resolution of the current image
Image.Size	Size of the current image
Image.Title.Detected	True if a title has been detected

Image.Fingerprint	Is only available when a Fingerprint Detection operation has been defined. Image.Fingerprint is the page type returned by the Fingerprint (layout) recognition engine.
Image.Width	Width of the current image
<b>Input variables</b>	<b>Description</b>
Input.Extension	Extension of the input file
Input.FileName	File name of the input file
Input.PageIndex	Page index within multipage input file
Input.Path	Path of the input file
<b>Mail variables</b>	<b>Description</b>
Mail.Cc	Cc recipients' email address(es)
Mail.Cc.DisplayNames	Displays Cc recipients' display names
Mail.Date	Sent date
Mail.From	Sender's email address
Mail.From.DisplayNames	Displays sender's display name
Mail.Name	XMail Fetcher subfolder. E.g. Mail00000001)
Mail.PageIndex	Index within each email (Which will be used for document separation) Tip: to create one document per email use the Condition Mail.PageIndex == 0
Mail.Path	XMail Fetcher Output path
Mail.Received	Reception date
Mail.ReplyTo	Recipients' email address
Mail.ReplyTo.DisplayNames	Displays recipients' display names
Mail.Subject	Email subject
Mail.To	Recipient's email address(es)
Mail.To.DisplayNames	Displays recipients' display names
<b>Output variables</b>	<b>Description</b>
Output.Name	Name of the output document. Is only available during export.
Output.Type	Type of the output. Is only available during export.
<b>Page variables</b>	<b>Description</b>
Page.Confidence	Is only available when a Page type has been defined. Confidence level between 1 (very low) and 100 (very high)
Page.Count***	Page count within the current document
Page.Index***	Page index within the current document
Page.IsBlank	Is only available when a Blank Page Detection operation has been defined. Page.IsBlank is true if both the rear and front images of the page are blank.
Page.IsAttached	True if the page is attached
Page.Type	Type of the current page (after identification)

System variables	Description
System.DefaultExportDirectory	Default export directory
System.DefaultImportDirectory	Default import directory
System.FileName	Current file name
System.InputDirectory	Current input directory
System.MachineName	Machine name
System.Now**	Current time
System.OutputDirectory	Current output directory
System.ProjectDirectory	Project directory
System.ProjectName	Project name
System.ScanningDirectory	Scanning directory
System.Today**	Current date
System.UserName	User name
System.WindowsUserName	Windows user name

**IMPORTANT**

1. Other index field can be referenced as follows:

**<document type>.<field name>**

**Or <batch type>.<field name>**

E.g. If you have defined a document type called “MyType” containing two fields “Field1” and “Field2” then **the variable MyType.Field1 contains the value of the index field Field1 and the variable MyType.Field2 contains the value of the index field Field2.**

2. Should you add the variables System.Now or System.Today to the Path, make sure the Culture of your Windows System Account corresponds to the language of your Windows User Account. After all, in some cultures dates are formatted as dd/mm/yyyy while in others they are formatted as mm/dd/yyyy. To do so, see **How to synchronize Date formats between IRIS Powerscan™, your Windows System Account and your Windows User Account** in the **How To Guide**.
3. In the previous versions of IRIS Powerscan 10, a page used to be the scanned equivalent of a paper sheet, i.e. containing both the Front and Rear side.

This has implications for Duplex scanning projects where the variables Page.Index or Page.Count is used to separate Documents or Batches. Suppose you configured the project to start a new Document every 2 pages: Page.Index>2. Because of the new Page structure in IRIS Powerscan™ this must be changed to Page.Index>4.

## 15.1.2 Overview of the available operators

Common Operators (can be applied to any type)	Examples / Description
Equals (==)	Value 1 == Value 2. Value 1 is equal to Value 2.
Not equals (!=)	Value 1 != Value 2. Value 1 is not equal to Value 2.
Greater than (>)	Value 1 > Value 2. Value 1 is greater than Value 2.
Greater than or Equals (>=)	Value 1 >= Value 2. Value 1 is greater than or equal to Value 2.
Less than (<)	Value 1 < Value 2. Value 1 is less than Value 2.
Less than or Equals (<=)	Value 1 <= Value 2. Value 1 is less than or equal to Value 2.
String Operators	Examples / Description
String ("" )	Concatenates values. E.g. "a" + "bc" == "abc"
Boolean Operators	Examples / Description
Not (!)	logical NOT
And (&&)	logical AND
Or (  )	logical OR
Is Null or Empty	True if the parameter is null or an empty string
Is Not Null or Empty	True if the parameter is not null or an empty string
Contains ("" )	True if the parameter is found in the string
Not Contains (!Contains"" )	True if the parameter is not found in the string
Numeric Operators	Examples / Description
Add (+)	Value 1 + Value 2. Adds Value 1 to Value 2.
Subtract (-)	Value 1 - Value 2. Subtracts Value 2 from Value 1.
Multiply (*)	Value 1 * Value 2. Multiplies Value 1 by Value 2.
Divide (/)	Value 1 / Value 2. Divides Value 1 by Value 2.
Modulo (%)	Value 1 % Value 2. The remainder of the division of Value 1 by Value 2. E.g. (Value 1 % 2) == 1 means that Value 1 is odd.
Conversion Operators	Examples / Description
String(Value)	Converts Value into a String
Integer(Value)	Converts Value into an Integer
Double(Value)	Converts Value into a Double
Ternary Operator	Examples / Description
Ternary (?)	<p>?(&lt;condition&gt;,&lt;value if the condition is true&gt;, &lt;value if the condition is false&gt;).</p> <p>E.g. ?(Page.Index &lt; 1, true, false). Returns true if the page index is less than 1.</p> <p>E.g. ?(Page.Index == 2, Image.Zone1, ""). This extracts Image.Zone1 on the second page.</p>

**Note:** in IRIS Powerscan™ unknown variables are by default 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 evaluated, go to the Configuration pane and set the `StrictIndexEvaluation` parameter to 'Yes'. If this parameter is set to 'Yes' and an unknown variable is encountered, the expression will not be evaluated and the index field will be empty.

### 15.1.3 Variables Example

Since the Expression possibilities are extremely vast, we will limit ourselves to an example.

Suppose you want **IRIS Powerscan™** to start a new Document each time it encounters a certain OCR zone AND a certain barcode on a page. To accomplish this you need to use a combined expression.

- First [add a Sample](#) page that contains the required OCR zone and the required barcode.



Example

- Go to **Data Extraction** in the Designer Explorer.
- Draw a frame around the OCR zone you want to use.
- Select **Text** as **Type**.
- Enter a **Name** for the zone.
- Select the correct **Language** of the zone.

#### Specify the zone properties

Name	OCRZone	?
Condition		✚ ✎
Languages	English	+

- Click **OK** to confirm.
- Then draw a frame around the Barcode zone you want to use.
- Select **Barcode** as **Type**.
- The correct barcode type is selected automatically.
- Enter a **Name** for the zone.

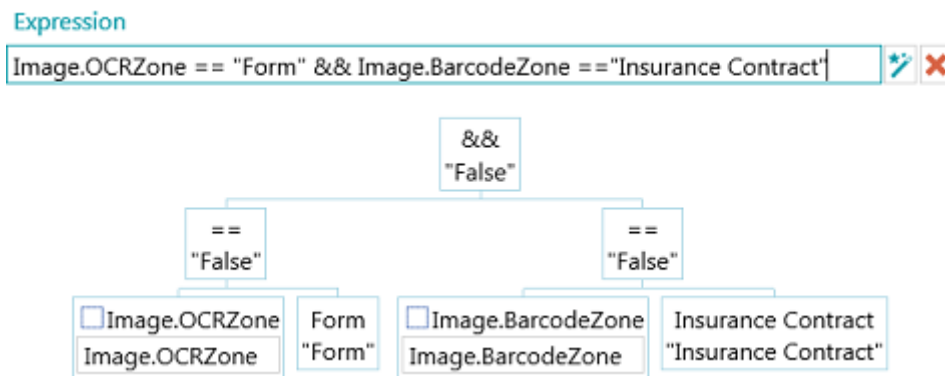
#### Specify the zone properties

Name	BarcodeZone	?
Condition		✚ ✎
Barcode	PDF417	+

- Click **OK** to confirm.
- Go to the default Document type in the Designer Explorer.

- Click the pencil next to **Condition**.
- Scroll down the list and double-click the OCR zone you created. In our example: **Image.OCRZone**.
- Double-click **Equals (==)**.
- Enter the value of the OCR zone between quotation marks. In our example: **"Form"**.
- Double-click **And (&&)**.
- Scroll down the list and double-click the Barcode zone you created. In our example: **Image.BarcodeZone**.
- Double-click **Equals (==)**.
- Enter the value of the Barcode zone between quotation marks. In our example: **"Insurance contract"**.
- Click **OK** to confirm.

The expression now looks like this.



**Note:** the different elements of an expression can be edited to test the expression.



**Note:** in IRIS Powerscan™ unknown variables are by default 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 evaluated, go to the Configuration pane and set the **StrictIndexEvaluation** parameter to 'Yes'. If this parameter is set to 'Yes' and an unknown variable is encountered, the expression will not be evaluated and the index field will be empty.

## 15.2 Using Scripts

Scripts can be used to extend the functions that are used in the expressions. You can define your own functions and call them in any expression.

### To add a script:

- In the Designer Explorer, right-click **Script** and click **Create**.
- Double-click the Script you have added to open its configuration window.

- Click the browse icon to indicate the path of the script you want to call.  
The default script is located in C:\Users\<YourUser>\AppData\Roaming\IPSx.

Functions		
Name	Type	Description
GetLastError	String	GetLastError()
ResetLastError	Void	ResetLastError()
IsDouble	Boolean	IsDouble(String input)
IsInteger	Boolean	IsInteger(String input)
IsDateTime	Boolean	IsDateTime(String input)
Length	Integer	Length(String input)

*Example script*

**WARNING:** scripts must be written in C#. VB scripts are not longer tested, therefore not recommended.

## 16. The IRIS Powerscan™ Agent

The Agent application is by default installed. Unless you cleared the option **System Tray icon** during setup.

The Agent is available in the **System Tray**.



It allows you to do the following quick actions:

- Open IRIS Powerscan™ by clicking the icon.
- Right-click the icon to display the context menu:
  - Open...:** opens IRIS Powerscan™.
  - Scan:** scans documents to IRIS Powerscan™.
  - Update:** installs updates if available.
  - About:** displays version information.
  - Exit:** exits the context menu.

The Agent also alerts you when scanned batches are available, even when the IRIS Powerscan™ main application is not running.



## 17. Keyboard Shortcuts

The following shortcuts can be used in IRIS Powerscan™:

### Navigation

Show Navigation mode	Ctrl + 1
Show Designer mode	Ctrl + 2
Edit tab	Alt + H
View tab	Alt + V
Next field	Tab
Previous field	Shift + Tab
Next invalid field	Ctrl + Tab
Previous invalid field	Ctrl + Shift + Tab
Go to page	Ctrl + G
Up	BackSpace
First image	Alt + Home
Last image	Alt + End
Previous image	Alt + Up
Next image	Alt + Down
Search previous text	Shift + F3
Search next text	F3
Move up (Navigation or Designer Explorer)	up arrow
Move down (Navigation or Designer Explorer)	down arrow
Browse backward (previous element in history)	Alt + left arrow
Browse forward (next element in history)	Alt + right arrow
Expand	Ctrl + *
Expand all	Ctrl + Shift + *
Collapse	Ctrl + /
Collapse all	Ctrl + Shift + /
Expand element (Navigation or Designer Explorer)	right arrow
Close element (Navigation or Designer Explorer)	left arrow
Open the Open section (of the Application menu)	Ctrl + O

Open the Create section (of the Application menu)	Ctrl + N
Open the Manage section (of the Application menu)	Ctrl + M
Toggle Focus (Navigation mode)	Ctrl + W
Scroll sample images (Designer Explorer/Operations)	Alt + down/up arrow

## Commands

Help	F1
Display key tips	Alt
Quick access toolbar	Alt + digit or letter in commands order
Save	Ctrl + S
Cut	Ctrl + X
Cancel Cut	Escape
Copy	Ctrl + C
Paste	Ctrl + V
Quiet delete	Shift + Delete or Delete
Undelete	Ctrl + Delete
Redo	Ctrl + Y
Undo	Ctrl + Z
Scan	F4
Stop Scan	Shift + F4
Rescan	F5
Settings	F6
Split	F7
Merge	Shift + F7
Merge previous	Ctrl + F7
Merge next	Ctrl + F8
Attach	Insert
Detach	Ctrl + Insert
Delete	Delete
Export	F9
Wizard	F12
Zoom In	Ctrl + Num+

Zoom Out	Ctrl + Num-
Zoom fit page	Ctrl + Num .
Zoom actual size	Ctrl + Num 0
Display 1 page in the Viewer	1
Display 2 pages in the Viewer	2
Display 4 pages in the Viewer	4
Display 8 pages in the Viewer	8
Rotate Left	Ctrl + L
Rotate Right	Ctrl + R
Auto rotate	Alt + A
Create document	Ctrl + D
Create batch	Ctrl+ B
Rename	F2
Capture recognition zone	Enter

## 18. Connect to the IRIS Powerscan Server™

In order for users to collaborate on projects that are managed by the IRIS Powerscan Server™, they must connect their IRIS Powerscan™ Client to the IRIS Powerscan Server™ and log in using the credentials that were defined in the IRIS Powerscan Server™.

### Prerequisites

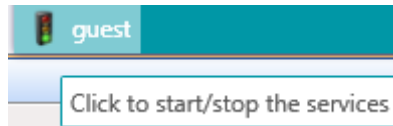
- The IRIS Powerscan Server™ must be installed correctly in a location to which the IRIS Powerscan™ Client has access.

**Note:** the IRIS Powerscan Server™ can be found on the IRIS Powerscan™ installation cd and on [www.irislink.com/downloadcenterpro](http://www.irislink.com/downloadcenterpro).

- The IRIS Powerscan Server™ Service must be started.

To check if it is started:

- Open the IRIS Powerscan Server™ application.
- Click the traffic light icon in the bottom ribbon, and make sure "Starting Service" appears in the pop-up window.



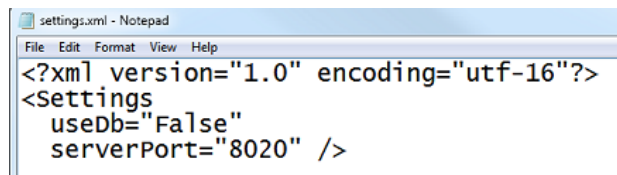
- The [Central Management add-on](#) must be activated in the IRIS Powerscan™ Client.

**Note:** this add-on must be installed on each IRIS Powerscan™ Client that wants to connect to the IRIS Powerscan Server™.

- By default port 8080 must be open to connect to the server.  
In case that port is used by another application, you can change the port for IRIS Powerscan™.

**To change the port:**

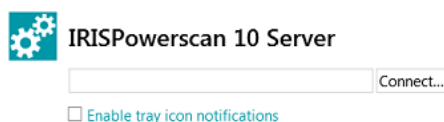
- Start the IRIS Powerscan Server™ Service as described above.
- On the computer where IRIS Powerscan Server™ is installed, open a browser and go to %programdata%\IPSxServer\LocalProjects.
- Right-click **settings.xml** and click **Edit**.
- Change the port from 8080 to another one.



- Save the settings.xml file.
- Click the traffic lights icon again to stop and then to restart the IRIS Powerscan Server™ Service.
- Now go to **File > Info > Generalities** in the IRIS Powerscan™ Client.
- In the IRIS Powerscan 10 Server field, enter the server address mentioning the new port in the following format <server>:<port>. For instance jsmith.iris.com:8020. Or if the server is installed on your local machine 127.0.0.1:8020.

## Step 1: Connect an IRIS Powerscan™ Client to the IRIS Powerscan Server™

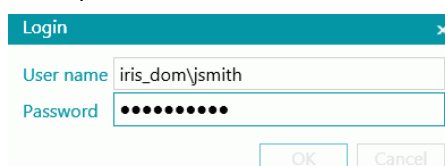
- Open the IRIS Powerscan™ Client.
- Click **File > Info > Generalities**.
- In the **IRIS Powerscan 10 Server** section, enter the address where the IRIS Powerscan Server™ is installed.
- Then click **Connect**.



- When the connection is established, click **Restart now** to restart the application.

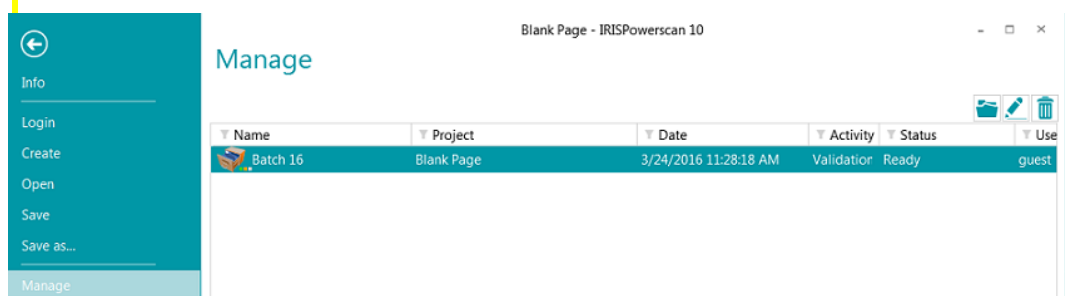
## Step 2: Log in from the IRIS Powerscan™ Client

- Open the IRIS Powerscan™ Client.
- Click **File > Login**.
- Click **Yes** to restart the application.
- When the application restarts, enter your **Domain\Username** and **Password** and click **OK**.

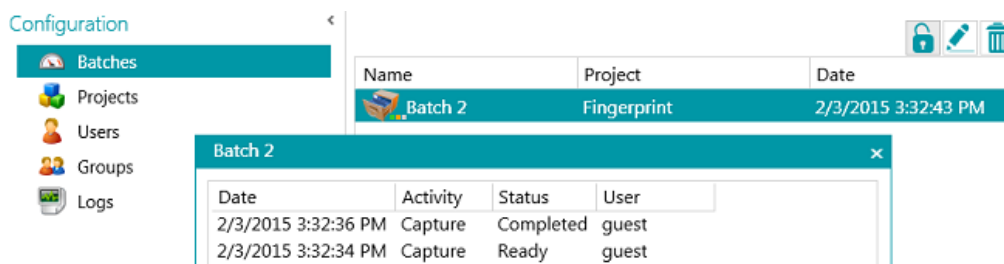


- Select the Project you want to open.  
The Projects that are listed here are the ones managed by the Server.
- Carry out the actions for which you have permissions and click **Process** to process the documents.
- The batches of documents that you process are shown in the **Manage** section of the Application menu. Click the pencil icon to view the Batch history.






**Note:** a Client only sees the batches to which he has access.



The Administrator can check the status of all Batches in the **Batches** section of the IRIS Powerscan Server application.



The Administrator can also check the **Logs** for more information about the activities.





Configuration		
	Batches	
	Projects	
	Users	
	Groups	
	Logs	

Date	User name	Message
29/01/15 13:53:52	jsmith-lap2	Started
03/02/15 10:41:16	guest	Exported Fingerprint
03/02/15 10:43:57	jsmith-lap2	Started
03/02/15 10:44:06	guest	Login
03/02/15 10:44:07	jsmith-lap2	Scanning... Capture Ready Batch 1 Fingerprir
03/02/15 10:44:08	jsmith-lap2	Finish Capture Completed Batch 1 Fingerprin
03/02/15 10:44:08	jsmith-lap2	Capture Completed Batch 1 Fingerprint

## Connection status on Client side

In the bottom ribbon, a witness icon informs you of the connection status with the server.

Connected:   G1\_User1 or disconnected:   G1\_User1

## 19. Using Connected Projects

To speed up the processing you can use **Connected Projects** on a single IRIS Powerscan™ workstation. This way you can for instance create one Project in which only the Image Processing is done, and another project in which the Identification and Separation are done.

In order to connect Projects, **Signal files** and **Watched Folders** are used.

**Note:** using Connected Projects has nothing to do with connecting IRIS Powerscan™ workstations to the IRIS Powerscan Server™.

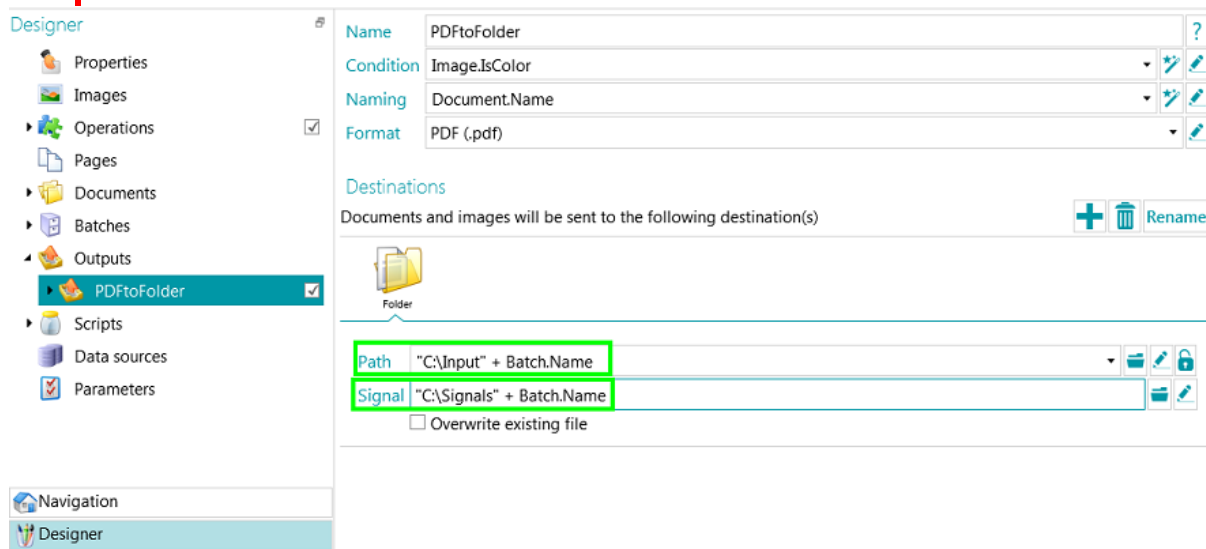
### To connect Projects:

- [Create a new Project](#) and select **Folder** as Destination.

In this Project you will do one part of the processing. E.g. the Scanning and Image Processing operations.

- Go to **Designer > Properties** and set the **Validation** and **Export** Activities to **Service**.
- Go to **Designer > Outputs > Output**.
- Enter a **Path** where the output documents will be stored. E.g. "C:\Input\" + Batch.Name.
- Enter the **Signal** folder where the signal files will be stored. E.g. "C:\Signals\" + Batch.Name.

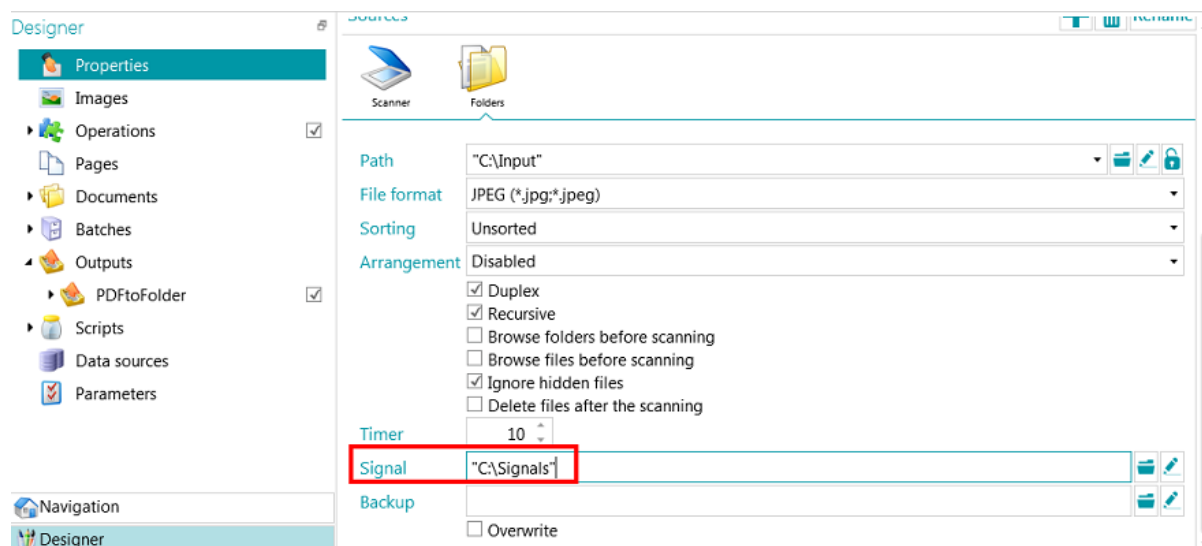
**WARNING:** make sure to put a back slash at the end of the folder name.



- Create a second Project and make sure to select **Folders** as Source.
- Go to **Designer > Properties** and set the **Capture** Activity to **Service**.  
The Folder will now be a Watched Folder.



- Enter the **Path** of the Folder you defined as Output Folder in the previous Project.  
In our example, this is "C:\Input\".
- Enter the Signal folder you defined in the previous Project.  
In our example, this is "C:\Signals\".



- Return to the previous Project and process your documents.  
When all documents have been exported a signal file is created in the Folder you defined. In our case C:\Signals\.
- Only when the Watched Folder of the second Project detects this signal file it will import the documents into the Project.  
In our example the subfolder "Batch 1" of the Watched Folder "C:\Input\" will be processed only if the Signal folder "c:\Signals\" contains a signal file named "Batch 1".
- Return to the second Project and process the documents. They are now sent to the Output folder.



## 20. Using the Button Manager

If your scanner is equipped with one or more scanner buttons, the IRIS Powerscan™ Button Manager allows you to configure those buttons to start IRIS Powerscan™ directly, open the Scan Project of your choice and start scanning documents, all at the touch of a button.

The Button Manager is compatible with virtually any Twain-based scanner that uses Twain version 1.9 and higher.

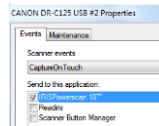
If you are using an ISIS-based scanner, make sure the **ISIS-Driver Add-on** has been activated.

**Before you configure the Button Manager:**

- Go to the Windows **Control Panel > Devices and Printers**.
- Right-click your scanner and click **Properties**.
- In the **Events** list select **Start the Program**.
- Select **IRIS Powerscan 10** as application.

In case this menu does not exist for your scanner:

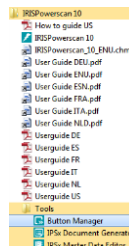
- Open your scanner's Scan Utility.  
E.g. Canon imageFormula Utility.
- Configure the utility to access IRIS Powerscan™ when you press the scanner button.



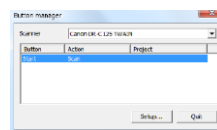
Example

**Now configure the IRIS Powerscan™ Button Manager:**

- Open the Button Manager from the Windows **Programs** list.



- The scanner you configured is displayed in the **Scanner** list.
- Select the button you want to configure, and then click **Setup**.



- Enter a name for the Button.
- Select one of the available **Actions**:
  - **Open project**: IRIS Powerscan™ simply starts and opens your project when you press the scanner button.
  - **Scan - new batch**: IRIS Powerscan™ starts, opens your project and creates a new batch.
  - **Scan - new document**: IRIS Powerscan™ starts, opens your project and creates a new document.
  - **Scan**: IRIS Powerscan™ starts, opens your project and scans. The scanned pages are added to the current batch and document.
- Select the **Project** the Button Manager must open: the project you used last, or another specific project.

**Note:** only the projects that have a scanner as input source are listed here.

- When you are done click **OK** to close the Settings.
- Now press the scanner button to start scanning.