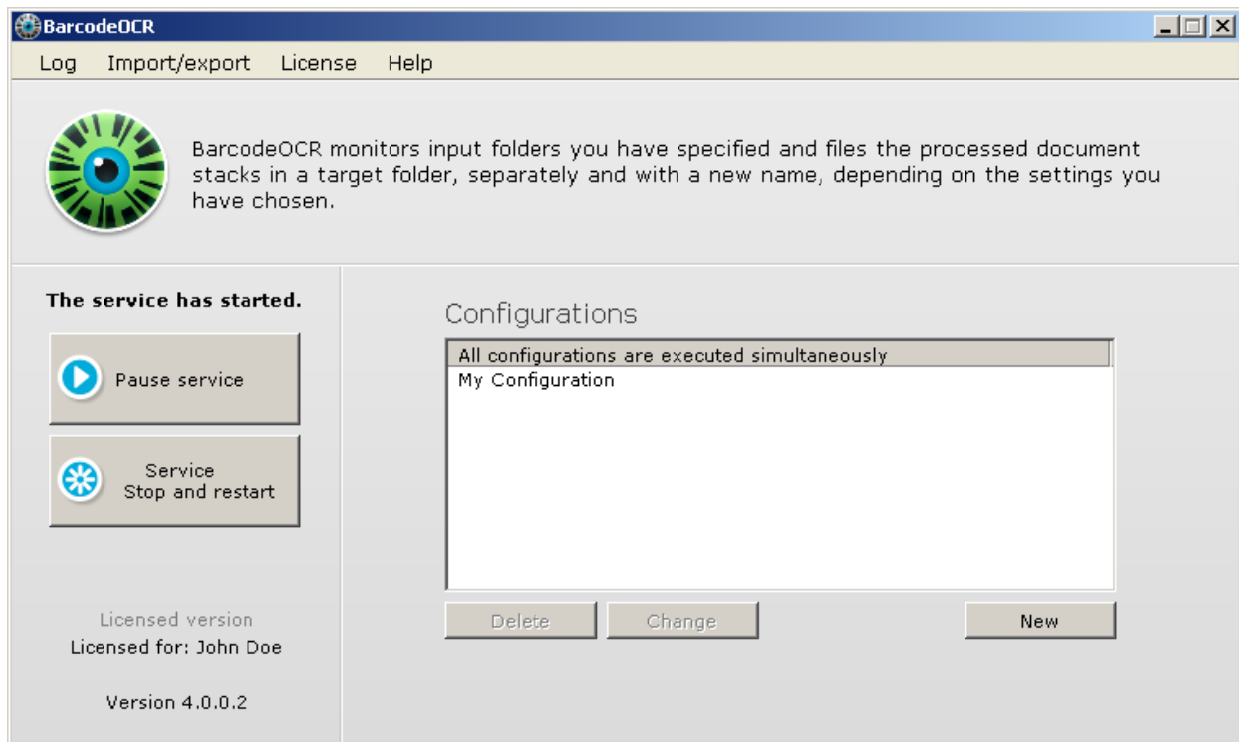




# User Manual

BarcodeOCR 4.0



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# Introduction

## What is BarcodeOCR?

BarcodeOCR is a tool for automatic file processing and barcode recognition.

With this software, scanned documents can be monitored for a barcode and then be saved in a different application for further processing, after being separated and given a new name as appropriate.

BarcodeOCR offers an extensive catalogue of recognisable barcodes and supported document formats.

BarcodeOCR monitors folders on the local PC or in the network. If new files appear in these input folders they are automatically processed.

How documents are to be processed is defined once-only in one or more configurations. This includes making differentiations on the basis of barcode type and contents, input folder and output folder, the separation of document stacks and the names of the output files. Once the configuration has been created the software runs automatically in the background as a Windows service, without any further intervention.

## Which barcodes are supported?

BarcodeOCR can recognise the following barcodes in documents

1D barcodes	Code 11 Code 39 Code 93 Code 128 2of5 Interleaved Codabar Patch Code EAN 8 EAN 13 UPC A UPC E Add 2 Add 5
Postal barcodes	PostNet Planet RM4SCC AustraliaPost IntelligentMail
2D barcodes	PDF417 Data Matrix QR Code

## System requirements

### Operating systems supported

32 and 64-bit Windows systems from Windows XP.

BarcodeOCR has been tested successfully under 32-bit Win XP, 32 and 64-bit Vista, 32 and 64-bit Server 2003, SBS 2003, SBS 2008, 32-bit and 64-bit Server 2008 as well as 32-bit and 64-bit Windows 7.

### File formats supported

PDF (automatic page separation possible), BMP, TIF, JPG and PNG



## Installation

### Download

The current version of BarcodeOCR is available from the download area at [www.barcode-ocr.de](http://www.barcode-ocr.de). The download area contains previous versions as well as the current version.

#### Instructions

1. Ensure that you have logged onto the computer with an administrator user account. Local administrator rights are needed for the installation.
2. Download the required version onto your PC from our website ([www.barcode-ocr.de](http://www.barcode-ocr.de)).
3. Unzip the ZIP archive in a local folder.

### Installation

Installation requires local administrator rights.

#### Instructions

4. Start the installation by double-clicking on the setup file from the unzipped ZIP archive.
5. Select the required language and confirm with OK.



6. Follow the instructions provided by the setup wizard to complete the installation.



# Licensing

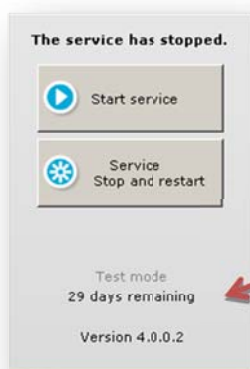
## The license wizard

The application is started automatically if installation is successful. This may take a short while. A wizard opens that will help you to register your installation of BarcodeOCR.



## Testing BarcodeOCR

You can run BarcodeOCR in test mode for 30 days. During this period the registration wizard will appear each time the application is started. The entire range of functions of BarcodeOCR is available in demo mode. Once the test period has expired the application can no longer be started. It is then only possible to activate it by entering a valid serial number.



Shows the remaining number of days that BarcodeOCR can be tested for free of charge.



## Registering BarcodeOCR

The licensing process comprises two steps - registration and activation. You are given a serial number when you purchase the software. This serial number is required to register your copy of BarcodeOCR. Activation is then carried out and BarcodeOCR becomes operational.

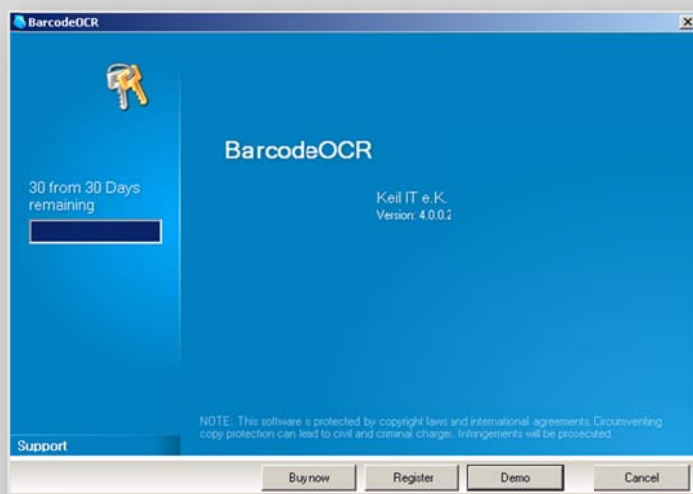
There are two different cases for registration. They are explained in more detail below.

### Registration and activation with existing internet connection.

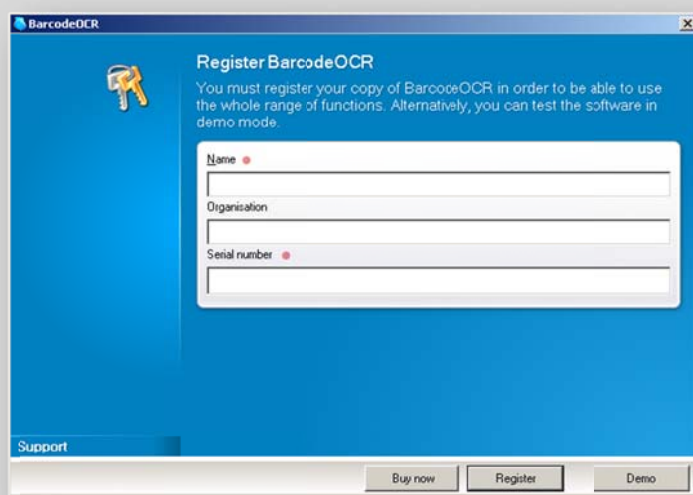
Registration with an existing internet connection is the quickest and easiest way to put your copy of BarcodeOCR into operation.

#### Instructions

7. Start the application to show the registration wizard.



8. Click on "Register".



9. Enter your name, an organisation (optional) and your serial number.
10. Click on "Register".

The software is then activated on the PC. After successful activation you can use the software with the range of functions that you have purchased.



If there is not an active internet connection available on your PC you must carry out additional steps to activate the software manually. These steps are described in the following chapter.

Note:

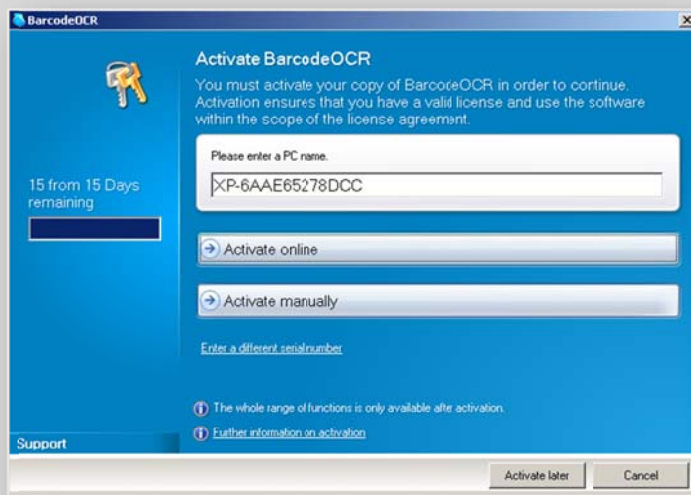
During the activation process, a connection is established to the license server in order to check the serial number. For activation, the data entered into the registration wizard and a unique key that is calculated from the PC's hardware are transmitted.

Apart from this, no data or other information is collected or transferred from your PC.

### Registration and activation without internet connection

If the PC that you want to run BarcodeOCR on does not have an existing internet connection you have to activate the software manually. This must be done in addition to the registration steps described above.

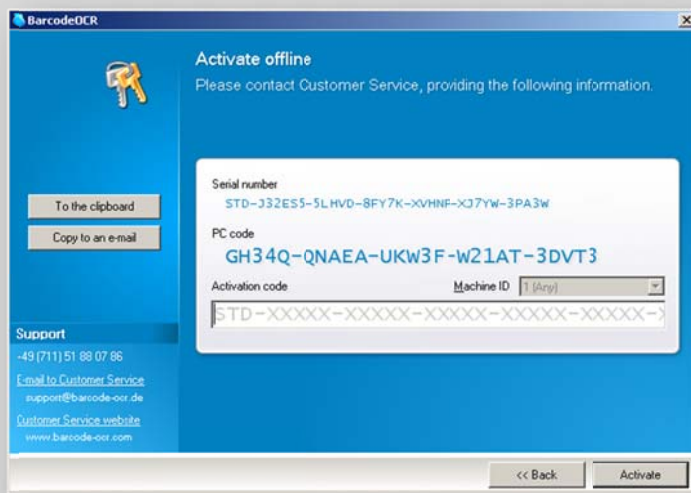
11. If automatic activation via the internet is not possible this window will appear.



12. Please enter a name for the PC. This will help you to remember which PC you have activated the software on.

13. If you were only temporarily without an internet connection you can now try to activate the software online again. To do this, click on "Activate online".

14. To start manual activation, click on "Activate manually".



15. Please contact Customer Service by telephone or e-mail and read off the information displayed to the Customer Service employee.
16. You will then be given an activation code. Please enter this code in the appropriate field.
17. Manual activation is completed by clicking on "Activate".

After successful activation you can use the software with the range of functions that you have purchased.



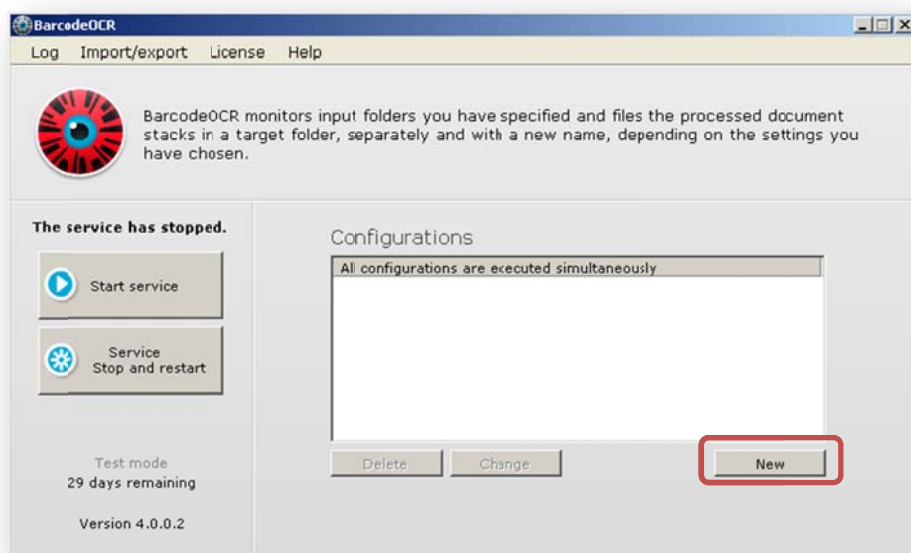
# Working with BarcodeOCR

## Configurations

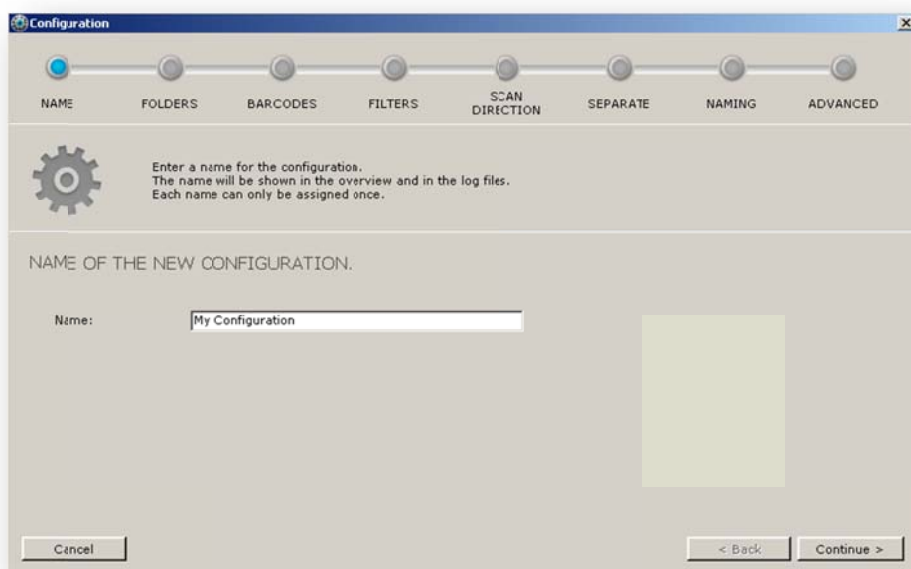
Using the configuration wizard, BarcodeOCR guides you through the individual steps needed to create a configuration. Configurations are required to control how BarcodeOCR processes documents.

### Creating a new configuration

On the BarcodeOCR start page, click on "New" to create a new configuration and start the wizard.



### Step 1: Name

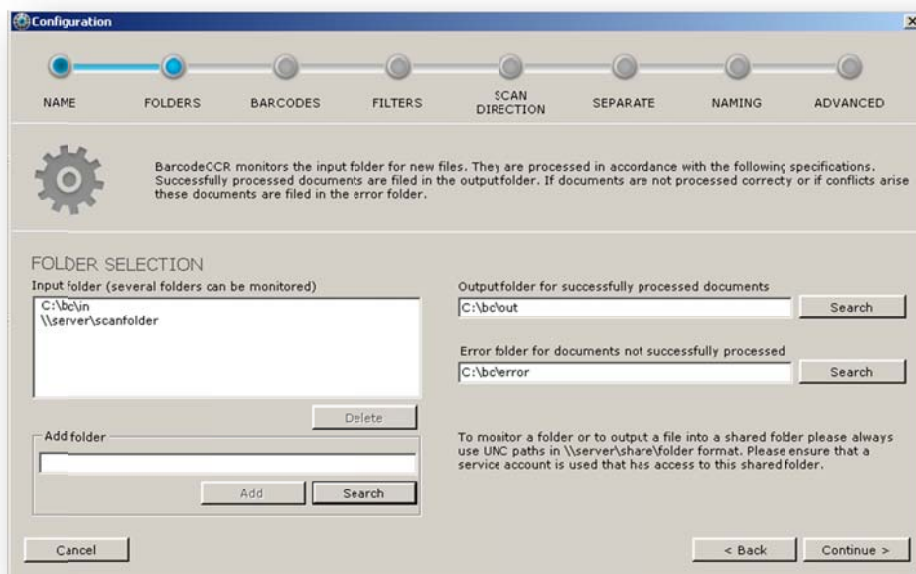


Enter the name that you want to give to the configuration. Please remember that each configuration must have a unique name. Then click on "Next >".

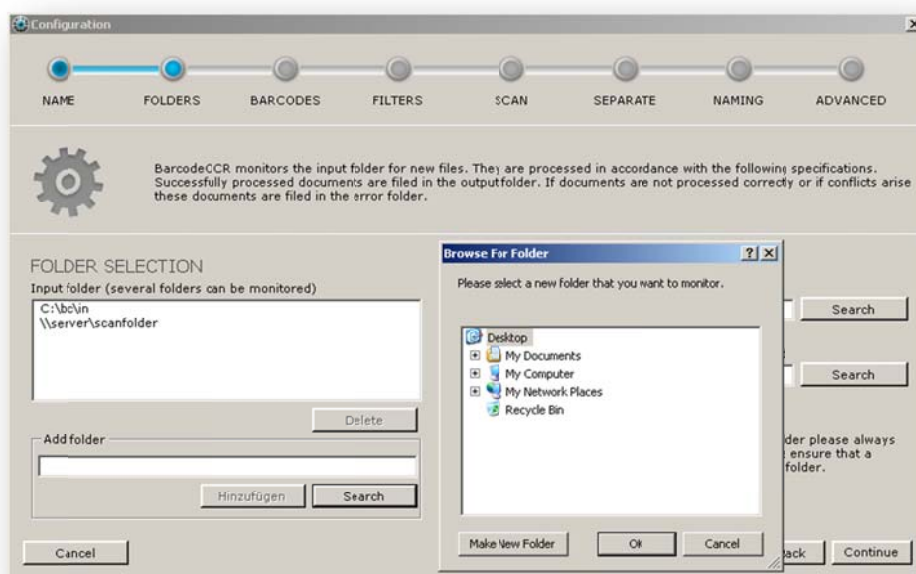


## Step 2: Folders

BarcodeOCR monitors a folder for incoming files. This folder is called the "input folder". It is usually the output folder of a scanner.



Specify an input folder and then click on "Add", or click on "Search" and navigate to a local folder.

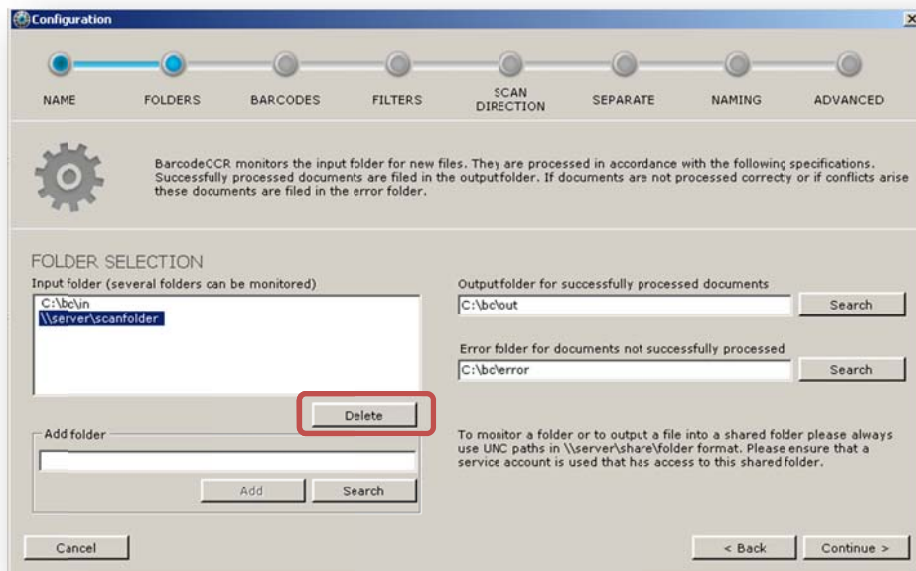


You can specify several input folders.

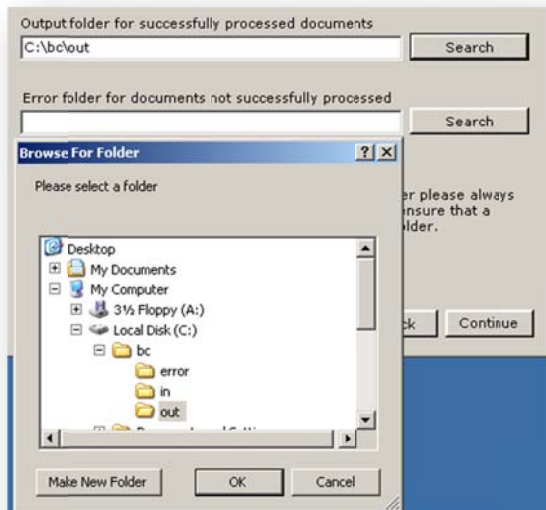
Please remember that shared folders must be specified via a UNC path and that the service account must have read and write permission for this shared folder.

If you would like to remove an input folder from the list again, select it and then click on "Delete".





Then specify an output folder and an error folder.



A successfully processed file is stored in the output folder. This folder is usually the input folder of a downstream application, such as archiving software, that uses the files processed by BarcodeOCR.

Files that it was not possible for BarcodeOCR to process are stored in the error folder. This is the case in particular if a barcode was not recognised or successful processing would create a naming conflict.

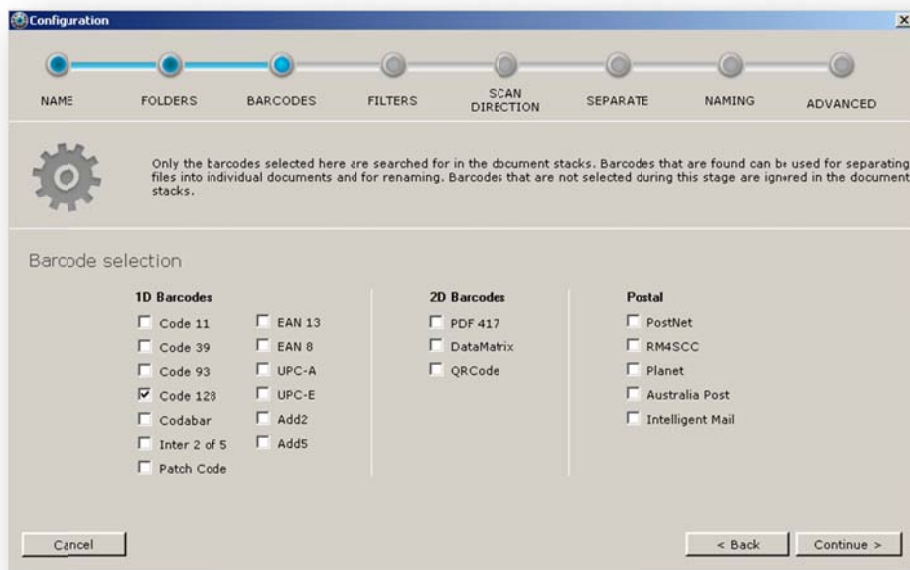
**Note**

To prevent loops, neither the output folder nor the error folder are permitted to be identical to an input folder or be a subfolder of one.



### Step 3: Barcodes

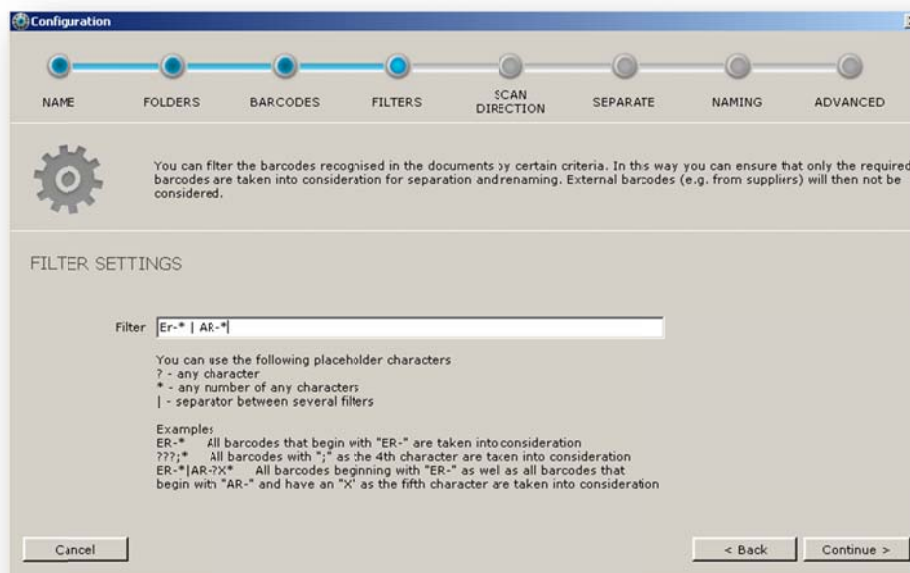
In this step you specify what type of barcodes BarcodeOCR is to search for in a file to be processed.



In this case the documents are only checked for "Code 128" and all other codes are ignored.

### Step 4: Filters

You can assign a filter in this step. The filter relates to the information coded in the barcode.



You can use the following placeholders to create the filter screen.

?	Any single character
---	----------------------



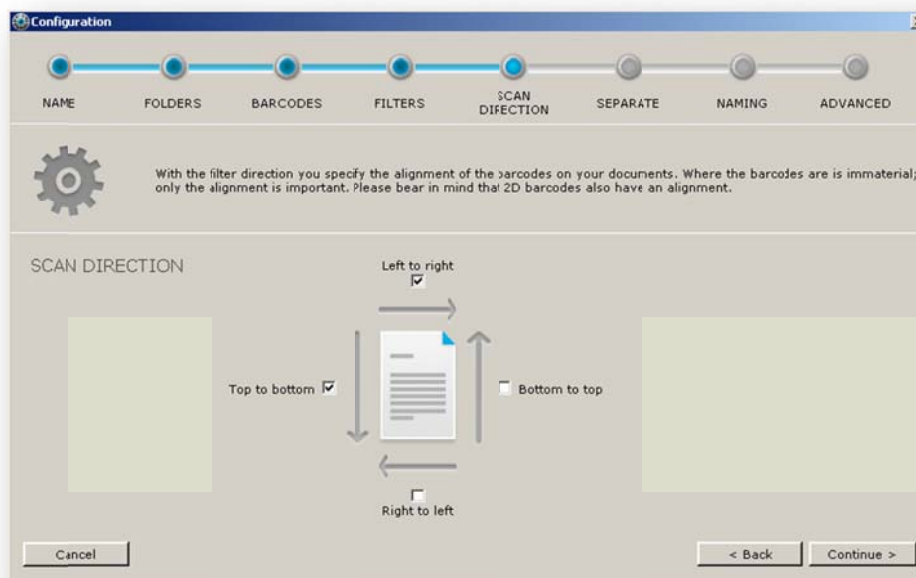
*	Any number of characters
	Separator in order to specify several filters one after the other

Examples:

<b>ER-*</b>	Takes all barcodes containing information beginning with "ER" into account.
<b>???:*</b>	Takes all barcodes containing information with a ";" as the fourth character into account.
<b>????????</b>	Takes all barcodes containing information with a length of eight characters into account.
<b>AR-*   *2011</b>	Takes all barcodes that begin with "AR-" as well as all barcodes that end in "2011" into account.

### Step 5: Scan direction

Select the direction in which BarcodeOCR is to look for barcodes in the document. The scan direction corresponds to the alignment of the barcode.



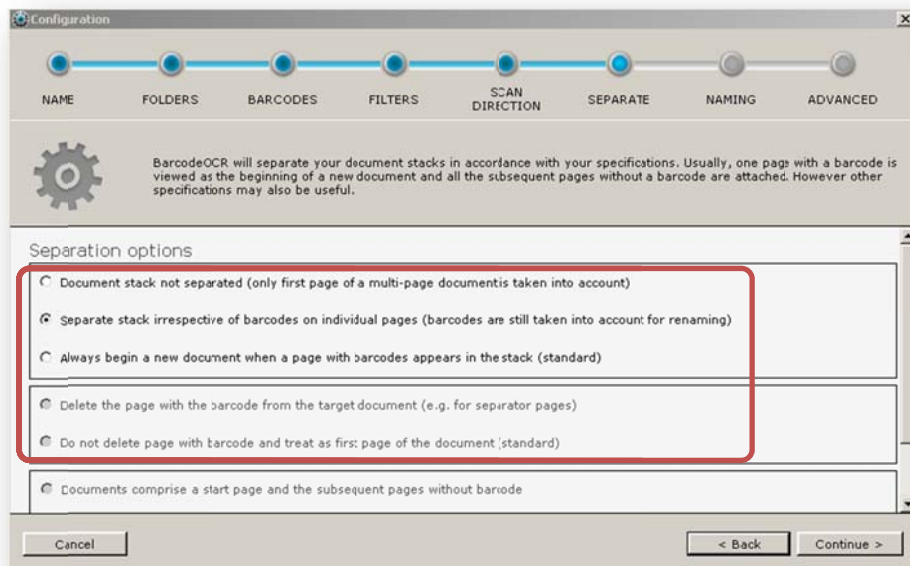
In this example, barcodes that are printed from "left to right" (normal horizontal reading direction) are taken into account as well as barcodes that are printed from "top to bottom".

Please bear in mind that 2D barcodes also have an alignment.

### Step 6: Separating

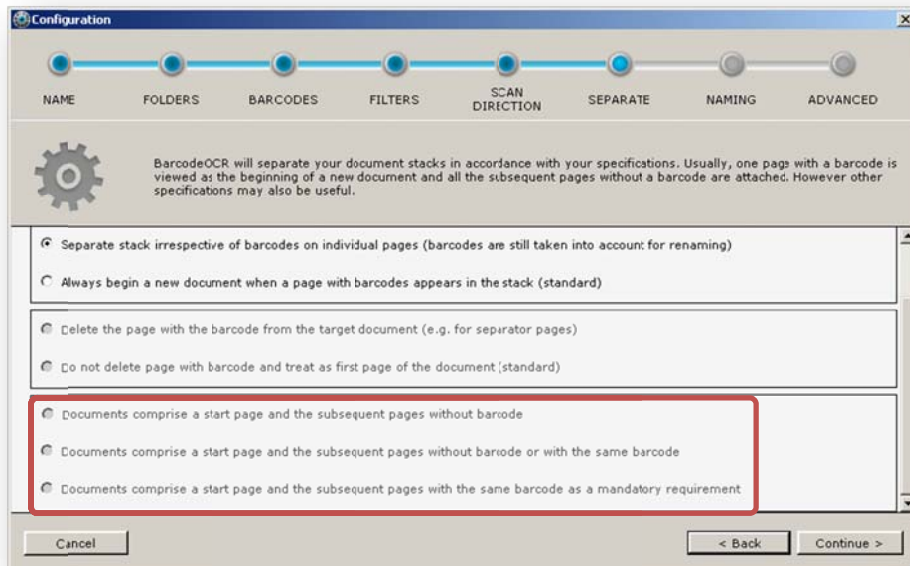
Determine how BarcodeOCR is to separate the document stack. Only PDF documents can be separated automatically.





- **Document stack not separated**
  - Only the first page of a multi-page document is taken into account
  - The document is not divided up into individual pages
- **Separate stack irrespective of barcodes on individual pages**
  - A multi-page document is divided up into individual documents, each with one page, irrespective of barcodes
  - However, the barcodes are taken into account when the files are subsequently renamed
- **Always begin a new document when a page with barcodes appears in the stack**
  - Each page in a multi-page document that has a barcode is viewed as the beginning of a new document (exceptions are then defined)
- **Delete the page with the barcode from the target document**
  - If your documents do not have any barcodes you can place separator pages with a barcode between the documents during scanning
  - If this option has been selected the page with the barcode is viewed as a separator page and it is not included in the target document
- **Do not delete page with barcode and treat as first page of the document**
  - This is the standard case. Pages with barcodes are not removed



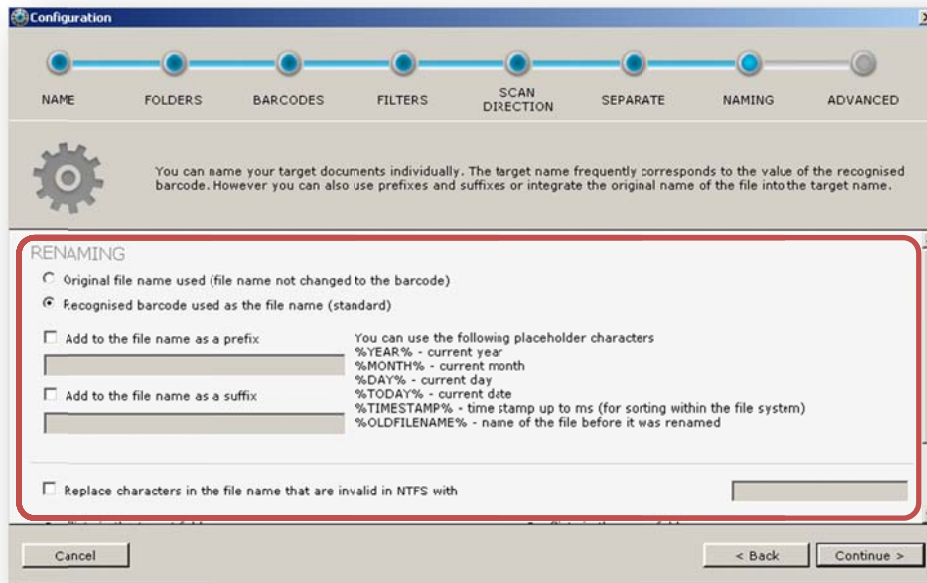


- *Documents comprise a start page with barcode and the subsequent pages without barcode*
  - A page with a barcode in the document stack marks the beginning of a new document
  - All subsequent pages on which no barcodes are found are attached to this page
  - The first subsequent page with a barcode marks the beginning of the next document
  
- *Documents comprise a start page with barcode and the subsequent pages without barcode or with the same barcode*
  - A page with a barcode in the document stack marks the beginning of a new document
  - All subsequent pages on which no barcodes are found or that have the same barcode as the start page are attached to this page
  - The first subsequent page with a different barcode marks the beginning of the next document
  
- *Documents comprise a start page with barcode and the subsequent pages with the same barcode as a mandatory requirement*
  - A page with a barcode in the document stack marks the beginning of a new document
  - All immediately following subsequent pages on which the same barcode as on the start page is found are attached to the start page
  - The first subsequent page with a different barcode marks the beginning of a new document
  - Subsequent pages without a barcode are sent to the error folder



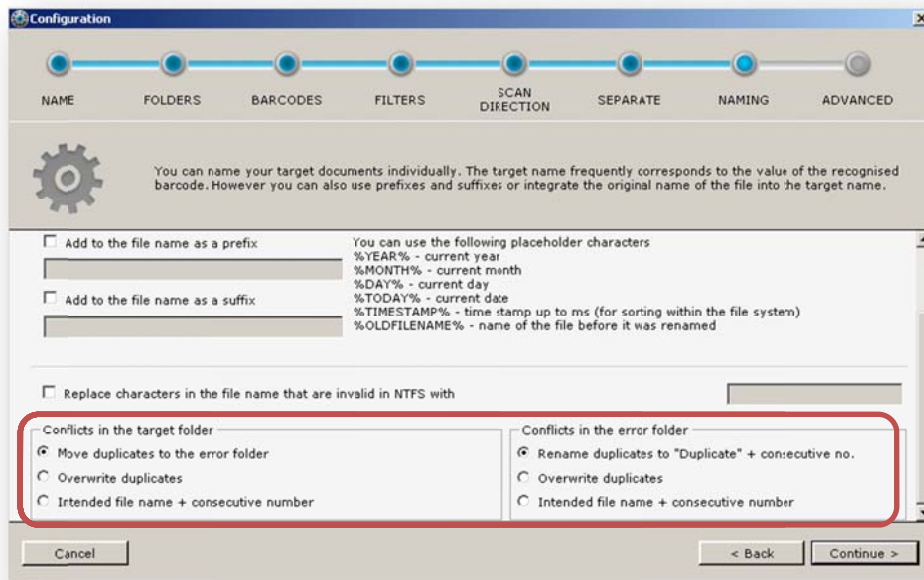
## Step 7: Naming

Specify the convention that the documents are to be renamed by.



- *Original file name used*
  - The document is only divided up and not renamed on the basis of the barcode
- *Recognised barcode used as the file name*
  - The document is renamed on the basis of the recognised barcode
- *Add to the file name as a prefix*
  - Puts the characters entered at the beginning of the file name
  - The placeholders specified on the right can be used
- *Add to the file name as a suffix*
  - Puts the characters entered at the end of the file name
  - The placeholders specified on the right can be used
- *Replace characters in the file name that are invalid in NTFS with*
  - The following characters are invalid in the file name in the NTFS file system: / ? < > \ : \* | " ' &lt; >
  - If the barcodes contain characters such as this you can specify a replacement character that appears in place of the invalid character when the file is saved





- **Conflicts in the target folder**

If conflicts arise on saving (e.g. because a barcode appeared twice in a stack) you have the following options

- *Move duplicates to the error folder*
  - The document is filed in the error folder
- *Overwrite duplicates*
  - The newer document overwrites the existing document
- *Intended file name + consecutive number*
  - The document is filed under the intended name but a consecutive number is attached in order to ensure that the file name is unique

- **Conflicts in the error folder**

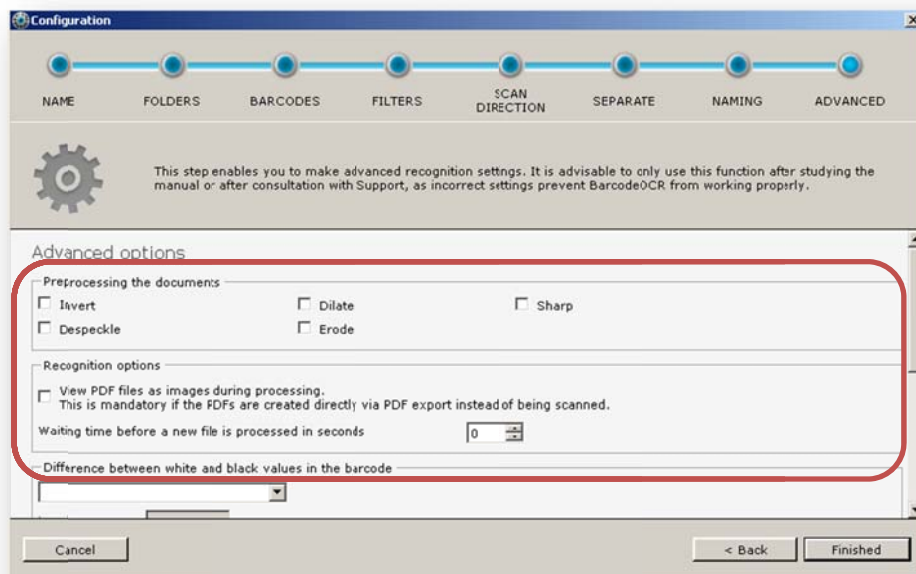
If conflicts arise in the error folder on saving you have the following options

- *Rename duplicates to 'Duplicate' + consecutive number*
  - The document is renamed "Duplicate" and is given a consecutive number in order to ensure that the file name is unique
- *Overwrite duplicates*
  - The newer document overwrites the existing one
- *Intended file name + consecutive number*
  - The document is filed under the intended name but a consecutive number is attached in order to ensure that the file name is unique



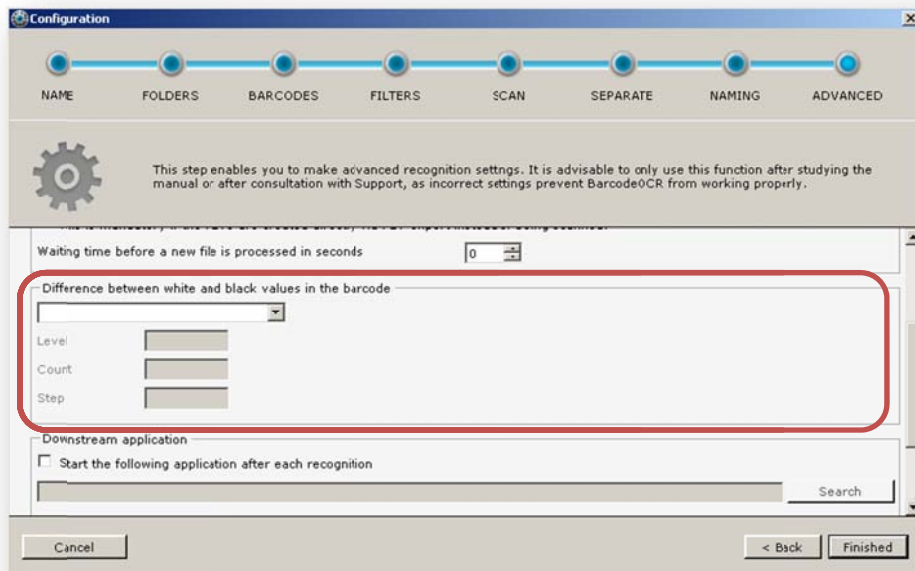
## Step 8: Advanced

The advanced options are only required in special situations and they should only be deployed by experienced users or in consultation with Customer Support.

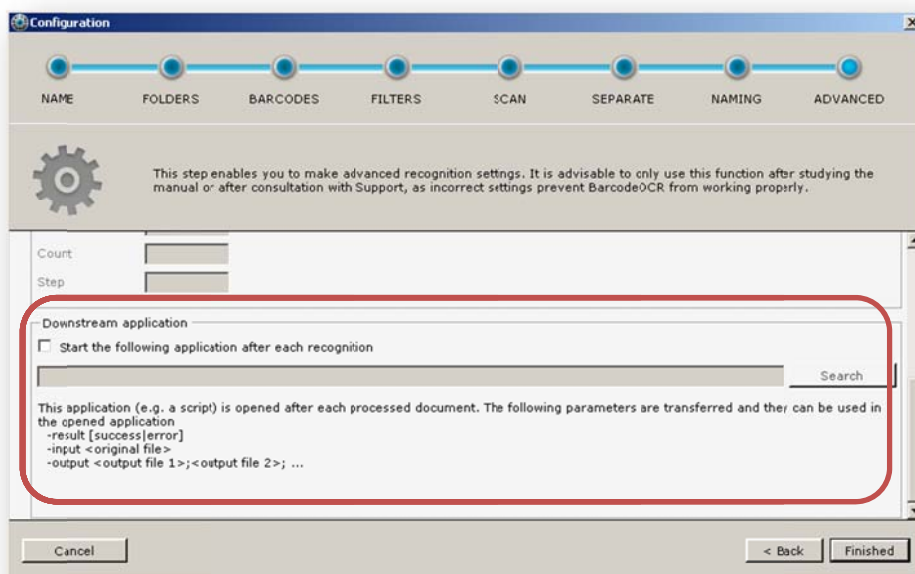


- **Preprocessing the documents**  
Various filters can improve barcode recognition before the scanned documents are processed. The filters are only applied during processing and they do not change the document.
  - *Invert* – switches black and white values
  - *Despeckle* – removes speckles and white dots from black barcode areas that can be produced on a black and white scan
  - *Dilate* – dilates the colour values
  - *Erode* – erodes the colour values
  - *Sharp* – sharpens the image
- **View PDF files as images during processing**  
If your documents are not scanned PDF files but are created with a PDF printer directly on your PC, the barcode in these documents is not an image. If this is the case (and only in this case) please activate this option in order to convert the PDF files into an image beforehand. They are only converted for the recognition process and this does not change the document.
- **Waiting time before a new file is processed in seconds**  
Some scanners do not only file the documents when all the pages have been scanned but create temporary files during the scanning process which contain the pages already scanned. In order that BarcodeOCR does not start recognition of the incompletely scanned documents, you can use this box to specify a time limit during which a new file is not processed. The number specified is the time in seconds that has to have elapsed since the point in time that the file was created.





- *Difference between white and black values in the barcode*  
BarcodeOCR has to stipulate the threshold between white and black values in the document in order to separate the light areas in the barcode from the dark ones. There are two options for this.
  - *Automatically*  
The threshold between white and black characters in the document is detected automatically.
  - *Iteratively*  
The recognition process initially starts at the threshold specified in the "Level" field (valid values 0 to 255) and attempts recognition with this setting. If this proves unsuccessful, the threshold is reduced by the value in the "Step" field and recognition is tried again. Then, the threshold in "Level" is increased by "Step" and recognition is attempted once more. The value in "Step" is doubled for the next run. The "Count" field indicates the number of runs. The iterative method is particularly useful if grey or coloured paper is involved.



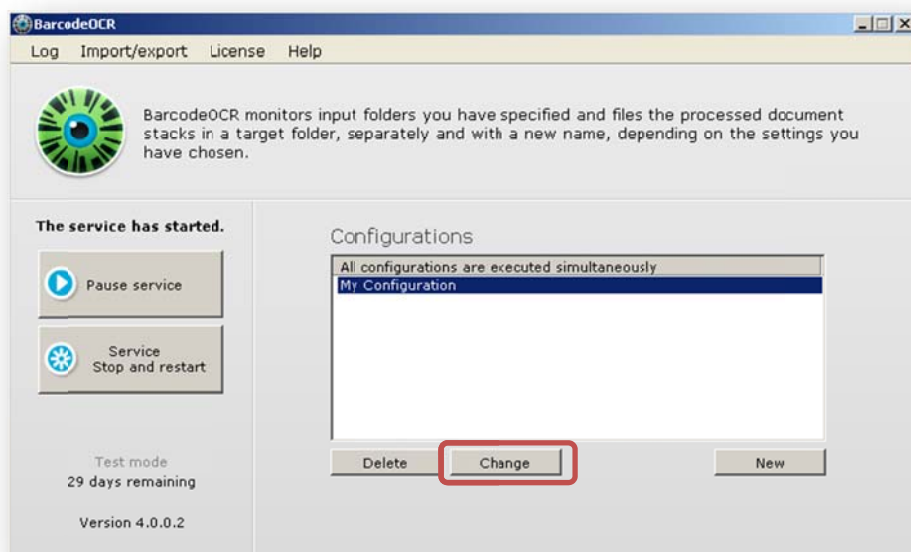
- *Downstream application*

You can specify a file or a script that is opened after each processed document. In this way you can, for example, move the file individually or start the import of downstream software. Please bear in mind that the application will run within the security context of the Windows service of BarcodeOCR and, in this case as well, access to the network must be specified with UNC paths. Your application can use the specified transfer parameters.

The service is restarted after the last step in the wizard has been completed. The new configuration is then active.

### Changing a configuration

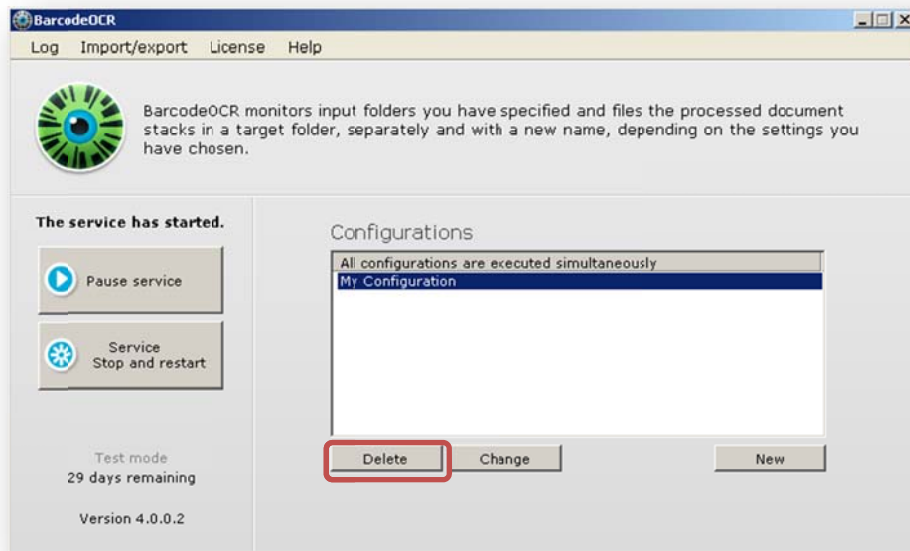
A configuration can be changed at any time using the "Change" button on the start page. The change is carried out in the same way as creating a new configuration. If you cancel the wizard during the change process no changes will be saved.



### Deleting a configuration

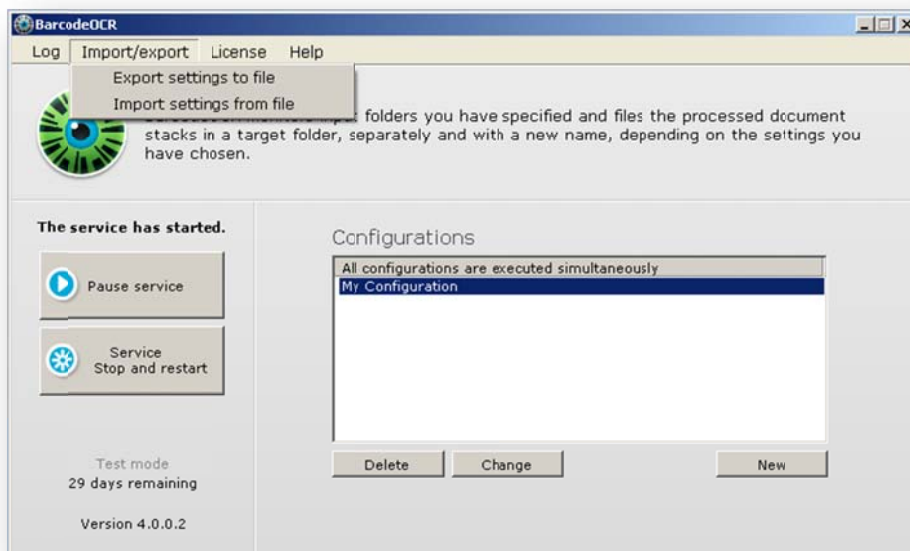
A configuration can be deleted at any time using the "Delete" button on the start page.





## Exporting/importing a configuration

If you want to back up your configurations, e.g. in order to test the settings, to migrate the software to a different PC or to make it available to Customer Support, you can use the "Export settings to file" option on the start page. You will be asked to specify a name and a folder for the export. All the configurations and the current log files are backed up. To import settings, select "Import settings from file". Then select the previously exported ZIP file. When you confirm the prompt, the exported configurations are imported. The current configurations are overwritten.

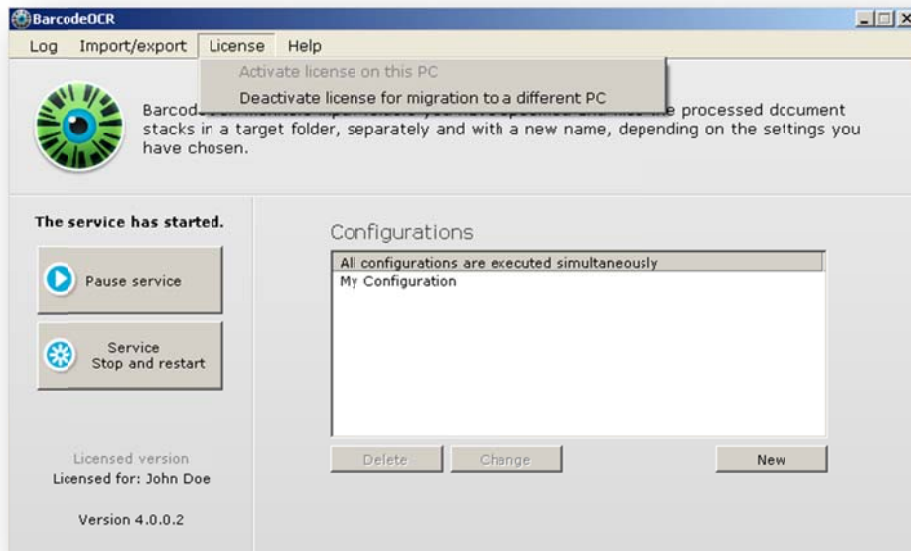


## Migration to a different computer

If you would like to migrate BarcodeOCR to a different computer you must first deactivate the license on the old PC.

In order to do this, select the "Deactivate license for migration to a different PC" menu item from the "License" menu.



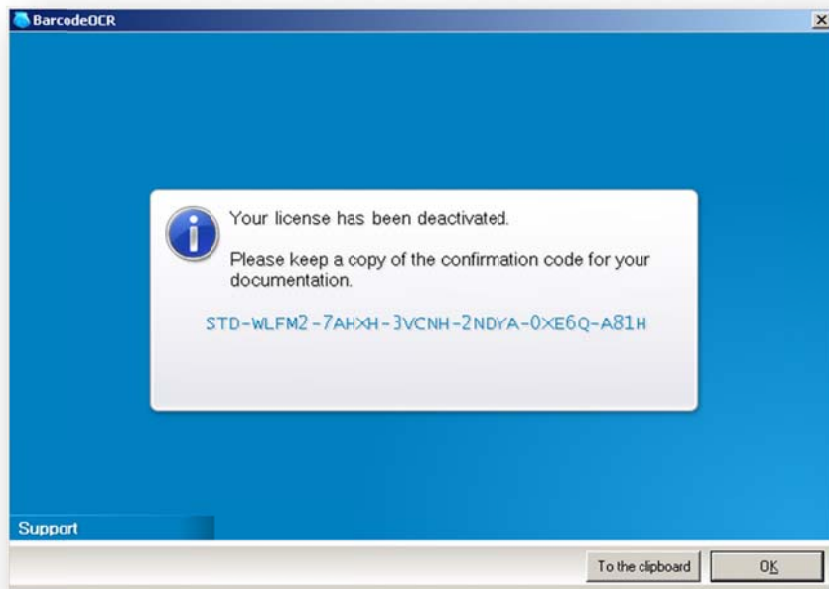


The dialog for deactivating the license appears.



The license is deactivated by clicking on "Deactivate" and then confirming the prompt. A confirmation code is then displayed.





An internet connection is needed for deactivation. If an internet connection is not available copy the deactivation confirmation code and send it to Customer Service, together with your serial number and the deactivation date.

## Uninstalling

To uninstall BarcodeOCR from your system, please select "Uninstall" from the start menu entry. An appropriate entry is also located in the program folder (%ProgramFiles%\BarcodeOCR). Please follow the instructions provided by the wizard.

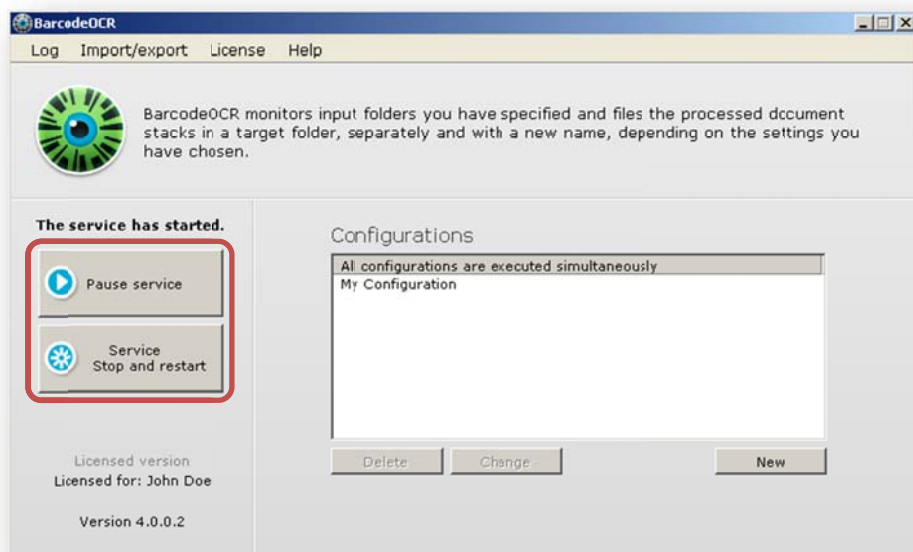
### Note

If you have already activated BarcodeOCR on this computer you should deactivate the license before uninstalling the software. This will enable you to run the software again at a later date. To deactivate the license, please follow the steps in the "Migration to a different computer" chapter.



# Service control and log files

## Service control

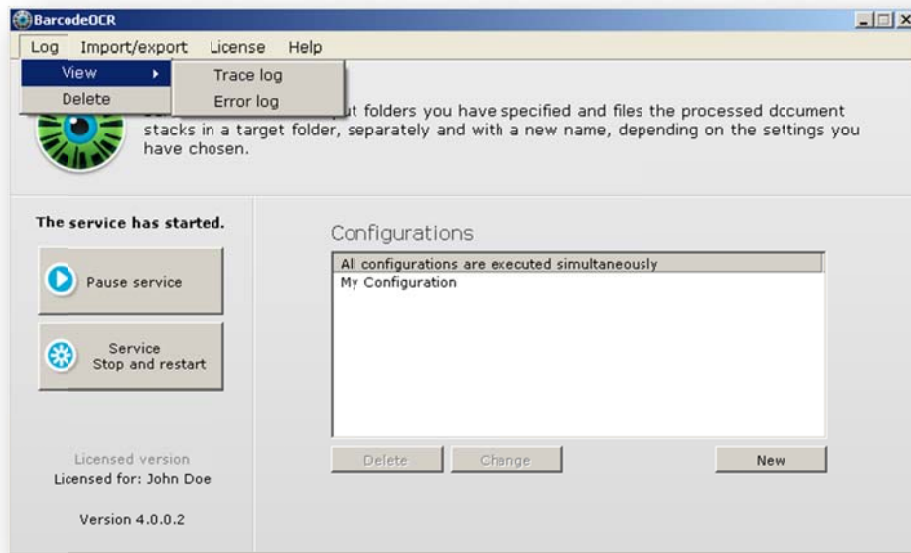


When a configuration is saved, the BarcodeOCR service is automatically restarted. If, for example, folders are not available or if the service account is incorrect, the service may not be able to start. The BarcodeOCR logo is displayed with a red background on the start page and you will be shown a message stating that the service has not started. You can then restart the service from the start page by clicking on "Start service". You can stop the current service by clicking on "Pause service". However, you can also use the Windows Service Controller.

## Logs

BarcodeOCR records successful and unsuccessful actions in log files. You can open them from the start page by clicking on the "Log" menu item. The trace log records all the service's successful activities. The error log contains all the error messages and naming conflicts that have arisen during the recognition processes. You can erase the logs by clicking on "Delete".





## Help/support

Do you have any other questions? Then visit our website at <http://www.barcode-ocr.de>

## Company details

BarcodeOCR is software produced by

 **Keil IT e.K.**  
Oderstrasse 17  
70376 Stuttgart

Tel: +49 (711) 51 88 07 86  
E-mail: [support@barcode-ocr.de](mailto:support@barcode-ocr.de)  
<http://www.barcode-ocr.de>  
HRA 721743 Stuttgart  
VAT ID: DE249642937

