

ABBYY FlexiCapture 12 Service Pack 1 Release Notes

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Introduction

About This Document

This document describes the features that have been implemented in ABBYY FlexiCapture 12 Release 1 Service Pack 1.

About the Product

ABBYY FlexiCapture 12 is a new version of FlexiCapture, a software product intended to provide a stable and scalable Data Capture platform which can serve as a basis for creating regional and vertical solutions.

About the Service Pack

Service Pack 1 is released to add new features to the product and to fix the issues described below. It can be installed on its own or on top of FlexiCapture 12 Release 1 and all previous patches.

We strongly recommend closing any tasks currently in processing before the upgrade. If you choose to leave any tasks in processing during the upgrade, they may fail and become inaccessible.

For detailed information about the upgrade procedure, please refer to the Administrator's Guide.

Technical Information

Release	Part #	Build #	OCRT build #	Release date
Release 1 Service Pack 1	1299/16	12.0.1. 367	15.0.1.243	2017.10.23
Release 1 Patch 3	1299/15	12.0.1.292	15.0.1.235	2017.08.18
Release 1 Patch 2	1299/14	12.0.1.282	15.0.1.230	2017.07.19
Release 1 Patch 1	1299/13	12.0.1.267	15.0.1.224	2017.05.23
Release 1	1299/12	12.0.1.263	15.0.1.223	2017.05.19

New Functionality

1. Advanced Classification

1.1. Classification confidence values are now available in FlexiCapture

Besides the final decision about the class of a page, the classification result now also contains confidence values for all classes differentiated by the classifier. To get access to this data, you must use a classification script in the batch type properties.

The following code will classify pages in the same way as a standard processing flow without scripting:

Page.ResultClassName = BatchTypeClassifier.ClassifyPage(Page).ClassName;

or

IPageClassificationResult result = BatchTypeClassifier.ClassifyPage(Page);

Page.ResultClassName = result. ClassName;

To provide access to all classes and their confidence values in a classification result, the IPageClassificationResult interface has been extended to include the following properties:

ClassName - the name of the class identified as the classification result for the current page.

Classes – a collection of class names and their confidence values.

You can iterate through all classes using code like the following:

FCTools.ShowMessage("Class name: " + result.Classes[i].Name + "; Confidence: " + result.Classes[i].Confidence, false);

}

1.2. Rules manually created in Flexilayout Studio can use confidence values obtained for the classes

You can use rules to improve auto-classification results when developing your own classification solution in Flexilayout Studio.

After auto-classification, you can see the confidence values obtained for the classes. These values are available in the page properties.

Properties - Page 1	
Name	Value
Comment	
Batch path	$C:\label{eq:constraint} C:\label{eq:constraint} C:\label{eq:constraint} Users\arrow defined as the constraint of the c$
Classification result	Class3
Reference Class	Class3
Class confidences	Class3, 97Class2, 30Class1, 15
Image info	1682x998 pixels, 96 dpi
Class confidences	
Class confidences	
Class2 30	^
Class1, 15	
<	>

The following new global functions have been added to the FlexiLayout language to provide access to the class confidence values obtained through auto-classification:

StringArray AutoClassificationResult() – gets access to all class names in an auto-classification result. StringArray ClassesByConfidence() – an array of class names in an auto-classification result, sorted in descending order. IntArray ClassConfidences() – an array of class confidence values sorted in the same order as the array returned by ClassesByConfidence().

Int ClassConfidence(String className) – gets the confidence of a class by its name.

Int ClassConfidence(Int classIndex) – gets the confidence of a class using the index of the class in the array returned by ClassesByConfidence().

Other changes:

- 1. operator << works for types RectArray, NamedValueArray, StringArray, YCoordinateArray.
- 2. constructor of StringArray type by String:
 - StringArray StringArray(String)
- 3. constructor of YCoordinateArray by YCoordinate: YCoordinateArray YCoordinateArray(YCoordinate)
- 4. global function to convert an array of int variables to string: String Str(IntArray)

A sample script for "Advanced Pre-search code" for a rule ID element:

```
print: "AutoClassificationResult=" + Str(AutoClassificationResult);
print: "ClassesByConfidence=" + Str(ClassesByConfidence);
print: "ClassConfidences=" + Str(ClassConfidences);
```

if ClassConfidences.Count > 0 then

```
{
    print: "ClassConfidence[0]=" + Str(ClassConfidence(1));
}
//next row will generate "Out of range" error if the number of classes is
smaller than 100
//print: "ClassConfidence[99]=" + Str(ClassConfidence(99));
// the names of classes are case-insensitive
print: "ClassConfidence letter=" + Str(ClassConfidence("letter"));
print: "ClassConfidence Letter=" + Str(ClassConfidence("Letter"));
// iterate all classes and their confidence values
for i from 0 to ClassConfidences.Count - 1
{
    String classname = ClassesByConfidence.GetAt(i);
    print: "Confindence of class " + className + " =
" + Str(ClassConfidence(i)) + "/" + Str(ClassConfidence(classname));
}
```

2. Improvements in Email Import

2.1. IMAP support

You can use the IMAP protocol to import email messages and their attachments from a mailbox.

Specify the address of the server and provide the credentials and encryption setting. In most cases, the Auto mode will work, while for some servers you have to explicitly choose SSL or TLS.

Import Profile Wizard

Image Sel	e Import S ect the sou	ource rce for image import
Image s O Sc Ho	ource anner: ot Folder:	IMAP server V
		Browse Settings
	Network	settings X
	Passwor	d:
		Type of encrypted connection: SSL V OK SSL TLS Auto
		< Back Next > Cancel

Please note that most popular mail servers, such as Gmail, require you to enable access via IMAP in the settings of your mail account.

 \times

Click **Browse...** if you want to specify a folder to import emails from (you can also set up mailbox rules to put all emails you want to process with ABBYY FlexiCapture into this folder).

You must also specify where to move processed emails. You can move emails processed with errors to a special folder inside your inbox (and set special notification rules on the mail server to notify you whenever anything arrives into this folder). Successfully processed emails can also be moved to a special folder or just deleted.

The IMAP protocol ensures reliable import of emails and guarantees that you won't lose any emails due to network or software failures. FlexiCapture processes emails from a mailbox sequentially. When the import starts, FlexiCapture creates a special folder inside your mailbox with the words "flexicapture12processing" in its name. All processed emails are placed into this folder. At the end of the import, the emails are removed from this folder in accordance with the options you specify for processed emails. If something goes wrong and the import fails unpredictably, the next import task will start with cleaning up the "flexicapture12processing" folder and moving all the emails to the Exceptions folder. This ensures that no emails are lost in the process.

2.2. Filtering email attachments by file extension

FlexiCapture 12 can import email attachments and, optionally, message bodies. You can filter attachments by extension and decide what to do with filtered attachments — delete them or attach them to a batch for further analysis.

	Hot Fold	er Profile Proper	ties		×
	Genera	Image Loading	Image Preprocessing	Folder Purge	
Files I	Masks Set	tings			×
Files	masks —				
Use	as separa	ator			
Indu	ıde: mp	*.doc *.docx *.c	odt *.htm *.html *.txt *	.rtf *.xls *.xlsx *.od	s *.ppt *.pptx *.odp
Exclu	ude: *.gi	f			
	Attach excl	uded files to batch	1		
				OK	Cancel
	Nhar	han af flas to ad	d. Maaaaa hadiaa aa	d attachmenta	Cattingen
	Nun	ider of files to add	1: Message bodies and	attachments V	Settings
				OK	Cancel

2.3. Adding entire emails, their bodies and attachments to batches

Imported email bodies and attached files are added as pages to a batch. These pages can be automatically assembled into documents during processing. Imported email bodies and attached files are also attached as files to a batch to simplify further processing (this is useful if you want to get access to or store source files). Entire email messages can also be attached to a batch as EML files, if the corresponding option is enabled in the import profile options.

3. Saving Document Data and Page Text for Use by a Custom Verification Client

We have added the ability to save document data and page text for use by a custom verification client. To save document data and page text, use the following new methods in your scripts.

IPage.SaveXmlTextToFile(filename); // Saves full page text in XML to file IPage.SaveXmlTextToFileStorage(); // Saves full page text in XML to file storage IDocument.SaveXmlToFile(filename); // Saves document XML to file IDcocument.SaveXmlToFileStorage(); // Saves document XML to file storage

4. Optimized Performance of Web Stations

Now Web Verification Stations and Scanning Stations work faster even if they are fed a large number of documents and images. We have improved the speed of loading thumbnails, the speed of scrolling, the speed of zooming into images, and the speed of processing "Check Rules" and "Apply Changes" operations at the verification stage.

For example, for an invoice document that contains 8 pages and 200 line items, the average time of loading the data form is 27 seconds, the "Check Rules" operation takes 24 seconds, and the "Apply Changes" operation takes 15 seconds (all measurements made in the Chrome browser).

For an invoice that contains 40 documents and 320 pages, the average time of loading the data form is 33 seconds, the "Check Rules" operation takes 25 seconds, and the "Apply Changes" operation takes 126 seconds (all measurements made in the Chrome browser).

5. Web Scanning Station

5.1. Integration into third-party systems

A Web Scanning Station can be integrated into a third-party system by means of single sign-on technology (using SAML 2.0 and windows authentication). Users will interact with the integrated Web Scanning Station in the same manner as they interact with a non-integrated station. The URL parameters are customizable and support headless mode.

To load the Web Scanning Station into the <iframe> element, set the value of the src attribute to:

<stationUrl>/Manage/winAuth/OpenOrCreate?projectId=[Id_of_project]&batchTypeName=[name_of_batchtype]&batchNa me=[name_of_batch]®param=[parameter:value], where:

Manage – This method turns off the header and the footer on the Web Scanning Station.

winAuth - Windows authentication parameter.

OpenOrCreate – This command opens an existing batch that has not been sent yet or creates a new batch.

projectId – The ID of the project (obligatory parameter).

batchTypeName – The name of the batch type (obligatory parameter).

batchName – The name of the batch (optional parameter). If this parameter is not specified, the batch will be named according to the batch naming scheme specified in the batch type settings on the Web Scanning Station.

regparam – Registration parameter (optional). This parameter can be repeated (if several registration parameters should be filled in). It has the format **name:value** and should be specified in the batch type settings of the Web Scanning Station. If no value is specified in the settings of the Web Scanning Station, this parameter is ignored when creating a batch.

To get a task for re-scanning, use the following URL:

<stationUrl>/Manage/winAuth/GetRescan?projectId=[Id_of_project]&batchName=[name_of_batch]®param=[paramete r:value], where:

GetRescan – Gets a task for re-scanning.

After closing or sending the batch, postMessage will pass an FC_Scanning_TaskClosed message to the parent element.

URL encoding should be used to pass non-Latin characters as parameter values in the URL (e.g. Japanese characters).

5.2. Image enhancements operations

The Crop, Redact, and Change Resolution operations are available for editing images. The Crop and Redact operations are located in the image editor and can be applied to one or several documents. The Change Resolution operation is located on batch editor toolbar.

6. Web Verification Station

6.1. Working with the custom data form on the Web Verification Station

The custom data form is available on the Web Verification Station and includes all the settings configured in the Document Definition. The following form elements and its parameters can be modified in the Document Definition editor and will be displayed accordingly in the data form on the Web Verification Station:

- position and size of fields
- font size of text in fields and labels
- static text
- table and its settings
- ability to hide/show empty columns in the table
- ability to add an instance of a repeating group/field anywhere on the form
- custom tab order
- custom buttons

6.2. Improved work with regions and tables

For your convenience, the regions of repeating groups, fields, and pictures (stamps, signatures, etc.) are shown on the image in different colors.

Drawing tables has become more user friendly. The mechanism of adding vertical and horizontal separators and binding columns has been improved.

6.3. Improved work with document errors

The same icons are now used to indicate errors in the batch editor and in the list of errors on the Web Verification Station. The batch editor now displays error icons so that the user can immediately see that the document has an assembly error, rule errors, or warnings. The list of errors shows detailed information about each error in the document.

6.4. Changed location for basic task operations

The basic task operations are now located in the right-hand pane of workplace. Each operation has its own icon supplied with a tooltip. These changes are available both on the Web Verification Station and on the Web Scanning Station.

If the green button is preferable for the basic task operations, you should specify TaskMenuLocationType=0 in the appSettings section of the web.config file of the Web Verification Station or the Web Scanning Station.

7. Enhanced Reports in the Administration and Monitoring Console

Now the settings of the general operators report contain a new option that allows you to add additional information to the layout of the report.

Selecting the **Batch details** check box will add *Batch name* and *Page count* columns to the general operators report. The *Batch name* column displays the name of the batch that the operator worked with. The *Page count* column displays the total number of pages in the batch. By default, the **Batch details** check box is not selected.

A new column named *Work time* has been added to the general operators report. It displays the time spent by the user on a particular stage. For scanning and rescanning stages, a dash will be displayed in this column.

For site productivity, processing productivity, and general operators reports, you can now gather statistics for scanning, rescanning, and custom stages.

The recent report settings are now saved individually for each user.

8. Documentation and localization

8.1. Online Help can be opened from any station

Click **Help > Web help** to open the online documentation.

8.2. Advanced classification functionality is now described in FlexiCapture and FlexiLayout Help

A set of articles describing advanced classification functionality has been added to the Administrator's Help (<u>FlexiCapture 12</u> <u>Distributed Administrator's Help > Program settings > Classification</u>) and to FlexiLayout Studio Help (<u>FlexiCapture 12</u> FlexiLayout Studio Help > Classification).

8.3. UI localized into German and Japanese

Localized components are highlighted in the table below.

Component	German	Japanese
Administrator's and Operator's Stations UI (desktop application)		
HTML5 Web Stations' UI (Scanning, Verification Stations)		
Silverlight Web Stations' UI (Scanning, Verification, Capture, Data Verification		
Stations)		
Desktop Stations' UI		
(Setup Station, Verification, Data Verification, Scanning Stations)		
Server UI (Administration & Monitoring Console, Processing Server Monitor,		
License Manager)		
FlexiLayout Studio UI		
FormDesigner UI		
Mobile client UI		

Bug fixes

Bug description

Verification

Several Japanese characters were not correctly displayed on verification.

IME for entering Japanese characters did not appear in the right place.

The project filter showed stages from the previously opened project.

The ability to save the verification results before rejecting the task has been added on then thick verification station. Now the operator has the option to save the results, reject the task without saving, or cancel rejecting.

The database check rule did not work when set up to check against the data set and at least one of the fields contained a float value. In particular, this prevented Purchase Orders Matching from working in FCI.

Workflow

Batches for field training that were automatically created by the auto-learning feature (when operators' work at verification is used by the system to learn where the fields are) were deleted during the automatic clean-up procedure.

Script rule was executed when the user opened the script editor.

There was an error in calculating document indexes within a batch. That caused the Batch.MoveDocument(document,Batch.Documents.Count-1) method to move the document to the penultimate position in the batch instead of to the last position in the batch. This sometimes caused batch processing scripts to behave differently in FlexiCapture 12 Compared to previous versions.

The controller object model was not accessible from the Global Module of script rules.

An interrupted network connection may cause FlexiEx.exe to hang forever.

If the option "Use PDF text layer instead of OCR" was enabled for loading PDF files into FlexiCapture and a PDF file did no have a text layer, then the recognition operation produced no result and there was no way to enable OCR for pages from this file.

The user station failed and produced IPE: LocalDocumentStorage.cpp 460 if the user name was not in Latin characters, e.g. C:\users\Пользователь.

Bug description

Project Setup Station

The batch filter displayed stages from the previously opened project.

A special script implemented in the "On Task to Stage" event should close the document editor. IPE: Tool\Splittable.cpp, 72 occurs when sending batches to the Exceptions stage.

Web Verification Station

The ability to save verification results before rejecting the task has been added on the Web Verification Station.

Changed the location of the green button and the key task operations both on the Web Verification Station and on the Scanning Station.

FlaxiLayout Studio

Adding words to the custom dictionary does not work in FlexiLayout Studio.

<u>Email</u>

The ability to use Office 365 and Amazon as the SMTP service to send mail notifications from FlexiCapture. The ability to explicitly specify the "From" address for such notifications.

Administration and Monitoring

The administrator's login on localized Windows systems is usually in local language, e.g. "Администратор" for the Russian version of Windows. This caused problems because FlexiCapture only allowed Latin characters in the login.

To configure database connection on the Administration & Monitoring Station, the user should be authenticated with Windows authentication. To use the Windows authentication method, the URL should have the "winauth" suffix. This was not obvious and users wondered why the station denied them access to the database configuration page.