

How To Upgrade

ABBYY® FlexiCapture® 9.0

Migrating from FormReader 6.5 to FlexiCapture 9.0

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Migrating from FormReader 6.5 to FlexiCapture 9.0

About this Document

This document describes how to migrate from FormReader 6.5 to FlexiCapture 9.0. FlexiCapture 9.0 represents the new generation of ABBYY data capture solutions with improved technologies and robust architecture. Templates created in FormReader 6.5 can be used in FlexiCapture 9.0 (refer to details below), but installation and configuration of 9.0 is different from 6.5 (detailed installation instructions are in the Administrators Guide available from the installation DVD).

New Product Names

Version 6.5	Version 8.0	Version 9.0
FormReader 6.5 Desktop Edition	FlexiCapture 8.0 Professional	FlexiCapture 9.0 (Standalone Installation)
FormReader 6.5 Enterprise Edition	-	FlexiCapture 9.0 (Distributed Installation)
FlexiCapture Studio 1.5	FlexiLayout Studio 8.0	FlexiLayout Studio 9.0
FormDesigner 2.5	FormDesigner 8.0	FormDesigner 9.0

Installation

Old and new versions of the FormReader/FlexiCapture products have completely separate installation processes, which means that configuration of the old version will not be inherited by the new installation. Old and new versions are treated as separate products. FormReader 6.5 and FlexiCapture 9.0 can be installed on the same machine. The installation instructions for FlexiCapture 9.0 can be found in the Administrator's Guide on the disk with FlexiCapture 9.0. You can open it using the Autorun menu.

Licenses

A new FlexiCapture 9.0 license is required in order to use FlexiCapture 9.0. The license used for FormReader 6.5 will not work with FlexiCapture 9.0. It is possible to write a FlexiCapture 9.0 license into the same hardware key where the FormReader 6.5 license is stored. The license can be written into the key using the License Manager utility shipped with FlexiCapture 9.0.

Software and Hardware requirements

Please refer to the "Software and hardware requirements" article in the Help File to check if your hardware and software configuration meets FlexiCapture 9.0 system requirements. **Please note** that it is strongly recommended to use server operating systems for the server installation. You can use other operating systems to install servers for demonstration purposes only, but since those operating systems have a limited number of connections, running in a production environment is not recommended. **Installation of the Application Server** requires additional software to be installed prior to server install using Internet Information Server 6 or 7 and .NetFramework 2.0 or later.

For more details please refer to the Administrator's Guide on the disk with FlexiCapture 9.0. You can open it using the Autorun menu.

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System Configuration

Servers and Stations

FlexiCapture 9.0 Standalone comes with the Administrator station only, which can be used to create and fine-tune projects (including Document Definition Creation) and for document processing.

FlexiCapture 9.0 Distributed has the following servers and stations:

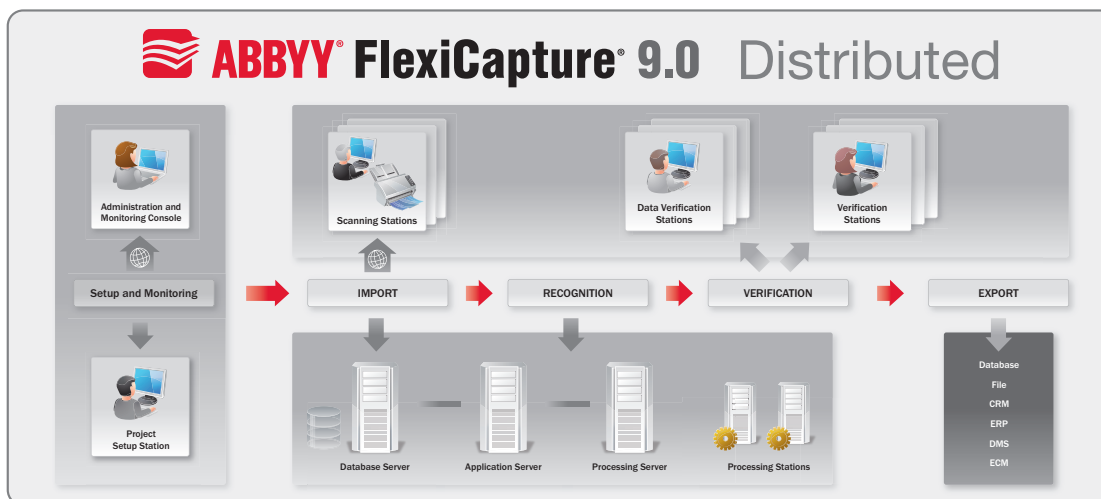
FormReader 6.5 Enterprise Edition	FlexiCapture 9.0 Distributed
-	Application Server (required) Ensures correct operation of the entire system. The stations communicate among themselves via the Application Server.
Protection Service	Protection Server (required) License Manager is used to manage licenses
Database MSDE (SQL 2000)	Database Server (required) SQL 2005, SQL 2008 or SQL Express can be used. SQL Express is supplied with FlexiCapture 9.0. File Storage on the Application Server can be used to store project files. If you don't use it, all files will be stored in the Database.
-	Processing Server (required) Distributes the workload among the Processing Stations. Protection Server Monitor is used for monitoring the Processing Server's work.
Recognition Station Recognition only	Processing Station (required) Performs the following operations: recognition, import from HotFolder, export.
Administrator Station	Project Setup Station (required) This station is used to create and set up projects. User's rights management was moved to the Administrator and Monitoring Console.
Export and Monitoring Station	Administration and Monitoring Console (required) Monitoring of the whole system's work, reports generation, users' rights management, database creation. The Administration and Monitoring Console is installed with the Application Server. You can also access it from another computer (if the user has proper rights). To open it, type the following address in your browser: <a href="http://<AppServer>/flexicapture/Home.aspx">http://<AppServer>/flexicapture/Home.aspx , where <AppServer> is the name of your Application Server. Export is executed by Processing Stations. Export Confirmation is available on the Verification Station if the corresponding queue is turned on.
Correction Station	Verification Station (optional)
Verification Station	Data Verification Station (optional)

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FormReader 6.5 Enterprise Edition	FlexiCapture 9.0 Distributed
Scanning Station	Scanning Station (optional)
Registration Station	<p>Registration Station was incorporated into any FlexiCapture 9.0 license by default.</p> <p>Now, import from HotFolder is set up on the Project Setup Station and performed by Processing Stations.</p> <p>It is also possible to import from HotFolder to the Scanning Station (using a virtual scanner).</p>

Number of Servers and Stations

One FlexiCapture installation should have one server of every type. The number of stations depends on your needs and is controlled by the license.



For example, the number of Project Setup, Verification, Data Verification and Scanning stations that can be running simultaneously is controlled by the license parameter and can be checked through the License Manager Utility.

All the stations above have their analogs in FormReader 6.5 Enterprise Editions. You may need the same number of stations you used in 6.5. You can also use the **Configuration Calculator** to calculate the preliminary number of stations.

The number of Processing Stations is not limited since productivity is controlled either by the number of pages or by the number of cores. The Administration and Monitoring Console has no limitations on the number of running copies and, you can use this station from any computer.

Database

FlexiCapture 9.0 supports SQL 2005 or SQL 2008. Existing databases used in FormReader 6.5 Enterprise Edition (that are based on MSDE or SQL 2000) must be replaced with SQL 2005 or 2008 in order to work with 9.0. FlexiCapture 9.0 has SQL Express 2005 delivered as part of the distribution kit.

Users and Groups

Since ABBYY has switched to a new security model in FlexiCapture 9.0, the user permissions must be set up from scratch in 9.0. FlexiCapture 9.0 introduces Windows Authentication. User permissions are set up in the Administration and Monitoring Console.

The information about user's rights can be found in the FlexiCapture 9.0 Help File, ("Granting access rights to users").

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Batch Types

Batch types are not imported from FormReader 6.5. Due to the new structure of batch types in FlexiCapture 9.0, the user must re-create batch types using the new settings.

The only information which is imported from batch types is a template structure (in case it is not a custom structure - see **Documents and batches structure**).

Batch types can be created using the Project Setup Station. Information about Batch Types can be found in the FlexiCapture Help File, ("Batch types" and "Project Setup Station").

Using FormReader 6.5 projects in FlexiCapture 9.0

In FlexiCapture 9.0, the structure of projects is different, so the FormReader 6.5 projects cannot be used as is. In order to use your templates and flexible descriptions created in FormReader 6.5, please read the instructions below and take all possible issues and limitations into consideration.

Using FlexiCapture Studio 1.5 projects (*.fsp) in FlexiLayout Studio 9.0.

FlexiCapture Studio 1.5 projects can be used in FlexiLayout Studio 9.0. Please note the following:

- Once the project is opened in FlexiLayout Studio 9.0, it is permanently converted into FlexiLayout Studio 9.0 format and can no longer be opened in FlexiCapture Studio 1.5 after this point. Please make sure you create a backup copy of all projects for FlexiCapture Studio 1.5 before opening them in FlexiLayout Studio 9.0. This is a safety measure useful in the event you still need to open the projects in FlexiCapture Studio 1.5.
- After opening a FlexiCapture Studio 1.5 project in FlexiLayout Studio 9.0, you need to delete all processing results and analyze all pages once again in order to finish converting the project.

Due to the changes in FlexiLayout language, some errors may occur during conversion. In this case, you will need to correct errors and re-compile FlexiLayouts. Please contact our support team if you need assistance. See **Errors which may occur while converting FlexiLayouts**.

Using FlexiLayouts (*.afli) created in FlexiCapture Studio 1.5 in FlexiCapture 9.0.

There are numerous changes in FlexiLayout Studio 9.0 compared with FlexiCapture Studio 1.5. That is why we recommend opening a *.fsp project in FlexiLayout Studio 9.0 first to check that there are no errors, and re-compile it, even though FlexiLayouts compiled in FlexiCapture Studio 1.5 can be loaded into FlexiCapture 9.0. See **Errors which may occur while converting FlexiLayouts**.

Importing templates from FormReader 6.5 batches (*.frm)

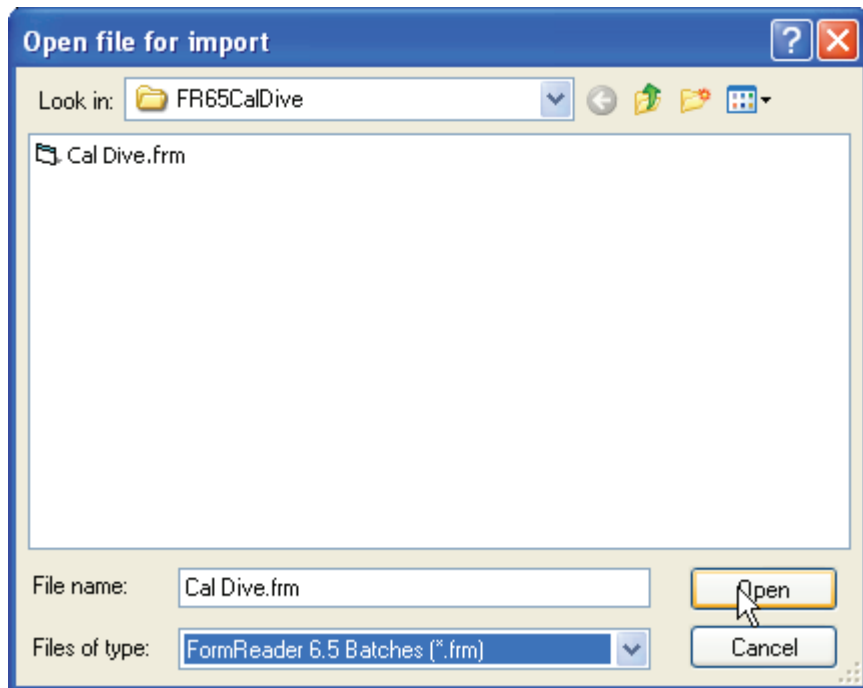
All FormReader 6.5 templates can be imported to FlexiCapture 9.0. You must specify from which FormReader 6.5 batches (.frm) you want to import templates. Conversion will be performed during import.

Note: Batches created in versions earlier than 6.5 cannot be imported.

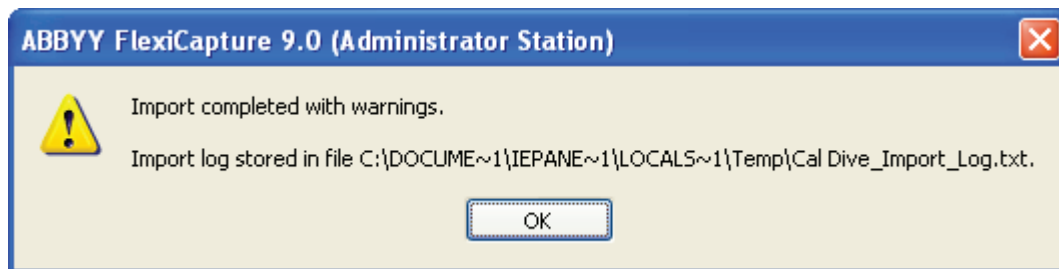
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Conversion scenario

1. Open the FlexiCapture 9.0 Project Setup Station for Distributed installation or the Administrator Station for Standalone installation.
2. Create a new project (**File > New Project...**).
3. Open the Document Definitions window (**Project > Document Definitions...**)
4. Click **Import...**, then select **FormReader 6.5 Batches (*.frm)** from the **Files of type:** list and browse the FormReader batch from which you want to import templates.



After you click **Open**, the import will start. When the import is finished, you will see a window about the import result with a path to the log file.



The log file contains information about conversion including description of warnings or errors, if there are any.

5. The imported template(s) will appear in the list of Document Definitions. Open them and check field marking, data types and validation rules. Both fixed and flexible layouts with fields and their names are imported completely (except additional fields). All data types are imported as Custom data types of the document definition. Some of the validation rules are converted automatically; the others have to be recreated manually. The information about rules' conversion can be found in the **Compatibility with FormReader 6.5 validation rules** table below. Tips for converting rules that cannot be imported automatically can be found in the Help File ("Migrating from FormReader 6.5 rules and export to FlexiCapture 9.0 scripts").
6. Export settings are not converted, so you will need to readjust them.

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7. Test the imported Document Definition on the test batches. The images from 6.5 batches are not imported; you can add them using the **File > Load Images...** command.
8. Publish the converted Document Definitions.

Document and Batch Structure

If the document definition imported from FormReader 6.5 contains a custom structure which is not supported in FlexiCapture 9.0, a set of one-paged document definitions will be imported.

1. Document templates with predefined structure (one-page documents, multi-page documents, sequence of pages) are correctly converted into the document definitions for FlexiCapture 9.0 with the same structure.
2. Custom document structure is not supported in FlexiCapture 9.0. Templates with custom structure will be converted into separate one-page document definitions.
3. If the structure of a batch (custom sequence of documents) was defined in FormReader 6.5, it will be ignored and the batch will be considered an arbitrary sequence of documents.

Compatibility with FormReader 6.5 Validation Rules

Support of FormReader 6.5 validation rules in FlexiCapture 9.0:

FormReader 6.5	Equivalent in FlexiCapture 9.0	Converted automatically
Check against a database	"Database Check" rule.	No
Check sums	"Check Sum" rule.	No
Merge blocks	"Merge Fields" rule.	Yes
Search in the list of suggestions	Field properties, "Data Type" tab. List the variants of allowed values in the "Validation" field.	Yes
Replace values from the list	Field properties, "Data Type" tab. "AutoCorrect options" field. Note. This rule will be converted if we find the value and write the result to the same field. If the fields are different, the rule cannot be converted, and the "Script" rule should be used.	Yes
Replace characters from the list	Field properties, "Data Type" tab. "AutoCorrect options" field. Note. This rule will be converted if we find the value and write the result to the same field. If the fields are different, the rule cannot be converted, the "Script" rule should be used.	Yes
Normalize and check dates	Field properties, "Data Type" tab. In the "Content" list, select "Date"; in the "Content Details" dialog box, select the required formats; in the "Validation" field, enter the required constraints.	No

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FormReader 6.5	Equivalent in FlexiCapture 9.0	Converted automatically
Regular expressions	Field properties, "Data Type" tab. From the "Content" list, choose "Text" or select the "Process value as text" option for another content type. Enter the required regular expression in the "Validation" field.	Yes
Match blocks	Can be implemented via a "Script" rule (see "Field match check" sample in Help).	No
If-Then rules	Can be implemented via a "Script" rule (see Help for instructions on how to migrate).	No
Automation check	Can be implemented via a "Script" rule (see Help for instructions on how to migrate). If the logic of the rule is too complex and requires an external component to be used, the component should be called from within the code of a "Script" rule (see "Automation rule" sample in Help).	No
VBScript rules	Can be implemented via a "Script" rule.	No
Sum in digits - sum in writing	"Sum in digits - sum in words" rule (for Russian language).	No
Normalize prices	Not supported; can be implemented through an external COM component called from a "Script" rule.	No
Price in digits - price in writing		
Validate passport series and number		

The information about FlexiCapture 9.0 rules can be found in the "Rule validation" section of the FlexiCapture Help File. For more information on the "Script" rule, see the "Using scripts in FlexiCapture 9.0" section.

Template conversion issues and possible workarounds

If validation rules and batch or document structures used in FormReader 6.5 have no analogs in FlexiCapture 9.0 and should be re-created manually, possible issues and workarounds are listed in the tables below.

Problem	Comment	Workaround
An error occurred during import: <i>Import failed: Error: Internal Program Error: .\\Import\Form65XmlBatchSettingsImporter. cpp, 2756.</i>	The problem is expected to be fixed in the maintenance release.	Until the bug is fixed, the user can delete additional fields from the template, like functions, manual entry fields, fields to be filled with a rule, and then import a template.

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Problem	Comment	Workaround
An error occurred during import: <i>Import failed.</i> <i>Error: Unable to define fixed layout inside flexible.</i>	This bug occurs when a field is absent in an original FlexiLayout, but the compiled layout contained it.	Open the *.fsp project in FlexiLayout Studio 9.0 first to check that there are no errors, and re-compile (match and recognize) it.
An image doesn't match the converted fixed Document Definition, although the same images matched the template previously conversion.	This happens due to significant changes in technologies.	Open the converted Document Definition in FlexiCapture 9.0, delete anchors, separators and static text, and re-create them automatically or manually.
Some rules which must be converted automatically (see the table) are not converted.	In FormReader 6.5, it was possible to create several rules which changed the value of the same field. This isn't possible in FlexiCapture 9.0.	Check if you really need such a complicated structure. Maybe the problem can be solved using the standard FlexiCapture 9.0 features. If not, use the "Script" rule.
In FormReader 6.5 Enterprise Edition, multi-page documents were processed successfully. Now after conversion, several single-page Document Definitions were created instead of a multi-page Document Definition.	FlexiCapture 9.0 does not support conversion of Custom structures of documents. If Custom structure was used in FormReader 6.5 Enterprise Edition, one-page templates will be imported. See Documents and batches structure. The documents structure is described in the FRE6BatchDefinition.sql file. If this file was damaged or deleted, only one-page templates will be exported.	Check if the FRE6BatchDefinition.sql file wasn't damaged or deleted. Adjust the document structure to fit FlexiCapture 9.0.
There were annexes in the documents, but they are not enabled in FlexiCapture 9.0 Document Definitions after conversion.	In FormReader 6.5, it was possible to add annexes using custom structure. Custom structure is not converted in 9.0. See Documents and batches structure.	Enable annex pages manually in the Document Definition Properties dialog box, Assembly tab.
The rules are converted, new rules are created but the order of rule execution differs from that in FormReader 6.5.	In FlexiCapture 9.0 the order of rule execution doesn't depend on the user's specification, it depends on the document structure.	Try to re-create rules in such a way that they won't depend on the execution order. If the order is very important, try to create a "Script" rule which covers all your rules.
FlexiLayout couldn't be compiled.	There are numerous changes in FlexiLayout Studio 9.0 compared to FlexiCapture Studio 1.5.	Open the *.fsp project in FlexiLayout Studio 9.0, correct errors and re-compile it (match and recognize). If there are errors, you will see invalid elements with error descriptions on the Errors tab. Possible errors and workarounds are described in the Errors in converted FlexiLayouts section.
FlexiLayout has been compiled, but an error occurred during matching of this FlexiLayout.	There are numerous changes in FlexiLayout Studio 9.0 compared to FlexiCapture Studio 1.5.	Open the *.fsp project in FlexiLayout Studio 9.0, correct the code and re-compile it (match and recognize). Possible errors and workarounds are described in the Errors in converted FlexiLayouts section.

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Errors which may occur while converting FlexiLayouts

Sometimes, the converted FlexiLayout cannot be compiled (matched and recognized). If the FlexiLayout cannot be compiled, you will see the corresponding message during templates conversion. Open the *.fsp project in FlexiLayout Studio 9.0. Some of the elements may be invalid and have an error description on the Errors tab. It is also possible that the FlexiLayout is successfully compiled, but some errors occurred during matching. If you have such problems after conversion, please check if it happened due to one of the errors described below.

Please note that some elements may be found in a different way now and the logic of FlexiLayout may change slightly. Test all FlexiLayouts on the images before using them for recognition.

If you need further assistance please contact ABBYY Technical Support at: var_support@abbyyusa.com.

Problem	Comment	Workaround
<i>A FlexiLayout will not be compiled with the following errors:</i>		
The name of an element coincides with a function's name that didn't exist in previous versions. Example: in version 1.5 (and 8.0) it was possible to create a text element with a name "RSA" and reference it using the short name: RSA.IsNull. This code cannot be compiled in 9.0.	If the element's name coincides with a function's name, it will be considered as a function's name in the code. It's possible to create an element with the name PageNumber, but it is prohibited to write PageNumber.IsNull (the only possible way is to write SearchElements.PageNumber.IsNull);	Use the full name of an element. Example: SearchElements.RSA.IsNull
If the element had a name which was allowed in 1.5 (or 8.0) but prohibited in 9.0, and there was a reference to this element using a short name in the AdvancedCode, this element will be re-named during conversion, but the short name in the AdvancedCode is not changed. So, in advanced code, there will be a reference to the element which doesn't exist.		In AdvancedCode, the element should be re-named manually.
The following structure is not allowed in 9.0: Let e = SearchElements.StaticText1; e = SearchElements.StaticText2;	As the elements now have user-defined properties, the elements of the same type are not considered identical.	Change the mentioned structure as follows: Hypothesis e; e = SearchElements.StaticText1; e = SearchElements.StaticText2;
Incorrect usage of elements' short names. Example: There are elements: SearchElements.A.A, SearchElements.A.B, SearchElements.A.C. In previous versions, it was possible to use the following structure in the code of element C: A.B In 9.0, such a structure cannot be compiled. A is considered SearchElements.A.A, but this element hasn't a B field.	A conflict may arise when short names are used. In 1.5 (and 8.0), in case of conflict, the high-level element was selected. In 9.0, the low-level element is selected.	Use the full names of elements.

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Problem	Comment	Workaround
<i>The following errors may occur during layout matching:</i>		
Error at position -1: Text for search not defined.	In 1.5, it was allowed to search a text which consisted of a space only. In 8.0 and 9.0, it isn't allowed.	Use allowed text for searching.
Error in element "SearchElements.StaticText", Pre-search relations section: D:\Tests\FORConversion\1.txt was not found.	In FlexiCapture 9.0, a reference folder for relative paths to the text files used in the StaticText element was changed. In 1.5 (and 8.0), the relative path began from the batch's folder (where the images are stored). In 9.0, they begin from the project's folder (the folder which contains the .fsp file).	Place the mentioned text file to the folder indicated in the message (for this example, you should put the file "1.txt" to the following folder: D:\Tests\FORConversion\). You can also change the path to the file.

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