

**ABBYY**



# ABBYY Vantage

## ABBYY Vantage 2.3.1 Release Notes

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# ABBYY Vantage 2.3.1 Release Notes

## About the Release

### Purpose of the Release

This is a minor Vantage release that introduces new features and bug fixes.

The [Main Features](#) section describes updates to the product's functionality.

User documentation is available:

- at <https://vantage-eu.abbyy.com/help/English/> for users in Western Europe,
- at <https://vantage-us.abbyy.com/help/English/> for users in North America,
- at <https://vantage-au.abbyy.com/help/English/> for users in Australia.
- It is also available locally in on-prem Vantage installations.

The [Bug Fixes](#) section contains a detailed list of issues that have been fixed in this release.

This release has some known limitations and issues, which are described in the **Limitations and Known Issues** section.

## Component Versions

Vantage Application #	0.46.0
Advanced Designer #	0.53.0
Platform #	0.30.2
Technology Core #	2.31.2
Vantage Solution #	0.22.3-onprem

## Main Features

### Document Skill

#### Support for training of repeatable barcode fields in Document Skill

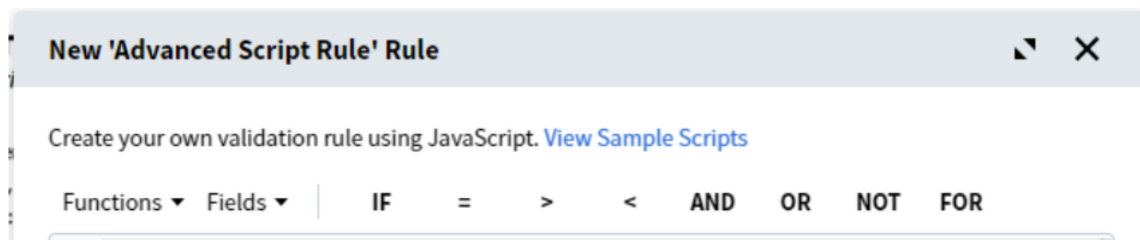
ABBYY Vantage supports Fields and Groups that can be repeated, e.g., multiple instances of addresses, account information, children names, and other similar fields or groups on a single document. It is now possible to enable the **Allow Multiple Items** option for such objects.

In Vantage 2.3.1, if you create Barcode Fields that can be repeated, they will be trained.

### Resizable Script Editor Window

A new button was added that allows resizing the script editor windows for the script rules in Document skill designer, Custom activity, export to external system in the Output activity, and the If activity in the Process

skill designer. This improves user experience for those who regularly work with scripts during skill development, providing more space and better visibility.



## Command Continue table from this row is applied to 10 pages

The execution of the **Continue table from this row** command can take a lot of time for multi-page tables. If a table is longer than 10 pages, the command will be applied to the following 10 pages. Operators can check whether data has been correctly extracted and apply this command again.

## Available Document Skills

ABBYY Vantage includes multiple Document Skills in the Skill Catalog in order to handle different types of documents from various industries: customer onboarding, accounts payable, transportation, insurance, etc.

For more information about ABBYY Vantage skills, see

- <https://vantage-eu.abbyy.com/help/english/SkillCatalog/?topic=abbyyskills> if you are in Western Europe,
- <https://vantage-us.abbyy.com/help/english/SkillCatalog/?topic=abbyyskills> if you are in North America,
- <https://vantage-au.abbyy.com/help/English/SkillDesigner/?topic=abbyyskills> if you are in Australia.

## Updates to existing built-in skills

### ▼ Invoices

1. Improved the quality of extraction of companies' names, addresses, and PO numbers.
2. Additional languages are now enabled for the Invoice EU skill. The full list of all enabled languages is as follows: English, Danish, Dutch, Finnish, French, German, Italian, Norwegian (Bokmal), Portuguese, Swedish, Bulgarian, Croatian, Czech, Estonian, Hungarian, Latvian, Lithuanian, Polish, Romanian, Russian, Slovak, Turkish, Ukrainian.



**Note:** It is recommended to disable unused languages to ensure better OCR quality.

### ▼ Purchase Orders

Improved the quality of Line Items extraction.

### ▼ Receipts

1. Improved the quality of all fields for supported countries including Sweden, Norway, and Finland.

2. Additional languages are now enabled for the Receipt skill. The full list of all enabled languages is as follows: English, French, German, Italian, Portuguese (Brazil), Spanish, Catalan, Dutch, Polish, Swedish, Turkish, Estonian, Finnish, Norwegian.

▼ Commercial Invoices

Trained on new documents, quality improved.

▼ Identity Documents

New field: Driver License Restriction Code.

▼ Form W-9, Request for Taxpayer Identification Number and Certification

Can now process handwritten forms.

▼ Form 1098, Mortgage Interest Statement

Improved the quality of the skill.

▼ IRS Tax Form 1040, U.S. Individual Income Tax Return

New skill (IRS Tax Form 1040, U.S. Individual Income Tax Return, 2022) created to process ISR Tax Forms 1040 for the latest year. The IRS Tax Form 1040 process skill (with a corresponding classifier) has been created to process Forms 1040 for different years simultaneously.

## New Built-in Skills

The following new skills have been made available with this release:


1. Form 1099 Composite
2. Brokerage Statement
3. Form 1099-B, Proceeds from Broker and Barter Exchange Transactions
4. Form 8949, Sales and other Dispositions of Capital Assets
5. Form 1095-C, Employer-Provided Health Insurance Offer and Coverage
6. Form 1095-B, Health Coverage
7. Insurance Health Card US
8. Business Card CJK

## Process Skill

### Export extraction results into CSV

CSV is available as an export format for extracted data in the Output Activity in the Process skill designer. The new format addresses the needs of users who cannot use the JSON format and enables them to export data to a format that is compatible with their systems, streamlining their workflows.

The output CSV file may also be passed to external systems using the External system option of the Output activity.

 **Note:** In this release, image fields can't be exported to CSV files. If there is an image field in the Document skill, the value of such a field will always be empty in the export results. Support for the export of image fields to CSV files is planned for future Vantage releases.

## Export document images into TIFF, JPG, and non-searchable PDF files

New export formats for pre-processed images are now available in OCR Skill and Output Activity in process skill:

- PDF (image only)
- TIFF
- JPG (with the option of choosing between maximum quality and reduced size)

These formats may help preserve images for long-term archiving and may be used in scenarios where recognized text needs to be shown on pre-processed images.

When one of these formats is selected in the settings in addition to the XML output format, coordinates for pre-processed images will be written in XML. If no image formats are selected, the coordinates will be written for the source images.

## ICR


Vantage 2.3.1 supports the following 4 languages for ICR:

- English
- German
- French
- Spanish (new)

The Handwritten option is enabled by default for document skills and disabled by default for the OCR Skill.

Users may select several languages for recognition and enable the **Handwritten** option. Then, for each document, the system will automatically select the best approach to process it.

Additionally, starting from version 2.3.1, multiline handwritten fields are supported.

 **Note:** For all languages, Handwritten text recognition works best if only the target language is selected in the list of recognition languages for the skill.

## ICR for Spanish

Support for handwritten text recognition of the Spanish language has been added in 2.3.1. The recognition quality for Spanish is at the same level as for English, German and French.

## Further improvements to ICR for French

Quality of French ICR has been improved (by about 5% compared to previous version).

## Improvements to OCR Technologies

### Further improvements to the quality of Japanese OCR

Japanese OCR in Vantage has gotten further improvements in quality when recognizing condensed and expanded characters as well as half-width katakana, with diacritics resulting in less OCR recognition errors.

### OCR quality on Documents with Watermarks

For the DOCX output format and formats that preserve document structure (XML, JSON), the OCR quality has been improved for documents with watermarks, resulting in up to 50% less errors on such documents from the ABBYY test set compared to the previous release.

### OCR for some European documents

Retraining Latin alphabet languages on an additional set of documents has improved the OCR quality for some document types. Among these are receipts, invoices, IDs, and contracts.

### Increased OCR speed for uncropped photos

Some adjustments were made to uncropped photos, resulting in the processing speed of these documents being improved by 10-15% (according to internal tests) without any losses in recognition quality.

## Skill Catalog

### Technology Core 1.0 end of support

With the recent introduction of the Vantage Skill Technology Core 2.0, the capabilities of the core AI technology have been updated. The new version brings better, faster, and more accurate OCR and Fast Machine Learning training, along with many other enhancements.

As part of our continuous improvement process, Technology Core 1.0 will no longer be available starting from the release of Vantage 2.3.1.


Any skills that still use Technology Core 1.0 are now disabled and will not be allowed to be used for new transactions. To continue leveraging skills that use the Technology Core 1.0, users are required to update them to Skill Technology Core 2.0.

## Manual Review

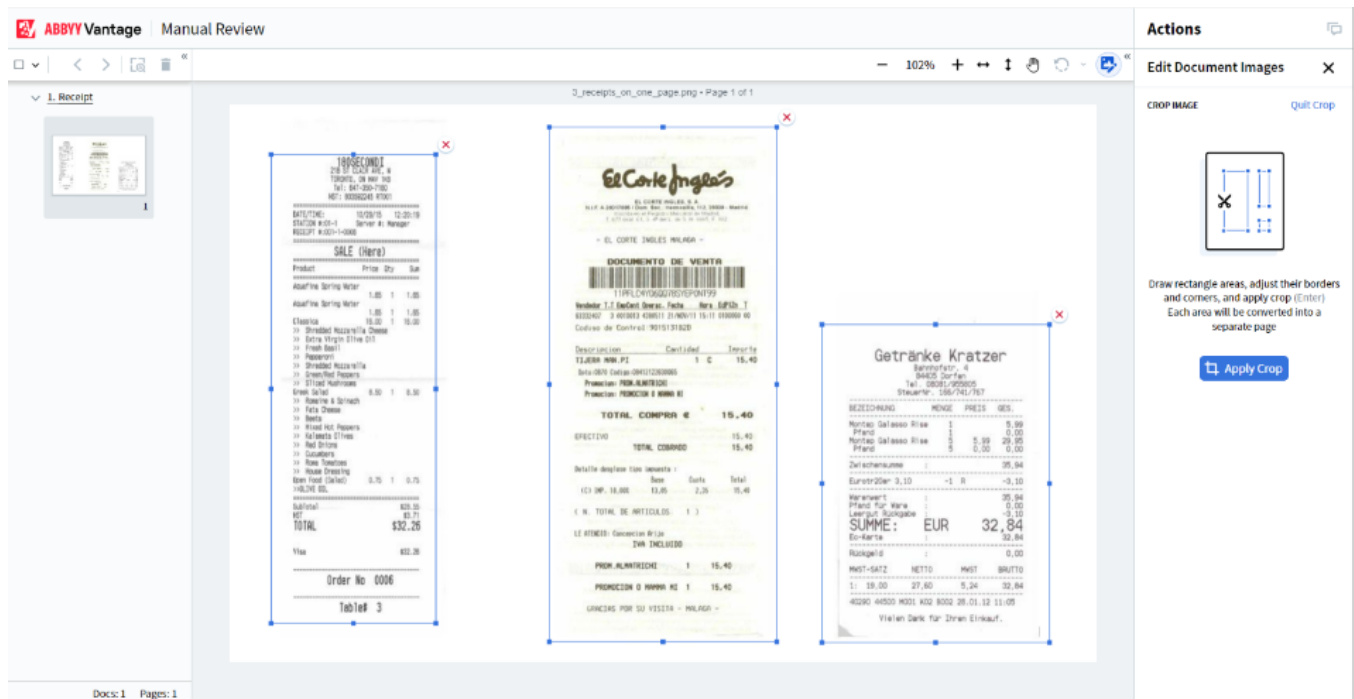
### Manually crop and split documents at manual review

During the Manual Review process, the operator can perform a variety of image editing operations to ensure the accuracy and completeness of the document. In version 2.3.1 documents can now be cropped and split manually.

If automatic cropping did not work correctly, or if the page contains more than one document and can't be cropped due to this, the user can revert back to the original image to crop it manually.

To start editing an image, click , and then click **Crop image** on the **Actions** pane. Draw one or several rectangle areas and align their borders to the corners of the images you want to crop. To finalize the changes, click **Apply crop** or press Enter. Once the crop has been applied, you will be prompted to extract data from the documents.



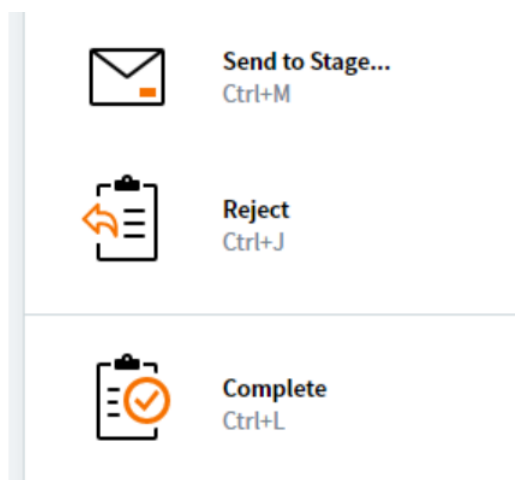


## Limitations:

- Crop is not supported in Try skill mode.
- Crop is supported in Document Skill Editor, and new documents can't be created. This means that if a skill developer wants to split a single page into several documents, they will need to upload the original document as many times as there are documents on that page, and then crop each uploaded document to be a single page.

## No "Send to Stage..." button in the Manual Review interface when integrated using iframe

The integrated Manual review interface has been updated for third-party applications that use iframe. Now, the "Send to Stage..." button is hidden by default, since it is not required in most integration scenarios.



If required, the "Send to Stage..." button in the Manual Review window may be displayed when integrated via iframe. For this, a new URL parameter should be added to the Manual Review link.

For more information, see

- [https://vantage-eu.abbyy.com/help/english/Runtime/?topic=manualreview\\_verification](https://vantage-eu.abbyy.com/help/english/Runtime/?topic=manualreview_verification) if you are in Western Europe,
- [https://vantage-us.abbyy.com/help/english/Runtime/?topic=manualreview\\_verification](https://vantage-us.abbyy.com/help/english/Runtime/?topic=manualreview_verification) if you are in North America,
- [https://vantage-au.abbyy.com/help/English/Runtime/?topic=manualreview\\_verification](https://vantage-au.abbyy.com/help/English/Runtime/?topic=manualreview_verification) if you are in Australia.

## Mobile Input

### Special interfaces for capturing ID cards

This Vantage release introduces new special user interfaces for capturing ID cards, improving user experience for business processes that require the processing of ID documents.

When enabled, the special interface for ID cards provides the user with hints regarding how the document should be placed in order to increase the resulting image quality.

To enable the special user interface for capturing ID cards, a new URL parameter should be added to the mobile input link that is generated by the Vantage API.

For more information, see

- <https://vantage-eu.abbyy.com/help/english/QuickStart/?topic=mobileupload> if you are in Western Europe,
- <https://vantage-us.abbyy.com/help/english/QuickStart/?topic=mobileupload> if you are in North America,
- <https://vantage-au.abbyy.com/help/English/QuickStart/?topic=mobileupload> if you are in Australia.

### Disabled uploading images from gallery

Some business processes may require users to capture their documents live to prevent them from manipulating their images when uploading them from the gallery. For example, businesses may require this to be the case for ID documents. In previous versions of Vantage, users could either take a picture of the document or upload an image from the gallery of their device.

In this release, Vantage Mobile Input now only allows users to take pictures of their documents, with the option to upload images from their gallery currently disabled. Uploading documents from the device gallery will become available again in future Vantage releases.

For more information, see

- <https://vantage-eu.abbyy.com/help/english/QuickStart/?topic=mobileupload> if you are in Western Europe,
- <https://vantage-us.abbyy.com/help/english/QuickStart/?topic=mobileupload> if you are in North America,
- <https://vantage-au.abbyy.com/help/English/QuickStart/?topic=mobileupload> if you are in Australia.

## Administering Vantage

## SAML 2.0 protocol support for authentication

SAML 2.0 is an XML-based protocol that is used as an alternative to the OAuth 2.0 protocol for authentication. Since many customers prefer using the SAML 2.0 protocol in their integrations with external identity providers, Vantage now supports this protocol as well.

Microsoft Azure Active Directory and Microsoft Active Directory Federation Services connected using SAML 2.0 protocol have been tested as external identity providers for Vantage.

For more information, see

- [https://vantage-eu.abbyy.com/help/english/AdminGuide/?topic=sysadmin\\_externalidentityprovider](https://vantage-eu.abbyy.com/help/english/AdminGuide/?topic=sysadmin_externalidentityprovider) if you are in Western Europe,
- [https://vantage-us.abbyy.com/help/english/AdminGuide/?topic=sysadmin\\_externalidentityprovider](https://vantage-us.abbyy.com/help/english/AdminGuide/?topic=sysadmin_externalidentityprovider) if you are in North America,
- [https://vantage-au.abbyy.com/help/English/AdminGuide/?topic=sysadmin\\_externalidentityprovider](https://vantage-au.abbyy.com/help/English/AdminGuide/?topic=sysadmin_externalidentityprovider) if you are in Australia.

## Using the same external identity provider in several Vantage tenants

Earlier versions of Vantage limited users to a single external identity provider for authenticating in each of their Vantage tenants. However, this was not sufficient for customers with multiple tenants that are intended for different purposes, e.g., for development, testing, and production usage of the skills.

This Vantage release allows users to connect several Vantage tenants to the same external identity provider.

For more information, see

- [https://vantage-eu.abbyy.com/help/english/AdminGuide/?topic=sysadmin\\_externalidentityprovider](https://vantage-eu.abbyy.com/help/english/AdminGuide/?topic=sysadmin_externalidentityprovider) if you are in Western Europe,
- [https://vantage-us.abbyy.com/help/english/AdminGuide/?topic=sysadmin\\_externalidentityprovider](https://vantage-us.abbyy.com/help/english/AdminGuide/?topic=sysadmin_externalidentityprovider) if you are in North America,
- [https://vantage-au.abbyy.com/help/English/AdminGuide/?topic=sysadmin\\_externalidentityprovider](https://vantage-au.abbyy.com/help/English/AdminGuide/?topic=sysadmin_externalidentityprovider) if you are in Australia.

## Single sign on experience with external identity providers

When an external identity provider is used for a tenant, users expect Vantage to authenticate them automatically if they are already authenticated with that identity provider.

Now, Vantage provides direct links to tenant login pages to enable the single sign on experience. When users follow this link, they are now automatically redirected to the external identity provider for authentication, and then redirected back to Vantage. Users will not be asked to enter their login either in Vantage or the external identity provider, speeding up the authentication process and improving user experience.

For more information, see

- [https://vantage-eu.abbyy.com/help/english/AdminGuide/?topic=tenantadmin\\_authorization](https://vantage-eu.abbyy.com/help/english/AdminGuide/?topic=tenantadmin_authorization) if you are in Western Europe,

- [https://vantage-us.abbyy.com/help/english/AdminGuide/?topic=tenantadmin\\_authorization](https://vantage-us.abbyy.com/help/english/AdminGuide/?topic=tenantadmin_authorization) if you are in North America,
- [https://vantage-au.abbyy.com/help/English/AdminGuide/?topic=tenantadmin\\_authorization](https://vantage-au.abbyy.com/help/English/AdminGuide/?topic=tenantadmin_authorization) if you are in Australia.

## ABBYY Vantage Advanced Designer

For more information, see the ABBYY Vantage Advanced Designer section in online Help:

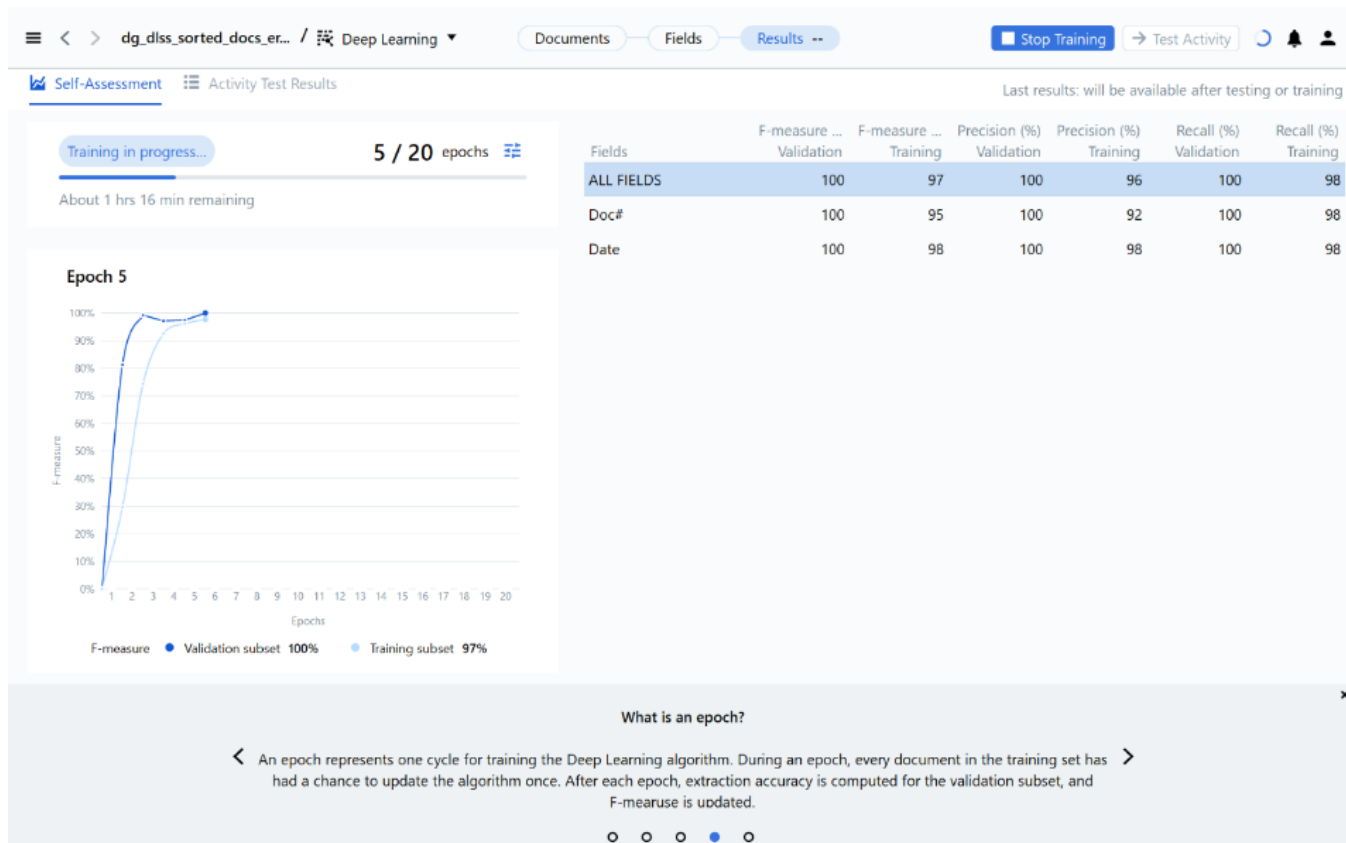
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_introduction](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_introduction) if you are in Western Europe,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_introduction](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_introduction) if you are in North America,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_introduction](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_introduction) if you are in Australia.

## Deep learning statistics

The Deep Learning for semi-structured documents activity is designed for training a skill to extract fields from semi-structured documents using neural networks.

One neural network can be trained for up to 50 text fields, including fields inside groups and repeating groups, or for a table containing up to 32 columns. Thus, you can create one Deep Learning activity for every 50 fields and one Deep Learning Activity for each table.

After adding and labeling documents, skill developers can start training neural networks. By default, a single neural network training procedure consists of 20 epochs. This number can be changed manually if necessary. At the beginning of an epoch, the document set is divided into a training subset and a validation subset. During an epoch, all documents from the training subset are passed through the training algorithm. After that, neural network performance is evaluated using the validation subset, and the metrics for each field and the whole document set are updated.



Skill developers can stop training, for example, if they see that the quality is sufficient and has stopped growing or if they believe that there are labeling errors that need to be fixed. Training can then be resumed from the very documents and labeling on which the training was halted. Alternatively, training can be re-started from scratch in order to train using the changed document set or corrected labeling.

After training is finished or manually stopped, final testing will be performed. Testing is done on an automatically created testing set that contains 20% of documents of the whole training set. Testing results are then displayed for each field. They also contain links to documents, allowing a skill developer to analyze any possible issues.

For more information, see:

- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_deeplearningsemistructured\\_progress](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_deeplearningsemistructured_progress) if you are in Western Europe,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_deeplearningsemistructured\\_progress](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_deeplearningsemistructured_progress) if you are in North America,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_deeplearningsemistructured\\_progress](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_deeplearningsemistructured_progress) if you are in Australia.

## Accessing data catalogs from extraction rules

To access a data catalog, you should first create a skill parameter referencing that catalog, and then use the parameter name in the method calls. This allows skill developers to change catalogs without editing any code in Extraction Rules. To manage skill parameters, open a skill's properties and navigate to the **Parameters** tab.

In addition to catalog parameters, the string parameter type can also be used by skill developers, for example, to store a frequently used regular expression.

Currently, text skill parameters can only be accessed from the Extraction Rules code. Catalog parameters can be accessed from Extraction Rules code too, as well as from the **Classify by company** activity.

For more information, see:

- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=global\\_functions](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=global_functions) if you are in Western Europe,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=global\\_functions](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=global_functions) if you are in North America,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=global\\_functions](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=global_functions) if you are in Australia.

For more information about data catalogs, see:

- [https://vantage-eu.abbyy.com/help/english/SkillDesigner/?topic=docskill\\_datacatalogs](https://vantage-eu.abbyy.com/help/english/SkillDesigner/?topic=docskill_datacatalogs) if you are in Western Europe,
- [https://vantage-us.abbyy.com/help/english/SkillDesigner/?topic=docskill\\_datacatalogs](https://vantage-us.abbyy.com/help/english/SkillDesigner/?topic=docskill_datacatalogs) if you are in North America,
- [https://vantage-au.abbyy.com/help/English/SkillDesigner/?topic=docskill\\_datacatalogs](https://vantage-au.abbyy.com/help/English/SkillDesigner/?topic=docskill_datacatalogs) if you are in Australia.

## Working with tables and repeating groups

### Table and Repeating groups

In ABBYY Vantage, Tables and Groups with the Allow multiple items option can be created.

Please note that Tables can only have text columns, while Repeating Groups can also include barcodes, checkmarks, image fields, as well as other fields and groups with the Allow multiple items option. Therefore, if you need to use such fields inside repeating groups, or if you have nested structure (which should be limited to 3 levels), use Groups with the Allow multiple items option.

Additionally, note that different training technologies will be used to train Tables and Groups with multiple items. If you are going to use trainable activities, it is important that you select the more relevant variant. However, if you are going to only use Extraction Rules, the choice of variant will not matter as much because the search element Repeating Group can be used as a source for both Tables and Groups.

If you are not sure which option is more suitable for you, analyze your documents first. If your documents contain tables with a common header and values that do not have any keywords near them, create a table. If your data is less structured and has keywords located near the values, create a Group with the Allow multiple items option.

Example of a table:

L/N Item Number	Description	Req. Date	U/M	Ordered	Unit Price	Ext. Price	
	Reference Number						
1	CHD-DR-7002314-050	1000 CT CHIP 1k/LB 50LB/CS 40CS/PLT RCH0001	6/9/2019	50# Cs	120.00000	52.7000	\$6,324.00
2	CHM-CI-0001601-016	Chunk, Milk, Ultimate, 300CT/LB 30LB/C RCH0009	6/9/2019	30# Cs	70.00000	47.8500	\$3,349.50
3	IMWCU2115801045	Wht Confectionaly Chunck 45lb/cs 40cs/ RCH0012	6/9/2019	45# Cs	80.00000	49.8150	\$3,985.20
4	CHD-F15A579-01-050	Chunk, Bavarian, 1178 50#/CS 40CS/PLT RCH0015	6/9/2019	50# Cs	160.00000	64.3500	\$10,296.00
5	CHD-DR-6002313-050	2000 CT CHIP 50LB/CS 40CS/PLT RCH0019	6/9/2019	50# Cs	80.00000	52.7000	\$4,216.00
6	CHD-DR-7019903-050	Chip, Semi-sweet 880CT/LB 50LB/CS 40< RCH0029	6/9/2019	50# Cs	120.00000	62.3500	\$7,482.00
7	ILW-WA-2150001-050	Chip, Wafer, White, CF-670 R/B RCH0021	6/9/2019	50# Cs	200.00000	53.6000	\$10,720.00

Example of a repeating group:

Loss File #: 21429705	Date of Loss: 04/09/2014	Lag Time: 42	Workers Comp			
Large Account:	Selective Risk Managers	Exposure Location:	000000 123 W MAIN ST, GIBSON CITY, PA, 14027		Deductible N/A:	
Loss Description:	Struck / Injured by -Falling or Flying Object			Status: Closed	Date: 12/16/2014	
Claimant:	Montanier, Eric			Class Code: 0980		
Coverage	Loss Reserves	Loss Payments	Expense Payments	Loss Recoveries	Loss Deductibles	Expense Deductibles
Medical	\$0	\$267.82	\$5.84	\$0.00	\$0.00	\$0.00

Loss File #: 21440530	Date of Loss: 06/24/2014		Lag Time: 1	Workers Comp		
Large Account:	Exposure: 000000 123 W MAIN ST, GIBSON		Deductible N/A:			
Loss Description: Struck / Injured by -Object Being Lifted or Handled		Location: CITY, PA, 14027				
Status: Closed			Date: 12/16/2014			
Claimant: Simpson, Dennis	Class Code: 0980					
Coverage	Loss Reserves	Loss Payments	Expense Payments	Loss Recoveries	Loss Deductibles	Expense Deductibles
Medical	\$0	\$527.63	\$2.50	\$0.00	\$0.00	\$0.00

ABBYY Advanced Designer provides flexible options for setting up the extraction of tables and groups with repeating items. The skill developer needs to take into account the differences between these two objects, because these differences are very important when mapping elements in the Extraction Rules activity, when importing ready-made labeling from a folder, and when importing FLS projects.

In Extraction Rules, you will be able to map a Repeating Group element to the Table field if the element does not contain embedded any groups or fields. Otherwise, you will need to use a Group with multiple items.

When importing ready-made labeling from a folder, fields that were not created in advance will be created automatically. A Table will be created if the document contains only text columns. However, if the ready-made labeling was created in ABBYY FlexiCapture, tables therein could contain fields of other types and repeating fields. If this is the case, Groups with multiple items will be created in Advanced Designer.

Table blocks from ABBYY FlexiLayout Studio projects will be converted to a Group field with multiple items allowed. Mapping to the corresponding table elements will be preserved. Table elements will also be preserved (with limitations).



## Converting Table elements from ABBYY FlexiLayout Studio

When a FlexiLayout is imported to Advanced Designer, the table block is converted to a Group field with multiple items allowed, with mapping being preserved. You can map the table element to another Group field with multiple items allowed or a Table field. The columns of the Table element can only be mapped to child elements of the selected Group or Table field. The set of child elements of the selected field should match the set of columns of the Table element.

The Table element is not fully supported in Advanced Designer, so please be aware of the following limitations:

- There is no What to search for section in the Properties pane of the Table element. Properties from this section can be configured via code.
- A list of existing columns is displayed only when mapping the element to a field via the Get region from drop-down list.
- Adding new columns isn't supported.
- Mapping of columns to fields via code isn't supported.

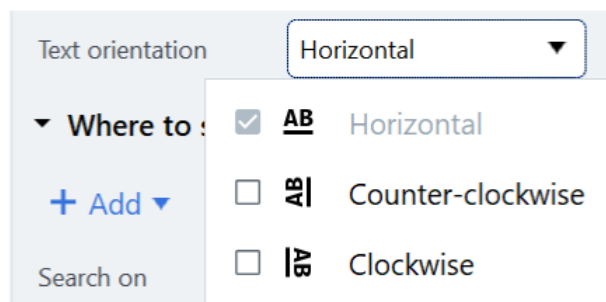
Table block conversion is only intended to minimize the editing efforts when importing FlexiLayouts with Table elements. However, if you need to make more significant changes, like altering the column set or the table extraction logic, we recommend that you replace the Table element with a Repeating Group element.

For more information, see:

- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_extractionrules\\_table](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_extractionrules_table) if you are in Western Europe,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_extractionrules\\_table](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_extractionrules_table) if you are in North America,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_extractionrules\\_table](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_extractionrules_table) if you are in Australia.

## Searching for vertical text only in extraction rules

The **Text orientation** property is available in Extraction Rules for search elements.



The setting has been changed to allow skill developers to search for horizontal and rotated text in any combination. For example, it is now possible to search for rotated text only, disregarding any matching horizontal words.

For more information, see:



- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_extractionrules\\_statictext](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_extractionrules_statictext) if you are in Western Europe,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_extractionrules\\_statictext](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_extractionrules_statictext) if you are in North America,
- [https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad\\_extractionrules\\_statictext](https://vantage-eu.abbyy.com/help/English/AdvancedDesigner/?topic=ad_extractionrules_statictext) if you are in Australia.

## Using cross-validation to estimate accuracy of NLP Segmentation activity

In version 2.3.1, Vantage now uses cross-validation to assess the accuracy of trained Segmentation activities.

Cross-validation is one of the techniques that make it possible to derive a more precise estimate of the Segmentation activity accuracy. The basic idea behind cross-validation is to divide the document set into two sets: a training set and a validation set. The model is trained on the training set and then evaluated on the validation set. This process is repeated several times, with different subsets of the documents used for training and testing each time. The results of these evaluations are then averaged to give an estimate of the Segmentation activity accuracy.

Using cross-validation to evaluate the accuracy helps ensure that the activity is robust and able to generalize to new document variations.

## NLP Language support

In version 2.3.1, Vantage now supports new languages for Advanced Designer NLP activities.

For the NLP Deep Learning activity, support for Portuguese and Italian has been added.

For the Segmentation activity, support for the Dutch language has been added.

For the Named Entities (NER) activity, support for the Duration named entity for the Portuguese and Italian languages has been added.

The above means that starting from version 2.3.1, Vantage fully supports NLP for:

- English,
- French,
- Spanish,
- German,
- Russian,
- Japanese (preview),
- Portuguese,
- Italian.

Full support means support for Segmentation, Named Entities (NER), and NLP Deep Learning activities.

For the Address Parsing activity, support for French addresses has been added. It means that starting from version 2.3.1, Vantage supports address parsing for the following regions:

Region	Supported languages
USA	English
Canada	English, French
Austria	English, German
Germany	English, German
Spain	English, Spanish
France	English, French

## Localization

1. Advanced Designer Help is translated into Spanish, Japanese, Chinese (Simplified), and Korean.
2. Vantage Scanning UI is translated into Portuguese (Brazilian) and Italian.

For more information, see the article about localization in online Help:

- [https://vantage-eu.abbyy.com/help/English/AdminGuide/?topic=specifications\\_uilanguages](https://vantage-eu.abbyy.com/help/English/AdminGuide/?topic=specifications_uilanguages) if you are in Western Europe,
- [https://vantage-us.abbyy.com/help/English/AdminGuide/?topic=specifications\\_uilanguages](https://vantage-us.abbyy.com/help/English/AdminGuide/?topic=specifications_uilanguages) if you are in North America,
- [https://vantage-au.abbyy.com/help/English/AdminGuide/?topic=specifications\\_uilanguages](https://vantage-au.abbyy.com/help/English/AdminGuide/?topic=specifications_uilanguages) if you are in Australia.

## Bug Fixes

In Vantage 2.3.1, the following bugs have been fixed:

Zendesk Ticket #	Description
402844	In the "Select Skill" dialog, skills were not sorted alphabetically.
505828, 517973	Documents with uncertain symbols were not routed to Manual Review when the condition "With rule errors and uncertain fields or unknown" was selected.
517207	The extraction quality of Handwritten fields was insufficient.
519019	The "Task reject" action was not described properly in the documentation.
519412, 521207	No notifications were displayed when a catalog update was completed.
520870	An error occurred when trying to match a modified Identity Document skill.

Zendesk Ticket #	Description
521194	The number of documents to be deleted from a skill's document set wasn't shown correctly in Japanese UI.
523111	The "Custom" Data Catalog type was not described correctly in the documentation.
523581	Text was missing on Arabic Identity Documents.
525389	The order of pages sent to Vantage from a Scan Station wasn't preserved.
527203	It was not possible to publish a skill after it was trained successfully if any errors occurred during the training process.
527638	An error occurred when training the InvoiceCA fields.
527851	The quality of recognition results decreased after upgrading to v2.3.
528200	When opening Manual review and then navigating to another tab, the document image disappeared.
528357	An error occurred when extracting after training.
528666	The quality of the vendor extraction results worsened after upgrading to version 2.3.
529139	The "Name/Full name" field was recognized incorrectly on Hong Kong ID cards.
529257	The program stopped responding when loading a data form in the Document Skill Editor for some skills.
529318	When clicking a link on the 6th or later documents in the Document set, the focus in the batch editor was set to the 1st document.
530193	The failure of a publish operation caused the workspace to become inconsistent.
530268	A field populated with a script rule was indicated to be located incorrectly in the Results tab of Document Skill Editor.
531032	The PDF text layer was recognized incorrectly on some documents.
532507, 532979, 533222, 533943, 534647	The Skill Monitor erroneously displayed a "Started" status for transactions that should have had the "Completed" status.
532619	The scrolling area was too narrow.
532968, 532989, 533429	Upgrading a copy of an Invoice skill to the latest version caused the program to become unresponsive.

Zendesk Ticket #	Description
533648	An "InvalidOperationException: Block with ID ... already exists on page..." error occurred when uploading a PDF document to the Process skill.
533776	The documentation incorrectly stated that a regular expression defined for a field was used for field value validation.
533811	An error occurred after authenticating in Vantage Scanning Station.
534063, 538564	An error occurred while processing some PDF files.
534080	Document processing failed if a checkmark group had checkmarks on different pages.
534369	PDF images were erroneously flipped horizontally by the Identity Document Skill.
534427	It took 10 seconds for Fast Learning to process a document.
534456	For Process skills containing more than one Custom Activity, export to PDF and OCR repeated several times.
534551	Line items were duplicated.
534679	An error occurred while setting up using Azure Active Directory (AD) as the external identity provider.
534853	In Vantage Skill Monitor, page recognition failed, causing the workflow to not be completed.
535552	An error occurred when processing PDF files using the OCR Skill.
535801	A Custom activity failed if multiple regions were selected for one field.
535827	The documentation erroneously stated that there were extra languages that could be enabled for built-in Invoice skill.
535865	Online learning didn't work for some skills.
536111	Output SFTP settings weren't editable in a copy of a locked Process Skill.
536389	Manual Review image scaling wasn't saved across multiple transactions.
537167	The Document skill training took too long.
537243	Extraction results of the Process skill differed from the results of the Document skill.
537734	Documents with uncertain symbols were not routed to Manual review when the condition "With rule errors and uncertain fields or unknown" was selected.

Zendesk Ticket #	Description
537882	Document images weren't displayed when a task was automatically opened in Manual Review.
538047	Tenants could access documents of other tenants.
538176	The ImageWidth and ImageHeight properties of the Page object returned 0 when they were used in the Custom activity script.
538443	An error occurred while capturing line items.
538449	The ID Reading skill produced a date in US format.
538804	The output XML file of an OCR skill didn't contain the "rotation" attribute of the "Page" element.
539009	Data forms were automatically scrolled down after a task was opened at the Manual Review stage.
539032	Document processing failed on classification or extraction.
539690	An error occurred when changing the document type in Manual Review.
539841	Skill versions were ordered incorrectly in a Processing Skill.
539908	The tooltip for the Context.Transaction object didn't contain the Parameters property.
540873	An error occurred when importing TXT files into Vantage.
541206	A "Max Activation Count..." error occurred when processing documents in Vantage.
541797	The tenant administrator's name was displayed in the Security Log for OML events.
541871	A blank page was shown instead of the document when working with line items.
542601	Documents were not added to the Document set if there was a Custom Activity after Manual review.
542813	An error occurred when trying to search a catalog.
542978	An error occurred when training a Classification skill.
543266	The source file name wasn't displayed for imported skills in the Skill Monitor.
546125	An incorrect message was displayed in the Security log online learning if the model was not applied.

Zendesk Ticket #	Description
529031	An error occurred when trying to review the training results of a document skill if there were some fields without regions.
519851	Fields' OCR settings were not applied if the skill had no Fast Learning model, for example, if it was created in Advanced Designer and did not contain a Fast Learning Activity.
Former Known issue	Adding a Fast Learning activity to a Document Splitter skill prevented the skill from working.
Former Known issue	Uploading a CSV file to a Data catalog failed if there was a space character in the catalog name.
Former Known issue	Advanced Designer. Neither the Script nor the IF activity editor opened after an empty group has been created in the <b>Manage Fields</b> dialog.
Former Known issue	Advanced Designer. When restoring a skill with duplicated documents that was saved to a local folder, the restored skill would contain just one copy of the duplicated documents.
Former Known issue	Advanced Designer. A group created on the <b>Data Form</b> pane turned into a table when the <b>Allow Multiple Items</b> parameter was enabled in the <b>Manage Fields</b> dialog.
503227	In Advanced Designer, adding a long comment (more than 256 characters) to a document in an Extraction Rules activity caused an internal error.
507801	Field type limitations for the Address Parsing activity were not specified in Advanced Designer documentation.
518544	In Advanced Designer, fields that were extracted successfully when matching an Extraction Rules activity weren't extracted when testing the skill.
521038	There was no warning that a copy of the Identity Documents skill can't be edited in Advanced Designer. The user could try to open a copy for editing, but loading froze.
525063	Advanced Designer could be blocked by a customer's IT infrastructure because it used an outdated version of Microsoft Edge WebView2 runtime.
527520, 528288, 528595, 528128	In Advanced Designer, the X icon for deleting a field region on the Fields tab was located below the area where the user should actually click to delete a region.
527537	In Advanced Designer, the Deep Learning for NLP activity didn't support text fields with data types Date and Number. Additionally, field type limitations for this activity were not specified in Advanced Designer documentation.
528403	When adding a new item for a field with multiple items, the region corresponding to the previous field item remained selected on the document image, meaning the

Zendesk Ticket #	Description
	user couldn't specify a region for the newly added field item.
528600, 529175	In Advanced Designer, it wasn't possible to review a recognition issue by clicking a value in the results table on the Results tab of a skill or any of its activities.
530146	When creating a skill from a local folder, only unique documents were uploaded to Advanced Designer. If the document set contained duplicate documents, only one instance for each document was uploaded.
530997	There was a misprint in a script sample for the Splitter Script activity in Advanced Designer documentation.
534066	Limited table element support has been developed based on this Zendesk ticket.
534358	In Advanced Designer, when data extraction was configured using an Extraction Rules activity and a lot of similar hypotheses were formulated for search elements, data was successfully extracted when matching the activity but wasn't extracted when testing the activity.
539560	In Advanced Designer, fields that got regions from optional Region search elements were extracted successfully when matching the Extraction Rules activity but weren't extracted when testing the skill.
539562	In Advanced Designer, an Extraction Rules activity couldn't find Separator search elements when the penalty length was set to the default value.
529097	A skill that was created in Advanced Designer 2.2.1 or earlier versions but wasn't published before updating to Advanced Designer 2.3 or later, couldn't be opened for editing after updating Advanced Designer.
529863	A user could try to save a skill locked by another user to a local folder, which caused an internal program error in Advanced Designer.
528171	Unless an option was selected from an opened context menu for a field with multiple items, the context menu could not be closed and remained permanently on the screen.

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