Kofax Mobile ID Capture

Best Practices Guide

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KOFAX

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Preface

This guide provides best practices, suggestions, and background conceptual information to help developers use the Kofax Mobile ID Capture to create their own applications.

Chapter 1

Overview

Kofax Mobile ID Capture can be deployed in two fashions, on-device extraction and server-side extraction. The workflow for both extraction processes is largely the same. The user will capture the image on their mobile device. The image must then be processed for extraction. The background of the surface the identity document was captured on will be cropped so that only the identity document is present. Processing may also correct skew, keystone distortions, or warn the user that the image they have captured is unsatisfactory for extraction. After extraction is completed, the extracted data is returned to the user.

Security recommendations

It is recommended that you have a valid SSL certificate.

Licensing

Kofax Mobile ID Capture requires the appropriate licenses to use different features. These are listed in the following tables. For both of these tables use the following symbols to indicate the type of license:

- 1/doc: The volume license is decremented per document. Sending both front and back images is considered one document.
- 1/pg: The volume license is decremented per page. Sending both front and back images is considered two pages.

Real-Time Transformation Interface

License ID	License Type	License Name	Mobile ID Extraction	ID Verification	ID - Facial Recognition
210	Volume	Kofax Transformation Modules Unlimited Fields Extraction	1/doc	1/doc	1/doc
110	Volume	Kofax Mobile ID Capture Server and Device Extraction	1/doc		

License ID	License Type	License Name	Mobile ID Extraction	ID Verification	ID - Facial Recognition
111	Volume	Kofax Mobile ID Capture ID Verification		1/doc	
112	Volume	Kofax Mobile ID Capture Facial Recognition			1/doc

TotalAgility

License ID	License Type	License Name	Mobile ID Extraction	ID Verification	ID - Facial Recognition
106	Volume	TotalAgility Unlimited Fields Extraction	1/pg	1/pg	1/pg
110	Volume	Kofax Mobile ID Capture Server and Device Extraction	1/doc		
111	Volume	Kofax Mobile ID Capture ID Verification		1/doc	
112	Volume	Kofax Mobile ID Capture Facial Recognition			1/doc

Note The observed licensing behavior only applies when `StoreFolderAndDocuments` is set to True in the request.

Chapter 2

Input images

Image source

Images can come from the following sources.

- Mobile device: The Kofax Mobile SDK has specific capture experiences for capturing image of identity documents. If you are using the Kofax Mobile SDK, please see the *Kofax Mobile SDK Best Practice Guide* for details. If you are using the native capture experience on a mobile device, please see the General Image Requirements section below.
- Scanner: If the source of your input image is a flatbed scanner or a multi function printer, you must make sure it is set to scan in color and have the DPI set to at least 500 dpi.

General image requirements

For the best data extraction results, your image should meet these requirements:

- At least 5 megapixels. Larger sizes are better.
- The identity document should be on an uncluttered and untextured background.
- Having contrast between the color of the document and the background will improve cropping accuracy.
- The image should be in focus. Any blurriness will impact data extraction.
- Free of glare.
- Free of shadows.

Chapter 3

Image processing

Server-side processing

For server-side processing, follow these recommendations.

- Processing in Kofax Mobile ID Capture: It is recommended to use the processing engine within the Kofax Mobile ID Capture product. This engine will always be the most up to date. To specify this engine, use the `xcropImage` parameter.
- Processing with Real-Time Transformation Interface: Though it is recommended that processing be performed in the Kofax Mobile ID Capture product, you are still able to process raw image with Real-Time Transformation Interface by setting the `processImage` parameter to true.
- Processing with a mobile device using the Kofax Mobile SDK: If you are capturing an image with the Kofax Mobile SDK, you can process the image on the device. Us the recommended processing string that can be found in the *Kofax Mobile SDK Best Practices Guide*.
- Image quality analysis: This feature is available when using an Real-Time Transformation Interface server. It will review the submitted raw image and determine if it is suitable for extraction. See the *Real-Time Transformation Interface Administrator's Guide* for more information.

Chapter 4

Scaling and performance

TotalAgility optimization recommendations

To ensure optimum performance, we recommend that the following features are incorporated into your TotalAgility environment:

- Capture Groups to Preload. This optimizes extraction time by preloading the classification and extraction groups of a TotalAgility project into memory.
- PrecompileSyncProcesses. This compiles the process map of the TotalAgility project before execution.

See the TotalAgility documentation for more information on both of these features.

TotalAgility and Real-Time Transformation Interface scaling and performance

Kofax Mobile ID Capture is capable of scaling linearly while processing documents submitted via Real-Time Transformation Interface to Kofax Transformation Services or via RTTS to TotalAgility. Throughput for processed front images can reach 8 transactions per second with 95% of the response times being below 3 seconds.

Kofax Mobile ID Capture processing requires about 50% less hardware when image processing takes place on the device than when image processing takes place in the server.

Kofax Mobile ID Verification and Kofax Mobile ID Facial Recognition scaling and performance

Kofax Mobile ID Verification and Kofax Mobile ID Facial Recognition are capable of scaling horizontally to increase throughput.

Chapter 5

Troubleshooting

Installation troubleshooting

Mobile ID performs the following types of installation and troubleshooting.

Kofax Mobile ID Capture installation

The Real-Time Transformation Interface and Kofax Mobile ID Capture installer is a simple one that checks prerequisites, copies files, and modifies the configuration .xml file. Use the default MSI installer logging tools if something is wrong.

For TotalAgility, no installation is performed.

Kofax Mobile ID Verification and Kofax Mobile ID Facial Recognition installation

ASP.NET State Service

If an error appears while accessing the Verification Application site, open the Windows Services console (services.msc) and verify that the ASP.NET State Service is Running and set to start automatically. Certain activities such as Windows updates may disable the ASP.NET State Service.

Linux external site access

During installation of rectification, tamper, and facial recognition components, the server must be able access the following external sites to download the required prerequisite files and packages:

- subscription.rhsm.redhat.com
- dl.fedoraproject.org
- mirrors.fedoraproject.org
- fedoraproject.org
- cdn.redhat.com
- pypi.python.org
- files.pythonhosted.org
- download.docker.com

Additionally, the mirrors listed in the following link: `https://mirrors.fedoraproject.org/mirrorlist?repo=epel-source-7&arch=x86_64`

Installation logs
During installation of rectification, tamper, and facial recognition components, files with the ".log" extension are created in the folder containing the Linux installation files.

FIPS (Federal Information Processing Standard) mode
The Verification Application server does not support environments with FIPS mode enabled.

Error responses

Error response indicate issues that can be resolved as follows. For more details, please refer to *Kofax Mobile ID Capture Administrator's Guide*.

Kofax Mobile ID Capture

If extraction was not successful, a generic error message is provided with a 200 OK (in case of TotalAgility or Real-Time Transformation Interface with enabled Enhanced Error Reporting feature) or 500 Internal Server Error status message.

For further clarification, user can set `ErrorAnalysis` parameter to true. This causes the JSON response to populate the `ErrorDetails` field.

For more technical analysis, such as cropping issues or issues with bar code parsing, use the `EnableLogging` and `LogFolder` parameters.

Kofax Mobile ID Verification and Kofax Mobile ID Facial Recognition

If an unexpected result occurs, the values returned from the fields `VerificationTransactionId` and `FRTransactionId` contain transaction IDs that can be searched on the Verification Application site and reviewed.

Error messages related to Kofax Mobile ID Verification are returned in the `VerificationErrorInfo` field, and error messages related to Kofax Mobile ID Facial Recognition are returned in the `FRErrorInfo` field. Further investigation can be done by checking the verification environment logs.

Frequently asked questions

The first request often times out.

The Mobile ID loads and initializes all models up-front. The more variants there are for a region, the longer it takes to load and initialize. A warmup image can be used to mitigate initial load time. See the *Real-Time Transformation Interface Administrator's Guide* for instructions.

All images return classification failures.

Check the following:

- Make sure all images have been processed. Unprocessed images often fail to classify.
- Make sure processed images are not processed twice. Over-processing results in unusable images.
- Make sure you are setting the correct `Region` and `IDType` for the document you are using.
- When taking pictures of images, minimize glare and avoid overexposure and underexposure. These can affect classification.

Classification is successful, but the extraction results are not good.

Make sure that the image is an acceptable resolution. A resolution of 500 dpi is recommended.

The resolution is correct, but the extraction results are not good.

Review the raw image and make sure the original image is set to a high resolution. If you are using the Mobile SDK, set `videoMode=false`.