HSBC IDVision2 Technical Integration Guideline

**Aug 2019**

Version 1.1



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**Document History**

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| **Version** | **Description** | **Prepared by** | **Date** |
| 1.0 | 1st Version (Refer to Integration Guideline v1.2) | TU | 13th Aug, 2019 |
| 1.1 | Similar to previous solution, add ExternalApplicationId | TU | 21st Aug, 2019 |
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# Introduction

The IDVision 2.0 Global Core Solution in DecisionEdge, consists of the Optical Character Recognition (OCR), Document Authentication (DA), and Facial Recognition (FR) modules to assess the identity risk of an applicant. The following process is used to process the requests between TransUnion and the Subscriber.

This document aims at summarizing the service and workflow, outlining the process requirement and the input/output data requirements for customer preview only. Actual implementation is subject to customer requirement and services subscription. This guide is not standalone. It should be used in conjunction with Requirement and Configuration Document which will be compiled during project requirement collection stage.

# Assumptions & Security

* Subscriber provides one set of identification at a time.
* Subscriber will deploy solution to online channel.
* Subscriber obtains sufficient consent from applicant prior to performing an IDVision request.
* IDVision authentication submission are done within a single user session in Subscriber web application.
* The Authenication request will be authenticated transaction with user credentials (i.e. User ID and Password). Afterwards, a Session Token will be generated upon response and this Session Token will be used for authentication of entire process. The timeout period of Session Token is 20 minutes and it will be refreshed everytime when the request is successfully processed and responsed, for example, when Subscriber receives the first response with Session Token, the second request must be submitted within 20 minutes.

# Web service methods

The web service call are developed based on RESTFul protocal for caller to access IDVision by submitting JSON request string input parameter.

Below is a common API to upload document as attachement, it should be used when any document/videos are required to submit to Transunion.

## UploadDocument Request

Request made by subscriber to upload a document and attach it to an application.

***ApplicationId*** is a unique identifier for the application from Transunion which returned from Section 4.3 SubmitApplication Request.

* **Endpoint:** /TU.DE.Pont/applications/{ApplicationId}/documents/
* **HTTP Request Header**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | Content-Type | A |  | Valid values:  ***application/json*** | Y |
|  | Authorization | A |  | token\_type and access\_token | Y |

* **HTTP Request Body**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
| *ROOT* | Description | A/N | 256 | File Description | Y |
|  | FileName | A | 50 | Filename with extensions  Sample values: ***IDImage.jpg***  ***Selfie.jpg***  ***IDVideo.mp4*** | Y |
|  | Note | A | 256 | A field to indicate a brief description of the attachment. It will be shown as “Description” on Document Upload section of Portal.  Default values: ***Empty*** | N |

Request sample:

|  |
| --- |
| curl -X POST /TU.DE.Pont/applications/{ApplicationId}/documents/  -H 'content-type: application/json'  -H 'authorization: bearer a74yBac\_tAr3\_hjNL68bjmLN5t86xQ5bC9\_AwlKC56eBh6IlaxgArCHr5vXiq7frdAE9fZycAygHdw7Egrr5480tyqjfBBTCEDEqxwp94qHtZo2wizXbbtuqe5q4q3SugP11TcidugT32vxnhIYscKPfamO\_gd84jvV2xR1tPeU5rnFcYK6htuoBDb6JOszptzlTQYnRNjC6Er0JpxyfC4URfAqfn4Gkw54eNuHGuuXXvFegV6vxkD4Z1dXZpyK\_gU1Q3015h\_WjMEFerevaPxq8cOFcgts6SOZ4hTllZ2M7b4M1zT1ibfbCwdKV5nJdNQ7I4sMjigZhubhXCsb75DjtJC9TrfhPeJqHR4'  -d '{  "Description": "Short Description",  "FileName": "IDImage.jpg",  "Note": "Readable notes Online Portal"  }' |

## UploadDocument Response

Response from TransUnion of the document upload results:

* **HTTP Response Header**

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
|  | location | A/N | 50 | Unique FileID for new document created |

* **HTTP Response Body**

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
| *ROOT* | Message | A/N | 50 | Success message |

Response XML sample:

|  |
| --- |
| POST /TU.DE.Pont/applications/{ApplicationId}/documents/ HTTP/1.1  **content-length** 43  **content-type** application/json; charset=utf-8  **location** /documents/75422  {  "Message": "Document created successfully"  } |

## UploadDocumentContent Request

Request made by subscriber to upload a document and attach it to an application.

* **Endpoint:** /TU.DE.Pont/documents/{FileID}
* **HTTP Request Header**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | Authorization | A |  | token\_type and access\_token | Y |

* **HTTP Request Body**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | data-binary | Binary |  | Attachment file content | Y |

**Type:** Binary

**Description**: File binary

Request sample:

|  |
| --- |
| curl -X POST /TU.DE.Pont/documents/{FileID}  -H 'content-type: application/octet-stream'  -H 'authorization: bearer a74yBac\_tAr3\_hjNL68bjmLN5t86xQ5bC9\_AwlKC56eBh6IlaxgArCHr5vXiq7frdAE9fZycAygHdw7Egrr5480tyqjfBBTCEDEqxwp94qHtZo2wizXbbtuqe5q4q3SugP11TcidugT32vxnhIYscKPfamO\_gd84jvV2xR1tPeU5rnFcYK6htuoBDb6JOszptzlTQYnRNjC6Er0JpxyfC4URfAqfn4Gkw54eNuHGuuXXvFegV6vxkD4Z1dXZpyK\_gU1Q3015h\_WjMEFerevaPxq8cOFcgts6SOZ4hTllZ2M7b4M1zT1ibfbCwdKV5nJdNQ7I4sMjigZhubhXCsb75DjtJC9TrfhPeJqHR4'  --data-binary @IDImage.jpg |

## UploadDocumentContent Response

Response from TransUnion of the document upload results:

* **HTTP Response Header**

*N/A*

* **HTTP Response Body**

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
| *ROOT* | Message | A/N | 50 | Success message |

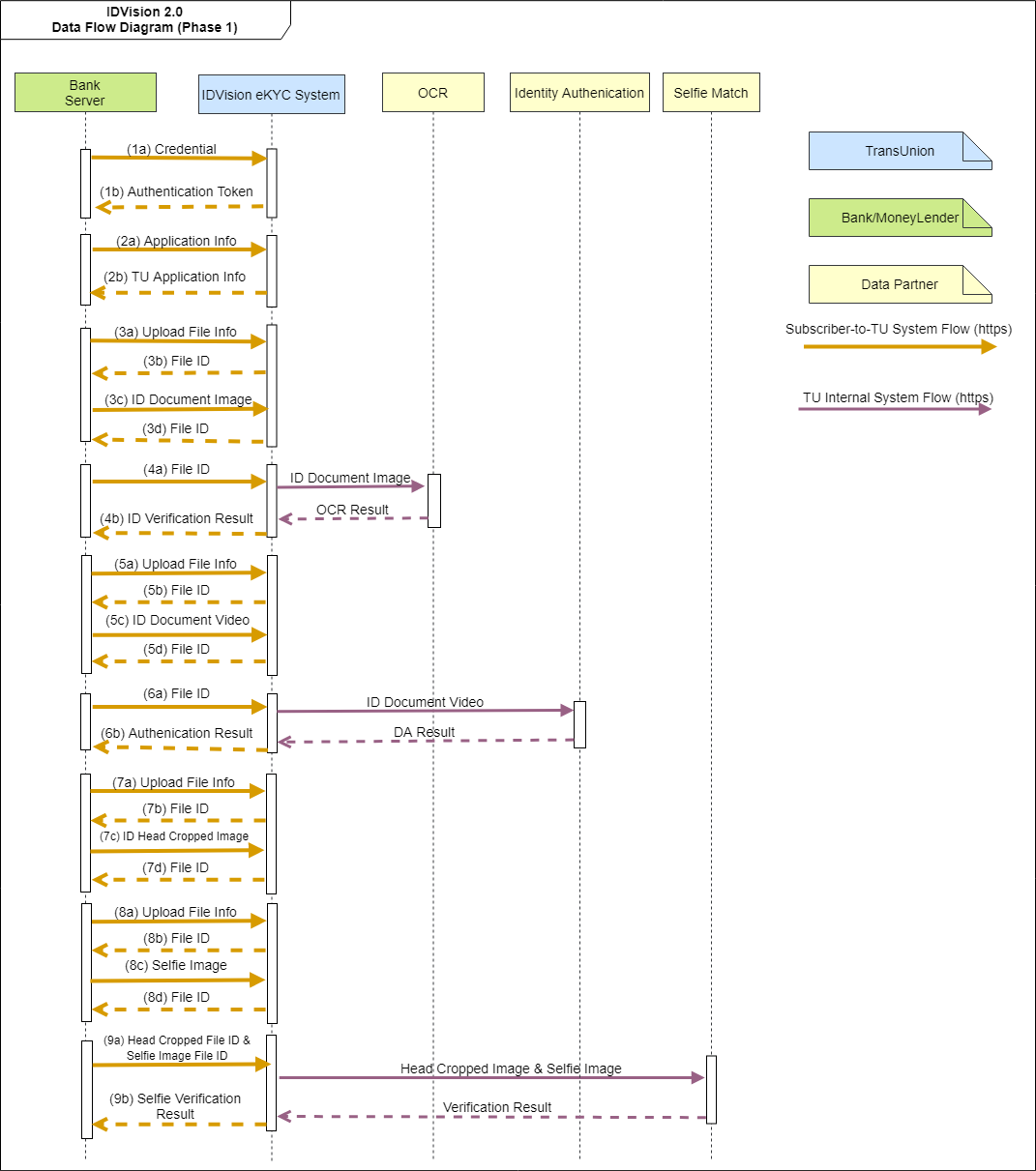
Response XML sample:

|  |
| --- |
| {  "Message": "Document uploaded successfully"  } |

# Application Communications Protocol

DecisionCentre and subscriber will exchange with JSON. The content will vary by direction of transmission and verification state.

Diagram of Subscriber to TransUnion data exchange:



## Authenication Request (System Interaction 1a)

Request made by subscriber to authenicae with user creditial (i.e. User ID and Password).

* **Endpoint:** /TU.DE.Pont/Token
* **HTTP Request Header**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | Content-Type | A |  | Valid values:  ***application/x-www-form-urlencoded*** | Y |

* **HTTP Request Body**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | grant\_type | A |  | Valid values:  ***password*** | Y |
|  | username | A/N | 50 | Account user ID | Y |
|  | password | A/N | 50 | Account password | Y |

Request sample:

|  |
| --- |
| curl -X POST /TU.DE.Pont/Token  -H 'content-type: application/x-www-form-urlencoded'  -d ' grant\_type=password&username={UserId}&password={Password}' |

## Authenication Response (System Interaction 1b)

Response from TransUnion containing authentication credential result:

* **HTTP Response Header**

*N/A*

* **HTTP Response Body**

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
| *ROOT* | access\_token | A/N | 512 | A unique identifier for subscribers use when retrieving session information |
|  | token\_type | A/N | 20 | Token type  Valid values:  **bearer** |
|  | expires\_in | N | INT | Expires duration in second |
|  | userName | A/N | 50 | Account user ID |
|  | .issued |  |  | System time of issue (GMT) |
|  | .expires |  |  | System time of expiration (GMT) |

Response sample:

|  |
| --- |
| {      "access\_token": "a74yBac\_tAr3-\_hjNL68b-jmLN5t86xQ5bC9\_AwlKC56eBh6Ilaxg-QArCHr5vXiq7frdAE9fZycAygHdw7Egrr5480tyqjfBBTCEDEqxwp94qHtZo2wizXbbtuqe5q4-q3SugP11TcidugT32vxnhIYscKPfamO\_gd84jvV2xR1tPeU5rnFcYK6htuoBDb6JOszptzlTQYnRNjC6Er0JpxyfC4URfAqfn4Gkw54eNuHGuuXXvFegV6vxkD4Z1dXZpyK\_gU1Q3015h\_WjMEFerevaPxq8cOFcgts6SOZ4hTllZ2M7b4M1zT1ibfbCwdKV5nJdNQ7I4sMjigZhubhXCsb75DjtJC9TrfhPeJqHR4",      "token\_type": "bearer",      "expires\_in": 1199,      "userName": "{UserId}",      ".issued": "Thu, 20 Jun 2019 07:56:55 GMT",      ".expires": "Thu, 20 Jun 2019 08:16:55 GMT"  } |

## SubmitApplication Request (System Interaction 2a)

Request made by subscriber to initiate an identity manager transaction.

* **Endpoint:** /TU.DE.Pont/applications
* **HTTP Request Header**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | Content-Type | A |  | Valid values:  ***application/json*** | Y |
|  | Authorization | A |  | token\_type and access\_token | Y |

* **HTTP Request Body**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
| RequestInfo | SolutionSetId | N | INT | The unique identifier of the solution. It will be defined by Transunion | Y |
|  | ExecuteLatestVersion | A | 5 | True/False | Y |
| Fields | ExternalApplicationId | A/N | 50 | A unique application identifier provided by subscriber | Y |
|  | RequestEnvelope | A |  | RequestEnvelope XML | Y |
| RequestEnvelope /Attributes | ConsentFlag | A | 1 | The field must be provided to represent whether consent has been granted by data subject. “Y” if granted, else “N”. | Y |
|  | Channel | A | 50 | The channel of the transaction. This will be referring to the client requirement configuration per customer.  Default values: ***Default*** | N |

Request sample:

|  |
| --- |
| curl -X POST /TU.DE.Pont/applications  -H 'authorization: bearer a74yBac\_tAr3\_hjNL68bjmLN5t86xQ5bC9\_AwlKC56eBh6IlaxgArCHr5vXiq7frdAE9fZycAygHdw7Egrr5480tyqjfBBTCEDEqxwp94qHtZo2wizXbbtuqe5q4q3SugP11TcidugT32vxnhIYscKPfamO\_gd84jvV2xR1tPeU5rnFcYK6htuoBDb6JOszptzlTQYnRNjC6Er0JpxyfC4URfAqfn4Gkw54eNuHGuuXXvFegV6vxkD4Z1dXZpyK\_gU1Q3015h\_WjMEFerevaPxq8cOFcgts6SOZ4hTllZ2M7b4M1zT1ibfbCwdKV5nJdNQ7I4sMjigZhubhXCsb75DjtJC9TrfhPeJqHR4'  -H 'content-type: application/json'  -d '{      "RequestInfo": {          "SolutionSetId": {SolutionSetId},          "ExecuteLatestVersion": True      },      "Fields": {          "RequestEnvelope": "<RequestEnvelope>           <Attributes>           <ConsentFlag>Y</ConsentFlag>           <Channel>Default</Channel>            </Attributes>          </RequestEnvelope>",       "ExternalApplicationId": "1254896"      }  }' |

## SubmitApplication Response (System Interaction 2b)

Response from TransUnion containing authentication credential result:

* **HTTP Response Header**

*N/A*

* **HTTP Response Body**

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
| *ROOT* | Status | A/N | 50 | Status of the transaction |
| ResponseInfo | ApplicationId | N | INT | A unique identifier for the application from Transunion. |
|  | SolutionSetInstanceId | A/N | 256 | The identifier for the solution set instance |
|  | CurrentQueue | A/N | 256 | The identifier for the system queue |
| Fields | ReturnStatus | A/N | 50 | Valid values:  **Success**  **Failed** |
|  | ReturnMessage | A/N | 256 | Contains the details if an error occurs. For example,  **System Error**  **Invalid Field Value, xxx**  **Invalid Field Length**  **No Hit found for ID Verification**  **No Consent is provided** |
|  | DataEnvelope | A/N |  | DataEnvelope XML |
| DataEnvelope | ExternalApplicationId | A/N | 50 | A unique identifier provided by subscriber |

Response sample:

|  |
| --- |
| {  "Status": "Success",  "ResponseInfo": {  "ApplicationId": 2141207,  "SolutionSetInstanceId": "0d3ba7b4-7b04-444c-95a6-bcf7d3ab72f0",  "CurrentQueue": "OCR\_Queue"  },  "Fields": {  "DataEnvelope":  "<DataEnvelope>\r\n  <ExternalApplicationId>1254896</ExternalApplicationId>\r\n  </DataEnvelope>\r\n",  "ReturnStatus": "Success",  "ReturnMessage": ""  }  } |

## UploadIDDocument (System Interaction 3a to 3d)

Upload ID document capture from SDK. Refer to,

[3.1 UploadDocument](#_UploadDocument_Request_(System)

[3.3 UploadDocumentContent](#_UploadDocumentContent_Request_(Syst)

## OCR Request (System Interaction 4a)

Request made by subscriber to initiate an document identification transaction. An applicant’s identity information is captured and sent to TransUnion server for character recognition.

* **Endpoint:** /TU.DE.Pont/applications/{ApplicationId}/queues/OCR\_Queue
* **HTTP Request Header**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | Content-Type | A |  | Valid values:  ***application/json*** | Y |
|  | Authorization | A |  | token\_type and access\_token | Y |

* **HTTP Request Body**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
| Fields | RequestEnvelope | A |  | RequestEnvelope XML | Y |
| RequestEnvelope /Document/Front | version | N |  | HKID generation  Valid values:  ***2003 (for gen 1)***  ***2018 (for gen 2)*** | Y |
|  | File | N |  | File ID returned from UploadDocument | Y |

Request sample:

|  |
| --- |
| curl -X POST /TU.DE.Pont/applications/{ApplicationId}/queues/OCR\_Queue  -H 'authorization: bearer a74yBac\_tAr3\_hjNL68bjmLN5t86xQ5bC9\_AwlKC56eBh6IlaxgArCHr5vXiq7frdAE9fZycAygHdw7Egrr5480tyqjfBBTCEDEqxwp94qHtZo2wizXbbtuqe5q4q3SugP11TcidugT32vxnhIYscKPfamO\_gd84jvV2xR1tPeU5rnFcYK6htuoBDb6JOszptzlTQYnRNjC6Er0JpxyfC4URfAqfn4Gkw54eNuHGuuXXvFegV6vxkD4Z1dXZpyK\_gU1Q3015h\_WjMEFerevaPxq8cOFcgts6SOZ4hTllZ2M7b4M1zT1ibfbCwdKV5nJdNQ7I4sMjigZhubhXCsb75DjtJC9TrfhPeJqHR4'  -H 'content-type: application/json'  -d '{  "Fields": {  "RequestEnvelope": "<RequestEnvelope>  <Document>  <Front>  <File>75422</File>  </Front>  <version>2003</version>  </Document>  </RequestEnvelope>"  }  }' |

## OCR Response (System Interaction 4b)

Response from TransUnion containing OCR result:

* **HTTP Response Header**

*N/A*

* **HTTP Response Body**

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
| *ROOT* | Status | A/N | 50 | Status of the transaction |
| ResponseInfo | ApplicationId | N | INT | A unique identifier for the application from Transunion. |
|  | SolutionSetInstanceId | A/N | 256 | The identifier for the solution set instance |
|  | CurrentQueue | A/N | 256 | The identifier for the system queue |
| Fields | ReturnStatus | A/N | 50 | Valid values:  **Success**  **Failed** |
|  | ReturnMessage | A/N | 256 | Contains the details if an error occurs. For example,  **System Error**  **Invalid Field Value, xxx**  **Invalid Field Length**  **No Hit found for ID Verification**  **No Consent is provided** |
|  | DataEnvelope | A/N |  | DataEnvelope XML |
| DataEnvelope | DocumentNumber | A/N | 50 | Identity card number |
|  | BirthDate | A |  | Date of Birth |
|  | IssueDate | A |  | Date of Issue |
|  | FirstRegisterationDate | A |  | First year-month of registration |
|  | FullNameCN | A |  | Name in Chinese |
|  | FullName | A |  | Name in English |
|  | CCC | A |  | Chinese Commercial Code |
|  | Sex | A |  | Gender |
|  | DOBSymbols | A |  | ID Symbols |
|  | DocumentNameCN | A |  | Title of ID Document (Chinese) |
|  | DocumentName | A |  | Title of ID Document (English) |
|  | DocumentVersion | N |  | HKID generation  Valid values:  ***2003 (for gen 1)***  ***2018 (for gen 2)*** |
|  | ExternalApplicationId | A/N | 50 | A unique identifier provided by subscriber |

Response XML sample:

|  |
| --- |
| {  "Status": "Success",  "ResponseInfo": {  "ApplicationId": 2141215,  "SolutionSetInstanceId": "679cfc67-add6-40b1-a5f7-a4aeea7783f2",  "CurrentQueue": "DocUpload\_Queue"  },  "Fields": {  "DataEnvelope": "<DataEnvelope>\r\n  <DocumentNumber>A123463(9)</DocumentNumber>\r\n  <BirthDate>01-01-1968</BirthDate>\r\n  <IssueDate>15-09-03</IssueDate>\r\n  <FirstRegisterationDate>01-79</FirstRegisterationDate>\r\n  <FullNameCN>李智能</name\_cn>\r\n  <FullName>Lee,Chi Nan</name\_en>\r\n  <CCC>2621 2535 5174</CCC>\r\n  <Sex>F</Sex>\r\n  <DOBSymbols>\*\*\*AZ</DOBSymbols>\r\n  <DocumentNameCN>香港永久性居民身份證</DocumentNameCN>\r\n  <DocumentName>HONG KONG PERMANENT IDENTITY CARD</DocumentName>\r\n  <DocumentVersion>2003</DocumentVersion>\r\n  <ExternalApplicationId>1254896</ExternalApplicationId>\r\n  </DataEnvelope>\r\n",  "ReturnMessage": "",  "ReturnStatus": "Success"  }  } |

## UploadIDVideo (System Interaction 5a to 5d)

Upload ID document video from SDK. Refer to,

[3.1 UploadDocument](#_UploadDocument_Request_(System)

[3.3 UploadDocumentContent](#_UploadDocumentContent_Request_(Syst)

## AuthenticateDocument Request (System Interaction 6a)

Request made by subscriber to initiate an document identification transaction. An applicant’s identity information is captured and sent to TransUnion server for risk evaluation.

* **Endpoint:** /TU.DE.Pont/applications/{ApplicationId}/queues/DocUpload\_Queue
* **HTTP Request Header**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | Content-Type | A |  | Valid values:  ***application/json*** | Y |
|  | Authorization | A |  | token\_type and access\_token | Y |

* **HTTP Request Body**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
| Fields | RequestEnvelope | A |  | RequestEnvelope XML | Y |
| RequestEnvelope /Document/Video | File | N |  | File ID returned from UploadDocument | Y |
| RequestEnvelope /Document | version | N |  | HKID generation  Valid values:  ***2003 (for gen 1)***  ***2018 (for gen 2)*** | Y |
|  | custom | A |  | Additional information captured from SDK | Y |

Request sample:

|  |
| --- |
| curl -X POST /TU.DE.Pont/applications/{ApplicationId}/queues/DocUpload\_Queue  -H 'authorization: bearer a74yBac\_tAr3\_hjNL68bjmLN5t86xQ5bC9\_AwlKC56eBh6IlaxgArCHr5vXiq7frdAE9fZycAygHdw7Egrr5480tyqjfBBTCEDEqxwp94qHtZo2wizXbbtuqe5q4q3SugP11TcidugT32vxnhIYscKPfamO\_gd84jvV2xR1tPeU5rnFcYK6htuoBDb6JOszptzlTQYnRNjC6Er0JpxyfC4URfAqfn4Gkw54eNuHGuuXXvFegV6vxkD4Z1dXZpyK\_gU1Q3015h\_WjMEFerevaPxq8cOFcgts6SOZ4hTllZ2M7b4M1zT1ibfbCwdKV5nJdNQ7I4sMjigZhubhXCsb75DjtJC9TrfhPeJqHR4'  -H 'content-type: application/json'  -d '{  "Fields": {  "RequestEnvelope": "<RequestEnvelope>  <Document>  <Video>  <File>75423</File>  </Video>  <version>2003</version>  <custom>{"videoTimeStamp":  "1554110632892.110840|1554110640600.164795|1554110645662.700195|1554110685662.700195"}</custom>  </Document>  </RequestEnvelope>"  }  }' |

## AuthenticateDocument Response (System Interaction 6b)

Response from TransUnion containing Document Authenication(DA) result:

Data Dictionary (for 2003 version):

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
| *ROOT* | Status | A/N | 50 | Status of the transaction |
| ResponseInfo | ApplicationId | N | INT | A unique identifier for the application from Transunion. |
|  | SolutionSetInstanceId | A/N | 256 | The identifier for the solution set instance |
|  | CurrentQueue | A/N | 256 | The identifier for the system queue |
| Fields | ReturnStatus | A/N | 50 | Valid values:  **Success**  **Failed** |
|  | ReturnMessage | A/N | 256 | Contains the details if an error occurs. For example,  **System Error**  **Invalid Field Value, xxx**  **Invalid Field Length**  **No Hit found for ID Verification**  **No Consent is provided** |
|  | DataEnvelope | A/N |  | DataEnvelope XML |
| DataEnvelope | ConfidenceScore | N |  | Image confidence score |
|  | ConfidenceHighThreshold | N |  | High threshold of Image confidence score |
|  | ConfidenceLowThreshold | N |  | Low threshold of Image confidence score |
|  | VideoScore | N |  | Video quality score |
|  | VideoScoreThreshold | N |  | Video quality threshold |
| Detail | KineprintHK.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | KineprintHK.Score | N |  | Result Score |
|  | SmartChip.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | SmartChip.Score | N |  | Result Score |
|  | SoftenPhotoArea.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | SoftenPhotoArea.Score | N |  | Result Score |
|  | Glare.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | Glare.Score | N |  | Result Score |
|  | OVI.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | OVI.Score | N |  | Result Score |
|  | TamperDetected.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | TamperDetected.Score | N |  | Result Score |
|  | KineprintFace.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | KineprintFace.Score | N |  | Result Score |
|  | FaceMatch.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | FaceMatch.Score | N |  | Result Score |
|  | ExternalApplicationId | A/N | 50 | A unique identifier provided by subscriber |

Response sample (for 2003 version):

|  |
| --- |
| {  "Status": "Success",  "ResponseInfo": {  "ApplicationId": 2141215,  "SolutionSetInstanceId": "679cfc67-add6-40b1-a5f7-a4aeea7783f2",  "CurrentQueue": "SelfieUpload\_Queue"  },  "Fields": {  "DataEnvelope": "<DataEnvelope>\r\n  <ConfidenceScore>0.67</ConfidenceScore>\r\n  <ConfidenceHighThreshold>0.4</ConfidenceHighThreshold>\r\n  <ConfidenceLowThreshold>0.7</ConfidenceLowThreshold>\r\n  <VideoScore>0.93</VideoScore>\r\n  <VideoScoreThreshold>0.5</VideoScoreThreshold>\r\n  <Detail>\r\n  <KineprintHK>\r\n  <Result>Pass</Result>\r\n  <Score>1</Score>\r\n  </KineprintHK>\r\n  <SmartChip>\r\n  <Result>Pass</Result>\r\n  <Score>1</Score>\r\n  </SmartChip>\r\n  <SoftenPhotoArea>\r\n  <Result>Pass</Result>\r\n  <Score>0.75</Score>\r\n  </SoftenPhotoArea>\r\n  <Glare>\r\n  <Result>Pass</Result>\r\n  <Score>1</Score>\r\n  </Glare>\r\n  <OVI>\r\n  <Result>Fail</Result>\r\n  <Score>0</Score>\r\n  </OVI>\r\n  <TamperDetected>\r\n  <Result>Pass</Result>\r\n  <Score>0</Score>\r\n  </TamperDetected>\r\n  <KineprintFace>\r\n  <Result>Pass</Result>\r\n  <Score>0.81</Score>\r\n  </KineprintFace>\r\n  <FaceMatch>\r\n  <Result>Fail</Result>\r\n  <Score>0</Score>\r\n  </FaceMatch>\r\n  </Detail>\r\n  <ExternalApplicationId>1254896</ExternalApplicationId>\r\n  </DataEnvelope>\r\n",  "ReturnMessage": "",  "ReturnStatus": "Success"  }  } |

Data Dictionary (for 2018 version):

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
| *ROOT* | Status | A/N | 50 | Status of the transaction |
| ResponseInfo | ApplicationId | N | INT | A unique identifier for the application from Transunion. |
|  | SolutionSetInstanceId | A/N | 256 | The identifier for the solution set instance |
|  | CurrentQueue | A/N | 256 | The identifier for the system queue |
| Fields | ReturnStatus | A/N | 50 | Valid values:  **Success**  **Failed** |
|  | ReturnMessage | A/N | 256 | Contains the details if an error occurs. For example,  **System Error**  **Invalid Field Value, xxx**  **Invalid Field Length**  **No Hit found for ID Verification**  **No Consent is provided** |
|  | DataEnvelope | A/N |  | DataEnvelope XML |
| DataEnvelope | ConfidenceScore | N |  | Image confidence score |
|  | ConfidenceHighThreshold | N |  | High threshold of Image confidence score |
|  | ConfidenceLowThreshold | N |  | Low threshold of Image confidence score |
|  | VideoScore | N |  | Video quality score |
|  | VideoScoreThreshold | N |  | Video quality threshold |
| Detail | TamperDetected.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | TamperDetected.Score | N |  | Result Score |
|  | Hologram.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | Hologram.Score | N |  | Result Score |
|  | SLI.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | SLI.Score | N |  | Result Score |
|  | FaceMatch.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | FaceMatch.Score | N |  | Result Score |
|  | RainbowPrinting.Result | A |  | Valid values - Result:  ***Pass***  ***Fail*** |
|  | RainbowPrinting.Score | N |  | Result Score |

Response sample (for 2018 version):

|  |
| --- |
| {  "Status": "Success",  "ResponseInfo": {  "ApplicationId": 2141215,  "SolutionSetInstanceId": "679cfc67-add6-40b1-a5f7-a4aeea7783f2",  "CurrentQueue": "SelfieUpload\_Queue"  },  "Fields": {  "DataEnvelope": "<DataEnvelope>\r\n  <ConfidenceScore>0.65</ConfidenceScore>\r\n  <ConfidenceHighThreshold>0.4</ConfidenceHighThreshold>\r\n  <ConfidenceLowThreshold>0.7</ConfidenceLowThreshold>\r\n  <VideoScore>0.5</VideoScore>\r\n  <VideoScoreThreshold>0.5</VideoScoreThreshold>\r\n  <Detail>\r\n  <TamperDetected>\r\n  <Result>Pass</Result>\r\n  <Score>0.5</Score>\r\n  </TamperDetected>\r\n  <Hologram>\r\n  <Result>Pass</Result>\r\n  <Score>1</Score>\r\n  </Hologram>\r\n  <SLI>\r\n  <Result>Pass</Result>\r\n  <Score>1</Score>\r\n  </SLI>\r\n  <FaceMatch>\r\n  <Result>Pass</Result>\r\n  <Score>0.85</Score>\r\n  </FaceMatch>\r\n  <RainbowPrinting>\r\n  <Result>Pass</Result>\r\n  <Score>1</Score>\r\n  </RainbowPrinting>\r\n  </Detail>\r\n  <ExternalApplicationId>1254896</ExternalApplicationId>\r\n  </DataEnvelope>\r\n",  "ReturnMessage": "",  "ReturnStatus": "Success"  }  } |

## UploadIDHead (System Interaction 7a to 7d)

Upload ID document head cropped image from SDK. Refer to,

[3.1 UploadDocument](#_UploadDocument_Request_(System)

[3.3 UploadDocumentContent](#_UploadDocumentContent_Request_(Syst)

## UploadSelfie (System Interaction 8a to 8d)

Upload selfie image from SDK. Refer to,

[3.1 UploadDocument](#_UploadDocument_Request_(System)

[3.3 UploadDocumentContent](#_UploadDocumentContent_Request_(Syst)

## FacialRecognition Request (System Interaction 9a)

Request made by subscriber to initiate an document identification transaction. An applicant’s identity information is captured and sent to TransUnion server for risk evaluation.

* **Endpoint:** /TU.DE.Pont/applications/{ApplicationId}/queues/SelfieUpload\_Queue
* **HTTP Request Header**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
|  | Content-Type | A |  | Valid values:  ***application/json*** | Y |
|  | Authorization | A |  | token\_type and access\_token | Y |

* **HTTP Request Body**

| Element | Field | Type | Max length | Description | Mandatory |
| --- | --- | --- | --- | --- | --- |
| Fields | RequestEnvelope | A |  | RequestEnvelope XML | Y |
| RequestEnvelope /Document/Head | File | N |  | File ID for Head cropped image returned from UploadDocument | Y |
| RequestEnvelope /Document/Selfie | File | N |  | File ID for selfie returned from UploadDocument | Y |

Request sample:

|  |
| --- |
| curl -X POST /TU.DE.Pont/applications/{ApplicationId}/queues/SelfieUpload\_Queue  -H 'authorization: bearer a74yBac\_tAr3\_hjNL68bjmLN5t86xQ5bC9\_AwlKC56eBh6IlaxgArCHr5vXiq7frdAE9fZycAygHdw7Egrr5480tyqjfBBTCEDEqxwp94qHtZo2wizXbbtuqe5q4q3SugP11TcidugT32vxnhIYscKPfamO\_gd84jvV2xR1tPeU5rnFcYK6htuoBDb6JOszptzlTQYnRNjC6Er0JpxyfC4URfAqfn4Gkw54eNuHGuuXXvFegV6vxkD4Z1dXZpyK\_gU1Q3015h\_WjMEFerevaPxq8cOFcgts6SOZ4hTllZ2M7b4M1zT1ibfbCwdKV5nJdNQ7I4sMjigZhubhXCsb75DjtJC9TrfhPeJqHR4'  -H 'content-type: application/json'  -d '{  "Fields": {  "RequestEnvelope": "<RequestEnvelope>  <Document>  <Head>  <File>75424</File>  </Head>  <Selfie>  <File>75425</File>  </Selfie>  </Document>  </RequestEnvelope>"  }  }' |

## FacialRecognition Response (System Interaction 5b)

Response from TransUnion containing Facial Recognition(FR) result:

| Element | Field | Type | Max length | Description |
| --- | --- | --- | --- | --- |
| *ROOT* | Status | A/N | 50 | Status of the transaction |
| ResponseInfo | ApplicationId | N | INT | A unique identifier for the application from Transunion. |
|  | SolutionSetInstanceId | A/N | 256 | The identifier for the solution set instance |
|  | CurrentQueue | A/N | 256 | The identifier for the system queue |
| Fields | ReturnStatus | A/N | 50 | Valid values:  **Success**  **Failed** |
|  | ReturnMessage | A/N | 256 | Contains the details if an error occurs. For example,  **System Error**  **Invalid Field Value, xxx**  **Invalid Field Length**  **No Hit found for ID Verification**  **No Consent is provided** |
|  | DataEnvelope | A/N |  | DataEnvelope XML |
| DataEnvelope | SelfieMatchScore | N |  | Selfie Match Score |
|  | HighRiskThreshold | N |  | High Risk Threshold |
|  | LowRiskThreshold | N |  | Low Risk Threshold |
|  | LivenessDetection | A |  | Result of Liveness Detection  Valid values:  **Pass**  **Fail**  **Disabled** |
|  | ExternalApplicationId | A/N | 50 | A unique identifier provided by subscriber |

Response XML sample:

|  |
| --- |
| {  "Status": "Success",  "ResponseInfo": {  "ApplicationId": 2141215,  "SolutionSetInstanceId": "679cfc67-add6-40b1-a5f7-a4aeea7783f2"  },  "Fields": {  "DataEnvelope": "<DataEnvelope>\r\n  <SelfieMatchScore>0.95</SelfieMatchScore>\r\n  <HighRiskThreshold>0.4</HighRiskThreshold>\r\n  <LowRiskThreshold>0.7</LowRiskThreshold>\r\n  <LivenessDetectionResult>Disabled</LivenessDetectionResult>\r\n  <ExternalApplicationId>1254896</ExternalApplicationId>\r\n  </DataEnvelope>\r\n",  "ReturnMessage": "",  "ReturnStatus": "Success"  }  } |

# Network Security Control

Subscriber shall access the TransUnion system using server to server web service call in JSON message format.

While the data transmission will be protected by SSL encryption (**with TLS 1.2 enabled only**), to ensure a trusted point to point connection the accessibility will be restricted to the following selected Server IP addresses of the Subscriber.

|  |  |
| --- | --- |
| Environemnt | TransUnion External Services Root URL |
| Testing | https://dcuat.transunion.hk:15443/ |
| Production | https://decisionedge.transunion.hk/ |

The list of Server IP addresses can be revised accordance with the consensus of the Subscriber and TransUnion.

Once the Server IP address has been added to the restricted list, developers will be able to obtain the wsdl to the TU endpoint provided.

Solution parameters such as user id, solution id, and version id will be assigned to the subscriber during configuration. The web service password will be emailed to the subscriber representative and will need to be reset during initial logon.

-The End-