

Shufti Pro

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Introduction

Shufti Pro provides two modes of verification :

1. **Real-Time Verification**
2. **Offline Verification**

In **Real time verification**, your customer has to show their face and the required document in front of the camera. On the other hand in **Offline Verification**, you have an opportunity to provide your customer's identity document to us via this API and we'll send you the verification results back.

Real-Time Verification

A typical real-time verification workflow looks like this:

1. You send us your customer's data to verify at one of our end points. We validate your request and send you a redirect URL so you can redirect your customer to our verification page or you can embed this in an iFrame.
2. Your customer sees an instruction page. Upon clicking 'Next' , the verification process starts.
3. Your customer shows their face followed by the required document to the camera and the verification process begins in the background.
4. Upon verification, your customer will be redirected back to the given URL. Along with this URL, we'll also send you the verification response via a callback.
5. When you receive a verification response from us, you will also receive a field **Signature**. You need to verify this field before proceeding further. An example is given below.

Offline Verification

In this mode, you only make a single call to our API with your customer's Identity document and we send you the verification result back in response to this API call. You can provide us this identity document either as an image or you can ask your customer to provide you a recorded video which you can forward to us. So for the Offline verification you can choose following methods:

1. Still Image Verification (Your customer's face and document image as a Base64 String)*
2. Video Verification (A recorded video of your customer showing his/her face and identity document (details showing clearly in the camera)**)

* Base64 string size shouldn't be greater than 4MB for each image

** This video size shouldn't be greater than 8MB

Identity Verification

The Identity verification supports the following kinds of verification:

- General Purpose verification
- Driving license verification
- Passport verification
- ID Card verification

General Purpose

Your customer is provided with a list of verification methods to choose from such as passport, driving license or ID card. After the user chooses one particular verification type, they are requested to display the required document in front of the camera. The validity of this document will make sure after cross checking the information provided in the request with that in the document

Driving License

Your customer needs to display their Driving License. Shufti Pro verifies the validity of the driving license by cross checking the information (customer's name and date of birth) provided in the request with that in the driving license.

Passport

Your customer needs to display their passport. The validity of the passport is verified by cross checking the provided information with that in the passport. For example, the customer's name and date of birth are cross checked to make sure whether the passport shown is forged or authentic.

ID Card

Your customer needs to display their Identity Document. It could be government, school and/or university issued ID card. Shufti Pro verifies the validity of such ID card by cross checking the information (customer name and date of birth) provided in the request with that in the ID card.

RESTful Request

You can make a request at the following endpoint with all the parameters defined below

Endpoint: POST <https://api.shuftipro.com/>
Format: x-www-form-urlencoded

| Parameter | Online | Offline | Description |
|------------|----------|----------|--|
| method | Optional | Required | Which type of verification would you like for your customers? Possible values: <ul style="list-style-type: none"> • passport • driving_license • id_card In real time verification if an empty value is provided then the end user will have an option to choose any of the verification method from the list given. |
| client_id | Required | Required | Client's ID provided by Shufti Pro to you. |
| reference | Required | Required | Your Unique reference ID, which we will send you back with each response , so you can verify the request. |
| first_name | Required | Required | Customer's First Name. The maximum length of the string is 32 characters and minimum required length is 2 characters. |
| last_name | Required | Required | Customer's Last Name. The maximum length of the string is 32 characters and minimum required length is 2 characters. |
| country | Required | Required | Full Country name or ISO2 Code . Example: United Kingdom or GB. |
| dob | Required | Required | Customer's date of birth (YYYY-MM-DD). Example: 1980-01-31 |

| | | | |
|----------------|----------|----------|--|
| phone_number | Required | Required | Customer's phone number with country code. Example: +440000000000 |
| callback_url | Required | Optional | Upon every request, we make a server to server call, it includes all the response values, so you can update status on your end even if the customer is lost in the midway through the process. Please verify the response's signature value with your own calculated signature value. Remember: It is not required if the user provides face_image, document_image or video. |
| redirect_url | Required | Required | Once the verification process is completed, we will redirect the customer back to your given URL. In this redirect request, you'll also get all the response values in HTTP POST, so you can make your decision. Please verify the response's signature value with your own calculated signature value. |
| signature | Required | Required | SHA256 hash of all the request parameters in sorted order. The details are in the signature calculation section. |
| face_image | Optional | Required | The base 64 string of the face. If the user wants to verify themselves through offline verification (still images). In this case, user must provide the next parameter i.e document_image. (max size 2MB) |
| document_image | Optional | Required | The base 64 string of the document mentioned in "method" parameter(passport, driving_license, id_card). This parameter is used for offline verification (still images). (max size 2MB) |
| video | Optional | Required | The base 64 of the video is only required when the user wants to verify him/herself through offline verification (by sending video). (max size 8MB) |

Card Present Verification

Card present verification is used to verify whether your customer owns the debit/credit card. Your customer needs to display their credit/debit card. Shufti Pro will confirm the first 6-digits and the last 4-digits of the credit/debit card which will be on display.

Endpoint: POST <https://api.shuftipro.com/>

Format: x-www-form-urlencoded

| Parameter | Online | Offline | Description |
|---------------------|----------|----------|---|
| method | Required | Required | Its value should be 'credit_card' without quotes. |
| client_id | Required | Required | Client's ID provided by Shufti Pro to you. |
| reference | Required | Required | Your Unique reference ID , which we will send you back in each response, so that you can verify the request. |
| card_first_6_digits | Required | Required | First 6 digits of the customer's credit/debit card number. The maximum and the minimum length required is 6 digits. |
| card_last_4_digits | Required | Required | Last 4 digits of the customer's credit/debit card number. The maximum and the minimum length required is 4 digits. |
| country | Required | Required | Full Country name or ISO2 Code. Example: United Kingdom or GB. |
| phone_number | Required | Required | Customer's phone number with country code. Example: +440000000000 |
| callback_url | Required | Optional | Upon every request, we make a server to server call, it includes all the response values, so you can update status on your end even if the customer is lost in the midway through the process. Please verify the response's signature value with your own calculated signature value. |

| | | | |
|----------------|----------|----------|---|
| redirect_url | Required | Required | Once the verification process is completed, we will redirect the customer back to your given redirect URL. In this redirect request, you'll also get all the response values in HTTP POST, so you can make your decision. Please verify the response's signature value with your own calculated signature value |
| signature | Required | Required | SHA256 hash of all the request parameters in sorted order. The details are in signature calculation section. |
| face_image | Optional | Required | The base64 of the face image, if the user sends their documents through offline verification (max size 2MB) |
| document_image | Optional | Required | The base64 of the card, if the user sends their documents through offline verification. (max size 2MB) |
| video | Optional | Required | The base 64 of the video is only required when the user wants to verify themselves through offline verification (by sending video). (max size 8MB) |

Responses

The Shufti Pro API will send you the two types of responses. One is the HTTP response sent against your request and the second one is the callback response. Both HTTP and callback responses will be in the JSON format and they contain the following parameters.

| Parameters | Description |
|-------------|---|
| status_code | One of the status codes from the status codes section. |
| message | The description of status code. If the status code is SP2 then the message will be a redirect URL. |
| reference | Your unique request reference which was provided at the time of the request so that you can identify the response in relation to the request. |
| signature | The SHA256 hash of all response parameters. The process of signature calculation is in the response signature calculation section. |

NOTE:

Callback response will be sent on the callback_url provided in the request if the provided callback URL is a valid URL.

Status Codes

Status codes represent the status of the verification process (Success / Failure). The Shufti Pro Verification API uses the following status codes sent throughout when making any kind of verification request.

| Status Code | Description | HTTP | Callback |
|-------------|---|------|----------|
| SP0 | Not Verified | Yes | Yes |
| SP1 | Verified | Yes | Yes |
| SP2 | Success! -- Contains the redirect url in message parameter. | Yes | Yes |
| SP11 | Length Validation -- [parameter_name] maximum and minimum length limit is [min & max] characters. | Yes | Yes |
| SP14 | Duplicate reference -- If a duplicate reference is provided. | Yes | Yes |
| SP15 | Invalid client id -- Client id is invalid or not found. | Yes | Yes |
| SP16 | Missing required parameter -- ["parameter_name"] is required but either missing or empty | Yes | Yes |
| SP17 | Invalid format -- ["parameter_name"] is not in the correct format. | Yes | Yes |
| SP18 | Invalid signature -- Invalid request signature. | Yes | Yes |

| | | | |
|------|--|-----|-----|
| SP19 | Invalid country code -- Invalid country code or country is not supported. | Yes | Yes |
| SP20 | Invalid Phone No -- Invalid phone number is provided. | Yes | Yes |
| SP21 | Invalid Method Name -- Given verification method is not supported. | Yes | Yes |
| SP22 | Invalid checksum value | Yes | Yes |
| SP23 | Invalid DOB -- Date of birth is not valid. | Yes | Yes |
| SP24 | Blocked Client -- Your account is not active. | Yes | Yes |
| SP25 | Request Timeout -- Sends in callback when request timeouts | No | Yes |
| SP26 | User has been landed on verification page | No | Yes |
| SP27 | Request is already processed | No | Yes |
| SP29 | Invalid size. The size limit for ["parameter_name"] is ["size in MBs"] | Yes | Yes |

Signature Calculation

The request and response signature can be calculated as following:

Request Signature

1. Sort all the request parameters (keys) in (ascending alphabetical order) and concatenate them.
2. Append the secret key in the end.
3. Calculate the SHA256 hash of string (made in above 2 steps).

Response Signature

1. Decode the response from JSON format.
2. Get all the response parameters' values and concatenate them.
3. Append the secret key in the end
4. Calculate the SHA256 hash of the string (made in above 2 steps).

So for example if you have 3 following parameters and your secret key is Trump:

| | |
|------------|------------|
| first_name | Alex |
| last_name | John |
| dob | 1990-12-25 |

You'd calculate its signature as

SHA256 ("1990-12-25AlexJohnTrump") = **ea617383129f67037f369d2bc66c7e44a3690ddcf93f52128d828fdf3cab2b2c**

Please note here, parameters are sorted ascendingly by their keys as **dob**, **first_name** and **last_name** and then Secret Key at the end.

Sample Codes

Below are the sample codes in php & python for the following verification methods

1. Online Identity verification
2. Online Card Present verification
3. Offline Identity verification
4. Offline Card Present verification

Online Identity verification

Python

```
#!/usr/bin/python
import hashlib
import requests
import json
import collections

url = 'https://api.shuftipro.com/'
CLIENT_ID = 'Your client id provided by Shuftipro'
SECRET_KEY = 'YOUR_SECRET_KEY'

post_data = {
    "method"           : "passport OR id_card OR driving_license OR null"
    "client_id"        : CLIENT_ID,
    "first_name"       : "John",
    "last_name"        : "Doe",
    "dob"              : "1980-01-31",
    "reference"        : "Your unique request reference",
    "country"          : "United Kingdom",
    "phone_number"     : "+440000000000",
    "callback_url"     : "https://www.yourdomain.com",
    "redirect_url"     : "https://www.yourdomain.com",
}

#sort the dictionary
post_data = collections.OrderedDict(sorted(post_data.items()))

#get values from dictionary and append secret key
raw_data = "".join(post_data.values()) + SECRET_KEY

#calculate sha 256
signature = hashlib.sha256(raw_data).hexdigest()

#append signature to data dictionary
post_data['signature'] = signature

#send POST request to API
response = requests.post(url, post_data).json()
if response['status_code'] == "SP2":
    print response['message'] #now you can redirect your customer to this url
```

PHP

```

$url= "https://api.shuftipro.com/";
$client_id = "Your client id provided by Shufti Pro";
$secret_key = 'YOUR_SECRET_KEY'; //Replace with your secret key provided by the Shufti Pro.

$post_data = array(
    "method"           => "id_card OR passport OR driving_license OR null",
    "client_id"        => $client_id,
    "first_name"       => "John",
    "last_name"        => "Doe",
    "dob"              => "1980-01-31", //Customer date of birth in valid date format
    "reference"        => "Your unique request reference",
    "country"          => "Pakistan",
    "phone_number"     => "+440000000000",
    "callback_url"     => "A valid callback url e.g https://www.yourdomain.com",
    "redirect_url"     => "A valid callback url e.g https://www.yourdomain.com",
);

ksort($post_data); //Sort the all request parameter.
$raw_data = implode("", $post_data) . $secret_key;

$signature           = hash("sha256", $raw_data);
$post_data["signature"] = $signature;

$ch = curl_init();
curl_setopt($ch, CURLOPT_URL, $url);
curl_setopt($ch, CURLOPT_POST, 1);
curl_setopt($ch, CURLOPT_POSTFIELDS, $post_data);
curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
$response = curl_exec($ch);
curl_close($ch);

```

Online Card Present Verification

The sample code of python & php are mentioned below:

Python

```
import hashlib
import requests
import json
import collections

url = 'https://api.shuftipro.com/'
CLIENT_ID = 'Your client id provided by Shuftipro'
SECRET_KEY = 'YOUR_SECRET_KEY'

post_data = {
    "method"           : "id_card OR passport OR driving_license",
    "client_id"        : CLIENT_ID,
    "card_first_6_digits" : "123456",
    "card_last_4_digits"  : "7890",
    "reference"         : "Your unique request reference",
    "country"           : "Pakistan",
    "phone_number"      : "+440000000000",
    "callback_url"      : "A valid callback url e.g https://www.yourdomain.com",
    "redirect_url"      : "A valid callback url e.g https://www.yourdomain.com",
}

post_data = collections.OrderedDict(sorted(post_data.items())) #sort the dictionary
raw_data = "".join(post_data.values()) + SECRET_KEY #get values from dictionary and append
secret key

hash_object = hashlib.sha256(raw_data) #calculating sha 256 hash
signature = hash_object.hexdigest()

post_data['signature'] = signature #append signature to data dictionary
response = requests.post(url, post_data).json() #send POST request to API

if response['status_code'] == "SP2":
    print response['message'] #now you can redirect your customer to this url
```

PHP

```
$url="https://api.shuftipro.com/";

$post_data = array(
    "method"           => "id_card OR passport OR driving_license",
    "client_id"        => "Your client id provided by Shuftipro",
    "card_first_6_digits" => "123456",
    "card_last_4_digits" => "7890",
    "reference"        => "Your unique request reference",
    "country"          => "Pakistan",
    "phone_number"     => "+440000000000",
    "callback_url"     => "A valid callback url e.g https://www.yourdomain.com",
    "redirect_url"     => "A valid callback url e.g https://www.yourdomain.com",
);

ksort($post_data); //Sort the all request parameter.
$raw_data = implode("", $post_data) . "YOUR_SECRET_KEY"; //Replace with your secret
key provided by the Shuftipro;

$signature           = hash("sha256", $raw_data);
$post_data["signature"] = $signature;

$ch = curl_init();
curl_setopt($ch, CURLOPT_URL, $url);
curl_setopt($ch, CURLOPT_POST, 1);
curl_setopt($ch, CURLOPT_POSTFIELDS, $post_data);
curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
$response = curl_exec($ch);
curl_close($ch);
```

Offline Identity Verification

The sample code of python & php are mentioned below:

Python

```
#!/usr/bin/python
import hashlib
import requests
import json
import collections

url = 'https://api.shuftipro.com/'
CLIENT_ID = 'Your client id provided by Shuftipro'
SECRET_KEY = 'YOUR_SECRET_KEY'

post_data = {
    "method"           : "passport OR id_card OR driving_license OR null",
    "client_id"        : CLIENT_ID,
    "first_name"       : "John",
    "last_name"        : "Doe",
    "dob"              : "1980-01-31", #Customer date of birth in valid date format
    "reference"        : "Your unique request reference",
    "country"          : "Pakistan",
    "phone_number"     : "+440000000000",
    "redirect_url"     : "A valid callback url e.g https://www.yourdomain.com",
    "face_image"       : "base64 of your face image (only required if you want to verify
                          through still images, (maximum size is 2mb)). you must provide
                          the next parameter i.e document_image",
    "document_image"   : "base64 of your document (id_card, passport, driving_license)
                          (maximum size is 2mb)",
    "video"            : "base64 of video, if you want to verify through offline video
                          verification" (maximum size is 8mb)
}

post_data = collections.OrderedDict(sorted(post_data.items())) #sort the dictionary
raw_data = "".join(post_data.values()) + SECRET_KEY #get values from dictionary and append
secret key

hash_object = hashlib.sha256(raw_data) #calculating sha 256
hash signature = hash_object.hexdigest()

post_data['signature'] = signature #append signature to data dictionary
response = requests.post(url, post_data).json() #send POST request to API

if response['status_code'] == "SP2":
    print response['message'] #now you can redirect your customer to this url
```

PHP

```

$url="https://api.shuftipro.com/";

$post_data = array(
    "method"           => "id_card OR passport OR driving_license OR null",
    "client_id"        => "Your client id provided by Shuftipro",
    "first_name"       => "John",
    "last_name"        => "Doe",
    "dob"              => "1980-01-31", //Customer date of birth in valid date format
    "reference"        => "Your unique request reference",
    "country"          => "Pakistan",
    "phone_number"     => "+440000000000",
    "redirect_url"     => "A valid callback url e.g https://www.yourdomain.com",
    "face_image"       => "base64 of your face image (only required if you want to
                          verify through still images (maximum size is 2mb)) must provide
                          the next parameter i.e document_image",
    "document_image"   => "base64 of your document (id_card, passport, driving_license)
                          (maximum size is 2mb)",
    "video"            => "base64 string of video, if you want to verify through offline
                          video verification" (maximum size is 8mb)
);

ksort($post_data); //Sort the all request parameter.
$raw_data = implode("", $post_data) . "YOUR_SECRET_KEY"; //Replace with your secret key
provided by the Shuftipro;

$signature           = hash("sha256", $raw_data);
$post_data["signature"] = $signature;

$ch = curl_init();
curl_setopt($ch, CURLOPT_URL, $url);
curl_setopt($ch, CURLOPT_POST, 1);
curl_setopt($ch, CURLOPT_POSTFIELDS, $post_data);
curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
$response = curl_exec($ch);
curl_close($ch);

```

Offline Card Present Verification

The sample code of python & php are mentioned below:

Python

```
#!/usr/bin/python
import hashlib
import requests
import json
import collections

url = 'https://api.shuftipro.com/'
CLIENT_ID = 'Your client id provided by Shuftipro'
SECRET_KEY = 'YOUR_SECRET_KEY'

post_data = {
    "method"           : "id_card OR passport OR driving_license",
    "client_id"        : CLIENT_ID,
    "card_first_6_digits" : "123456",
    "card_last_4_digits" : "7890",
    "reference"        : "Your unique request reference",
    "country"          : "Pakistan",
    "phone_number"     : "+440000000000",
    "redirect_url"     : "A valid callback url e.g https://www.yourdomain.com",
    "face_image"       : "base64 of your face image (only required if you want to verify
                        through still images (maximum size is 2mb))must provide the next
                        parameter i.e document_image",
    "document_image"   : "base64 of your document (id_card, passport, driving_license)
                        (maximum size is 2mb)",
    "video"            : "base64 of video, if you want to verify through offline video
                        verification" (maximum size is 8mb)
}

post_data = collections.OrderedDict(sorted(post_data.items())) #sort the dictionary
raw_data = "".join(post_data.values()) + SECRET_KEY #get values from dictionary and append
secret key

hash_object = hashlib.sha256(raw_data) #calculating sha 256 hash
signature = hash_object.hexdigest()

post_data['signature'] = signature #append signature to data dictionary
response = requests.post(url, post_data).json() #send POST request to API

if response['status_code'] == "SP2":
    print response['message'] #now you can redirect your customer to this url
```

PHP

```

$url="https://api.shuftipro.com/";

$post_data = array(
    "method"           => "id_card OR passport OR driving_license",
    "client_id"        => "Your client id provided by Shuftipro",
    "card_first_6_digits" => "123456",
    "card_last_4_digits" => "7890",
    "reference"        => "Your unique request reference",
    "country"          => "Pakistan",
    "phone_number"     => "+440000000000",
    "redirect_url"     => "A valid callback url e.g https://www.yourdomain.com",
    "Face_image"       => "base64 of your face image (only required if you want to verify
                          through still images (maximum size is 2mb)) must provide the next
                          parameter i.e document_image",
    "document_image"   => "base64 of your document (id_card, passport, driving_license)
                          (maximum size is 2mb)",
    "video"            => "base64 string of video, if you want to verify through offline
                          video verification" (maximum size is 8mb)
);

ksort($post_data);//Sort the all request parameter.
$raw_data = implode("", $post_data) . "YOUR_SECRET_KEY"; //Replace with your secret key
provided by the Shuftipro;

$signature           = hash("sha256", $raw_data);
$post_data["signature"] = $signature;

$ch = curl_init();
curl_setopt($ch, CURLOPT_URL, $url);
curl_setopt($ch, CURLOPT_POST, 1);
curl_setopt($ch, CURLOPT_POSTFIELDS, $post_data);
curl_setopt($ch, CURLOPT_RETURNTRANSFER, true);
$response = curl_exec($ch);
curl_close($ch);

```