Integrating the Pay360 Mobile SDK

Evolve

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Introduction

The Pay360 Mobile SDK provides a simple integration to process payments on the Pay360 payment platform via a Mobile App. This document will help you with the process of integrating to the Evolve platform.

For further information about the merchant onboarding process and Mobile SDK please refer to the following:

- Merchant Onboarding – https://docs.pay360evolve.com/
- Integrating the Pay360 Mobile SDK – (Mobile SDK – Integrating SDK.pdf)
- Pay360 Mobile SDK PCI Compliance Statement (Mobile SDK – PCI Compliance Statement.pdf)

If you would like to partner with Evolve, your first step is to visit our Partner Integration site - https://www.pay360.com/partners - for more information.

Alternatively, you can submit a contact request and one of our experts will get straight back to you.

Environments

Evolve provides two environments to help you through the development process, the live environment and the sandbox. Because the live and sandbox environments are completely segregated, you will be supplied with a different API key for each environment. The Evolve sandbox is a test environment where you can test any part of the integration without affecting live data or processing a transaction involving real money. We recommend that you make full use of the sandbox environment before deploying to the live system. When you have completed your testing and you are ready to deploy to the live environment, you will need to create a new account for the live environment.

By maintaining a separate testing environment to our production environment, we ensure that we have a clear separation between test activities and live use and can focus on maintaining availability of production operation. It also means that we do not have the risk that the testing activity one of our customers will impact on the live operation of another customer.

Sandbox

Here you can explore our APIs and develop your integration. A fully functional environment that obviously does not process any live transactions. Create your account and perform tests in this environment safe in the knowledge that you will not be touching any live payment services.

The Evolve Payment sandbox environment is available at the following URLs:

- https://secure.test.pay360evolve.com

⚠ For the terms and conditions related to using our test environment, please refer to the evaluation user agreement.

Live

When you are ready to go live you will use our production systems which are connected to the live systems of the providers of payments services (such as Visa, Mastercard & Pay by Bank)

The Evolve Payment live environment is available at the following URLs:

- https://secure.pay360evolve.com

Authentication & Authorisation

Calls made to the Pay360 Evolve Payment Platform API require authentication in order to verify the identity of the caller and establish what permissions they have within the service.

In order to make calls to the API endpoints in the Pay360 Evolve API a user needs to have an API key to authenticate with the service.

When we have onboarded you onto the service, you will be given the master API keys needed to access the APIs.

Note: do not confuse this with the Pay360 Evolve Platform API key which is used to access rest of the Evolve platform (not payments).

Using your API Keys with the APIs

When making an API call to one of our endpoints the API key needs to be passed in the HTTP header of the request being sent, an example is shown below;

GET http://secure.test.pay360evolve.com/system/paymentMethods HTTP/1.1

Content-Type: application/json

"jwt": {{YOUR_API_KEY}}

Keeping your API keys secure

Your API Key should be treated as sensitive data and not shared externally with any untrusted partners. If you lose your API Key or believe it has been compromised, then please contact your support contact to have a new API Key issued and your old API Key revoked.

Since the API Key is sensitive data it should never be embedded within a client web page or a Mobile App – all calls to the Evolve Platform APIs should be server to server – interactions between a client and the server are authenticated using JWT tokens which are discussed in the User Management API section.

API Keys and Environments

API Keys are only valid for the environment for which they are issues. You cannot use a UAT API Key with the LIVE system or vice versa.

Managing your own API Keys

The API Keys we issue to you when you first board to the system can be used to generate your own API Keys. This is the recommended approach as it allows you to create and revoke API Keys yourself and does not require you to wait for us to revoke and reissue keys if your master key is lost.

Mobile SDK Integration

Integration to the Mobile SDK requires making server-side calls to the Evolve payment platform and client-side calls to the Mobile SDK. The following is a sequence of making these calls.

Merchant/Integrator Service	Server-side	Create payment intent
Merchant/Integrator Service	Client-side/App	Pass payment intent response to app
Mobile App	Client-side/App	Collect payment data
Mobile App	Client-side/App	Send payment data to Mobile SDK
Mobile App	Client-side/App	Handle payment process response
Mobile App	Server-side	Send response to Merchant/Integrator Service
Merchant/Integrator Service	Server-side	Request payment result

Card Payment Integration

Integration to process payments via the Pay360 Mobile SDK requires you to make **server-side** calls from your server to the Pay360 Evolve Payment API. Once a successful payment intent has been created, you can initialize the Mobile SDK and collect the payment data. For a typical payment request, the following server-side calls should be observed.

- Call to create a payment intent and handing the response
- Call to get the final payment status and handling the response

In between making these two server-side calls, an interaction by the Mobile App user will be made through the Mobile SDK to the Pay360 payment platform.

Create a payment intent

Creating a payment intent will allow you to pass in transactional information about the payment to be made and the route to use for processing.

The following is an example request with the minimum set of data attributes

```
curl --location --request POST
'https://secure.test.pay360evolve.com/api/v1/merchants/{{PROCESSING_MERCHANT_ID}}/transactions/payments' \

--header 'Content-Type: application/json' \
--header 'jwt: {{API_KEY}}' \
--data-raw '{
    "remittance": {
        "merchantId": "{{BENEFICIARY_MERCHANT_ID}}"
    },
    "paymentMethod": {
        "provider": "SBS",
        "methodId": "GATEWAY",
        "gateway": {
            "routing": "API"
        }
    },
    "transaction": {
        "amount": 19.95,
        "capture": true,
        "submit": false
    }
}
'
```

A description of some of the key attributes in the request are below.

ESP request attribute	Comment
PROCESSING_MERCHANT_ID	The entity responsible for processing the payment. This is typically the identifier provided to an ISV when onboarded.
BENEFICIARY_MERCHANT_ID	The entity that will be remitted the funds from successful payments.

API_KEY	The API key provided to you for processing payments on the Evolve payment platform.
methodId	This must be provided as GATEWAY; indicating that the payment method will be decided by the processing gateway system. In this case the Mobile SDK.
capture	Set to true. Indicating that the payment will be authorised and captured in a single action.
submit	Set to false. Indicating that the payment will be submitted by another request. In this case the Mobile SDK.

The full interface specification for payment processing is available at the following link

https://docs.pay360evolve.com/apiref/#operation/createPaymentUsingPOST.

Handle Payment Intent Response

A successful payment intent will return a response with data attributes that enable you to initiate a Mobile SDK and submit payment data.

Note: the response has been shortened for clarity

```
{
    "processedBy": "{{PROCESSING_MERCHANT_ID}}",
    "processing": {
        "requestId": "3efa30b3-6ec9-41e0-97cd-fa2bcc8616c1",
        "responseStatus": "SUCCESS"
    },
    "transaction": {
        "transactionDateTime": "2021-12-01T12:00:00.000Z",
        "type": "PAYMENT",
        "status": "REQUESTED",
        "sessionId": "{{SESSION_JWT}}",
        "transactionId": {{TRANSACTION_ID}}

    }

}
```

The following attributes from the response need to be passed into the Mobile SDK.

ESP response attribute	Mobile SDK field	Comment
sessionId	token	JWT for authentication
processedBy This is the same as the merchantId provided in the request URL parameter	installationId	Processing merchant Id.

The following attribute from the response are also key to further processing.

ESP response attribute	Comment
transactionId	The value should be stored at your server-side and passed when requesting the payment status

For failed response scenarios please refer to the online API documentation https://docs.pay360evolve.com/apiref/#operation/createPaymentUsingPOST.

Retrieve final payment status

Upon payment completion, the Pay360 Mobile SDK will return a status back. This will provide a summary of the payment status. To retrieve the full status response, a server-side call must be made to EPS.

The following is an example of the request that should be made to retrieve the status.

```
curl --location --request GET ''https://secure.test.pay360evolve.com/api/v1/merchants/{{PROCESSING_MERCHANT_ID
}}/transactions/payment/{{TRANSACTION_ID}}/status' \

--header 'Content-Type: application/json' \
--header 'jwt: {{API_KEY}}' \

--data-raw ''
```

Handing Payment Status Response

A successful payment status will return a response with data attributes identifying the outcome of the payment.

Note: the response has been shortened for clarity

```
{

    "processedBy": "{{PROCESSING_MERCHANT_ID}}",

    "processing": {

        "requestId": "8282ee78-0d10-4855-b4fc-5785073020dd",

    },

    "transaction": {

        "currency": "GBP",

        "amount": 19.95,

        "transactionDateTime": "2021-12-15T13:03:19.323Z",

        "type": "PAYMENT",

        "status": "COMPLETE",

        "transactionId": {{TRANSACTION_ID}}

    },

    "paymentMethod": {

        "providerResponse": {

            "result": "AUTHORISED",

            "status": "SUCCESS",
            "captured": "FULL",

            "authorisationCode": "100002",

            "providerTransactionId": "SBS:0VTMFSKJEO80",

            "methodUsed": "CARD",

            "maskedCredentials": "444433******1111"

        }

    }

}
```

Having received a successful response, your integration with your Mobile App should present the payer with a payment completion page.

The Evolve API documentation provides information about the attributes returned in the response. Some of the key attributes are

ESP response attribute	**Comment**
transaction.amount	Authorised payment amount
transaction.datetime	UTC date and time of processing the transaction
transaction.status	Transaction status
Transaction.transactionId	Transaction identifier
paymentMethod.providerResponse.authorisationCode	Acquirer authorisation code
paymentMethod.providerResponse.methodUsed	Payment method used to process
paymentMethod.providerResponse.maskedCredentials	Masked card number
paymentMethod.providerResponse.providerTransactionId	Provider transaction identifier

For failed response scenarios please refer to the online API documentation https://docs.pay360evolve.com/apiref/#operation/statusUsingGET.

Payment Intent Customisation

The data provided in the Payment Intent can be customised as required by you. The solution offers a light-touch approach as documented above or enables you to benefit from additional processing features provided by the Evolve platform. These include

Shopping basket	Multiple shopping basket line items with detailed data
Billing address	The cardholders billing address can be captured in the payment intent, and so could be omitted when supplying payment data to the Mobile SDK. This provides the flexibility of providing the data up-front and therefore streamlining the payment process.
Email receipts	Capturing the email address could be used to send an email receipt to the customer on successful payment. Additionally, notification email can be sent to the merchant of successful payment.
Customer details	You customer data can be captured to enable further analytics of future payments
Delivery address	Details of the delivery of items can be captured to support fulfilment of goods.

Verify Integration

Integration to verify a card via the Pay360 Mobile SDK follows the same process as the payment integration and requires you to make server-side calls from your server to the Pay360 Evolve Payment API. Once a successful verification intent has been created, you can initialize the Mobile SDK and collect the payment data. For a typical verification request, the following server-side calls should be observed.

- Call to create a verification intent and handing the response
- Call to get the final verification status and handling the response

In between making these two server-side calls, an interaction by the Mobile App user will be made through the Mobile SDK to the Pay360 payment platform.

Create a verification intent

Creating a verification intent will enable the capturing of payment data to be tokenised for future payments.

The following is an example request with the minimum set of data attributes

```
curl --location --request POST
'https://secure.test.pay360evolve.com/api/v1/merchants/{{PROCESSING_MERCHANT_ID}}/transactions/verify' \

--header 'Content-Type: application/json' \

--header 'jwt: {{API_KEY}}' \

--data-raw '{
    "paymentMethod": {
        "provider": "SBS",
        "methodId": "GATEWAY",
        "gateway": {
            "routing": "API"
        }
    }
}
'
```

A description of some of the key attributes in the request are below.

ESP request attribute	Comment
PROCESSING_MERCHANT_ID	The entity responsible for processing the payment. This is typically the identifier provided to an ISV when onboarded.
API_KEY	The API key provided to you for processing payments on the Evolve payment platform
methodId	This must be provided as GATEWAY; indicating that the payment method will be decided by the processing gateway system. In this case the Mobile SDK. *Currently, this only supports verification of a card payment method.*

The full interface specification for verification processing is available at the following link

https://docs.pay360evolve.com/apiref/#operation/createVerifyUsingPOST.

Handle Verification Intent Response

A successful verification intent will return a response with data attributes that enable you to initiate a Mobile SDK and submit verification data.

Note: the response has been shortened for clarity

```
{
    "processedBy": "{{PROCESSING_MERCHANT_ID}}",
    "processing": {
        "requestId": "3efa30b3-6ec9-41e0-97cd-fa2bcc8616c1",
        "responseStatus": "SUCCESS"
    },
    "transaction": {
        "transactionDateTime": "2021-12-01T12:00:00.000Z",
        "type": "VERIFY",
        "status": "REQUESTED",
        "sessionId": "{{SESSION_JWT}}",
        "transactionId": {{TRANSACTION_ID}}
    }
}
```

The following attributes from the response need to be passed into the Mobile SDK.

ESP response attribute	**Mobile SDK field**	**Comment**
sessionId	token	JWT for authentication
processedBy This is the same as the merchantId provided in the request URL parameter	installationId	Processing merchant Id.

The following attribute from the response are also key to further processing.

ESP response attribute	Comment
transactionId	The value should be stored at your server-side and passed when requesting the verification status

For failed response scenarios please refer to the online API documentation https://docs.pay360evolve.com/apiref/#operation/createVerifyUsingPOST.

Retrieve final verification status

Upon verification completion, the Pay360 Mobile SDK will return a status back. This will provide a summary of the verification status. To retrieve the full status response, a server-side call must be made to EPS.

The following is an example of the request that should be made to retrieve the status.

```
curl --location --request GET ''https://secure.test.pay360evolve.com/api/v1/merchants/{{PROCESSING_MERCHANT_ID
}}/transactions/verify/{{TRANSACTION_ID}}/status' \

--header 'Content-Type: application/json' \

--header 'jwt: {{API_KEY}}' \

--data-raw ''
```

Handing Verification Status Response

A successful verification status will return a response with data attributes identifying the outcome.

Note: the response has been shortened for clarity

```
{

    "processedBy": "{{PROCESSING_MERCHANT_ID}}",

    "processing": {
        "requestId": "8282ee78-0d10-4855-b4fc-5785073020dd",
    },
    "transaction": {
        "transactionDateTime": "2021-12-15T13:03:19.323Z",
        "type": "VERIFY",
        "status": "COMPLETE",
        "transactionId": {{TRANSACTION_ID}}
    },
    "paymentMethod": {
        "providerResponse": {
            "result": "VERIFIED",
            "status": "SUCCESS",
            "providerTransactionId": "SBS:0VTMFSKJEO80",
            "methodUsed": "CARD",
            "maskedCredentials": "444433******1111"
        },
        "storedMethod": {
            "token": "{{TOKEN}}",
            "verification": "{{VERIFICATION}}"
        }
    }
}
```

Having received a successful response, your integration with your Mobile App should present the user with a verification completion page.

The Evolve API documentation provides information about the attributes returned in the response. Some of the key attributes are

ESP response attribute	**Comment**
transaction.datetime	UTC date and time of processing the transaction
transaction.status	Transaction status
Transaction.transactionId	Transaction identifier
paymentMethod.providerResponse.methodUsed	Payment method used to process
paymentMethod.providerResponse.maskedCredentials	Masked card number
paymentMethod.providerResponse.providerTransactionId	Provider transaction identifier
paymentMethod.storedMethod.token	Token to be used to process a recurring payment
paymentMethod.storedMethod.verification	Verification value to be used for processing a recurring payment

For failed response scenarios please refer to the online API documentation https://docs.pay360evolve.com/apiref/#operation/createVerifyUsingPOST.

Handling network communication issues

Since the processing of payments requires a reliable network communication between the Mobile App and the Payment gateway services, it is possible the due to network issues, the communication is not received.

If the payment gateway does not receive the request sent from the Mobile App, the payer may be able to try the payment again. However, if the payment has been processed but the communication back to the Mobile App fails, this may result in the payer making another payment resulting in multiple payments being debited from the payer.

To mitigate this scenario, your server integration should implement a polling service to check the status of the payment or verification after a timeout (around 5 minutes after initiating the Mobile App for processing the payment). The polling service should continue until the provider response status returns “SUCCESS” or “FAILED”.

Another trigger to check the status could be if the Mobile App does not receive a response from the Mobile SDK after a specific timeout.