Payflow Payment gateways

Payflow uses real-time, encrypted communication to process debit and credit card transactions.

This product provided by PayPal, offers an elaborated version of payment options and more control over the user experience by providing the option for choosing in between different layouts and full control over the checkout process and adding up different levels of fraud detection and also offers customers many ways to perform the payments and also gives us option to get basic or advanced fraud detection and protection against fraud risks.

Making a first call to payflow

At first, we require to create a payflow pro account and after that you have to log on to PayPal manager.

In payflow, we can actually test our payment gateway with their pilot URL like, <https://pilot-payflowpro.paypal.com>. With this URL, we have to pass in 9 parameters like PARTNER(BANK), PWD(password), VENDOR (merchant login ID we got from the manager), USER (ID that I specified in manager or same as vendor), TENDER (Payment method in single alphabet), ACCT (CC number), TRXTYPE (type of transaction, single letter input), AMT(amount). We can use cURL command to hit the API:

*curl https://pilot-payflowpro.paypal.com \ -s \ --insecure \ -d PARTNER=<PayPal> \ -d PWD=<MyPassword> \ -d VENDOR=<MyMerchantID> \ -d USER=<MyMerchantID> \ -d TENDER=C \ -d ACCT=5105105105105100 \ -d TRXTYPE=S \ -d EXPDATE=1221 \ -d AMT=1.00*

Which responds:

*RESULT=0&*

*PNREF=VFHA1234567&*

*RESPMSG=Approved&*

*AUTHCODE=123PNI*

In which:

* *RESULT=0. Indicates approved.*
* *PNREF. The Payflow transaction ID value.*
* *RESPMSG. The response message. Value is Approved.*
* *AUTHCODE. The approval code value.*

Payflow transactions flow:

1. When customer clicks the purchase button, transaction request has been sent to the PayPal gateway server.
2. The gateway will send the transaction to the payment processing network.
3. The processor responds back to the PayPal gateway server and processes the transaction (i.e. transfers the payment from customer bank to the merchant bank).
4. The gateway will return the response to the website.
5. Website displays the response to the customer.

Transaction methods

Payflow avails following transaction methods:

* Authorization transaction: It provides increased flexibility in obtaining payments from buyers. An authorization transaction places a hold on customer’s open-to-buy limit, lowering the limit by the amount of the transaction.
* Delayed capture transaction: Merchant can perform delayed capture to the original transaction amount after an authorization takes place. PayPal schedules the delayed capture for settlement during next settlement period.
* Sale transaction.: A sale transaction charges the specified amount against the account and marks the transaction for immediate fund transfer during the next settlement period.
* Void transaction. You can void any transaction that has not yet been submitted for settlement. The original transaction ID is obtained from the transaction's response.
* Credit/Refund transaction: Transaction that has not been settled.

Payflow API credentials:

Payflow provides PayPal manager to manage the test account to perform transactions to test the integration. To perform your first payflow test to create a new user to the PayPal manager:

1.login to the PayPal manager.

2.Click account administration.

3.Under manage users, click add user.

4.Enter manager login password, create a new user and password and fill in the required details and click Update.

5.For Select a predefined a Role, choose a privilege among 7 options:

* ADMIN
* ADMIN\_TRANSACTIONS
* API\_FULLTRANSACTIONS
* API\_LIMITED\_TRANSACTIONS
* FULL\_TRANSACTIONS
* LIMITED\_TRANSACTION
* READ\_ONLY

And for testing Endpoints are:

* Live: https://payflowpro.paypal.com
* Test-sandbox: <https://pilot-payflowpro.paypal.com>

Integration Path for the gateway:

The integration can be done with 2 ways:

* + By SDK. This can be found here: <https://github.com/paypal/payflow-gateway>. To clone this repository, refer the git documentation.
  + By defining our own API to connect the PayPal directly. Customizing the gateway instance that included the connection parameters, user parameters, and name-pair format. There are some requirements for a simple transaction and these parameters are required to perform a transaction while calling the PayPal, if we are using our customized API or SDK.:
    - Name- Value Pairs
    - Payflow connection parameters
    - User parameter data
    - Transaction data.
    - Format other PayPal Gateway transactions.

Let me define what these requirements are:

1. Name- Value pairs: these pairs are just parameter information in which the parameter name and it value separated by ‘=’ sign. Like:
   * + ParameterName = ParameterValue
   * To separate 2 parameters & comes here. Like:
     + ParameterName1 = ParameterValue1& ParameterName1 = ParameterValue1
   * In the value, both ‘=’ and ‘&’ are prohibited. If we have these special characters in the value, then we have to define the string length to get that value. Like:
     + CompanyName = MPS&LTD is not valid
     + CompanyName[7] = MPS&LTD is valid
2. Payflow connection parameter: The payflow SDK passes connection parameters to define the connection to server. These parameters are:
   * HOSTADDRESS
   * HOSTPORT
   * TIMEOUT
   * PROXYADDRESS
   * PROXYPORT
   * PROXYLOGON
   * PROXYPASSWORD
     + Only HOSTTADDRESS, HOSTPORT, TIMEOUT are required, rest are optional. Along with this information NVP (Name-value pairs) passes.
3. User parameter data: These parameters are:
   * + USER – username same as vendor name
     + VENDOR- vendor name
     + PARTNER- partner name
     + PWD – password
4. Transaction parameter data: Generally, the data about the customer’s details, though the PayPal does have a set of parameters to elaborate the details about the transaction but these parameters are required:
   * TRXTYPE
   * TENDER
   * ACCT
   * AMT
   * EXPDATE

Let me show an example:

TRXTYPE=S&TENDER=C&USER=MerchantUserID&VENDOR=MerchantUserID&&PWD=Pwd4Gateway&PARTNER=PayPal&ACCT=5105105105105100&EXPDATE=1215&AMT=23.45&COMMENT1=AirportShuttle&BILLTOFIRSTNAME=Jamie&BILLTOLASTNAME=Miller&BILLTOSTREET=123 Main St.&BILLTOCITY=SanJose&BILLTOSTATE=CA&BILLTOZIP=951311234

&BILLTOCOUNTRY=840&CVV2=123&CUSTIP=0.0.0.0&VERBOSITY=HIGH