

Merchant Integration Guide

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PayFast

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Revision History

Date	Revised By	Revision	Incorporated Changes
		Section	
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26th Jan 2021	Syed Danyal Hassan	Adding Store id in Initiate Transaction via Form POST	5.2 Initiate Transaction via Form Post Adding For Redirection implementation with store id
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2			
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23 rd December 2022	Ritika Thorani	3.2 Initiate transaction via post	Addition of form parameters and their responses

3.1 Get Access

Token Api

Addition of request parameter

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1. Preface

1.1 About

This document contains detail explanation about how to integrate with PAYFAST Using Our Hosted Checkout and I-frame based transactions functionality. This document contains the details for online transactions.

1.2 Intended Audience

This document is for merchants, acquirers and developers who want to integrate with PAYFAST to perform Our Hosted Checkout and I-frame based transactions.

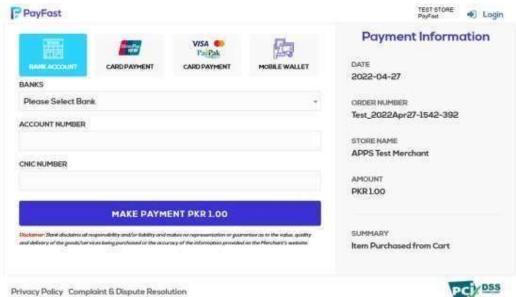
1.3 Integration scope

All the ecommerce functionality will be implemented by the merchant. PAYFAST service (*PayFast*) will be used only for payment processing.

2. Introduction

PAYFAST payment gateway is a payment service developed for merchants to accept payments from the customers using banks' instruments.





Transaction starts from the merchant's web based ecommerce portal, after this the customer checks out and is redirected to PAYFAST payment gateway web checkout page where customer will enter their credit, debit, wallet and, account number Buyer Send the correct OTP (one-time password), and completes the payment process, and customer will have redirected towards the same merchant's ecommerce portal where the customer order is confirmed by merchant if payment is successful.

2.1 Payment Flow:

A generic payment flow:



In a typical PAYFAST payment flow, a buyer:

- 1. Buyer (customer) adds items in the shopping cart on merchant's ecommerce portal.
- 2. Buyer reaches checkout page and select the PAYFAST as the payment option.
- 3. Buyer is redirected to PAYFAST payment gateway web checkout page (For Details see section "3" PAYFAST Checkout Flow).
- 4. Buyer Send the correct OTP (one-time password), and completes the payment process. And customer will have redirected towards the same merchant's ecommerce portal where the customer order is confirmed by merchant if payment is successful.

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2.2 PayFast Checkout Flow

In the PAYFAST checkout flow, the buyer:

Logged IN user and clicks, "Submit my order" button on the merchant's ecommerce portal.

2.2.1 For redirection implementation

- 1. Order request forward to the PAYFAST checkout page.
- 2. Buyer select banks and enter their credit, debit, wallet and, account number, and proceed payment.
- 3. After clicking validate button, transaction request to the selected bank for authentication via OTP from customer.
- 4. After receiving OTP, customer can enter the OTP which is provided by bank on SMS/USSD channel.
- 5. Returns to Merchant site and confirms the order then receives confirmation.

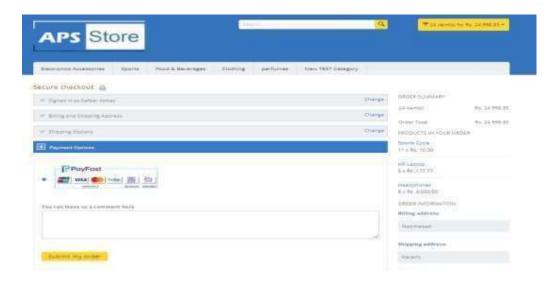
2.2 Merchant Logo/Name setup on PAYFAST gateway page



Before the transaction is processed the buyer is taken to a Merchant Logo/Name on PAYFAST payment gateway page, where the buyer's information is taken, and after submission the order information is displayed. Upon continuation, this page is used to process the transaction with the PAYFAST platform.

The buyer is subsequently taken to the merchant website order confirmation page.

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2.3 Getting Started with PayFast

3. Technical integration requirements

3.1. Getting an ACCESS TOKEN

A webhook has to be called to get the access token. Merchant ID, Secure Key, Basket ID, and Transaction amount are the values that will be sent to fetch the access token. Moreover, Empty user agents are not allowed.

Please see below table 1.1.

Table 1.0	
URL	https://ipguat.apps.net.pk/Ecommerce/api/Transaction/GetAccessToke n
Method	POST

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Parameter s	MERCHANT_ID (Mandatory)
	SECURED_KEY (Mandatory)
	BASKET_ID (Mandatory)
	TXNAMT (Mandatory)
	CURRENCY_CODE (Mandatory)
Response Type	JSON
Response	{ "MERCHANT_ID":"< <merchant_id>>" "ACCESS_TOKEN":"<<access_token>>" "NAME":"sha" "GENERATED_DATE_TIME":"<<generated_date_time>>" }</generated_date_time></access_token></merchant_id>

3.2. Initiate Transaction via Form POST

For Redirection implementation, after getting an access token, ecommerce shopping cart will send a **FORM POST** along with following parameters to PAYFAST payment gate.

Table 1.1	
URL for redirection option	https://ipguat.apps.net.pk/Ecommerce/api/Transaction/PostTransaction
Method	POST
Form Parameters	
i oi iii Fai aiiletei S	Description
MERCHANT_ID	A unique ID provided by PAYFAST



TOKEN	Access token fetched by web hook as mentioned in Table 1.0
PROCCODE	00/000
TXNAMT	The amount which needs to be paid by the customer (this should match with the amount sent in the token API)
CUSTOMER_MOBILE_NO	Customer's mobile number
CUSTOMER_EMAIL_ADDRES S	Customer's email address
SIGNATURE	A random string value
VERSION	A random string value
TXNDESC	Short description of the goods purchased by customer
SUCCESS_URL	URL where customer will be redirected to in the browser if payment is successful.
FAILURE_URL	URL where customer will be redirected to in the browser if payment is unsuccessful.

BASKET_ID	A unique order id from the merchant, which will represent customer's order. (this should match with the Basket ID sent in the token API)
ORDER_DATE [mandatory]	Date of the order. (Format: YYYY-MM-DD e.g. 2018-01-01)
CHECKOUT_URL	URL payment information or notification is pushed to the merchant at the backend. There are two types of checkout URL immediate(Transaction notification will be pushed immediately) or delayed(Transaction notification will be pushed after a minute)
STORE_ID	Alphanumeric string which would come from merchant portal's outlet section after outlet creation <optional></optional>
CURRENCY_CODE	PKR <optional></optional>
TRAN_TYPE	Transaction type for settlement <optional></optional>



CUSTOMER_NAME	Customer name from merchant's web site
MERCHANT_CUSTOMER_ID	Customer ID in merchant's web site
CUSTOMER_IPADDRESS	Customer IP address at merchant's web site
COUNTRY	Customer country
SHIPPING_CUSTOMER_NAME	Customer name for Shipping address
SHIPPING_ADDRESS_1	Customer shipping address
SHIPPING_ADDRESS_2	Customer shipping additional address
SHIPPING_STATE_PROVINCE	Shipping state/province
SHIPPING_ADDRESS_CITU	Shipping city
SHIPPING_POSTALCODE	Shipping postal code
SHIPPING_METHOD	Shipping method (Courier, Local Delivery etc)
BILLING_CUSTOMER_NAME	Billing customer name from merchant's web site
BILLING_ADDRESS_CITY	Billing city of customer
BILLING_ADDRESS_1	Billing address
BILLING_ADDRESS_2	Billing additional address
BILLING_STATE_PROVINCE	Billing state/province
BILLING_POSTALCODE	Billing postal code
MERCHANT_USERAGENT	Browser user agent from merchant's web site
ITEMS	An array (stating from zero) of purchased products from merchant's web site. S
	ITEMS[x][SKU]
	ITEMS[x][NAME]

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ITEMS[x][PRICE]

	ITEMS[x][QTY]
TRAVEL_FIRSTNAME	Traveling customer's first name
TRAVEL_LASTNAME	Traveling customer's last name
TRAVEL_NOOFPASSENGERS	Traveling no of customers
TRAVEL_CARRIERCODE	Traveling customer carrier code
TRAVEL_DESTINATION	Traveling Destination
TRAVEL_DEPARTUREDATE	Traveling departure date
TRAVEL_DEPARTURETIME	Travelling departure time
TRAVEL_ORIGINATION	Travelling origination
TRAVEL_JOURNEYTYPE	Travelling journey type
TRAVEL_ACTUALFINALDEST INATION	Traveling actual destination
PROCESSING_TYPE	"HYBRID_TOKEN" (if a merchant requires a token against a customer-provided instrument used in the current transactions, skip this parameter if not relevant (optional)

MERCHANT_CUSTOMER_ID	(Customer ID used in merchant's system/application (optional)
INSTRUMENT_TOKEN	"{Token Value}" (needs to provide the instrument token provided (optional
Transaction_Instrument	1-Bank Account 2-UnionPay 3-visa/MasterCard/paypak(card) 4-wallet (if a merchant needs only one payment type)

Working Code Example

An example PHP code snippet is as follows:

```
<html>
<body>
  <h1>PayFast Example Code For Redirection Payment Request</h1>
<?php
  $merchant_id = 102;
  $secured_key = 'zWHjBp2AlttNu1sK';
  $basket_id = 'ITEM-001';
  t=100; if (count(\$_GET) > 0)
  {
     processResponse($merchant_id,$basket_id,$trans_amount,$currency_code,
$_GET);
  }
  $token = getAccessToken($merchant_id, $secured_key, $basket_id,
$trans_amount,$currency_code);
  /**
   * get access token with merchant id, secured key, basket id, transaction
amount , currency code
   */
```



```
function getAccessToken($merchant_id, $secured_key, $basket_id,
$trans_amount, ,$currency_code)
    $tokenApiUrl =
'https://ipquat.apps.net.pk/Ecommerce/api/Transaction/GetAccessToken';
    $urlPostParams = sprintf(
'MERCHANT_ID=%s&SECURED_KEY=%s&TXNAMT=%s&BASKET_ID=%s&CURRENC
Y_CODE=%s',
       $merchant_id,
       $secured_key,
       $trans_amount,
       $basket_id,
       $currency_code
    );
    $ch = curl_init(); curl_setopt($ch, CURLOPT_URL, $tokenApiUrl);
curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1); curl_setopt($ch,
CURLOPT_POST, 1); curl_setopt($ch, CURLOPT_POSTFIELDS,
$urlPostParams); curl_setopt($ch, CURLOPT_USERAGENT, 'CURL/PHP_PayFast
Example');
    $response = curl_exec($ch);
                                   curl_close($ch);
    $payload = json_decode($response);
    $token = isset($payload->ACCESS_TOKEN) ? $payload-
>ACCESS_TOKEN: ";
    return $token;
  }
  /**
   * process response coming from PayFast
```

```
echo "<br/>Transaction Failed. Message: " .
$err_msg;
  }
  ?>
  <!-- For data integrity purpose, transaction amount and basket id should be the
same as the ones sent in token request -->
  <!--
    Actual Payment Request
  <form id='PayFast_payment_form' name='PayFast-payment-form' method='post'</pre>
action="https://ipguat.apps.net.pk/Ecommerce/api/Transaction/PostTransactio n">
     Currency Code: <input type="TEXT" name="CURRENCY_CODE"
value="="<?php echo $currency_code; ?>" /><br />
     Merchant ID: <input type="TEXT" name="MERCHANT_ID" value="<?php echo
$merchant id; ?>" /><br />
     Merchant Name: <input type="TEXT" name="MERCHANT_NAME" value="UAT
Demo Merchant" /> <br />
    Token: <input type="TEXT" name="TOKEN" value="<?php echo $token; ?>"
/><br />
     Success URL: <input type="TEXT" name="SUCCESS_URL"
value="http://merchant-site-example.com" /><br/>
     Failure URL: <input type="TEXT" name="FAILURE URL"
value="http://merchant-site-example.com" /><br/>
     Checkout URL: <input type="TEXT" name="CHECKOUT URL"
value="http://merchant-site-example.com" /><br/>
     Customer Email: <input type="TEXT"
name="CUSTOMER_EMAIL_ADDRESS" value="some-email@example.com" /><br />
     Customer Mobile: <input type="TEXT" name="CUSTOMER_MOBILE_NO"
value="00000000000" /><br/>
     Transaction Amount: <input type="TEXT" name="TXNAMT" value="<?php
echo $trans_amount; ?>" /><br />
     Basket ID: <input type="TEXT" name="BASKET ID" value="<?php echo
$basket id; ?>" /><br />
```



```
Transaction Date: <input type="TEXT" name="ORDER_DATE" value="<?php
echo date('Y-m-d H:i:s', time()); ?>" /><br />
     Signature: <input type="TEXT" name="SIGNATURE"
value="SOMERANDOM-STRING" /><br />
     Version: <input type="TEXT" name="VERSION" value="MERCHANTCART-
0.1" /><br />
     Item Description: <input type="TEXT" name="TXNDESC" value="Item
Purchased from Cart" /> <br />
     Proccode: <input type="TEXT" name="PROCCODE" value="00" /><br />
     Transaction Type: <input type="TEXT" name="TRAN_TYPE"
value='ECOMM PURCHASE' /><br />
     Store ID/Terminal ID (optional): <input type="TEXT" name="STORE_ID"
value='102-ZEOJDZS3V' /><br />
Recurring transaction: <input type="TEXT" name="RECURRING_TXN"
value="TRUE/FALSE " /><br />
<INPUT TYPE="HIDDEN" NAME="MERCHANT_USERAGENT" value="Mozilla/5.0</p>
(Windows NT 6.1; Win64; x64; rv:47.0) Gecko/20100101 Firefox/47.0">
<INPUT TYPE="HIDDEN" NAME="ITEMS[0][SKU]" value="SAMPLE-SKU-01">
<INPUT TYPE="HIDDEN" NAME="ITEMS[0][PRICE]" value="150"> <INPUT</pre>
TYPE="HIDDEN" NAME="ITEMS[0][QTY]" value="2">
<INPUT TYPE="HIDDEN" NAME="ITEMS[1][SKU]" value="SAMPLE-SKU-02">
<INPUT TYPE="HIDDEN" NAME="ITEMS[1][NAME]" value="Ice Cream">
<INPUT TYPE="HIDDEN" NAME="ITEMS[1][PRICE]" value="45"> <INPUT
TYPE="HIDDEN" NAME="ITEMS[1][QTY]" value="5">
     <input type="SUBMIT" value="SUBMIT">
  </form>
</body>
</html>
```

For Redirection implementation with store ID

Please note that store id is optional but if added as a parameter then it will be validated in our system of which following example is slated below: Store id of sample merchant: 102-ZEOJDZS3V

For Redirection/IPN (backend payment notification)

The payment gateway will send additional parameters (along with those sent already by the merchant) containing transaction information. These parameters are as follows:

Table 1.2	
Method	GET
transaction_id	Transaction ID processed at payment gateway
err_code	Status code of the transaction.
	('000' is for successful transaction)
err_msg	Descriptive message in case of failed transaction
basket_id	Order ID sent by merchant.
order_date [Mandatory]	Date of order sent by merchant.



A SHA256 hash of combination of following fields in particular order:
Basket ID
Merchant Secured Key
Merchant ID
Error Code (received from PayFast)
String Sequence:
"your_basket_id your_merchant_secret_key your_merchant_id payasft_err_code"
e.g. BAS-01 jdnkaabcks 102 000
SHA256 of above example will make following hash: e8192a7554dd699975adf39619c703a49239 2edf5e416a61e183866ecdf6a2a2 (please note " " (pipe) sign is included in the string) Value received from PayFast should match with your calculated hash for data integrity.
Payment type (account , card , wallet)
Discount given my merchant (if any)
Actual transaction amount
Amount sent by merchant
Transaction currency
Merchant requested token (applies for particular opted service)

Recurring_txn	True/False

3.3. Description of mandatory field

Mandatory Field	Description
MERCHANT_ID	A unique ID provided by PAYFAST
Merchant_Name	Your brand name
TOKEN	Access token fetched by webhook as mentioned in Table 1.0
PROCCODE	00 /000
TXNAMT	The amount that needs to be paid by the customer
CUSTOMER_MOBILE_NO	Customer's mobile number
CUSTOMER_EMAIL_ADDRESS	Customer's email address
SIGNATURE	A random string value
VERSION	A random string value
TXNDESC	Short description of the goods purchased by customer
SUCCESS_URL	URL where customer will be redirected to in the browser if payment is successful.
FAILURE_URL	URL where customer will be redirected to in the browser if payment is unsuccessful.
BASKET_ID	A unique order id from the merchant that will represent customer's order.
ORDER_DATE	Date of the order. (Format: YYYY-MM-DD e.g. 2018-01-01)
CHECKOUT_URL	URL payment information or notification is pushed to the merchant at the backend. There are two types of checkout URL immediate(Transaction notification will be pushed immediately) or delayed (Transaction notification will be pushed after a minute)



4. Error Codes & Description

Some new error codes may not exist in the below table:

ERROR CODES	ERROR DESCRIPTIONS
000 OR 00	Processed/Successful Transaction
002	Time Out
97	Dear Customer, You have an Insufficient Balance to proceed
106	Dear Customer, Your transaction Limit has been exceeded please contact your bank
03	You have entered an Inactive Account
104	Entered details are Incorrect
55	You have entered an Invalid OTP/PIN
54	Card Expired

13	You have entered an Invalid Amount
126	Dear Customer your provided Account details are Invalid
75	Maximum PIN Retries has been Exceeded
14	Dear Customer, You have entered an In-Active Card number
15	Dear Customer, You have entered an In-Active Card number
42	Dear Customer, You have entered an Invalid CNIC
423	Dear Customer, We are unable to process your request at the moment please try again later
41	Dear Customer, entered details are Mismatched
801	{0} is your PayFast OTP (One Time Password). Please do not share with anyone.
802	OTP could not be sent. Please try again later.

803	OTP has been sent to your email address.
804	OTP has been sent to your mobile number.
805	OTP Verified
806	OTP could not be verified.



807	Too many attempts. Please try again later in few minutes.
808	Passwords do not match
809	Invalid Password
810	Password could not be changed
811	Password changed successfully
812	Request could not be validated. Please try again.
813	Email address already registered
9000	FRMS Rejected
9010	FRMS Error
308	Dear Customer your provided Account details are Invalid
600	OTP Already Expired
309	You have entered Invalid OTP Length
853	Dear Customer, Your provided Account details are Invalid
04	You have entered a Closed Account
537	You have entered a Dormant Account
359	Blocked Account
8811	Password changed successfully

880	Transaction declined due to nonactivation of local ecommerce session. Please call your bank.
881	Your transaction is declined due to insufficient funds. Please call your bank for assistance
882	Your transaction is declined due to consumption of daily local e_payment transaction limit/count.
883	Your transaction is declined. Please call your bank to activate local e_payment service

4.1 PayFast Checkout Page

For redirection implementation



On posting the form data, the customer will be redirected to the following page of the PAYFAST web e-commerce portal.

