

# Merchant Onboarding Guide

Powered by 

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## Revision History:

<b>Date</b>	<b>Revised By</b>	<b>Revision Section</b>	<b>Incorporated Changes</b>
26 September	S Yousuf Aziz	API End Points	3.5 and 3.9 added
7 <sup>th</sup> Feb	S Yousuf Aziz	Error Codes	Error codes update

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# I Preface

## I.1 About

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

## I.2 Intended Audience

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

## I.3 Integration scope


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


# 2 Introduction


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




### Select Your Method


  
**BANK ACCOUNT**

  
**CARD PAYMENT**

  
**MOBILE WALLET**

  
**UNION PAY**

BANKS

 PLEASE SELECT BANK ▼

ACCOUNT NUMBER

CNIC NUMBER

**MAKE PAYMENT RS. 100.00 →**

### Payment Information

ORDER NUMBER	DATE
<b>10</b>	<b>1/2/2019</b>
STORE NAME	AMOUNT
<b>Demo Merchant</b>	<b>RS. 100.00</b>

---

SUMMARY

Description of goods

Transaction starts from the merchant's web based ecommerce portal, after this the customer checks out and is redirected to APPS 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 APPS 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 APPS as the payment option.
3. Buyer is redirected to APPS payment gateway web checkout page (For Details see section "3" APPS 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.

## 2.2 Payfast Checkout Flow

In the APPS checkout flow, the buyer:

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

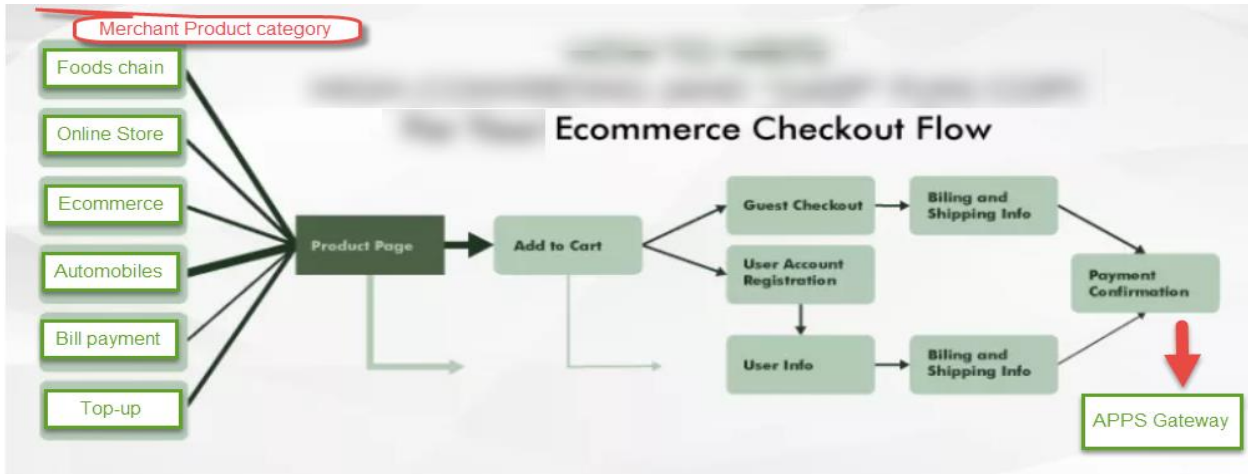
### 2.2.1 For redirection implementation

1. Order request forward to the APPS 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.

### 2.2.2 For I-Frame implementation

1. Create an iframe and submit Order request as targeted iframe then APPS checkout page will open in provided iframe
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.

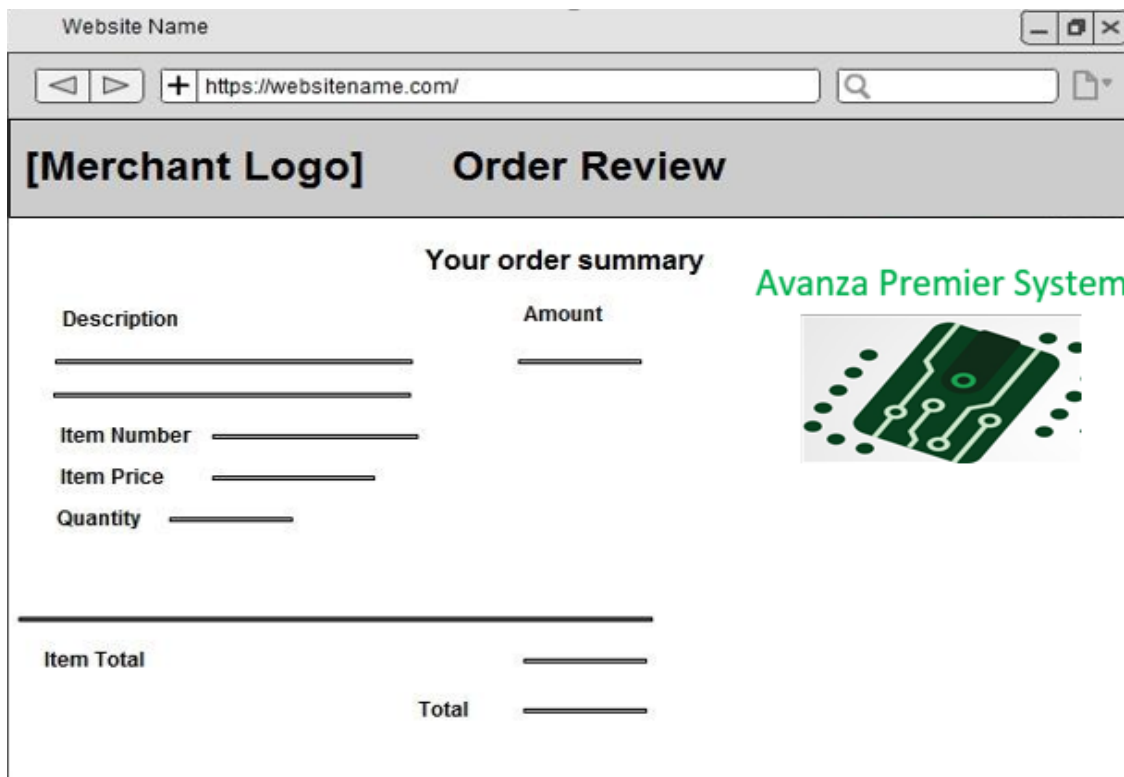
5. Returns to Merchant site and confirms the order then receives confirmation.



### 2.3 Merchant Logo/Name setup on APPS gateway page

Before the transaction is processed the buyer is taken to a Merchant Logo/Name on APPS 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 APPS platform.

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



## 2.4 Getting started with APPS

Merchant should complete all the paper formalities with APPS. After that a



Microsoft Excel  
Worksheet

merchant info sheet will be provided by APPS at the time of agreement and would be shared with the APPS and the business/ operational person will **create/update the merchant information accordingly.**

After the creation of the merchant, the finalized **MDR will be configured against the merchant in the back office portal.**

Merchant Name	Merchant Code	Registered Date	NTN	Email	Phone	Status	Action
11th Street Pizza	11STPI-UitA	25/10/2018	123456	burhanjaani7@yopmail.com	03456275997	Active	Add/Edit Details
AFC	AF-eUVz	16/10/2018	1234567	waqas@yopmail.com	1234567	Active	Add/Edit Details
Aureate Jewelry	Auje-flyf	05/09/2018	3980317-1	jameelakhtar@hotmail.com	03212550068	Active	Add/Edit Details
CheezMall	Ch-xSSF	24/10/2018	12345	yousuf.aziz@yopmail.com	3452468994	Active	Add/Edit Details
Computer Zone	CoZo-fk8N	24/07/2018	123456789	computerzone@mailinator.com	123456789	Active	Add/Edit Details
Crystallite Pakistan Pvt Ltd	CrPaPvLt-fvKU	10/09/2018	01234-5	ali.raza@bitswits.com	03018284315	Active	Add/Edit Details
KFC	KF-AAKr	27/12/2017	12121234543	muhammadts@hotmail.com	123132231234	Active	Add/Edit Details

### 2.4.1 Merchant Settlement

**Settlement is the process through which a merchant receives money paid by their end users for a particular product/service.**

**The complete process takes a time of T+3\* business days, T being the date of capture of payment.**

**\* Settlement cycle is subject to bank approval and can vary based on your business vertical, risk factor etc.**

### 3 Merchant online Payment Integration

Merchant needs to be registered with APPS to be able to send payment requests to payment gateway. Once merchant is registered, it receives authentication information which will be used to get customers to payment gateway for the payment process, which are as follows:

Merchants are expected to send a specific set of parameters to APPS payment gateway to kick off payment process. All parameters defined below are case sensitive.

#### Simple Integration

Just add a few lines of code to your website or app and you are ready >

- Merchant ID
- Merchant Secure Key

These 2 values will be used to recognize legit transaction requests from the customer. Merchant will be able to reset "Merchant Secure Key" from the merchant APPS Merchant Portal.

Merchant needs to send a set of parameter as a "POST" request to the APPS payment gateway. Before posting such requests, merchant needs to get an authentication token (for details on authentication token please view section 6.1 of Technical Integration Requirements) every time a payment request is sent to APPS. This token is actually a volatile string value and subject to expiry time.

This token will then be sent as one of the parameters to post transaction request to APPS.





## 4 Response from Payment Gateway



### 4.1.1 For Redirect implementation

After successful/unsuccessful payment process, payment gateway will perform following actions.

1. redirect back to merchant's defined success/failure URL
2. send backend payment notification to merchant's defined URL (instant payment notification).

### 4.1.2 For I-Frame implementation

After successful/unsuccessful payment process, I-frame will perform following actions.

1. redirect back to merchant's defined success/failure URL
2. send backend payment notification to merchant's defined URL (instant payment notification).

## 5 Technical integration requirements

### 5.1 Getting an ACCESS TOKEN

A web hook has to be called to get the access token. Merchant ID and Secure Key are the 2 values will be sent to fetch the access token. Please see below table 1.1.

Table 1.0	
<b>URL</b>	http://cloud.apps.net.pk:7021/Ecommerce/api/Transaction/GetAccessToken
<b>Method</b>	POST
<b>Parameters</b>	MERCHANT_ID SECURED_KEY
<b>Response Type</b>	JSON
<b>Response</b>	{ "ACCESS_TOKEN": "xxxxxxx" }

### 5.2 Initiate Transaction via Form POST

**For Redirection implementation**, after getting an access token, ecommerce will send a **FORM POST** along with the following parameters to APPS payment gateway:

**For I-Frame implementation**, after getting an access token, ecommerce will send a **FORM POST** along with the following parameters to APPS payment gateway and get response is in iframe and set as targeted.

Create an iframe on page with dimensions' `width: 425px; height: 450px`.

Table 1.1	
<b>URL for redirection option</b>	http://cloud.apps.net.pk:7021/Ecommerce/api/Transaction/PostTransaction
<b>URL for I-frame option</b>	http://cloud.apps.net.pk:7021/Ecommerce/api/Transaction/PostTransactionModel
<b>Method</b>	POST
<b>Target for I-frame option</b>	Iframe id (for Iframe implementation only)
<b>Form Parameters</b>	<b>Description</b>
<b>MERCHANT_ID</b>	A unique ID provided by APPS
<b>TOKEN</b>	Access token fetched by web hook as mentioned in Table 1.0
<b>PROCCODE</b>	00
<b>TXNAMT</b>	The amount which needs to be paid by the customer
<b>CUSTOMER_MOBILE_NO</b>	Customer's mobile number
<b>CUSTOMER_EMAIL_ADDRESS</b>	Customer's email address
<b>SIGNATURE</b>	A random string value
<b>VERSION</b>	A random string value
<b>TXNDESC</b>	Short description of the goods purchased by customer

<b>SUCCESS_URL</b>	URL where customer will be redirected to in the browser if payment is successful.
<b>FAILURE_URL</b>	URL where customer will be redirected to in the browser if payment is unsuccessful.
<b>BASKET_ID</b>	A unique order id from the merchant which will represent customer's order.
<b>ORDER_DATE</b>	Date of the order. (Format: YYYY-MM-DD e.g. 2018-01-01)
<b>CHECKOUT_URL</b>	URL payment information is pushed to the merchant at the backend.
<b>CURRENCY_CODE</b>	PKR <optional>

## Working Code Example

An example PHP code snippet is as follows:

```
<?php
/**
 * setup merchant id and secured key
 */
$merchantid = "102";
$secret = "zWHjBp2AltNu1sK";
/**
 * token URL
 */
$token_url =
"http://cloud.apps.net.pk:7021/Ecommerce/api/Transaction/GetAccessToken?
MERCHANT_ID=" . $merchantid . "&SECURED_KEY=" . $secret;

$content = file_get_contents($token_url);

/**
 * decode JSON returned data
 */
$token_info = json_decode($content);

$token = "";
if (isset($token_info->ACCESS_TOKEN)) {
    $token = $token_info->ACCESS_TOKEN;
}

/**
 * initialize form with required parameters
 */
?>
```

For Redirection implementation <form method="POST" action =  
"http://cloud.apps.net.pk:7021/Ecommerce/api/Transaction/PostTransaction

```
">
  <INPUT TYPE="TEXT" NAME="MERCHANT_ID" VALUE="<?php echo $merchantid;
?>">
```

**For I-frame implementation** <form method="POST" action =  
"http://cloud.apps.net.pk:7021/Ecommerce/api/Transaction/PostTransaction  
Model">

```
  <INPUT TYPE="TEXT" NAME="MERCHANT_ID" target="payfast" VALUE="<?php
echo $merchantid; ?>">

  <INPUT TYPE="TEXT" NAME="MERCHANT_NAME">
  <INPUT TYPE="TEXT" NAME="TOKEN" VALUE="<?php echo $token; ?>">
  <INPUT TYPE="TEXT" NAME="PROCCODE" VALUE="00">
  <INPUT TYPE="TEXT" NAME="TXNAMT" VALUE = "100">
  <INPUT TYPE="TEXT" NAME="CUSTOMER_MOBILE_NO" VALUE="+92300000000">
  <INPUT TYPE="TEXT" NAME="CUSTOMER_EMAIL_ADDRESS"
VALUE="email@example.com">
  <INPUT TYPE="TEXT" NAME="SIGNATURE" VALUE="RANDOMSTRINGVALUE">
  <INPUT TYPE="TEXT" NAME="VERSION" VALUE="MY_VER_1.0">
  <INPUT TYPE="TEXT" NAME="TXNDESC" VALUE="HP Mouse X1">
  <INPUT TYPE="TEXT" NAME="SUCCESS_URL" VALUE="http://merchant-
site.com/order/success">
  <INPUT TYPE="TEXT" NAME="FAILURE_URL" VALUE="http://merchant-
site.com/order/failure">
  <INPUT TYPE="TEXT" NAME="BASKET_ID" VALUE="10051">
  <INPUT TYPE="TEXT" NAME="ORDER_DATE" VALUE="2018-02-13">
  <INPUT TYPE="TEXT" NAME="CHECKOUT_URL" VALUE="http://merchant-
site.com/order/backend/confirm">
  <INPUT TYPE="SUBMIT" value="PAY NOW">
</form>
```

**For I-frame implementation on Client page**

```
<iframe name="payfast" id="my-frame" style="width: 425px; height:
450px;" ></iframe>
```

```
<!-- End of Code -->
```

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

<b>Table 1.2</b>	
<b>Method</b>	GET
<b>URL</b>	Merchant's supplied URL
<b>Parameters</b>	<b>Description</b>
<b>transaction_id</b>	Transaction ID processed at payment gateway.
<b>err_code</b>	Status code of the transaction. (‘000’ is for successful transaction)
<b>err_msg</b>	Descriptive message in case of failed transaction.
<b>basket_id</b>	Order ID sent by merchant.
<b>order_date</b>	Date of order sent by merchant.
<b>Rdv_Message_Key</b>	Payment gateway middleware transaction id.
<b>responseKey</b>	An MD5 hash of combination of multiple fields, to verify authenticated response: merchant_id + basket_id + <secret word>+ txnamt + err_code

### 5.3 Description of mandatory field

<b>Mandatory Field</b>	<b>Description</b>
MERCHANT_ID	A unique ID provided by APPS
TOKEN	Access token fetched by web hook as mentioned in Table 1.0
PROCCODE	00
TXNAMT	The amount which 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 which 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 is pushed to the merchant at the backend.

The code being flexible is easily embedded on the merchant payment page. The buyer payment information will need to be parsed to the APPS gateway page via this relay form.

## 6 Error Codes & Description

ERROR CODES	ERROR DESCRIPTIONS
00	Processed OK
002	Time Out
001	Pending

<b>97</b>	Dear Customer, you have an insufficient Balance to proceed
<b>106</b>	Dear Customer, Your transaction Limit has been exceeded please contact your bank
<b>3</b>	You have entered an Inactive Account
<b>14</b>	Entered details are Incorrect
<b>55</b>	You have entered an Invalid OTP/PIN
<b>54</b>	Card Expired
<b>13</b>	You have entered an Invalid Amount
<b>126</b>	Dear Customer your provided Account details are Invalid
<b>75</b>	Maximum PIN Retries has been Exceeded
<b>14</b>	Dear Customer, You have entered an In-Active Card number
<b>15</b>	Dear Customer, You have entered an In-Active Card number
<b>42</b>	Dear Customer, You have entered an Invalid CNIC
<b>423</b>	Dear Customer, We are unable to process your request at the moment please try again later
<b>41</b>	Dear Customer, entered details are Mismatched
<b>801</b>	{0} is your PayFast OTP (One Time Password). Please do not share with anyone.
<b>802</b>	OTP could not be sent. Please try again later.
<b>803</b>	OTP has been sent to your email address.
<b>804</b>	OTP has been sent to your mobile number.
<b>805</b>	OTP Verified
<b>806</b>	OTP could not be verified.
<b>807</b>	Too many attempts. Please try again later in few minutes.
<b>808</b>	Passwords do not match
<b>809</b>	Invalid Password
<b>810</b>	Password could not be changed
<b>811</b>	Password changed successfully
<b>812</b>	Request could not be validated. Please try again.
<b>813</b>	Email address already registered


## 7 APPS checkout Page


### 7.1 For redirection implementation


On posting the form data, customer will be redirected to the following page of the APPS web ecommerce portal.




#### Select Your Method

  
**BANK ACCOUNT**

  
**CARD PAYMENT**

  
**MOBILE WALLET**

  
**UNION PAY**

BANKS

PLEASE SELECT BANK

ACCOUNT NUMBER

CNIC NUMBER

**MAKE PAYMENT RS. 100.00 →**

#### Payment Information

ORDER NUMBER	DATE
<b>10</b>	<b>1/2/2019</b>
STORE NAME	AMOUNT
<b>Demo Merchant</b>	<b>RS. 100.00</b>

---

SUMMARY

Description of goods



#### Enter Verification Code

OTP has been sent on your registered mobile number

....

**SUBMIT**

**Authorization Code Expiry**

09:49

Didn't receive the  
**Verification Code?**  
ResendOTP

#### Payment Information

ORDER NUMBER	DATE
<b>10</b>	<b>1/2/2019</b>
STORE NAME	AMOUNT
<b>Demo Merchant</b>	<b>RS. 100.00</b>

---

SUMMARY

Description of goods

## 7.2 For I-Frame implementation

On posting the form data, response form will be loaded in iframe then customer provide selected information and on Success/Failure customer will be redirected to merchant provided Success/failure URLs.

The screenshot shows the payfast payment interface. At the top left is the 'payfast' logo. Below it is the heading 'SELECT YOUR METHOD'. There are four buttons for payment methods: 'BANK ACCOUNT' (highlighted in blue), 'MOBILE WALLET', 'CARD PAYMENT', and 'UNIONPAY'. Below the buttons is a 'BANKS' section with a dropdown menu showing 'PLEASE SELECT BANK'. Underneath are input fields for 'ACCOUNT NUMBER' and 'CNIC NUMBER'. At the bottom is a yellow button that says 'MAKE PAYMENT RS. 380.00'.