



# IME pay WEB CHECKOUT INTEGRATION GUIDE

Version 3.1

**By**

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## Documentation Control

### Revision History

Version	Date	Author	Summary of Changes
1.0.0	3/20/2017	Neeraj Dhungana	Initial Draft
2.0.0	3/29/2017	Neeraj Dhungana	Updated
2.0.1	5/29/17	Neeraj Dhungana	Updated
2.0.2	7/14/2017	Neeraj Dhungana	Updated
2.0.3	11/22/2017	Neeraj Dhungana	Added source in form request
2.0.4	08/28/2018	Neeraj Dhungana	UI Changed and Result Response
2.0.5	09/06/2019	Sameer Neupane	Implementation of SSL
2.0.6	04/02/2020	Neeraj Dhungana	Dynamic Response and Cancel Url
2.0.7	04/05/2020	Neeraj Dhungana	Redirection Method Option to Merchant
3.1	17/06/2020	Neeraj Dhungana	Transaction Confirmation

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## Introduction

### Background

IME Digital Solution Ltd. is a subsidiary of IME Group established under the payment and settlement by laws 2072, with an aim to provide digital financial services to customers in partnerships with banks/FIs as well as telecom operators and aggregators, deployed through self-service as well as agent-based delivery channel.

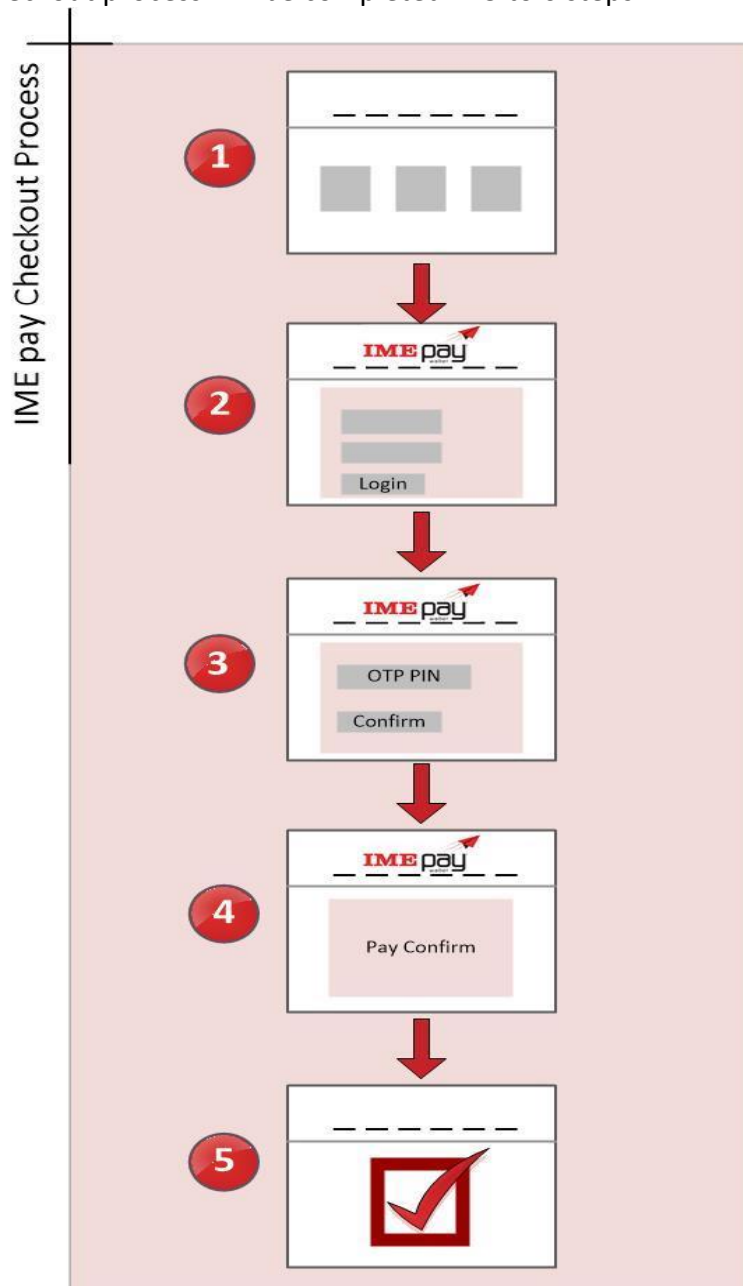
IME Digital intends to introduce mobile money service, with name IME pay, under its digital financial services initiative and offer a wide range of payment services to remittance customers existent with money transfer associate company IME Ltd. and also cater to the vast majority of unbanked and under-banked customers of Nepal. IME pay can be accessed via mobile and can be serviced through any of the 20000 plus strong agent network of IME and beyond.

## IME pay Checkout Process Overview:

### Introduction

This document describes the process for successfully integrating IME pay into your transaction process, explaining how to facilitate communication between your website and the IME pay, and how to receive and process the authorization response messages sent back to your website after a transaction has been processed.

IME Pay checkout process will be completed in 5 to 6 steps.



## Steps in IME pay Checkout:

### STEP 1

The first step involves payment method selection in the merchant site by customer. In this step customer selects the payment option pay by “IME pay” among available payment options. To start payment process, merchant needs to get TokenId for each transaction processing using IME pay. IME pay system generates TokenId against the MerchantCode, RefId and Amount for security and authenticity purpose. RefId should be always unique from merchant side to reconcile any conflicting transaction.

Merchant portal needs to send request to IME pay API to get TokenId using following parameters.

The merchant credentials shared with you and URL used in the whole document is for UAT Integration purpose. Please consult merchant team for live credentials and URLs.

API URL to get token ID <https://stg.imepay.com.np:7979/api/Web/GetToken> with type="POST".

Also Authorization header and Module\* should be sent to API for authentication purpose. The Apiuser and Password should be used in header.

```
Authorization header = Basic {Apiuser:Password} **  
Module = {Module} **
```

**Request** JSON parameters will be as below:

```
{  
  "MerchantCode": "M0001",  
  "Amount": "10.75",  
  "RefId": "Ref-9901"  
}
```

**Response** JSON values will be as below:

```
{  
  "ResponseCode": 0,  
  "TokenId": "201612151220041022", ***  
  "Amount": "10.75",  
  "RefId": "Ref-9901"  
}
```

NOTE:

\* [ApiUser, Password, Module] will be provided by IME pay at the time of registration.

\*\* Values should be encoded using Base64.

\*\*\* TokenId will be valid for only one time. For every new transaction new TokenId should be used.

## STEP 2

Merchant should maintain a database table to store responses received from IME pay. The table must contain following columns in exact table format as mentioned below. The records of each transaction are stored on this Db table with an added feature to recheck the transactions (explained on step 7). This allows merchants to reconfirm and complete the failed transactions, which may have occurred due to various reasons.

Once TokenId is received from IME pay, merchant portal should store these values (MerchantCode, TranAmount, RefId, TokenId) into the specified table format.

Column Name	Size	Description
<b>MerchantCode</b>	VARCHAR(10)	Will be provided by IME Pay
<b>TranAmount</b>	MONEY	Amount involved in the transaction
<b>RefId</b>	VARCHAR(20)	Unique id generated by merchant's system
<b>TokenId</b>	VARCHAR(20)	Will be provided by IME Pay at the end of Step 1
<b>TransactionId</b>	VARCHAR(20)	IME Pay Unique Id returned after successful payment
<b>Msisdn</b>	VARCHAR(20)	IME Pay Wallet Id returned after successful payment
<b>ImeTxnStatus</b>	TinyInt	0-Success,1-Failed,2-Error,3-Cancelled
<b>RequestDate</b>	DATETIME	Date/Time of Merchant's request
<b>ResponseDate</b>	DATETIME	Date/Time of IME Pay response

Merchant portal, now, should either post values to the IME pay Web Checkout page or redirect the data in specific format with following parameters.

### GET Request Format:

Prepare a payload string comprising data parameters and encode those data into Base64 string and redirect to our Url as below:

Payload data composition: **TokenId** | **MerchantCode** | **RefId** | **TranAmount** | **Method** | **RespUrl** | **CancelUrl**

Payload string after Base64 Encoding with Url Encoding look like below:

**VG9rZW5JZHhNZXJjaGFudENvZGV8UmVmSWR8VHJhbktFtb3VudHxNZXR0b2R8UmVzcFVybHxhYXV5jWxVcmw=**

Now Redirect to IME Pay page with data named query parameter like below:

**<https://stg.imepay.com.np:7979/WebCheckout/Checkout?data=VG9rZW5JZHhNZXJjaGFudENvZGV8UmVmSWR8VHJhbktFtb3VudHxNZXR0b2R8UmVzcFVybHxhYXV5jWxVcmw=>**

## POST Request Format:

```
<form action="https://stg.imepay.com.np:7979/WebCheckout/Checkout"method="post">

    <input type="hidden" name="TokenId" value="201612151220041022">
    <input type="hidden" name="MerchantCode" value="M0001">
    <input type="hidden" name="RefId" value="Ref-9901">
    <input type="hidden" name="TranAmount" value="10.75">
    <input type="hidden" name="Method" value="GET">
    <input type="hidden" name="RespUrl" value="http://abc.com/result.aspx">
    <input type="hidden" name="CancelUrl" value=" http://abc.com/cancel.aspx ">

</form>
```

### Note:

- **Method:** The way of response sent to merchant's portal (RespUrl or CancelUrl) by IME pay. Options are GET and POST. If GET then url redirection will be done with response values in query string else form post will be done.
- **RespUrl:** Url of Merchant where Transaction Response is expected to post by IME Pay.
- **CancelUrl:** Url of Merchant where user cancelled transaction is expected to post by IME Pay.

Field Name	Data Type	Size	Description	Required
TokenId	String	18	Unique TokenId	Y
MerchantCode	String	9	Unique Code assigned to Merchant	Y
RefId	String	20	Unique Code for Transaction generated by Merchant's system.	Y
TranAmount	Float		6 digits with 2 decimal places. E.g. 999,999.99	Y

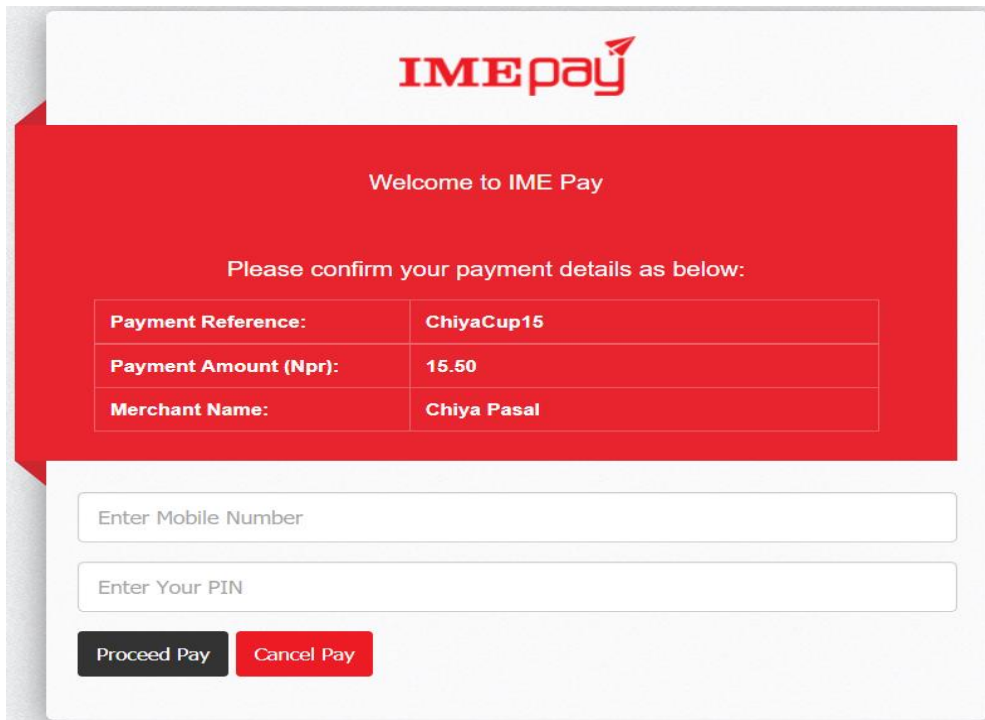
### Note:

- MerchantCode and Module are assigned by IME pay.
- Source URL will be validated to prevent processing unauthorized requests.



### STEP 3

Merchant's page is redirected to IME pay WebCheckout page. It initially validates the TokenId against the MerchantCode, RefId, and Amount sent. In case of failure, error page is displayed. If successful, customer wallet account input form is displayed. Customer verifies transaction amount, and Merchant Name, if satisfied, enters wallet id and PIN (Personal Identification Number) associated with IME pay and clicks "Proceed Pay" button.



Payment Reference:	ChiyaCup15
Payment Amount (Npr):	15.50
Merchant Name:	Chiya Pasal

Proceed Pay

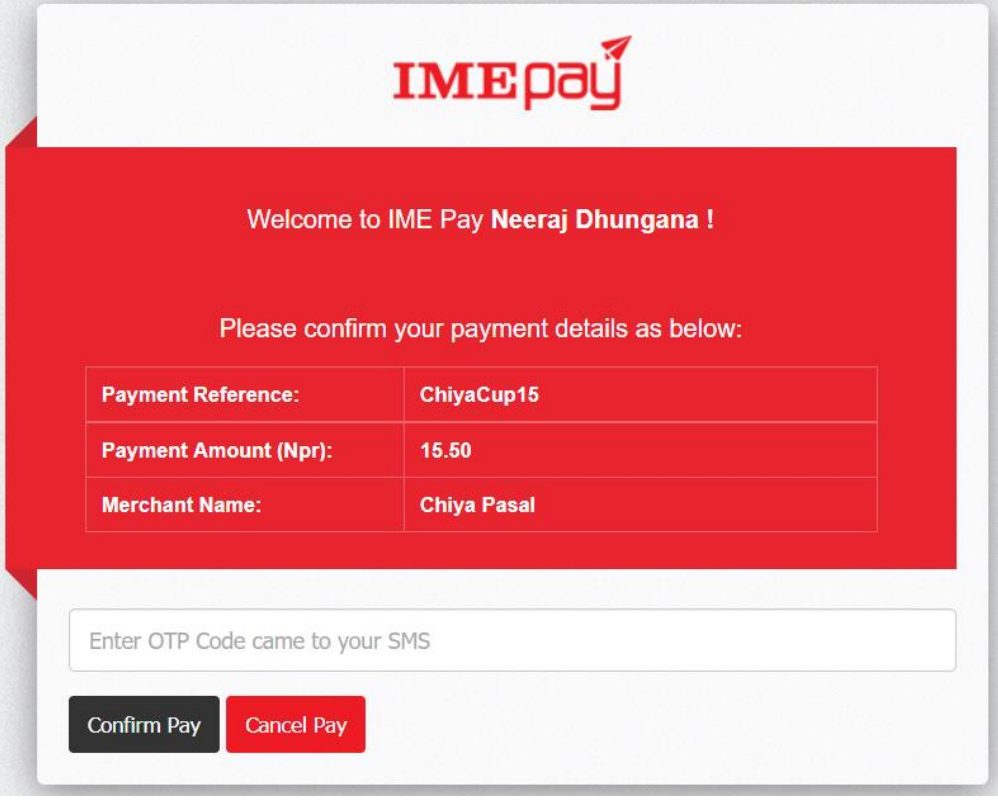
Cancel Pay

**Note:**

If customer is not satisfied with the payment details, he/she can abort the operation by closing the window or by clicking the Cancel Pay button. If Cancel pay button is pressed, customer will be redirected to CancelUrl sent in step 1. If CancelUrl is not provided then customer will be redirected to RespUrl sent in step 1. ResponseCode for Cancel is 3.

## STEP 4

If combination of entered mobile number and PIN is correct, customer will receive SMS in his/her mobile containing OTP (One Time Password). Customer then has to enter the OTP and press Confirm Pay button to process the transaction.

The image shows a mobile application interface for IME Pay. At the top, the IMEpay logo is displayed. Below it, a red banner contains the text "Welcome to IME Pay Neeraj Dhungana !". Underneath the banner, the text "Please confirm your payment details as below:" is shown. A table with three rows of payment details is presented: Payment Reference (ChiyaCup15), Payment Amount (Npr) (15.50), and Merchant Name (Chiya Pasal). Below the table is a text input field labeled "Enter OTP Code came to your SMS". At the bottom, there are two buttons: "Confirm Pay" (black) and "Cancel Pay" (red).

Payment Reference:	ChiyaCup15
Payment Amount (Npr):	15.50
Merchant Name:	Chiya Pasal

### Note:

If customer decides to cancel the transaction in this stage, he/she can abort the operation by closing the window or by clicking the Cancel Pay button. If Cancel pay button is pressed, customer will be redirected to CancelUrl sent in step 1. If CancelUrl is not provided then customer will be redirected to RespUrl sent in step 1. ResponseCode for Cancel is 3.

## STEP 5

If OTP of the transaction is entered correctly and customer has sufficient balance, then payment is processed.

If merchant specified the Method parameter as POST then transaction response is posted to the merchant's portal (RespUrl) by IME pay. Merchant should provide the RespUrl in which IME pay would post transaction response and redirects customer to Merchant's portal.

## RESPONSE:

```
<form action="RespUrl" method="post">
  <input type="hidden" name="ResponseCode" value="0">
  <input type="hidden" name="ResponseDescription" value="Success">
  <input type="hidden" name="RefId" value="Ref-9901">
  <input type="hidden" name="TranAmount" value="10.75">
  <input type="hidden" name="Msisdn" value="9849079513">
  <input type="hidden" name="TransactionId" value="201609271720522269">
  <input type="hidden" name="TokenId" value="201612151220041022">
</form>
```

Field Name	Data Type	size	Description	Required
<b>ResponseCode</b>	TinyInt		0-Payment request Success	Y
			1-Payment request failed	
			2-Error	
			3-Cancel	
<b>RefId</b>	String	20	Unique Code for Transaction generated by Merchant's system	Y
			Communicated in Step 1.	
<b>TranAmount</b>	Float		6 digits with 2 decimal values.	Y
			Same data sent by merchant's portal	
<b>Msisdn</b>	String	10	Customer mobile number (IME pay Wallet ID) of the payer.	Y
<b>TransactionId</b>	String	18	ID generated by IME pay to identify Payment.	Y
<b>TokenId</b>			TokenId sent on the request at step 2	

If merchant specified the Method parameter as GET then transaction response is routed to the merchant's portal (RespUrl) in a Base64 query string by IME pay. The response url will be like:

<http://abc.com/result.aspx?data=M3xPcGVyYXRpb24gQ2FuY2VsbGVkIEJ5IFVzZXJ8MDAwfDAwMHx0aGl5YVBlckN1cF8xMC4xNXwxMC4xNXwyMDIwMDQwNDE5MzEzOTgzOTI%3d>

Now get the string in query string parameter named 'data' which is in Base64 format so decode it from Base64 into plain text then split it into string array by splitting plain text with '|' character. The index of each parameters are as below:

- a. [0]-> ResponseCode
- b. [1]-> ResponseDescription
- c. [2]-> Msisdn
- d. [3]-> TransactionId
- e. [4]-> RefId
- f. [5]-> TranAmount
- g. [6]-> TokenId

After receiving the transaction response values, merchant should update the record created in step 1 with TransactionId and Msisdn and ImeTxnStatus by validating their RefId and Amount in the above database table.

ImeTxnStatus should be mapped to the value of ResponseCode posted by IME Pay.

ResponseCode: 0 -> Success

ResponseCode: 1 -> Fail

ResponseCode: 2 -> Error

ResponseCode: 3 -> Cancelled

#### **NOTE:**

Once response is posted to the Merchant's ResUrl then Merchant can process further to complete their transaction.

If merchant receives ResponseCode 2 as error then they need to recheck the status of the transaction for making the transaction as success or fail for their customer.

If merchant does not receive the response at all from IME Pay then they can do run some background job or manual action to recheck the transaction status and do the needful for their customer.

## Step 6

In step 6, merchant must verify the transaction status. Merchant needs to call a new API with details stored in Step 2 and others received in Step 5. It will validate the transaction status and provide response.

API URL to recheck confirmation <https://stg.imepay.com.np:7979/api/Web/Confirm> with type = "POST".

Also Authorization header and Module\* should be sent to API for authentication purpose. The same Apiuser and password as in step 1 should be used in header.

```
Authorization = Basic {Apiuser:Password} *  
Module = {Module} **
```

NOTE:

- \* Values should be encoded using Base64.
- \*\* Module will be provided by IME pay.

**Request** JSON parameters will be as below:

```
{  
  "MerchantCode": "M0001",  
  "RefId": "Ref-9901",  
  "TokenId": "201612151220041022",  
  "TransactionId": "201609271720522269",  
  "Msisdn": "9849079513"  
}
```

**Response** JSON values will be as below:

```
{  
  "ResponseCode": "0",  
  "Msisdn": "9849079513",  
  "TransactionId": "201609271720522269",  
  "ResponseDescription": "Success",  
  "RefId": "Ref-9901",  
  "TokenId": "201612151220041022"  
}
```

ResponseCode: 0 -> Success

ResponseCode: 1 -> Not found or failed

## Step 7

In step 5, if it fails to post transaction response in the URL provided by merchant then merchant needs to recheck the transaction status. Merchant needs to call a new API with parameters stored in Step 2. It will validate the transaction status and provide response.

API URL to recheck confirmation <https://stg.imepay.com.np:7979/api/Web/Recheck> with type ="POST".

Also Authorization header and Module\* should be sent to API for authentication purpose. The same Apiuser and password as in step 1 should be used in header.

```
Authorization = Basic {Apiuser:Password} *  
Module = {Module} **
```

NOTE:

- \* Values should be encoded using Base64.
- \*\* Module will be provided by IME pay.

**Request** JSON parameters will be as below:

```
{  
  "MerchantCode": "M0001",  
  "RefId": "Ref-9901",  
  "TokenId": "201612151220041022",  
}
```

**Response** JSON values will be as below:

```
{  
  "ResponseCode": "0",  
  "Msisdn": "9800007788",  
  "TransactionId": "201609271720522269",  
  "ResponseDescription": "Success",  
  "RefId": "Ref-9901",  
  "TokenId": "201612151220041022"  
}
```

ResponseCode: 0 -> Success

ResponseCode: 1 -> Not found or failed

After receiving the transaction response, update TransactionId, Msisdn and ImeTxnStatus by validating particular RefId and Amount in the above created table.

## Contacts

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