Land Bank of the Philippines

LANDBANK ePayment Portal

Web Service Guide

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SIGN-OFF SHEET

The provisions within this Web Service Guide are agreed upon and accepted by _____ and Land Bank of the Philippines as indicated by the signatures below.

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_____ _____

Document Information

This section of the document records various versions or releases of this document.

Revision History

Version	Date	Summary of Change(s)	Author(s)
1.7	--	EPP Web service Guide	Erick Kalugdan
1.8	October 23, 2020	• Update the EPP file name from 'epp20190517' to 'epp20200915' • Added the status code 15 and 16 in the Result Status Codes Table	Elsa Contreras
1.9	January 29, 2021	• Sample ePP Output change Status value from '00' to 'Successful'	Elsa Contreras
2.0	February 26, 2021	• HTTP Method from 'Post or Get' to 'Post' • Amount Data type from 'Real' to 'Float' • PayorName Data type character length from '50' to '500' • Datestamp data type from 'Datetime' to 'Timestamp' • Added Datestamp in Instant Payment Notification Parameter with data type of Timestamp • PaymentOption sample value – 'LBP' to 'LANDBANK/OFBank ATM Card' • PaymentOption Character Length from '20' to '100'	Jamille Agbuya
2.1	March 31, 2021	• Update Particulars in IPN Section	Jamille Agbuya

Approved By

Name	Role	Signature
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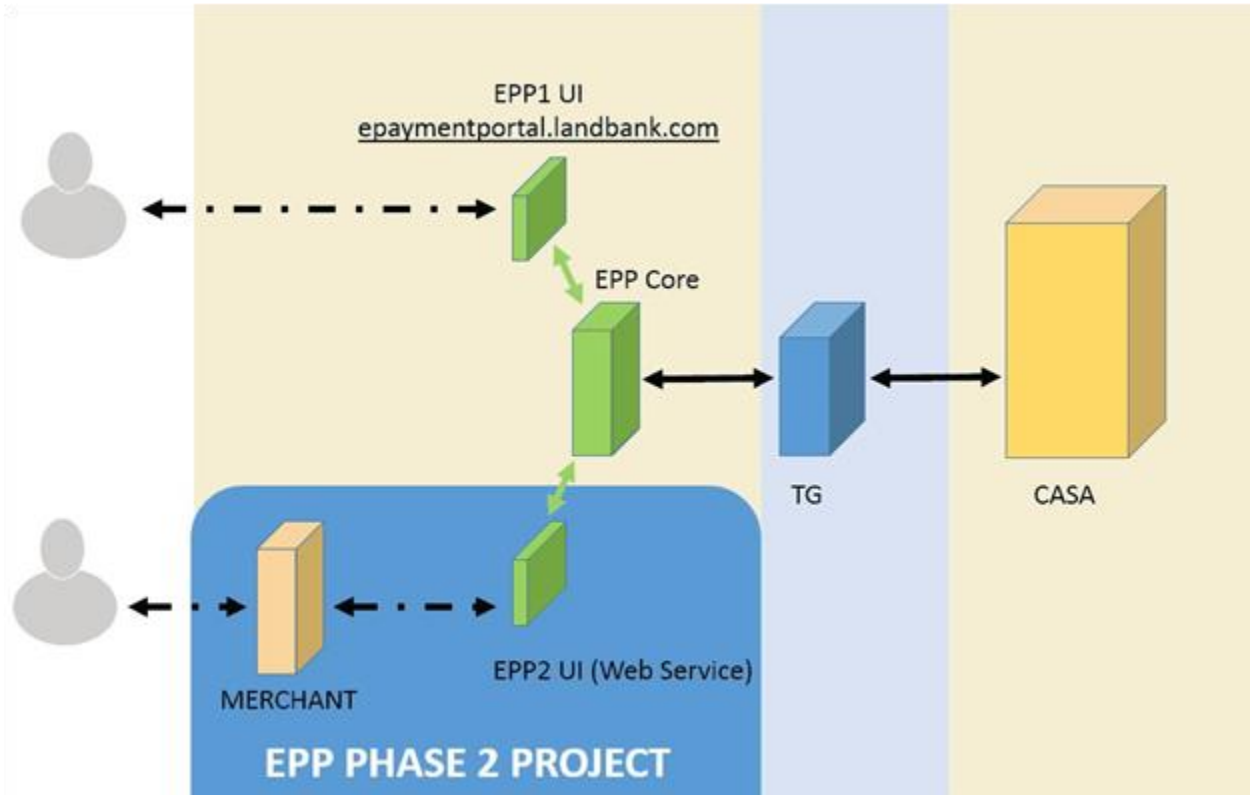
Table of Contents

1.0 Introduction

This document describes the system architecture, instructions and responses for integrating the LANDBANK ePayment Portal Web Service (from here on referred to as ePP Web Service) with online merchant websites (from here on referred to as MERCHANT). This shall be the basis for communicating payment instructions between ePP Web Service and MERCHANT.

2.0 System Overview

The ePP Web Service module is an add-on (indicated in the illustration below with dark blue background) to the existing EPP Core system. It acts as another means of capturing payment information from the end-user. Instead of having the end-user input the payment information on the EPP1 front-end (epaymentportal.landbank.com), the MERCHANT system will be the one to provide all the necessary payment information to the EPP Core for processing.



3.0 Design Assumptions and Constraints

The following will be the working assumptions and constraints:

1. The communication between MERCHANT and ePP Web Service will be via HTTPS.
2. The MERCHANT system should be able to interact with ePP Web Service.
3. The MERCHANT system should be able to handle situations of partial failure. This refers to situations wherein network, client or service becomes inaccessible or busy.

4.0 Detailed Interface Design

4.1 Web Service Information

Web Service Type	REST
Transport Protocol	HTTP / HTTPS POST
HTTP Port	80 / 443

4.2 Security Architecture

The following security mechanisms are applied in the web service and communication exchanges to ensure that payment data and its transmission will not be plainly visible and intercepted:

HASHING

The application will require that the payment information from the Merchant be encrypted using the MD5 hash algorithm before it is sent to the ePP Web Service.

HTTPS

The transportation of data will be via HTTPS. Using a security certificate from a reputable SSL certificate provider like Verisign, this will encrypt the data being passed over the public Internet and then decrypted upon reaching the receiving end.

4.3 Payment Instruction

Description	Send payment instruction to ePP Web Service
Test URL	https://222.127.109.48/epp20200915/
PROD URL	https://epaymentportal.landbank.com/
HTTP Method	POST

Parameters

Parameter	Datatype	Description
MerchantCode	Varchar(50)	Unique merchant code assigned by ePP Web Service
MerchantRefNo	Varchar(50)	Unique reference number per merchant per transaction.
Particulars	Varchar(500)	Description / Purpose of payment. Please make sure that the transaction_type and fields that you use are exactly the same ones registered with LANDBANK
Amount	Float	Amount to pay
PayorName	Varchar(500)	Name of the payor
PayorEmail	Varchar(50)	Email address of the payor
ReturnURLOK	Varchar(500)	URL where ePP Web Service will redirect when transaction is successful
ReturnURLError	Varchar(500)	URL where ePP Web Service will redirect when transaction fails
Hash	Varchar(100)	Unique MD5 hash per payment instruction

4.4 Hash Encryption Method

HASH = LowerCase (MD5 (MerchantCode + MerchantRefNo + (Amount * 100)))
Example: If the MerchantCode is 2017110229 and MerchantRefNo is 1234 and the amount to be paid is P2,500.00 multiply by 100. The hash should be the MD5 hash of

the concatenation of all three parameters.

HASH = LowerCase (MD5 (20171102291234250000))

The result will be

HASH = fe38b7924be81e629bb142ccbb71757c

Sample Data

MerchantCode	2017110229
MerchantRefNo	1234
Particulars	transaction_type=Tuition fee;Desc=Tuition;SID=201505;Name=John Doe;
Amount	2500.00
PayorName	John Doe
PayorEmail	john.doe@gmail.com
ReturnURLOK	http://merchant.com/merchant/ok.php
ReturnURLError	http://merchant.com/merchant/error.php
Hash	fe38b7924be81e629bb142ccbb71757c

Sample form based on sample data above

<form action=" https://222.127.109.48/epp20200915/" method="POST">

<input type="hidden" name="MerchantCode" value="2017110229">

<input type="hidden" name="MerchantRefNo" value="1234">

<input type="hidden" name="Particulars" value="transaction_type=Tuition fee;Desc=Tuition;SID=201505;Name=John Doe;">

<input type="hidden" name="Amount" value="2500.00">

<input type="hidden" name="PayorName" value="John Doe">

<input type="hidden" name="PayorEmail" value="john.doe@gmail.com">

<input type="hidden" name="ReturnURLOK"

value="http://merchant.com/merchant/ok.php">

```
<input type=”hidden” name=”ReturnURLError”
value=”http://merchant.com/merchant/error.php”>
<input type=”hidden” name=”Hash” value=” fe38b7924be81e629bb142ccbb71757c”>
<input type=”submit” value=”POST TO EPP”>
</form>
```

Sample resulting URL based on sample data above

URL = https://222.127.109.48/epp20200915/

POST = MerchantCode=2017110229&MerchantRefNo=1234&Particulars=transaction_type%3DTuition+fee%3BDesc%3DTuition%3BSID%3D201505%3BName%3DJohn+Doe%3B&Amount=2500.00&PayorName=John+Doe&PayorEmail=john.doe%40gmail.com&ReturnURLOK=http%3A%2F%2F127.0.0.1%2Fmerchant%2Fok.php&ReturnURLError=http%3A%2F%2F127.0.0.1%2Fmerchant%2Ferror.php&Hash=fe38b7924be81e629bb142ccbb71757c

5.0 ePP Web Service Result

The result of the ePP Web Service payment transaction will be sent back to the MERCHANT system via redirect URL as indicated in the RedirectURLOK and RedirectURLError parameters passed by MERCHANT to ePP Web Service.

If the payment transaction was successful, ePP Web Service will redirect the user to RedirectURLOK.

If the payment transaction failed, ePP Web Service will redirect the user to RedirectURLError.

ePP Web Service upon redirection will also pass the following parameters:

Parameter	Data Type	Description
MerchantCode	Varchar(50)	Unique merchant code assigned by ePP
MerchantRefNo	Varchar(50)	Unique reference number per merchant. Assigned by merchant.
Particulars	Varchar(500)	Description / Purpose of payment

Amount	Float	Amount paid
PayorName	Varchar(500)	Name of the payor
PayorEmail	Varchar(50)	Email address of the payor
Status	Int	Status of the transaction
EppRefNo	Varchar(50)	EPP transaction reference number
PaymentOption	Varchar(100)	The payment option used by the payor
Datestamp	Timestamp	Date and time when payment has been made

5.1 Result Status Codes

Below is the list of possible payment transaction result status:

Status Code	Description
00	Successful
01	Invalid merchant code
02	Invalid merchant reference number
03	0 or negative amount
04	Null payors name
05	Null returnURLok
06	Null returnURLerror
07	Invalid hash
08	Service unavailable
09	Transaction in process
10	Cancelled transaction
11	EPP offline
12	Invalid transaction type
13	Invalid particulars
14	Duplicate transaction
15	Third Party Gateway Transaction Failed
16	Invalid Credit Amount

6.0 Transaction Status Inquiry

Merchant can inquire the status of the transaction any time after posting the initial payment instruction

Description	Get transaction status
Test URL	https://222.127.109.48/epp20200915/api2-status.php
PROD URL	https://epaymentportal.landbank.com/api2-status.php
HTTP Method	POST

Parameters

Parameter	Datatype	Description
MerchantCode	Varchar(50)	Unique merchant code assigned by ePP Web Service
MerchantRefNo	Varchar(50)	Unique reference number per merchant per transaction.
Hash	Varchar(100)	Unique MD5 hash per payment instruction

6.1 Hash Encryption Method

HASH = LowerCase (MD5 (MerchantCode + MerchantRefNo + SecretKey))

Example: If the merchant has the following payment information:

MerchantCode = 0001

MerchantRefNo = 1234

SecretKey = fc5e038d38a57032085441e7fe7010b0

The hash should be the MD5 hash of the concatenation of all three parameters.

HASH = LowerCase (MD5 (00011234fc5e038d38a57032085441e7fe7010b0))

The resulting MD5 hash will be

HASH = **e6fc2a9e521ee7c5a6477edc7192879e**

6.2 Sample PHP Script based on sample data above sent to EPP UAT URL

```
$postdata = array(
        'MerchantCode' => '0001',
        'MerchantRefNo' => ‘1234’,
        ‘Hash’ => ‘e6fc2a9e521ee7c5a6477edc7192879e’
);
$ch = curl_init();
curl_setopt($ch, CURLOPT_URL, " https://222.127.109.48/ epp20200915/api2-status.php");
curl_setopt($ch, CURLOPT_POST, 1);
curl_setopt($ch, CURLOPT_HEADER, 0);
curl_setopt($ch, CURLOPT_POSTFIELDS, $postdata);
curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
$output = curl_exec($ch);
curl_close($ch);
```

6.3 Sample EPP Output

The result of the code above will be a JSON encoded payment details like the following:

```
{
        “MERCHANTCODE”:“0001”,
        “MERCHANTREFNO”:”1234”,
        “PARTICULARS”:”{\“transaction_type\”:\”Tuition fee\”, \“Desc\”:\”Tuition\”,
                \“SID\”:\”201505\”, \“Name\”:\”John Doe\” }”,
        “AMOUNT”:”2500.00”,
        “PAYORNAME”:”John Doe”,
        “PAYOREMAIL”:”john.doe@gmail.com”,
        “STATUS”:”Sucessful”,
```

“EPPREFNO”:”332211”,

“PAYMENTOPTION”:”LBP”,

“EPPTIMESTAMP”:” 2021-02-23 14:48:14”

}

7.0 Instant Payment Notification

Upon transaction completion, EPP will post data to merchant site:

Target URL	Merchant specific
Method	Merchant choice between POST

The parameters that will be posted to the merchant site are the following:

Parameter	Type	Sample data
MarchantCode	Varchar(50)	0001
MerchantRefNo	Varchar(50)	1234
Particulars	Varchar(500)	Transaction_type=Real Property Tax;Name=John Doe;Tax Declaration No.=20161118;
Amount	Float	2500.00
PayorName	Varchar(500)	John Doe
PayorEmail	Varchar(50)	John.doe@gmail.com
Status	Varchar(200)	00
EppRefNo	Int	712345
PaymentOption	Varchar(100)	LANDBANK/OFBank ATM Card
Datestamp	Timestamp	2021-02-23 14:48:14