BELIZE BANK LIMITED

ELECTRONIC BILL PAYMENT WEBHOOK SERVICE

Integration Guide

January 10, 2023
Version 1.0

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HISTORY

Version	Date	Description
1.0	January 10, 2023	Initial document

INTRODUCTION

Purpose

This document details the integration specifications of the Belize Bank Limited's Electronic Bill Payment Webhook Service.

Audience

The primary audience of this document are software developers.

OVERVIEW

Features

The Belize Bank exposes webhooks a payee's system can integrate with to enhance the processing of bill payments made via the Bank's system.

The following features are made available to a payee as a result of integrating with this system:
- A payee can choose to validate a bill payment, based on the information entered by the customer, via the Bank's Online or Mobile Banking, before it is accepted by the Bank
  - This is done via the [bill payment validation](#) webhook
- A payee can choose to be informed in real time of a bill payment accepted on its behalf by the Bank
  - This is done via the [bill payment post](#) webhook
- A payee can can choose to be informed of a summary of the day's payments collected on its behalf by the Bank
  - This is done via the [bill payment reconciliation](#) webhook

Architecture

The Belize Bank's system will communicate with a payee's system via REST based web services using the HTTPS protocol. The hosting, security, and maintenance of the endpoints to be consumed by the Bank's system are the responsibility of the payee.

All requests to the payee's system will be sent in JSON format and will be of content type application/json. All responses are expected back in JSON format. This provides an operating system, programming language, and hardware platform independent interface.

For each request sent, a response is expected back within 30 seconds. If a response is not received within this period the Bank will assume the request was unsuccessful.

The API contracts each endpoint must abide by are detailed in this document.

Security

All payees must comply with the mandatory requirements in order to use this service.

Mandatory
- All communication must be performed over a HTTPS connection
- Validation of the bearer token

- ○ All requests will be sent with a bearer token in the HTTP header.
- ○ This bearer token will be mutually agreed upon by both parties at a later time.
- ○ It is the responsibility of the payee to validate this token and only honor requests with the bearer token agreed upon by both parties.

Recommended
- ● Creation of firewall policy on the payee's network so the payee's endpoints only accept requests from the Bank's network

BILL PAYMENT VALIDATION WEBHOOK

Purpose:
The payee can utilize this webhook to validate the bill payment being entered, based on the information entered by the customer, and inform the Bank whether to proceed with this payment or not, before it is accepted by the Bank.

This webhook can also be used by the payee to:
- Advise the Bank of any range within which the payment amount must be
- Advise the customer of the name associated with this bill payment
- Advise of customer of any additional information related to the bill payment; for example a due date or outstanding amount due
- Advise the customer of the specific reason why this bill payment is not being accepted by the payee

Request message

Protocol: HTTP
Method: POST
URL: To be specified by payee
Format: JSON

Body:

Field name	Use	Description
{dynamicField1}	Mandatory	The value of the first input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.
{dynamicField2}	Optional	The value of the second input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.
{dynamicField3}	Optional	The value of the third input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.

Example:

```
{
```

```
    "accountNumber":"123456",
    "referenceNumber":"AD-987",
    "customerNumber":"BP654"
}
```

Response message

Body:

Field name	Use	Description
status	Mandatory	A value of 0 means the Bank can accept this payment. A value of 1 means the Bank should not accept this payment.
displayInfo	Optional	When the status field has a value of 0, this field can contain any additional information regarding this bill payment the payee wishes to display back to the customer. For example, "Due Date; Feb 1 2023. Outstanding balance: $500.00" When the status field has a value of 1, this field can be used to state the specific reason why this bill payment is not being accepted. For example, "This account is dormant" This field can contain a maximum of 50 characters.
amountMin	Optional	The minimum amount the payment must be for.
amountMax	Optional	The maximum amount the payment can be for.
customerName	Optional	The customer name assigned to this bill payment.

Example:

```
{
    "status":0,
    "displayInfo":"Due Date: January 31 2023. Outstanding Balance:
$500.00",
    "amountMin":45.50,
    "amountMax":132.75,
    "customerName":"John Doe",
}
```

BILL PAYMENT POST WEBHOOK

Purpose:
The payee can utilize this webhook to be informed in real time of a bill payment accepted on its behalf by the Bank

This webhook can also be used by the payee to inform the Bank of the unique identifier, for example a receipt or reference number, assigned to this payment by the payee's system. If this is provided, the Bank displays this information back to the customer; and prints it on the receipt generated for easy reference.

Request message

Protocol: HTTP
Method: POST
URL: To be specified by payee
Format: JSON

Body:

Field name	Use	Description
{dynamicField1}	Mandatory	The value of the first input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.
{dynamicField2}	Optional	The value of the second input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.
{dynamicField3}	Optional	The value of the third input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.
postingDate	Mandatory	The date the payment was processed formatted CCYY-MM-DD
bblReferenceNumber	Mandatory	The unique identifier assigned to this payment by the Bank's system. This value is unique throughout the lifespan of the system.
amount	Mandatory	The payment amount

Example:

```
{
    "accountNumber":"123456",
    "referenceNumber":"AD-987",
    "customerNumber":"BP654"
    "postingDate":"2020-01-16",
    "amount":"150.95",
    "bblReferenceNumber":"200000001234",
}
```

Response message

Body:

Field name	Use	Description
status	Mandatory	A value of 0 means the payment was accepted by the payee's system. A value of 1 means the payment was not accepted by the payee's system.
receiptNumber	Optional	The unique identifier assigned to this payment by the payee's system

Example:

```
{
    "status":0,
    "receiptNumber":"REC-123456",
}
```

BILL PAYMENT RECONCILIATION WEBHOOK

Purpose:
The payee can utilize this webhook to be informed of a summary of the day's payments collected on its behalf by the Bank.

This information can be used to drive any reconciliation process in the payee's system; or post payments not received via the post webhook during the day due to a break in communication.

Request message

Protocol: HTTP
Method: POST
URL: To be specified by payee
Format: JSON

Body:

Field name	Use	Description
totalAmount	Mandatory	The total amount of all payments accepted for the day
totalCount	Mandatory	The total number of all payments accepted for the day
businessDate	Mandatory	The business date on which the payments were accepted formatted CCYY-MM-DD
transactions	Mandatory	This is an array. It is a parent tag containing information of each transaction accepted.
-> {dynamicField1}	Mandatory	The value of the first input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.
-> {dynamicField2}	Optional	The value of the second input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.
-> {dynamicField3}	Optional	The value of the third input data element as requested by the payee. The name of the field itself is dynamic and will be agreed upon beforehand by both parties.
-> postingDate	Mandatory	The date the payment was processed formatted

		CCYY-MM-DD
-> bblReferenceNumber	Mandatory	The unique identifier assigned to this payment by the Bank's system. This value is unique throughout the lifespan of the system.

Example:

```json
{
    "totalAmount":187.75,
    "totalCount":2
    "businessDate":"2023-01-01",
    "transactions":[
    {
        "accountNumber":"123456",
        "referenceNumber":"AD-987",
        "customerNumber":"BP654"
        "postingDate":"2020-01-16",
        "amount":"150.95",
        "bblReferenceNumber":"200000001234",
    },
    {
        "accountNumber":"99887",
        "referenceNumber":"AD-236",
        "customerNumber":"BP147"
        "postingDate":"2020-01-16",
        "amount":"36.80",
        "bblReferenceNumber":"200000001235",
    },
    ]
}
```

Response message

Body:

Field name	Use	Description
status	Mandatory	A value of 0 means the message was accepted by the payee's system. A value of 1 means the message was not accepted by the payee's system.

Example:

```
{
    "status":0,
}
```