

# VENDING API SERVICES REQUEST SPECIFICATION DOCUMENT

## Introduction

This document defines the service specification for vending API services offered by the bank for partners and/or clients.

The scope of the REST services to be consumed is as below:

- Authentication
- Validate Request
- Confirmation/Purchase
- Transaction Status

## Authentication

This is the first API call to be made for authorization purposes, returns an authentication token. These services make use of Oauth 2 protocol.

### Token Generation

To generate a token for Vending Gateway API services, use:

**Token endpoint :** [https://uat.buni.kcbgroup.com/token?grant\\_type-=client\\_credentials](https://uat.buni.kcbgroup.com/token?grant_type-=client_credentials)

Create an application on Buni Devportal and subscribe to VENDINGGATEWAYAPIS then obtain consumer key and consumer secret on Sandbox Keys section under subscriptions.

Buni Devportal link: <https://sandbox.buni.kcbgroup.com/devportal/apis>

The screenshot shows the Buni Devportal interface. At the top, there's a navigation bar with the KCB logo, 'BUNI' text, and links for 'APIs' and 'Applications'. A search bar and a user profile icon are also present. Below the header, a green button labeled 'SUBSCRIPTION & KEY GENERATION WIZARD' is visible. The main content area is titled 'Subscriptions' with the subtitle '( Applications Subscribed to this Api )'. It lists a single application: 'DefaultApplication' with 'Unlimited' throttling tier and 'UNBLOCKED' status. To the right of the application details are buttons for 'SANDBOX KEYS', 'PROD KEYS', 'UNSUBSCRIBE', and 'MANAGE APP'. A large section titled 'Sandbox OAuth2 Keys' follows. It contains two fields: 'Key and Secret' (Consumer Key: 'bjQURVgnzQPVIAg8gcknPKM9TEwa') and 'Consumer Secret' (redacted). Below each field is a note: 'Consumer Key of the application.' and 'Consumer Secret of the application.' respectively. At the bottom of this section are two buttons: 'GENERATE ACCESS TOKEN' and 'CURL TO GENERATE ACCESS TOKEN'.

To generate access tokens, you will have to pass basic authorization header whose value is base64encode of the two keys above separated by a colon with no spaces between e.g. Consumer Key:Consumer Secret.

The following sample request curl example shows how to generate an access token from the above keys using the Password Grant type.

```
curl --location --request POST 'https://uat.buni.kcbgroup.com/token?grant_type=client_credentials' \
--header 'Authorization: Basic
RzNDRDU0QTK0T25PcFFxY1NvbFg3VFVQmQpzN0JjJeEdWeWJUTKBLMIRPYTFMUXdh' \
--header 'Cookie: 4b1f380494b4bbde9d5435be4996a54d=56b891aadc02ec5ac0a2dc4f95247c6d'
```

Note: The value of Basic Authorization header is the base64encode of the Consumer Key and Consumer Secret separated by a colon with no spaces.

### sample Response

```
{
  "access_token": "eyJ4NXQiOiJNR1F6TmpreIptVTFaV1k0T0dFNU5UZGpPRFU1T1RSak9ETmtaalZpWWpoaE4yRmtaamRoTU
RBNVpUWXdNamM0T0",
  "token_type": "Bearer",
  "expires_in": 3600
}
```

## 1. Validate Request

Validates the customer request

**Endpoint:** <https://uat.buni.kcbgroup.com/kcb/vendingGateway/v1/1.0.0/api/validate-request>

### Validation Request Parameter Definitions

Name	Type	Presence	Description
<b>HEADER</b>	Object		
<b>conversationID</b>	String	Mandatory	A unique identifier for the conversation or session between the client and server. It helps in correlating multiple related requests.

<b>serviceCode</b>	String	Mandatory	A unique code assigned to the service being requested.
<b>serviceName</b>	String	Mandatory	The name of the service being invoked.
<b>channelName</b>	String	Mandatory	Provides information of the channel used for this service.
<b>timeStamp</b>	String	Mandatory	Provides information on the time of the transaction.
<b>partnerId</b>	String	Mandatory	Identifiers for the partner making the request, which helps with authorization and auditing.
<b>partnerUserId</b>	String	Mandatory	Identifiers for the partner making the request, which helps with authorization and auditing.
<b>callBackURL</b>	String	Optional	The URL where notifications or responses should be sent if the request is asynchronous.
<b>requestPayload</b>		Mandatory	This section holds the actual data that the validation service will process.
<b>billerData</b>		Mandatory	This section holds the actual data that the validation service will process.
<b>billerCode</b>	String	Mandatory	Identifies the biller or service provider. This value would map to a predefined entity in the system (e.g., a utility company, bank, or merchant).
<b>transactionInfo</b>	Object	Mandatory	
<b>billerRef</b>	String	Mandatory	A reference number associated with the biller.
<b>transactionReference</b>	String	Mandatory	Unique transaction Id supplied by partner when initiating request.

### Sample Request Message

```
{
  "header": {
    "conversationID": "6833b978-0a12-48e8-b302-92fd7d8a017f",
    "serviceCode": "8001",
    "serviceName": "Validation",
```

```
        "channelName": "wso3",
        "timeStamp": "2023005022 14:43:03",
        "partnerId": "006",
        "partnerUserId": "006",
        "callBackURL": "http://127.0.0.1:8080"
    },
    "requestPayload": {
        "billerData": {
            "billerCode": "99"
        },
        "transactionInfo": {
            "billerRef": "4440856790",
            "transactionReference": "6833b978-0a12-48e8-b302-92fd7d8a017f"
        }
    }
}
```

## Sample Success Response

```
{
    "statusDescription": "Success",
    "transactionReference": "6833b978-0a12-48e8-b302-92fd7d8a017f",
    "sessionId": "4440856790",
    "account": {
        "accountReference": "6833b978-0a12-48e8-b302-92fd7d8a017f",
        "balance": "10,494.98",
        "dueDate": "2023-05-15",
        "fullName": "MARY AKOTH OWAGA",
        "lastAmount": "8117"
    },
    "statusCode": "0"
}
```

## Sample Failure Response

```
{
    "statusDescription": "Validation Failed!!",
    "transactionReference": "6833b978-0a12-48e8-b302-92fd7d8a017f",
    "statusCode": "1"
}
```

## Sample Success Parameter Definitions

Name	Type	Presence	Description
<b>statusDescription</b>	String	Mandatory	This is the result of the request.
<b>statusCode</b>	String	Mandatory	A numeric code representing the status of the request. "0" signifies success, "1" signifies failure.
<b>TransactionReference</b>	String	Mandatory	Echoes the transaction reference from the request, used to correlate this response with the original validation request.
<b>sessionId</b>	String	Mandatory	unique identifier for this validation session, often used for tracking purposes.
<b>Account</b>		Mandatory	
<b>accountReference</b>	String	Mandatory	Unique identifier of the account being validated.
<b>balance</b>	String	Mandatory	The current balance of the account.
<b>dueDate</b>	String	Mandatory	Indicates a due date associated with the account.
<b>fullName</b>	String	Mandatory	The name of the account holder.

<b>lastAmount</b>	String	Mandatory	Last payment amount, outstanding balance, or the last billed amount.
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## 2. Confirmation

This service asynchronously handles the actual service fulfillment.

**Endpoint:** <https://uat.buni.kcbgroup.com/kcb/vendingGateway/v1/1.0.0/api/vendor-confirmation>

### Confirmation Parameter Definitions

Name	Type	Presence	Description
<b>HEADER</b>			
<b>conversationID</b>	String	Mandatory	A unique identifier for this transaction, used for tracking and correlation across systems.
<b>serviceCode</b>	String	Mandatory	Identifies the type of service being invoked.
<b>serviceName</b>	String	Mandatory	The name of the service being invoked.
<b>channelName</b>	String	Mandatory	Provides information of the channel used for this service.
<b>timeStamp</b>	String	Mandatory	Provides information on the time of the transaction.
<b>partnerId</b>	String	Mandatory	Identifiers for the partner making the request.
<b>partnerUserId</b>	String	Mandatory	Identifiers for the partner making the request, used for Authorization and auditing.
<b>callBackURL</b>	String	Optional	The URL where notifications or responses should be sent if the request is asynchronous.

<b>requestPayload</b>	String	Mandatory	
<b>Biller Data</b>		Mandatory	
<b>billerCode</b>	String	Mandatory	Identifies the biller or service provider for this transaction.
<b>transactionInfo</b>		Mandatory	
<b>transactionAmount</b>	String	Mandatory	Amount of money being transacted by user for the purchase of tokens.
<b>chargeFees</b>	String	Mandatory	Money charged for the transaction.
<b>transactionReference</b>	String	Mandatory	A unique transaction code used to track the request lifecycle. This is generated by the 3rd party calling the service and must be unique per transaction.
<b>billReference</b>	String	Mandatory	Refers to the biller's account or reference number.
<b>narration</b>	String	Mandatory	A description of the transaction typically included in payment records or statements.
<b>phoneNumber</b>	String	Mandatory	The customer's phone number, formatted with the country code, this could be used for SMS confirmations, OTP verification, or notifications.

## Sample Request

```
{
  "header": {
    "conversationID": "6833b978-0a12-48e8-b302-992fd7d8a017kkl",
    "serviceCode": "8001",
    "serviceName": "Confirmation",
    "channelName": "ws02",
    "timeStamp": "20201113091250",
    "partnerId": "006",
  }
}
```

```

    "partnerUserId": "006",
    "callBackURL": "https://webhook.site/77b7254e-85f5-4d17-95de-354f47c3a0c1"
},
"requestPayload": {
    "billerData": {
        "billerCode": "99"
    },
    "transactionInfo": {
        "transactionAmount": "1000",
        "chargeFees": "36",
        "transactionReference": "6833b978-0a12-48e8-b302-92fd70d8a017kk1",
        "billReference": "4440856790",
        "narration": "token purchase",
        "phoneNumber": "254707254793"
    }
}
}

```

## Sample Acknowledgement payload

```
{
    "statusDescription": "Request received for processing.",
    "statusCode": "200"
}
```

## Callback Request payload

```
{
    "statusCode": "0",
    "statusDescription": "Success",
    "callbackUrl": "https://posthere.io/873c-46ab-ac1d",
    "conversationID": "588a04f5-ec86-4991-af17-17f6b9399447",
    "callbackData": {
        "tokenNumber": "33378011751553003444",
        "billerCode": "99",
        "partnerId": "006"
    }
}
```

## Callback Request Payload Parameter Definitions

Name	Type	Presence	Description
<b>StatusCode</b>	String	Mandatory	
<b>StatusDescription</b>	String	Mandatory	This is the result of the transaction.
<b>callbackUrL</b>	String	Mandatory	
<b>ConversationID</b>	String	Mandatory	Unique identifier of the conversation.
<b>callbackData</b>		Mandatory	
<b>tokenNumber</b>	String	Mandatory	A unique token generated as part of the confirmation process this could be a prepaid token.
<b>BillerCode</b>	String	Mandatory	Identifies the biller involved in the transaction.
<b>PartnerId</b>	String	Mandatory	Identifies the partner making the request.

### 3. Transaction Status

Used for fetching the status of a transaction done.

**Endpoint:** <https://uat.buni.kcbgroup.com/kcb/vendingGateway/v1/1.0.0/api/transaction-status>

## Transaction Request Parameter Definitions

Name	Type	Presence	Description
<b>Payload</b>		Mandatory	

<b>originatorRequestId</b>	String	Mandatory	A unique identifier for the originating request.
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## Sample Request Payload

```
{
  "payload": {
    "originatorRequestId": "f4e22815-335c-40a9-9987-0f29514e9d58"
  }
}
```

## Sample Response payload

```
{
  "statusCode": "0",
  "statusDescription": "Success",
  "payload": {
    "callbackUrl": "https://posthere.io/873c-46ab-ac1d",
    "conversationID": "588a04f5-ec86-4991-af17-17f6b9399447",
    "callbackData": {
      "tokenNumber": "33378011751553003444",
      "billerCode": "99",
      "partnerId": "006"
    }
  }
}
```

## Sample Success Parameter Definitions

Name	Type	presence	Description
<b>statusCode</b>	String	Mandatory	Unique code that indicates whether the request successfully processed or not

<b>statusDescription</b>	String	Mandatory	Provides additional information about the status of the transaction.
<b>Payload</b>	String	Mandatory	
<b>callbackUrl</b>	String	Mandatory	The URL where notifications or responses were sent.
<b>conversationID</b>	String	Mandatory	Unique code that identifies the conversation.
<b>callbackData</b>	String	Mandatory	
<b>tokenNumber</b>	String	Mandatory	A unique token generated as part of the confirmation process, this could be a prepaid token.
<b>billerCode</b>	String	Mandatory	Identifies the biller involved in the transaction.
<b>partnerId</b>	String	Mandatory	Identifies the partner making the request and helps with authorization, tracking, and billing.

## ERROR CODE REFERENCES

This section introduces the parameter **ResponseCode** and **ResultCode** in messages.

### **ResponseCode & ResponseDescription** list

Response Code	Response Description
0	Accept the service request successfully.
-1	System internal error.
1000	System is busy, the service request is rejected.

1001	Caller authentication error.
1002	Parameter missing or data type error.
1003	Duplicate originator conversation ID.

### Result Code and Result Description list

Result Code	Result Description
0	Process service request successfully.
-1	System internal error.
2000	Service code error.
2001	Initiator authentication error.
2002	Receiver invalid.
2004	Amount invalid.
2006	Balance insufficient.
2007	Conversation ID invalid.
2010	Request has been rejected by the approver.
2011	Request process expired because of approval timeout.
2023	File load error.
2036	One and only one of the query parameter <i>ReceiptNumber</i> , <i>OriginatorConversationID</i> and <i>ConversationID</i> can appear at the same time.
2051	MSISDN invalid.
2052	KYC field invalid.
2053	Trust level invalid.
2054	Account Type invalid.
2055	New operator ID invalid.

## HTTP Response Codes

Response code	Description
<b>200</b>	Request processed successfully
<b>400</b>	Bad request
<b>401</b>	Unauthorized request
<b>403</b>	Request is forbidden
<b>404</b>	The request resource is not found
<b>500</b>	Internal Host Error
<b>503</b>	Service unavailable

## CONCLUSION

For any additional support, please write to [buni@kcbgroup.com](mailto:buni@kcbgroup.com)