Verge

Payment Gateway API

This is a technical API specification document
Version: 1.0.2

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Contents

Introduction

This document is a technical and integration document for the Verge Payment Gateway. It provides guidance and a template material which is intended to assist the relevant stakeholders to easily integrate to the payment gateway for collections and processing of transactions seamlessly.

The gateway has multiple payment channels, allowing customers to choose from all available channels for their payments, and a single integration to Verge Payment Gateway is sufficient to enjoy all channels.

Available Channels
- C'Gate USSD
- Card Payment
- NQR
- Bank Transfers

Channels Description

C'Gate USSD

This is a payment channel that uses the banks' USSD platform to make payments on App/Web/POS, with a dynamic USSD string generated based on the customer's selected bank. The customer can pay by tapping the USSD string or by copying the USSD string to the phone dial.

When the transaction is approved via the bank's USSD, the gateway automatically displays the transaction status and redirects to the merchant's website.

Card Payment

The card payment channel is the payment option where the customer enters his Debit/Credit card details to approve a transaction, and upon successful transaction, the gateway routes the customer back to the merchant's website.

NQR

The NQR channel is the payment option where a QR code is generated by the gateway to be scanned by the customer using their respective bank mobile app. The gateway immediately responds to the status of the transaction and route back to the merchant's website. Note: There is a module for NQR on the banks mobile app to make payment.

Bank Transfer

This payment channel allows the customer to transfer the specified amount to a dynamically generated account number, and the gateway displays the status of the transaction immediately the fund is received, hence the gateway routes back to the merchant website.

API Specification

Merchants are required to be registered on Verge Payment Gateway platform and the credentials to call the API operations will be shared.

Verge Payment Gateway uses the JWT authentication method to authenticate users calling the API, and a Key to generate the Signature value for every service calls.

Authentication

Merchants are required to call the Authentication operation using the credentials provided by CORALPAY during registration. The Response from this operation includes the Token for bearer token authentication for other operations and a Key to calculate the signature to maintain the data integrity.

Note that the Key changes every time this operation is called, so we advise this operation to be called once a day.

URL	https://testdev.coralpay.com:5000/GwApi/api/v1/Authentication
VERB	POST
CONTENT-TYPE	application/json

REQUEST-PAYLOAD	{
	  "username": "Skaikru",
	  "password": "#1ooGr@0ndar$",
	  "terminalId": "10990M-TID"
	}

RESPONSE-PAYLOAD	{
	  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJqdG",
	  "key": "2092ba6b-742b-4df1-af34-7def3bc004c1",
	  "status": "Success"
	}

Properties Description

Properties	Description	Mandatory
Username	This is a unique username assigned to the merchant. *Datatype: String*	YES
Password	The is the Corresponding password to the Username. *Datatype: String*	YES
TerminalId	This is the unique Id of the terminal *Datatype: String*	NO
Token	The is the generated token used for the bearer token authentication type. *Datatype: String*	YES
Key	This is used to generate the signature value on operation call. *Datatype: String*	YES
Status	This is the status of the call which is either Success or Failed. *Datatype: String*	YES

InvokePayment

This is the operation to initiate payment on the Verge Payment Gateway.

URL	https://testdev.coralpay.com:5000/GwApi/api/v1/InvokePayment
VERB	POST
CONTENT-TYPE	application/json
AUTHENTICATION	Bearer Token Authentication type.

REQUEST-PAYLOAD	```{
	  "requestHeader": {
	    "merchantId": "10990MTE0992",
	    "terminalId": "10990M-TID",
	    "timeStamp": 0123456789,
	    "signature": "0928uymd0dkq445553222pl9"
	  },
	  "customer": {
	    "email": "babavoss@see.com",
	    "name": "Baba Voss",
	    "phone": "080300000001"
	    "tokenUserId": "080300000001"
	  },
	  "customization": {
	    "logoUrl": "http://sampleurl.com",
	    "title": "Watermarks Limited",
	    "description": "Service Payment"
	  },
	    "metaData": "string",
	    "traceId": "9900990285",
	    "productId": "aa12443d",
	    "amount": 2000.00,
	    "currency": "NGN",
	    "feeBearer": "M",
	    "returnUrl": "http://samplereturnurl.com/status"
	}```

RESPONSE-PAYLOAD	```{
	  "responseHeader": {
	    "responseCode": "00",
	    "responseMessage": "Successful",
	    "timeStamp": 0123456789,
	    "signature": "120dksl3l3lld303e3k3mjmf36k6j3h"
	  },
	  "transactionId": "029918891988381",
	  "traceId": "9900990285",
	  "payPageLink": "https://testdev.coralpay.com/payment/00998833",
	  "metaData": "string"
	}```

Properties Description

Properties	Description	Type	Mandatory
RequestHeader			
MerchantId	This is the Merchant unique identifier	String	Yes
TerminalId	This is the unique identifier for the terminal	String	No
TimeStamp	Timestamp: `UnixTimeSeconds` *Datatype: long*	Long	Yes
Signature	This value is generated to maintain the integrity of the payload. Note that a new Timestamp must be generated to calculate the signature every API call. Sha256(MerchantId +TraceId+ TimeStamp + Key).	String	Yes
Customer			
Email	This is a customer property, which is the customer email	String	No
Phone	This is a customer property, which is the customer Phone No.	String	No
Name	This is a customer property, which is the customer Name	String	Yes
TokenUserId	The is the User Id to get the tokenised card	String	No
Customization			
Title	This is an object that contains title, description, and the Logo you want to display on the payment gateway page.	String [25]	Yes
Description		String [50]	Yes
Logo		String	No
MetaData	This field can be used for additional information.	String	No
TraceId	This is the unique identifier of the transaction from the merchant's end.	String	Yes
ProductId	The is the unique identifier of the product	String	
Amount	This is the amount of the transaction.	Decimal	Yes
FeeBearer	There is a default merchant fee bearer in the merchant settings, but this can be overridden if another value of the fee bearer is passed on the api request. The value for the property is either M or C. M=Merchant, C=Customer	String [1]	No
Currency	This is the currency of the transaction. e.g., NGN	String	Yes
ReturnUrl	This is the URL to return to when payment is completed. We'll include Id and Status as query strings in the URL while routing to it. Also note that a real-time notification will be pushed via the call-back.	String	Yes
ResponseCode	This is the status code for the transaction.	String	
ResponseMessage	This is the status code message for the transaction	String	
TransactionId	This is unique identifier of the transaction generated by CoralPay.	String	

Transaction Query

This operation can be called to get transaction details of transactions of not more than 3 months.

URL	https://testdev.coralpay.com:5000/GwApi/api/v1/TransactionQuery
VERB	POST
CONTENT-TYPE	application/json
AUTHENTICATION	Bearer Token Authentication type. Authentication

REQUEST-PAYLOAD	```{
	  "requestHeader": {
	    "merchantId": "10990MTE0992",
	    "terminalId": "10990M-TID",
	    "timeStamp": 123456789,
	    "signature": "0928uymd0dkq445553222pl9"
	  },
	      "traceId": "9099388490"
	}```

RESPONSE-PAYLOAD	```{
	  "merchantId": "10990MTE0992",
	  "terminalId": "10990M-TID",
	  "traceId": "9099388490",
	  "transactionId": "099387777727777724",
	  "paymentDate": "2021-11-21T15:39:33.8838432+01:00",
	  "channel": "USSD",
	  "amount": 6000.00,
	  "fee": 60.0,
	  "feeBearer": "M",
	  "title": "Watermarks Limited ",
	  "description": "Service payment",
	  "paymentInstrument": "string",
	  "timeStamp": 123456689,
	  "signature": "3436557434lkejfd4oiw3i3pd",
	  "responseCode": "00",
	  "responseMessage": "Successful"
	  "channelTransactionId": "1123332455289"
	  "refunds": [
	    {
	      "amount": 0,
	      "channel": "string",
	      "refundId": "string",
	      "traceId": "string",
	      "transactionId": "string",
	      "refundDate": "2023-04-10T10:44:33.069Z"
	    }
	  ]
	}```

Properties description

Properties	Description	Type	Mandatory
MerchantId	This is the Merchant unique identifier	String	Yes
PaymentDate	This is the date the transaction was carried out	String	
TerminalId	This is the unique identifier for the terminal	String	No
TransactionId	This is unique identifier of the transaction generated by CoralPay.	String	
TimeStamp	Timestamp: `UnixTimeSeconds` *Datatype: long*	Long	Yes
Signature	This value is generated to maintain the integrity of the payload Sha256(MerchantId +TraceId+ Timestamp + Key).	String	Yes
ResponseCode	This is the status code for the transaction.		
ResponseMessage	This is the status code message for the transaction		
Title	Transaction title as in the payment request	String	Yes
Description	Transaction description as in the payment request	String	Yes
PaymentInstrument	This is the instrument used in carrying out the payment	String	
TraceId	This is the unique identifier of the transaction, generated by the merchant	String	Yes
Amount	This is the amount of the transaction.	Decimal	Yes
Fee	This is the transaction fee	Decimal	Yes
FeeBearer	This is the Entity that bears the fee which is either M or C	String	Yes
Currency	This is the currency of the transaction. e.g., NGN	String	Yes
ResponseCode	This is the status code for the transaction	String	Yes
ResponseMessage	This is the status code message for the transaction	String	Yes
Channel	This is the channel used to complete the transaction	String	Yes
ChannelTransactionId	This is the transaction ID of the channel used.	String	Yes
Refunds			
Amount	This is the amount refunded	Decimal	
Channel	This is the channel used to complete the transaction	String	
RefundId	The is the unique identifier of the refund	String	
TraceId	This is the unique identifier of the transaction, generated by the merchant	String	
TransactionId	This is unique identifier of the transaction generated by CoralPay.	String	
RefundDate	This is the date the refund was done.	String	

Call-Back

This operation is to be created by the merchant to receive real time payment notification; we expect to get Http response 200 upon posting the notification. Verge Payment Gateway will repush the notification 6 times within an hour until http response 200 is received.

URL	To be provided by the merchant.
VERB	Post
CONTENT-TYPE	application/json
AUTHENTICATION	Basic Auth: *using username and password provided by CORALPAY*

REQUEST-PAYLOAD	{
	  "MerchantId": "10990MTE0992",
	  "TraceId": " 10990M-TID",
	  "TerminalId": "231167543AR2",
	  "TransactionId": "099387777727777724",
	  "PaymentDate": "2021-11-21T15:39:33.8838432+01:00",
	  "Channel": "USSD",
	  "Currency": "NGN",
	  "Amount": 6000.0,
	  "Fee": 60.0,
	  "FeeBearer": "M",
	  "TimeStamp": 0123456689,
	  "Signature": "3436557434lkejfd4oiw3i3pd",
	  "ResponseCode": "00",
	  "ResponseMessage": "Successful",
	  "ProductId": "AA122323",
	  "ChannelTransactionId": "22447554455584115",
	  "PaymentInstrument": "string",
	  "IsTokenized": true,
	   "CardToken": {
	     "Pan": "5433 **** **** 23456",
	    "TokenUserId": "08036261685",
	     "TokenId": " we32-e2233e-2ebf3-fdr34"
	    }
	}

Properties description

Properties	Description	Type	Mandatory
RequestHeader			
MerchantId	This is the Merchant unique identifier	String	Yes
TimeStamp	Timestamp: `UnixTimeSeconds` *Datatype: long*	Long	Yes
Signature	This value is generated to maintain the integrity of the payload Sha256(MerchantId +TraceId+ Timestamp + Key).	String	Yes
Title	Transaction title as in the payment request	String	Yes
Description	Transaction description as in the payment request	String	Yes
TraceId	This is the unique identifier from the merchant	String	Yes

TerminalId	This is the unique identifier for the terminal	String	No
Amount	This is the amount of the transaction.	Decimal	Yes
Fee	This is the transaction fee	Decimal	Yes
FeeBearer	This is the Entity that bears the fee which is either M or C	String	Yes
Currency	This is the currency of the transaction. e.g., NGN	String	Yes
ResponseCode	This is the status code for the transaction	String	Yes
ResponseMessage	This is the status code message for the transaction	String	Yes
ProductId	The is the unique identifier of the product	String	Yes
Channel	This is the channel used to complete the transaction	String	Yes
ChannelTransactionId	This is the transaction ID of the channel used.	String	Yes
ProductId	This is the unique identifier of the product	String	Yes
IsTokenized	This is to show if it is tokenized.	Bool	Yes
CardToken	This is the details of the card tokenized by the customer during the transaction	**Object** (Nullable)	**No**
Pan	This is the masked pan	String	
TokenUserId	This is the user identifier for saved tokens	String	
TokenId	This is the token identifier	String	

Refund

This is the operation to be called by merchants to carry out a refund on Verge Payment Gateway.

URL	https://testdev.coralpay.com:5000/GwApi/api/v1/Refund
VERB	POST
CONTENT-TYPE	application/json
AUTHENTICATION	Bearer Token Authentication type.

REQUEST-PAYLOAD	<pre>{
	  "requestHeader": {
	    "merchantId": "10990MTE0992",
	    "terminalId": "10990M-TID",
	    "timeStamp": "123456789",
	    "signature": "0928uymd0dkq445553222pl9"
	  },
	   "traceId": "029918891988381"
	   "amount": 6000.00
	  }</pre>

RESPONSE-PAYLOAD	<pre>{
	  "responseCode": "00",
	  "responseMessage": "Successful",
	  "signature": "125a12c4b47a4774ca2a11454",
	  "timeStamp": 0123456789
	  "transactionId": 029918891988381,
	  "traceId": "226557255782",
	  "refundId": "122344585885"</pre>

	}

Properties Description

Properties	Description	Type	Mandatory
RequestHeader			
MerchantId	This is the Merchant unique identifier	String	Yes
TerminalId	This is the unique identifier of the terminal	String	
TimeStamp	Timestamp: `UnixTimeSeconds` *Datatype: long*	Long	Yes
Signature	This value is generated to maintain the integrity of the payload. Note that a new Timestamp must be generated to calculate the signature every API call. Sha256(MerchantId +TraceId+ TimeStamp + Key).	String	Yes
Amount	This is the amount to be refunded	Decimal	Yes
TraceId	This is the unique identifier from the merchant	String	Yes
TransactionId	This is the unique identifier for the transaction	String	Yes
ResponseCode	This is the status code for the refund operation	String	Yes
ResponseMessage	This is the status code message for the refund operation	String	Yes
RefundId	This is the unique identifier for the refund operation	String	Yes

Error Codes

Codes	Description
00	Successful
01	Failed Transaction: Description in the ResponseMessage, e.g. Insufficient fund,
96	General Error or System Challenge
06	Invalid or Missing Parameter
25	Not Found
12	Invalid Transaction
09	Pending Transaction
34	Suspected Fraud

Using ISO 8583 - Wikipedia