Mohamed Kassimu

LINK CARD INTEGRATION

API DOCUMENTATION

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# Document History

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Description** |
| 1.0 | 21th MAY 2020 | M. Kassim | Initial draft |

# Acronyms

OCT Original Credit Transaction

BCX Business Connexion (T)Ltd

USSD Unstructured Supplementary Service Data

ID Identification

PAN Primary Account Number

AFT Account Fund Transfer

3DS Three-Domain Secure

# Background

This document serves as the API document for any THIRD PARTY and Visa Integration through BCX Visa gateway for link card through 3DS.

# Requirements definitions

THIRD PARTY may wish to extend the following services to their consumers: -

1. Linking their debit/credit/prepaid card into their respective wallet.
2. Transfers funds to THIRD PARTY wallet from his/her Visa card.
3. My card
4. Disable/Enable
5. Unlink
6. View card details

# Process flows

## Linking card on the wallet

This is the process whereby the consumer can record his card details at once on the mobile application to allow transfers to be initiated from the THIRD PARTY USSD.

The process requires 3DS authentication, where cardholder will have to be authenticated by his/her issuer for the completing the linking process, and therefore, the service will only be applicable for consumer who is under the bank that participating in the 3DS.

Below is the process for the link card process.

### Message flow diagram



### Process descriptions

|  |  |
| --- | --- |
| **Process Number** | **Description** |
| USSD Session | * Visa Card holder will launch THIRDRY PARTY application or USSD and re-direct USSD session to BCX USSD application * Card holder will select link card, THIRD PARTY will redirect the USSD traffic to BCX USSD application and customer will prompted to enter:  1. Card number 2. Expiry date   And click submit |
| 1 | BCX USSD application will send the check authentication request to BCX Visa platform for linking the details which will includes mobile number, customer names (first name, middle name and last name), PAN and expiry date and mark the registration as pending approval |
| 2 | BCX Visa gateway will generate the 3DS auth request the network (Visa) |
| 3 | The network will perform some check on the directory server and forward request to issuer ACS. |
| 4 | Issuer authentication response to the Visa |
| 5 | The Visa will send response to BCX gateway |
| 6 | BCX gateway will send a response to BCX USSD application |
| 7 | BCX USSD application will send to THIRD PARTY (with some authentication details in the case of the step-up authentication is required) |
| 8 | THIRD PARTY will respond to acknowledge the receipt of the request. |
| 9 | THIRD PARTY to create and post http post form to ACS server, that will contain the details from step 7 in case of step up which include the return url (call back url) |
| 10 | ACS will generate an OTP to the customer |
| 11 | ACS will generate the form to THIRD PARTY, and THIRD PARTY will prompt customer to enter OTP and OTP will be sent back to ACS for validation |
| 12 | ACS will return the authentication result to THIRD PARTY through the return URL included in the step 9 |
| 13,14,15 | On successful authentication on step 12, THIRD PARTY will send validate authentication result to BCX USSD gateway to Visa |
| 16 | Visa will return a response to BCX Visa gateway for it to complete the process of linking the card. |

**API FOR STEP 7 and 8:**

**REQUEST**

**STEP UP IS REQUIRED (OTP AUTHENTICATION)**

{

"clientReferenceInformation": {

"code": "1234455666"

},

"consumerAuthenticationInformation": {

"**acsUrl**": "https://merchantacsstag.cardinalcommerce.com/MerchantACSWeb/pareq.jsp?vaa=b&gold=AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA",

"**xid**": "UEtVdGVYRFBJNUFKWFZLdnkzVzA=",

"authenticationTransactionId": "PKUteXDPI5AJXVKvy3W0",

"**pareq**": "eNpVUV1TwjAQfM+vYBifyQcFgTkyU0QUUKaDUtC3mt5IR2khTRng15u0IJqn3ctdsrsHr2uNOHxBVWiU8Ix5Hn1iLYn79WC6MLgaBuOWP1mF0/2xuWR1CYE/x52EPeo8yVLJG6whgF4osU9otY5SIyFSu8F4Jr12V",

"veresEnrolled": "Y",

"proxyPan": "3610713",

"authenticationPath": "ENROLLED",

"proofXml": "<AuthProof> <Time>2020 May 20 18:55:41</Time> <DSUrl>https://merchantacsstag.cardinalcommerce.com/MerchantACSWeb/vereq.jsp?acqid=CYBS</DSUrl> <VEReqProof> <Message id=\"PKUteXDPI5AJXVKvy3W0\"> <VEReq> <version>1.0.2</version> <pan>XXXXXXXXXXXX0002</pan> <Merchant> <acqBIN>469216</acqBIN> <merID>341422420000000</merID> <password> </password> </Merchant> <Browser> <deviceCategory>0</deviceCategory> </Browser> </VEReq> </Message> </VEReqProof> <VEResProof> <Message id=\"PKUteXDPI5AJXVKvy3W0\"> <VERes> <version>1.0.2</version> <CH> <enrolled>Y</enrolled> <acctID>3610713</acctID> </CH> <url>https://merchantacsstag.cardinalcommerce.com/MerchantACSWeb/pareq.jsp?vaa=b&gold=AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA</url> <protocol>ThreeDSecure</protocol> </VERes> </Message> </VEResProof> </AuthProof>",

"specificationVersion": "1.0.2",

"token": "AxjzbwSTP9cUJgNY8huDABEBURwcBYS3pAuJYEau3pJl6MVzMKYAwAAABgMw"

},

"errorInformation": {

"reason": "PENDING\_AUTHENTICATION",

"message": "The cardholder is enrolled in Payer Authentication. Please authenticate the cardholder before continuing with the transaction."

},

"id": "5900009413526854704003",

"status": "PENDING\_AUTHENTICATION",

"submitTimeUtc": "2020-05-20T18:55:41Z"

}

**NO STEP UP IS REQUIRED (NO OTP AUTHENTICATION IS RQUIRED)**

{

"clientReferenceInformation": {

"code": "1234455666"

},

"consumerAuthenticationInformation": {

"eciRaw": "06",

"**authenticationTransactionId**": "n4mZ1fEv4xBkMDOg5vP0",

**"eci": "06",**

"proofXml": "<AuthProof> <Time>2020 May 21 03:25:37</Time> <DSUrl>https://merchantacsstag.cardinalcommerce.com/MerchantACSWeb/vereq.jsp?acqid=CYBS</DSUrl> <VEReqProof> <Message id=\"n4mZ1fEv4xBkMDOg5vP0\"> <VEReq> <version>1.0.2</version> <pan>XXXXXXXXXXXX0101</pan> <Merchant> <acqBIN>469216</acqBIN> <merID>341422420000000</merID> <password> </password> </Merchant> <Browser> <deviceCategory>0</deviceCategory> </Browser> </VEReq> </Message> </VEReqProof> <VEResProof> <Message id=\"n4mZ1fEv4xBkMDOg5vP0\"> <VERes> <version>1.0.2</version> <CH> <enrolled>Y</enrolled> <acctID>3610723</acctID> </CH> <url>https://merchantacsstag.cardinalcommerce.com/MerchantACSWeb/pareq.jsp?visaattempts=true&gold=AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA</url> <protocol>ThreeDSecure</protocol> </VERes> </Message> </VEResProof> </AuthProof>",

"token": "AxjzbwSTP9tTIL84rwMjABEBURwcDHpLpAuJYEbDJpJl6MVzMKYAwAAA5AL0",

"cavv": "BwAQAgJ4IAUFBwdik3ggEETHTsU=",

"paresStatus": "A",

"xid": "bjRtWjFmRXY0eEJrTURPZzV2UDA=",

"cavvAlgorithm": "2",

"veresEnrolled": "Y",

"authenticationPath": "ATTEMPTS\_COMPLETE",

"ecommerceIndicator": "vbv\_attempted",

"specificationVersion": "1.0.2"

},

"id": "5900315371036382004003",

"status": "AUTHENTICATION\_SUCCESSFUL",

"submitTimeUtc": "2020-05-21T03:25:37Z"

}

For **NO STEP-UP** authentication, the followings are used to evaluate if the authentication was successful without the use of OTP.

**eci** values.

**05**: Successful authentication

**06**: Authentication attempted

**07**: Failed authentication (No response from the merchant because of a problem.)

**RESPONSE**

{

"clientReferenceInformation": {

"code": "1234455666"

},

“actionCode”:”00”

“Message”:”Received Successfull”

}

**STEP 9**

In the case where step up authentication is required, a payer authentication request will be sent from the customer directly to ACS. The API call will have to post a form to ACS server directly (not through BCX) using the detailed shared in the step 7 mainly **acsURL**, **xid** and **pareq**. Below is the sample, and this is the one will trigger an OTP generation.

<!DOCTYPE HTML>

<body onload="document.PAEnrollForm.submit ();"/>

<form id="PAEnrollForm" name="PAEnrollForm" action="**acsURL** **value**"

method="post" target="paInlineFrame">

<input type="hidden" name="PaReq" value="**pareq value**"/>

<input type="hidden" name="TermUrl" value="**termination url**"/>

<input type="hidden" name="MD" value="**The xid value**"/>

</form>

Please refer to ***Payer\_Authentication\_SO\_API\_2016.pdf*** page 26 for the next authentication steps.

**API FOR STEP 13 and 18**

**REQUEST**

{

"CustomerInfo": {

"address1": "1 Market St",🡪 Optional

"address2": "Address 2",🡪 Optional

"administrativeArea": "Dar",🡪 Optional

"country": "TZ",🡪mandatory

"locality": "Dar Es Salaam", 🡪 Optional

"firstName": "John",🡪Mandatory

"lastName": "Doe",🡪Optional

"phoneNumber": "2557XXXXXXXX",🡪Mandatory

"email": "test@email.com",🡪 Optional

"postalCode": "94105"🡪 Optional

}

"paymentInformation": {

"card": {🡪 Optional

"type": "001",

"expirationMonth": "12",

"expirationYear": "2022",

"number": "4000000000000002"

}

},

"consumerAuthenticationInformation": {

**"authenticationTransactionId": "1xa5CmpaKqvWrYorkP00"** 🡪Mandatory

}

}

**RESPONSE:**

{ "clientReferenceInformation":

{"code": "1589055491467"

},

"consumerAuthenticationInformation":

{"indicator": "internet",

"eci": "07",

"specificationVersion": "1.0.2",

"token": "AxizbwSTP1PfBZnUncEGABEBUagKhOo+AAgoZNJMvRiuZhTAGAAAAwCS" }, **"id": "5890554914896556704006",**

"status": "AUTHENTICATION\_SUCCESSFUL",

"submitTimeUtc": "2020-05-09T20:18:11Z"}

## AFT from card to wallet

This is the process whereby the Visa cardholder transfer funds from his bank account through VisaNet to his/her mobile wallet account initiated from THIRD PARTY channels.

### Message flow diagram



### Process flow description

|  |  |
| --- | --- |
| **Process Number** | **Description** |
| 1 | Customer will launch USSD session and select transfer from my card, Customer will enter amount, authenticated using third party PIN and submit transaction to BCX Visa gateway |
| 2 | Visa gateway will respond to third party to acknowledge receipt of request |
| 3,4 | BCX - Visa gateway will generate pull fund transfer request and send issuer visa VisaNet |
| 5,6 | Issuer will send a response to BCX Visa gateway through VisaNet |
| 7 | BCX Visa gateway will generate and send the B2C request to third party |
| 8 | Third party will send a response BCX Visa gateway |

API FOR STEP 1 and 2.

**Request**

{

"amount":"124.05",

“CurrencyCode”:”834”,

"localTransactionDateTime":"2020-05-09T19:58:56",

“retrievalReferenceNumber”:”12345678912345” **[12 digits]**

"businessApplicationId":"AA",

“channelType”:”USSD”,

"MobileNumber":"255652123456",

"terminalId":"THIRD\_PART\_ID"

}

**Response**

{

"actionCode": "00",

“Message”:”Pending issuer approval”

}

Note: Recommended format for retrievalReferenceNumber field is **ydddhhnnnnnn**

URL end point: ***../aft***

On successful approval from issuer, third party API for B2C will be invoked.

## My card

May is the card management services, whereby the consumer can disable/Enable, unlink and view card details.

Below is the API document

Action description

DC- Disable card- Disable the unlinked card.

AC- Activate card- in case card was previously activated and then deactivated then can be activated

UC- Unclick card- card and customer records will be completed deleted.

**Request**

{

“MobileNumber”:”07xx123456”,

“action”:”DC”,

“maskedPan”:”400121\*\*\*\*\*\*1236”

}

**Response**

{

“actionCode”:”00”

“message”: “Processed successful”

}

End poing will be ***/mycard***

# Sign-off

The sign off is to agree on the information above you have reading and understanding

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SNo** | **Representative Name** | **Organization** | **Signature** | **Date** |
| 1 |  | Business Connexion (T) Ltd |  |  |
| 2 |  | THIRD PARTY |  |  |
| 3 |  | Visa |  |  |
|  |  |  |  |  |