

NCBA M-pawa Auto strike TRS (Auto collection)

Prepared by: Stanley Muthama

Reviewed by: R

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NCBA Solution Architecture:

Vodacom Solution Architecture:

Product Manager:

1. Objective:

M-pawa Autostrike is offering a solution to recover defaulted loans from customers, by automatically deducting loan amount from customer's wallet as soon as they get deposits.

1.1 Risk:

- Recycle clean-up should be done to prevent us from auto debiting customer who were issued with the new lines. Avoid auto debiting the wrong customer.
- Recycle process needs to include clean up on the defualter table. (The New CR for automated recycling should include this clean up from Vodacom side)
- We have customers who had multiple loans on the legacy system. In the Get loan details NCBA shall return the total amount of the all defaulted Loans. For loan repayment, NCBA should repay the loan from 1 by 1 from the oldest to latest based on disbursement day.

1.2 Process:

2. Step 1: File Generation and sharing process:

1. NCBA to generate the defaulted customer list.
2. The list should be extracted and placed in a share where Voda will collect or NCBA can push the data to the directory shared by Vodacom.
3. Vodacome will upload the data to their defualter table.

NCBA development:

- NCBA will create a scheduled job to select the criteria of defaulted customers and create a file in the sftp location.
- The defaulter data should exclude recycled customers.
- The business should have a configurable parameter to select on the preferred date of collection from Boss.
- NCBA should share the 2 critical fields in the generated file e.g MSISDN, VMT REF.
- File format will be CSV and name will be todays date. Agreed file name: 'MPAWA_AUTO_RECOVERY_20230403235959'
- File should be extracted Daily.

3. Step 2:

The file has been shared to Vodacom and updated in the defaulter table.

NB: Vodacom Upload rules:

- If a customer exists in Vodacom's defaulter table but does not exists in today's defaulter file generated by Mpawa NEO, Vodacom should remove it from the defaulter table.
- If the customer exist in the file shared by NCBA but not in defaulter table, Vodacom should append it to the default table.

It would mean Any time a deposit is done to Vodacome. Vodacome service will keep checking if the customer is part of the defaulter list.

If the customer is not part of the defaulter list Auto strike process should end immediately.

4. if Else:

If the customer is part of the defaulter list.

Check if the Mobile number and VMT refer from Vodacome and Defaulter table are same. (Ensure we are debiting the correct customer.)

Check on the Loan information via API call to Mpawa NEO system.

5. Get defaulted loan details

Purpose:

1. API will be used to get loan details and due dates.

API Capability:

- Vodacom should validate the ns5:LoanPayByDate2023-04-09/ns5:LoanPayByDate. Only debit when today is more than due date.
- NCBA to create a configurable parameter of the loan aging dates.
Example: if you want to return response from day 90 based on disbursement and above. Days should be configurable. Age should be based on disbursement day.
- The API should only be able to return loans for the stated configurable date/days.
- Before triggering Loan details request Voda will check if the customer is recycled in G2.
- NCBA will expose a new end point for `CUSTOMER_AUTOSTRIKE_REQUEST`.

5.1 Request

```

<request>
  <service>CUSTOMER_AUTOSTRIKE_REQUEST</service>
  <partnerId>NCBA</partnerId>
  <conversationId>98bcbb53-adc7-46f5-a6b2</conversationId>
  <MSISDN>25572866687</MSISDN>
  <vmtRef>11234</vmtRef>
  <availableAmount>1000</availableAmount>
  <timestamp>2023012011244142</timestamp>
  <language>EN</language>
</request>

```

5.2 Response:

SYNC Response sample (without loans)

```

<response>
  <!-- E102 -->
  <responseCode>S0</responseCode>
  <responseDesc>Customer has no loan(s) to auto strike</responseDesc>
  <service>CUSTOMER_AUTOSTRIKE_REQUEST</service>
  <conversationId>98bcbb53-adc7-46f5-a6b2</conversationId>
  <vmtRef>11234</vmtRef>
  <MSISDN>254724884757</MSISDN>
  <timestamp>2023012011244142</timestamp>
  <loans/>
</response>

```

SYNC Response sample (with loans)

```

<response>
  <responseCode>S0</responseCode>
  <responseDesc></responseDesc>
  <service>CUSTOMER_AUTOSTRIKE_REQUEST</service>
  <conversationId>98bcbb53-adc7-46f5-a6b2</conversationId>
  <vmtRef>11234</vmtRef>
  <timestamp>2023012011244142</timestamp>
  <loans>
    <ns5:LoanBalance>1000</ns5:LoanBalance>
    <ns5:LoanPayByDate>2023-04-09</ns5:LoanPayByDate>
  </loans>
</response>

```

responseCode	Description
S0	Success

responseCode	Description
<i>To be provided</i>	No loans to autostrike
<i>Others</i>	Failed

NB:

- If A customer has more than 1 defaulted loans, we shall return the total amount of all defaulted loans. NCBA will return the oldest due date for `LoanPayByDate`.

6. Loan Repayment API:

Purpose: Loan repayment API.

API capability:

- Should have retry mechanism and Rolled back mechanism to handle failure exceptions. (Vodacom). During retry we should maintain same receipt ID so that we can track duplicates.
- After a successful repayment response and `<ns5:IsFullyRepaid>true</ns5:IsFullyRepaid>`, Vodacom should delink the customer from the defaulter table to avoid multiple debits. (Vodacom)

NB: Do not remove when the isfullyrepaid flag is false since the loan will have been paid partially.

Mpawa to add a new column for Auto strike API

(c4:TransactionTypeNameAutostrike/c4:TransactionTypeName)

- This will enable us distinguish Customer repaid and Auto strike loan repayments
- The statement should read as Auto strike.
- Vodacom should update the transaction type in the recon file and customer statement. NCBA to check if Automated recon will be affected and resolve.
- We shall have funds posted to Savings as excess. Business to define due to the Capital share with Vodacom.

In core level we should be able to see the financial entries.

6.1 Request:

```
<?xml version="1.0" encoding="UTF-8"?>
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:vmt="http://VMTComponentModel/InterfaceSpecification/Interfaces/C4
/VMTtoFSPService"
xmlns:c4="http://VMTComponentModel/InterfaceSpecification/FSPDefined/Mes
sages/C4/"
xmlns:vmt1="http://schemas.datacontract.org/2004/07/VMT.BankingIntegrati
on.FSIC4Simulator.Common">
  <soapenv:Body>
    <vmt:PaybackLoan>
      <vmt:request>
        <c4:BankShortCode>174422</c4:BankShortCode>
        <c4:CustomerId>
          <vmt1:MSISDN>255757846098</vmt1:MSISDN>

<vmt1:VmtReferenceNumber>17490549</vmt1:VmtReferenceNumber>
          </c4:CustomerId>
          <c4:MessageId>
            <vmt1:Id>7128188rDJruu000A3P7</vmt1:Id>
            <vmt1:TimeStamp>2023-03-
28T21:24:20.348+03:00</vmt1:TimeStamp>
          </c4:MessageId>
          <c4:TransactionId>0</c4:TransactionId>

<c4:TransactionReceiptNumber>ACS19902VKV</c4:TransactionReceiptNumber>

<c4:TransactionTypeName>Autostrike</c4:TransactionTypeName>
          <c4:Amount>15000.00</c4:Amount>
        </vmt:request>
      </vmt:PaybackLoan>
    </soapenv:Body>
  </soapenv:Envelope>
```

Response:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```

<ns1:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:vmt="http://VMTComponentModel/InterfaceSpecification/Interfaces/C4
/VMTtoFSPService"
xmlns:c4="http://VMTComponentModel/InterfaceSpecification/FSPDefined/Mes
sages/C4/"
xmlns:vmt1="http://schemas.datacontract.org/2004/07/VMT.BankingIntegrati
on.FSIC4Simulator.Common"
xmlns:ns1="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ns5="http://VMTComponentModel/InterfaceSpecification/FSPDefined/Me
ssages/C4/"
xmlns:ns4="http://schemas.datacontract.org/2004/07/VMT.BankingIntegratio
n.FSIC4Simulator.Common"
xmlns:ns8="http://VMTComponentModel/InterfaceSpecification/Interfaces/C4
/VMTtoFSPService">
  <ns1:Body>
    <ns8:PaybackLoanResponse>
      <ns8:PaybackLoanResult>

<ns5:AdditionalInformation>Success</ns5:AdditionalInformation>
      <ns5:BankResponseCode>S0</ns5:BankResponseCode>
      <ns5:BankShortCode>174422</ns5:BankShortCode>
      <ns5:CustomerId>
        <ns4:MSISDN>255757846098</ns4:MSISDN>

<ns4:VmtReferenceNumber>17490549</ns4:VmtReferenceNumber>
      </ns5:CustomerId>
      <ns5:MessageId>
        <ns4:Id>7128188rDJruu000A3P7</ns4:Id>
        <ns4:TimeStamp>2023-03-
28T21:24:20.348+03:00</ns4:TimeStamp>
      </ns5:MessageId>
      <ns5:TimeStamp>2023-03-
28T21:24:20.348+03:00</ns5:TimeStamp>
      <ns5:TransactionId>0</ns5:TransactionId>

<ns5:TransactionReceiptNumber>ACS19902VKV</ns5:TransactionReceiptNumber>

<ns5:TransactionTypeName>Autostrike</ns5:TransactionTypeName>
      <ns5:AmountPaid>15000</ns5:AmountPaid>
      <ns5:Balance>20000</ns5:Balance>
      <ns5:IsFullyRepaid>false</ns5:IsFullyRepaid>
      <ns5:IsOverpaid>false</ns5:IsOverpaid>
      <ns5:LoanPaybackDate>2023-03-03</ns5:LoanPaybackDate>
    </ns8:PaybackLoanResult>
  </ns8:PaybackLoanResponse>
</ns1:Body>
</ns1:Envelope>

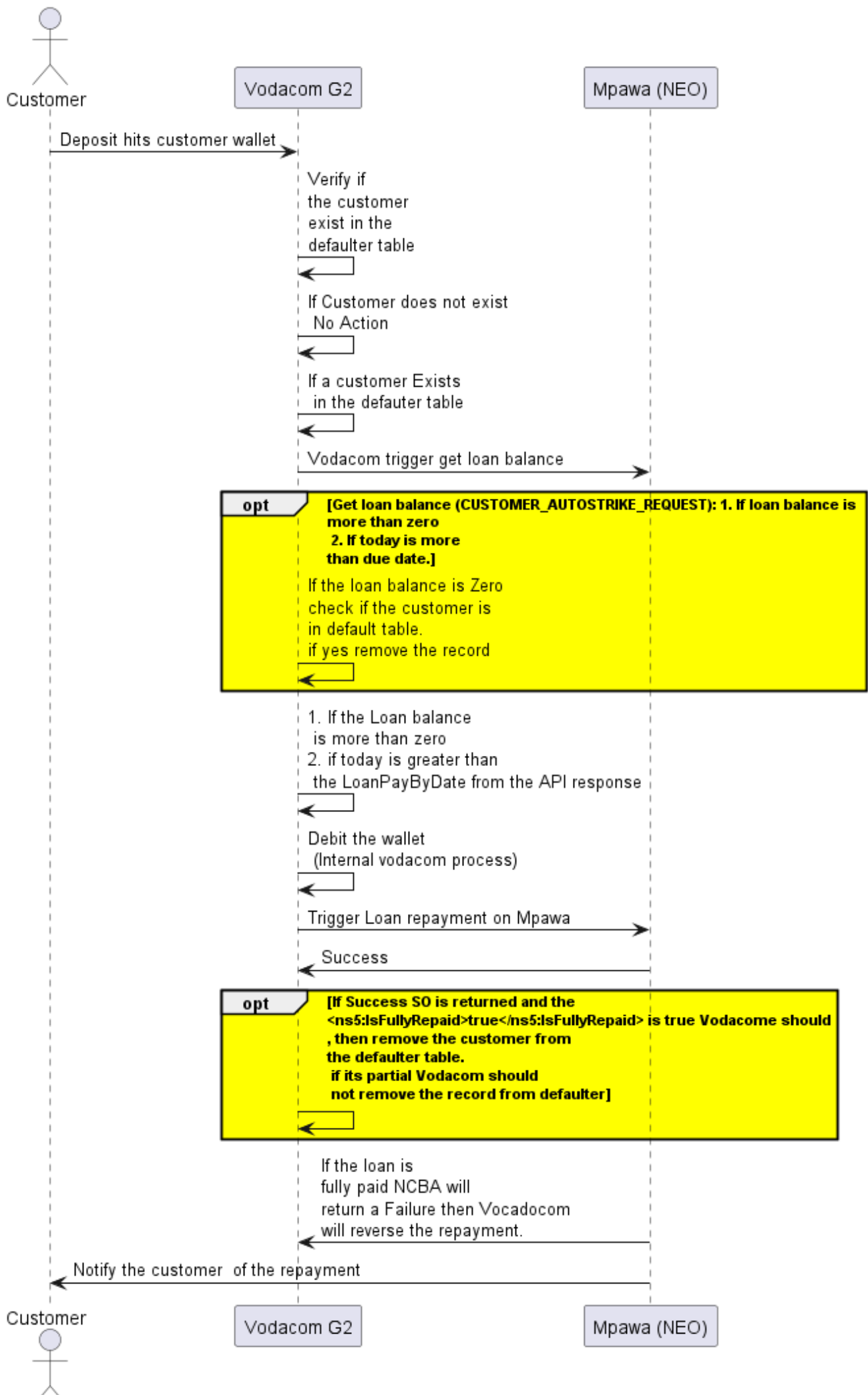
```

- NCBA will expose a new end point for loan repayments.

To Do items:

1. Vodacom transaction recon file should include the new transaction type.
2. New narration required for the statement.
3. Recon team to define exception handling for Auto strike.
4. Business to confirm if there is a report required for Auto strike.
5. Business to share notification.

Auto Strike Flow:



Zabbix Monitoring perspective:

- Add Dashboard for the new transaction type called Auto strike.

Paybill at Vodacom end: Reuse Loan repayment Paybill or create a new sub-paybill.

Pending sign off by

NCBA Solution Architecture:

SIGN:

Date:

Vodacom Solution Architecture:

SIGN:

Date:

Product Manager:

SIGN:

Date:

