R-NDPS Platform

ISO 20022 Specification

P2P transfer

Version 3.1

Rwanda National Digital Payment System

Revision history

Date	Version	Description	Author
November 2019	1.6	Initial version	Zorodzai Mhlanga
September 2020	1.8	Addition of clearing and settlement diagrams as well as bulk upload details	Zorodzai Mhlanga
March 2021	2.3	Update with details on account closing and suspension Update with chapter on directory services, proxy and brand id, reversal request element description	Zorodzai Mhlanga
April 2021	2.5	Update get account (lookup) iso message to make institution_id field optional to enable sender to lookup using account/wallet/proxy_id only.	Ntare Niyomugabo
Juillet 2022	3.0	Update of Proxy/alias identification description and iso 20022 messages including registration, modification, lookup and closing.	Ntare Niyomugabo
September 2022	3.1	Update on account suspension, proxy and bulk upload file including proxy descriptions	Ntare Niyomugabo

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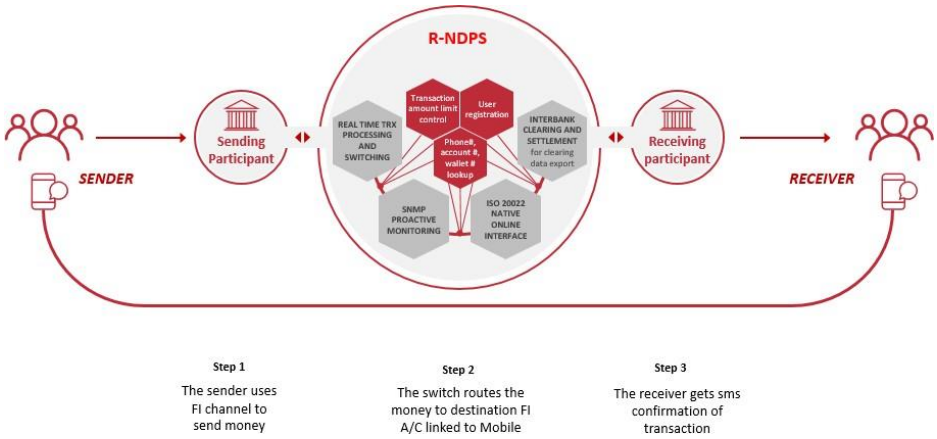
Introduction

This document contains specifications for the ISO20022 message as implemented in Rwanda National Payment System (R-NDPS) for the purpose of providing end to end P2P transfers between participating financial service providers (FSPs).

The P2P operation is performed by the user through the FSP front end application. To perform a funds transfer, the user enters the mobile phone number or FSP and FSP account and the amount of the transfer, and then confirms the transfer after payee name verification.



This document describes the procedure for information upload to Centralised Directory Services, account lookup and P2P funds transfer to the beneficiary account.

ISO 20022 is a financial standard covering messages sent between different organizations. These messages include credit transfer and direct debits as well as payment status reports and account statements. The messages are defined by ISO 20022 Universal financial industry message scheme (UNIFI) and are based on XML (Extensible Mark-up Language).

Background

R-NDPS is a retail payment scheme governed by a single set of rules and standards. At its core is a centralized, digital processing platform, referred to as R-NDPS platform, that enables electronic fund transfers between various accounts (e.g. bank / MFI / mobile wallet accounts) of different customers across financial services providers (i.e. “any-to-any” transfers). The R-NDPS platform supports instant payments, with funds availability in real-time, as well as settlement services between participants via RIPPS system.

Audience and Scope of document

This document is a reference source for persons responsible for the message interface between an FSP payment platform and the R-NDPS system. It includes transaction flows, a general overview of the ISO20022 message, and a description of each of the data elements contained

in the message as per R-NDPS implementation for the purposes of implementing the P2P use case. Other R-NDPS use cases are documented separately.

1. Person-to-person (P2P)

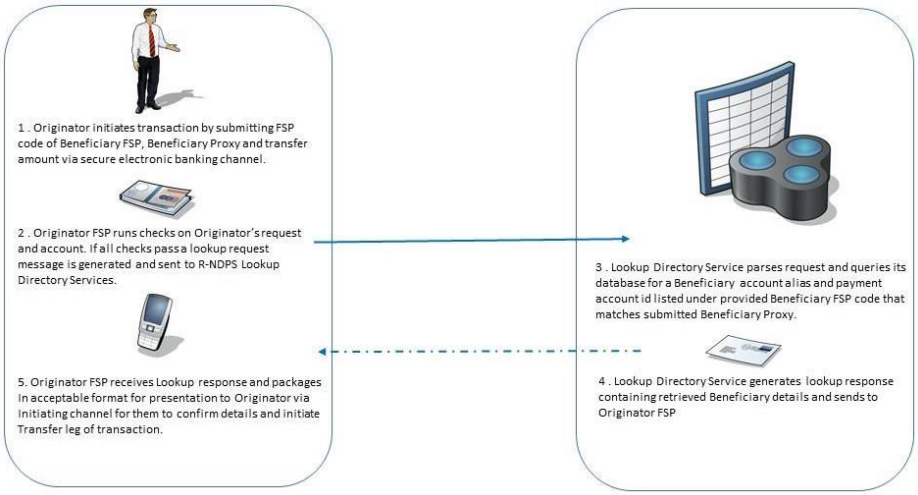
P2P transfers include transfers between:

- Mobile wallet to mobile wallet
- Mobile wallet to bank account (both commercial bank and MFI)
- Bank account to mobile wallet
- Bank account to bank account

This use case refers to an "any-to-any" transfer between accounts and wallets of different customers across financial services providers.

High level view

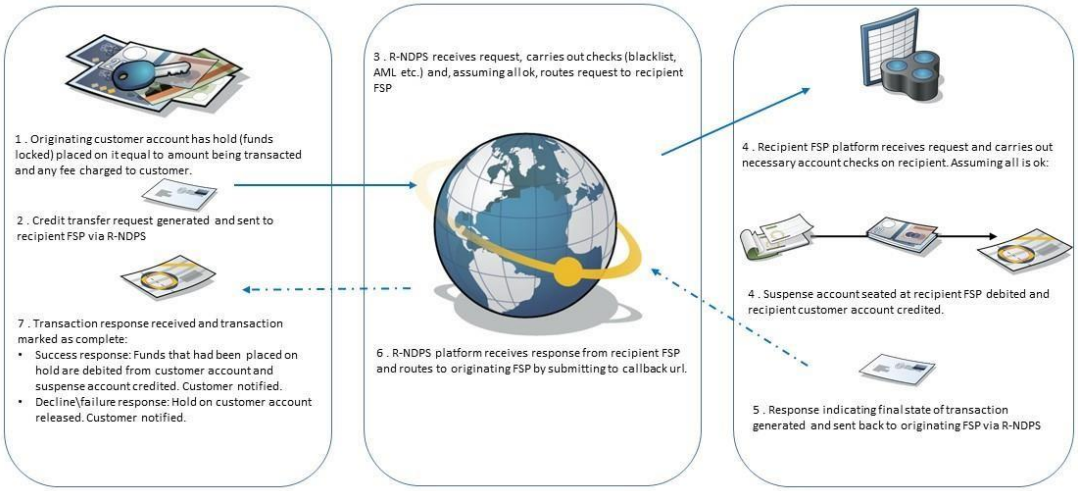
A complete transaction consists of two main process cycles – clearing and settlement. In the case of R-NDPS P2P transfer there is an additional pre-requisite process cycle that must occur prior to clearing and settlement – beneficiary lookup:



Only on completion of lookup can clearing and settlement take place. At a high level the clearing and settlement legs of a P2P transaction can be depicted as below:

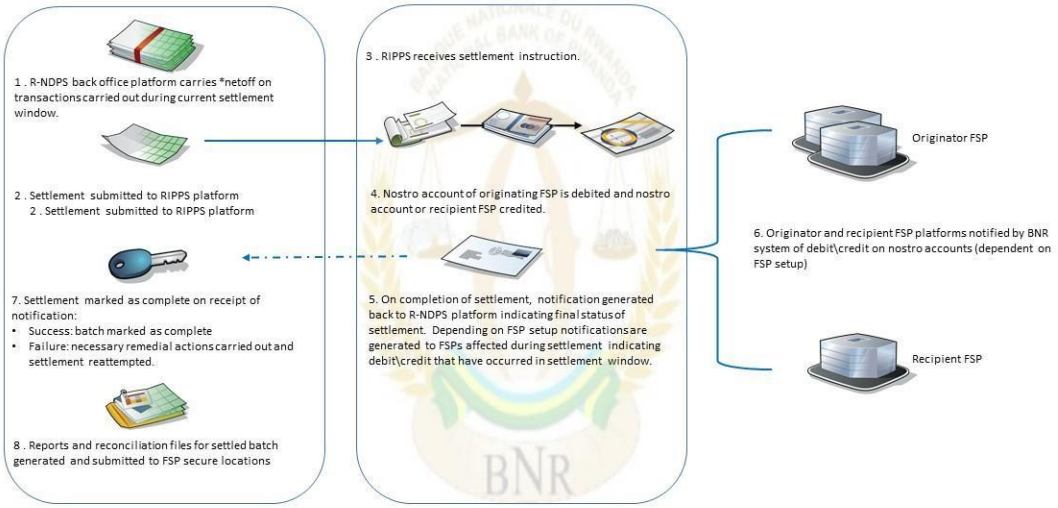
P2P clearing

0 . Customer initiates transaction via mobile channel and carries out necessary validations. Account movements only happen after client receives response from lookup query and confirms they want to transfer funds.



P2P Settlement

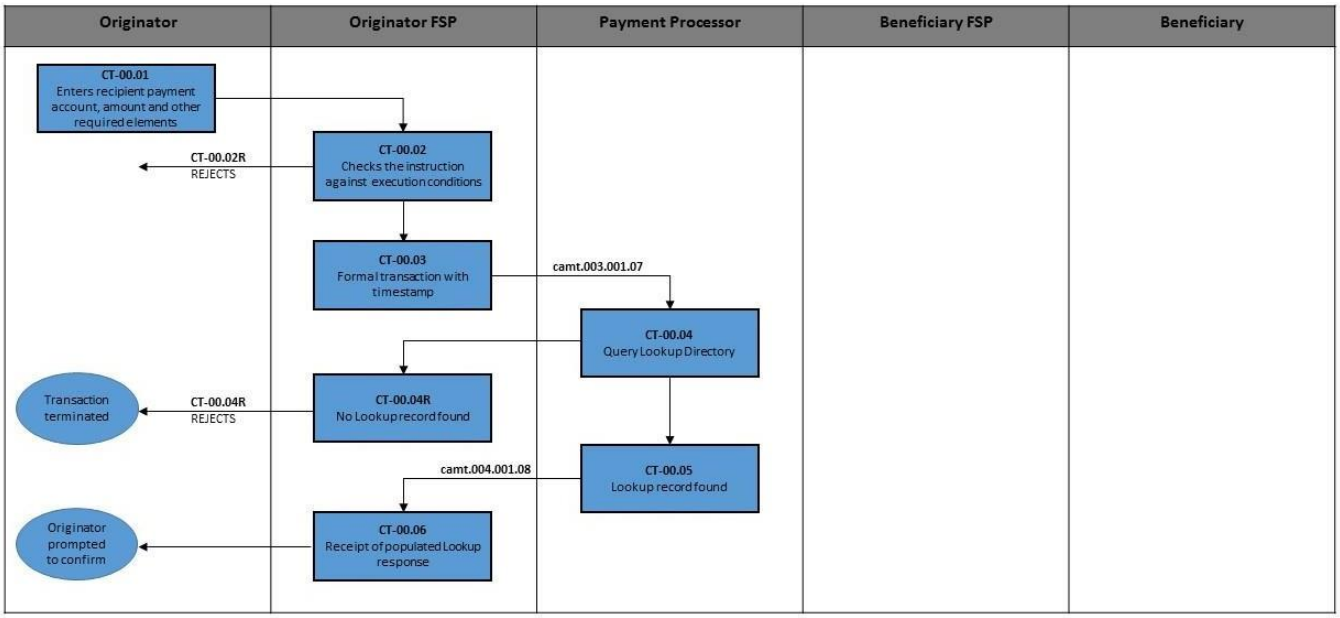
0 . Settlement takes place on a regular basis between R-NDPS back office platform and RIPPS.



*netoff – for each originator\recipient pairing the system calculates total sent and received between both parties. A netoff is then done to determine which party needs to pay the other to balance off their accounts with neither party owing the other. For purposes of illustration this example assumes settlement is of one transaction carried out as per previous slide.

Process flows

Lookup



CT-00.01 The Originator selects Beneficiary FSP from options presented and enters Beneficiary payment account number or alias and transfer amount. The Instruction is submitted by any means agreed between the Originator and the Originator FSP.

CT-00.02 The Originator FSP receives the Lookup Instruction. It instantly checks if the instruction fulfils the execution conditions required by its procedures including the authenticity of the instruction, the availability of funds and the checking of the format and the plausibility of the Beneficiary FSP code or Alias.
Rejected Lookup instructions in this step result in the transaction request being declined and transaction declined.

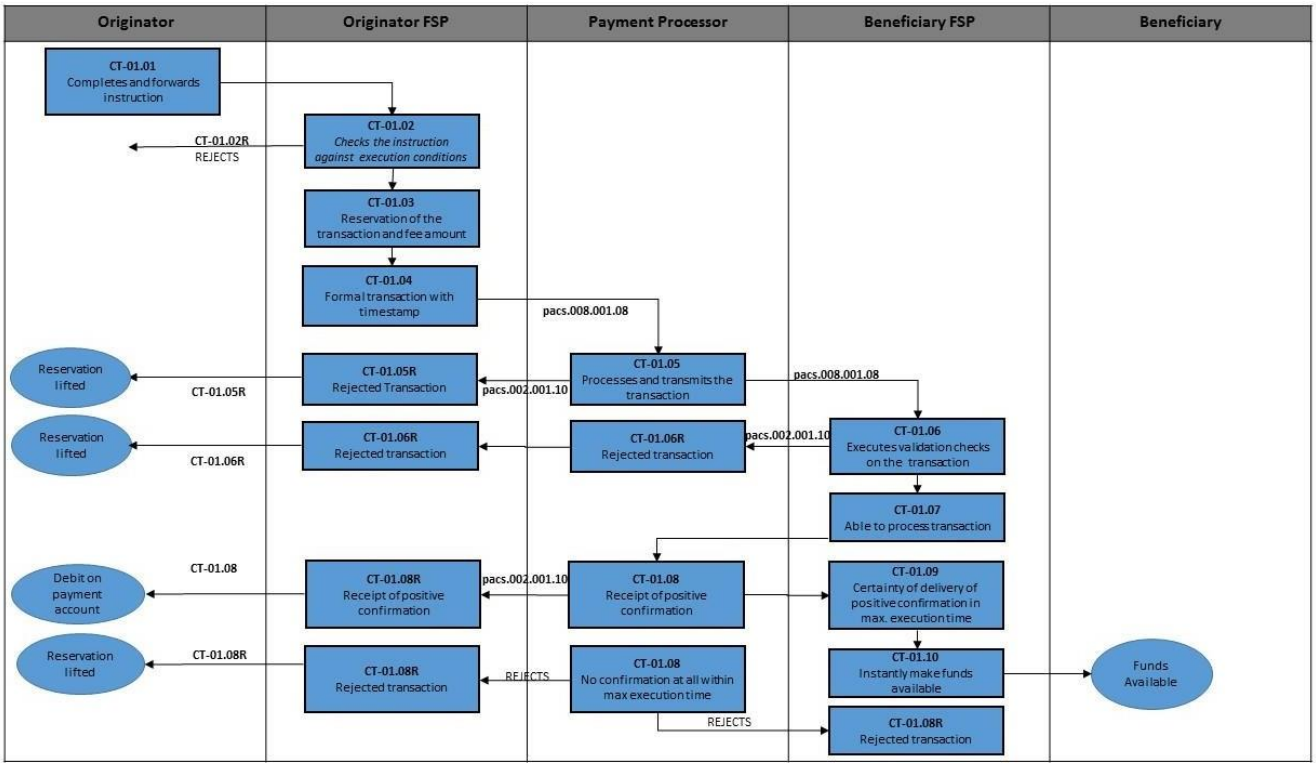
CT-00.03 When these execution conditions are successful the Originator FSP instantly prepares a Lookup Request Transaction based on the Lookup Instruction and puts the time stamp in the created transaction prior to digitally signing and submitting the transaction to the Payment Processor. The time stamp marks the start of the execution time cycle of the Lookup Transaction.

CT-00.04 The Payment Processor platform queries the Lookup Directory for the details of intended Beneficiary.
In the event no matching record is found a response is sent back to the Originator FSP indicating the intended Beneficiary is not registered.

CT-00.05 In the event Lookup is successful the details of intended Beneficiary are packaged into a return account lookup response which is digitally signed and sent back to the Originator FSP.

CT-00.06 The Originator FSP receives the return account response and formats the details to present to the Originator for confirmation. If the Originator cancels the transaction is terminated, if the Originator confirms transaction details by entering PIN and selecting confirmation option a P2P Instant Credit Transfer Transaction with given details is initiated.

Credit Transfer



CT-01.01 The Originator completes and forwards the P2P Instant Credit Transfer Instruction. The Instruction will be submitted by any means agreed between the Originator and the Originator FSP.
The data elements to be provided are defined in dataset DS-01 in section 4.5.

CT-01.02 The Originator FSP receives the P2P Instant Credit Transfer Instruction. It Instantly checks if the Instruction fulfils the execution conditions required by its procedures including the authenticity of the Instruction, the availability of Funds and the checking of the format.
Rejected P2P Instant Credit Transfer Instructions in this step are covered by procedures described in section 4.3.2.

CT-01.03 When these execution conditions are successful, the Originator FSP instantly makes a reservation of the sum of the transfer amount and fees on the Originator's payment account with this information instantly accessible to the Originator.
This step may be bypassed by the Originator FSP if already carried out in the Lookup related to the transaction.

CT-01.04 The Originator FSP instantly prepares a digitally signed P2P Instant Credit Transfer Transaction based on the P2P Instant Credit Transfer Instruction and puts the time stamp in the created P2P Instant Credit Transfer Transaction. The time stamp marks the start of the execution time cycle of the P2P Instant Credit Transfer Transaction.

CT-01.05 The Originator FSP immediately sends the digitally signed P2P Instant Credit Transfer Transaction message to the Payment Processor the Inter Participant Space to ensure the Beneficiary FSP receives the P2P Instant Credit Transfer Transaction in accordance with the rules of the Scheme within the maximum execution time defined in section 4.2.3. The data elements to be provided are defined in dataset DS-02 in section 4.5.
Rejected P2P Instant Credit Transfer Transactions (*negative confirmations*) in this step are covered by procedures described in section 4.3.2.

CT-01.06 The Beneficiary FSP receives the digitally signed P2P Instant Credit Transfer Transaction from the Payment Processor in the Inter Participant Space, instantly verifies if it can apply the P2P Instant Credit Transfer Transaction to the Beneficiary's payment account and executes various validation checks.

Rejected P2P Instant Credit Transfer Transactions (negative confirmations) in this step are covered by procedures described in section 4.3.2.

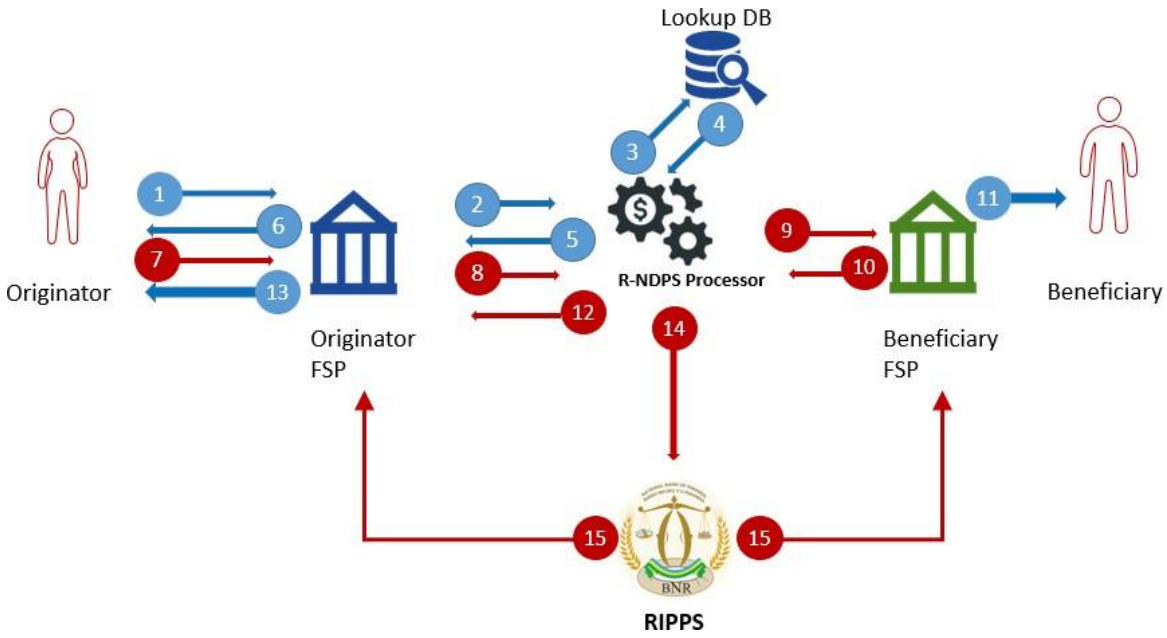
CT-01.07 The Beneficiary FSP avails the status of the transaction on its loopback url for the Payment Processor to retrieve within the maximum execution time defined in section 4.2.3. The status update indicates that the Beneficiary FSP:
- has received the P2P Instant Credit Transfer Transaction and
- is able to process the P2P Instant Credit Transfer Transaction (*positive confirmation*)

CT-01.08 The Payment Processor retrieves the *positive confirmation* message within the maximum execution time defined in section 4.2.3 and instantly acknowledges to the Beneficiary FSP that the transaction status has been retrieved. The Payment Processor immediately updates the transaction status on its loopback url in order for the Originator FSP to retrieve via a *status update query message.* On retrieval of the *positive confirmation* by the Originator FSP the Originator FSP debits as soon as possible the payment account of the Originator.
Rejected P2P Instant Credit Transfer Transactions (*negative confirmations*) in this step are covered by procedures described in section 4.3.2.

CT-01.09 The Beneficiary FSP has received the certainty that its *positive confirmation* message has been successfully queried and retrieved by the Payment Processor within the maximum execution time defined in section 4.2.3.

CT-01.10 The Beneficiary FSP instantly makes the funds available to the Beneficiary. The Beneficiary FSP will make the information of DS-04 available to the Beneficiary on the basis agreed between the Beneficiary and his Beneficiary FSP.
This action means that the Beneficiary has immediate use of the funds subject to the Terms and Conditions governing the use of the payment account of the Beneficiary.

Complete P2P credit transfer (end to end)



Lookup Request

Account lookup can either be based on account (bank/MFI/SACCO account number or MFS wallet) or on proxy. Both account lookup and proxy lookup steps are described below, please note for a given transaction only one process would be followed (i.e. customer either carries out a lookup on account or proxy, not both, for any given individual transaction)

Account lookup

1. Sending customer initiated transaction (P2P transfer)

User action: Initiation of request via electronic channel	Transaction can be initiated via mobile or internet.
System Actions: Actions carried out on originator FSP platform	Prior to initiating transaction to R-NDPS platform the originator FSP system needs to ensure the originator will be able to fulfill transfer. • Check if originator account\wallet allowed to carry out action • Check if originator account\wallet contains sufficient funds to carry out intended transaction • Check if transaction value below originator limit
Message: Internal to originator FSP channel	Request is sent from user device to originator FSP platform via channel. At this point the request to FSP includes information regarding transaction type, intended beneficiary (account and FSP)

2. Originator platform checks if originator can carry out transaction and submits request to R-NDPS platform

User action: N/A	
System Actions: Actions carried out on originator FSP platform	If originator platform checks are passed the originator platform creates an account lookup message which is submitted to R-NDPS platform.
Message: camt.003.001.07	Request message sent from originator FSP to R-NDPS platform.

3. R-NDPS core platform queries lookup database

User action: N/A	
System Actions: Actions carried out on R-NDPS platform	On request of lookup message platform unpacks request and submits the lookup value to lookup database
Message: N/A	

4. R-NDPS core platform retrieves beneficiary details from lookup database

User action: N/A	
System Actions: Actions carried out on R-NDPS platform	Lookup database queried for lookup value using combination of lookup ids (lookup value id and id of destination FSP). If no match found an appropriate decline response sent back to core R-NDPS platform, if lookup value located beneficiary details provided to core platform for packaging into response to originator FSP. Details returned are full name of beneficiary as stored in database
Message: N/A	

5. R-NDPS platform generates 'return account' response to originator FSP

User action: N/A	
System Actions: Actions carried out on originator FSP platform	R-NDPS platform generates a return account response message which is sent back to originator FSP for customer validation
Message: camt.004.001.08	Response message sent from R-NDPS platform to originator FSP. Mandatory fields:
Status	Approval: full beneficiary name, mobile number, account id and email address (if available) is returned as retrieved from R-NDPS platform. Negative: Appropriate failure or decline response code returned indicating that record does not exist.

6. Originator FSP forwards response from R-NDPS to originator for confirmation

User action: N/A	
System Actions: Actions carried out on originator FSP platform	On receiving lookup response from R-NDPS the originator FSP platform sends formatted response back to customer for confirmation if beneficiary details are correct. In addition to beneficiary details the originator is also provided details of total transaction amount for which they will be debited (amount to be sent + fees)
Message: Internal to originator FSP channel	

7. Originator confirms beneficiary details

User action: Confirmation of beneficiary details	If beneficiary details are correct the originator confirms as per originator FSP requirements and goes through originator specific authorisation procedure so as for transfer request to be generated. Originator FSP has option to include additional "are you sure you want to carry out transaction" prompt following confirmation of beneficiary details. If beneficiary details are incorrect or originator decides to terminate transaction they can carry out the originator FSP specific option for cancelling – at this point transaction is terminated.
System Actions: Actions carried out on originator FSP platform	If originator confirms details the originator platform carries out authorisation steps of originator using credentials submitted (can be password, OTP, biometric, token etc)
Message: Internal to originator FSP channel	Internal interaction between originator and originator FSP for authorisation of transaction to be carried out following confirmation of beneficiary details by originator.

Proxy lookup

1. Sending customer initiated transaction (P2P transfer)

User action: Initiation of request via electronic channel	Transaction can be initiated via mobile or internet.
System Actions: Actions carried out on originator FSP platform	Prior to initiating transaction to R-NDPS platform the originator FSP system needs to ensure the originator will be able to fulfill transfer. • Check if originator account\wallet allowed to carry out action • Check if originator account\wallet contains sufficient funds to carry out intended transaction • Check if transaction value below originator limit
Message: Internal to originator FSP channel	Request is sent from user device to originator FSP platform via channel. At this point the request to FSP includes information regarding transaction type, intended beneficiary (account and FSP)

2. Originator platform checks if originator can carry out transaction and submits request to R-NDPS platform

User action: N/A	
System Actions: Actions carried out on originator FSP platform	If originator platform checks are passed the originator platform creates an account lookup message which is submitted to R-NDPS platform.
Message: camt.003.001.07	Request message sent from originator FSP to R-NDPS platform.

3. R-NDPS core platform queries lookup database

User action: N/A	
System Actions: Actions carried out on R-NDPS platform	On request of lookup message platform unpacks request and submits the lookup value to lookup database
Message: N/A	

4. R-NDPS core platform retrieves beneficiary details from lookup database

User action: N/A	
System Actions: Actions carried out on R-NDPS platform	Lookup database queried for lookup value using proxy. If no match found an appropriate decline response sent back to core R-NDPS platform, if proxy value located beneficiary details provided to core platform for packaging into response to originator FSP. Details returned are full name of beneficiary, account and FSP id as stored in database
Message: N/A	

5. R-NDPS platform generates 'return account' response to originator FSP

User action: N/A	
System Actions: Actions carried out on originator FSP Platform	R-NDPS platform generates a return account response message which is sent back to originator FSP for customer validation
Message: camt.004.001.08	Response message sent from R-NDPS platform to originator FSP. Mandatory fields:
Status	Approval: full beneficiary name, mobile number and email address (if available) is returned as retrieved from R-NDPS platform. Negative: Appropriate failure or decline response code returned indicating that record does not exist.

6. Originator FSP forwards response from R-NDPS to originator for confirmation

User action: N/A	
System Actions: Actions carried out on originator FSP platform	On receiving lookup response from R-NDPS the originator FSP platform sends formatted response back to customer for confirmation if beneficiary details (name) are correct. In addition to beneficiary details the originator is also provided details of total transaction amount for which they will be debited (amount to be sent + fees) *Though beneficiary FSP details (account and |FSP id) are not displayed to the sender the originator FSP platform needs to retain the information as it will be used to populate the funds transfer request in the event the originator decides to proceed with the transaction.*
Message: Internal to originator FSP channel	

7. Originator confirms beneficiary details

User action: Confirmation of beneficiary details	If beneficiary details are correct the originator confirms as per originator FSP requirements and goes through originator specific authorisation procedure so as for transfer request to be generated. Originator FSP has option to include additional "are you sure you want to carry out transaction" prompt following confirmation of beneficiary details. If beneficiary details are incorrect or originator decides to terminate transaction they can carry out the originator FSP specific option for cancelling – at this point transaction is terminated.
System Actions: Actions carried out on originator FSP platform	If originator confirms details the originator platform carries out authorisation steps of originator using credentials submitted (can be password, OTP, biometric, token etc)
Message: Internal to originator FSP channel	Internal interaction between originator and originator FSP for authorisation of transaction to be carried out following confirmation of beneficiary details by originator.

Only in the event that a lookup has been completed successfully and customer has confirmed they want to proceed with the transaction should the P2P funds transfer processes be initiated

P2P funds transfer

8. Reservation of funds on originator account\wallet and submission of transfer request to R-NDPS platform

User action: N/A	
System Actions: Actions carried out on originator FSP platform	On validating originator the Originator FSP instantly makes a "Reservation of the Amount" on the originator's account\wallet. Originator FSP instantly prepares a P2P transaction request based on the instruction from the originator.
Message: pacs.008.001.08	Transfer request message sent from originator FSP to R-NDPS platform.

9. R-NDPS platform routes transfer request to beneficiary FSP

User action: N\A	
System Actions: Actions carried out on R-NDPS platform	R-NDPS platform carries out checks on request message received from originator FSP: • Is transaction amount below limit set for originator FSP and transaction type • Is originator transaction count (velocity) within the limit for given period • Does originator activity (MSISDN and account) fall within acceptable behavior as determined by fraud management module • Does beneficiary activity (MSISDN and account) fall within acceptable behavior as determined by fraud management module • Is originator FSP enabled to carry out specified transaction • Is beneficiary FSP enabled to carry out specified transaction • Is originator account on a blacklist • Is beneficiary account on a blacklist If all checks pass, the originator request is forwarded to beneficiary FSP *In the event that R-NDPS platform declines, a pacs.002.002.10 response is returned to originator FSP with appropriate decline\failure status code.*
Message: pacs.008.001.08	Transfer request message received from originator FSP forwarded to beneficiary FSP. Mandatory fields:

10. Beneficiary platform receives request and processes credit transfer response.

User action: N/A	
System Actions: Actions carried out by beneficiary FSP platform	Beneficiary FSP instantly verifies if it can apply the P2P Credit request to the beneficiary's account and executes various validation checks: • Is beneficiary account valid (does it exist) • Is beneficiary account enabled to receive funds (no active block on account) Based on result of validation the beneficiary FSP generates confirmation message to submit to R-NDPS platform indicating status of transaction and additionally serves as confirmation that beneficiary FSP has received request and has processed it. The response is populated with appropriate response code indicating status of transaction on beneficiary account.
Message: pacs.002.001.10	
Response	Approval: Appropriate status code indicating beneficiary account has been successfully credited. Negative: Appropriate failure or decline status code returned indicating beneficiary FSP has declined request or a failure has been encountered. *Refer to Appendix 1 (response codes) for full details on response codes.*

11. Notifying beneficiary of received funds

User action: N/A	
System Actions: Actions carried out by beneficiary FSP platform	On successful submission of payment status message to R-NDPS platform the Beneficiary PSP sends a notification to the Beneficiary advising on receipt of funds and should instantly make the funds available to the Beneficiary. The information about the new available funds is instantly accessible to the Beneficiary. This action means that the Beneficiary has immediate use of the funds subject to the terms and conditions governing the use of the payment account of the Beneficiary.
Message: Internal to beneficiary FSP (can be SMS, email etc)	

12. R-NDPS forwards payment status response message to originator FSP

User action: N/A	

System Actions: Actions carried out by beneficiary FSP platform	On receipt of payment status response from Beneficiary FSP the R-NDPS platform routes the response to the originator FSP for processing.
Message: pacs.002.001.10	
Response	Returned unchanged from beneficiary FSP Approval: Appropriate approval code indicating beneficiary account has been successfully credited. Negative: Appropriate failure or decline status code returned indicating beneficiary has declined request or a failure has been encountered. *Refer to Appendix 1 (response codes) for full details on response codes.*

13. Receipt of payment status response message by originator FSP

User action: N/A	
System Actions: Actions carried out by originator FSP platform	On receipt of the payment status response the Originator FSP platform parses the transaction status field: If transaction status indicates a decline or failure code (funds have not been made available to the Beneficiary) the Originator PSP is obliged to immediately inform the Originator and lift the "Reservation of the Amount" made in step 8. If transaction status indicates a success code (funds have been made available to the Beneficiary) the Originator PSP can formally debit the payment account of the Originator of transaction amount and fee that were set put on hold.
Message: Internal to originator FSP (can be SMS, email etc)	In both success and decline\failure scenarios the Originator FSP informs the Originator about the final transaction status and funds made available to the Beneficiary.

Settlement

14. Generation of settlement files

User action: N/A	
System Actions: Actions carried out by R-NDPS platform	In the next settlement cycle, R-NDPS submits a settlement file to RIPPS (Currently MT971 to be upgraded when RIPPS upgrade is done). Report and reconciliation files are generated and place in individual FSP secured file dump locations for retrieval: • Successful transaction report • Declined and failed transaction report • Transaction summary report • Full transaction reconciliation extract

	• Settlement report
Message: N/A	

15. Settlement of FSPs at BNR

User action: N/A	
System Actions: Actions carried out by BNR RIPPS platform	The RIPPS system performs the settlement process by debiting Originator's Bank Settlement Account and crediting Beneficiary's Bank Settlement account.
Message:	

Exception Processing Flow

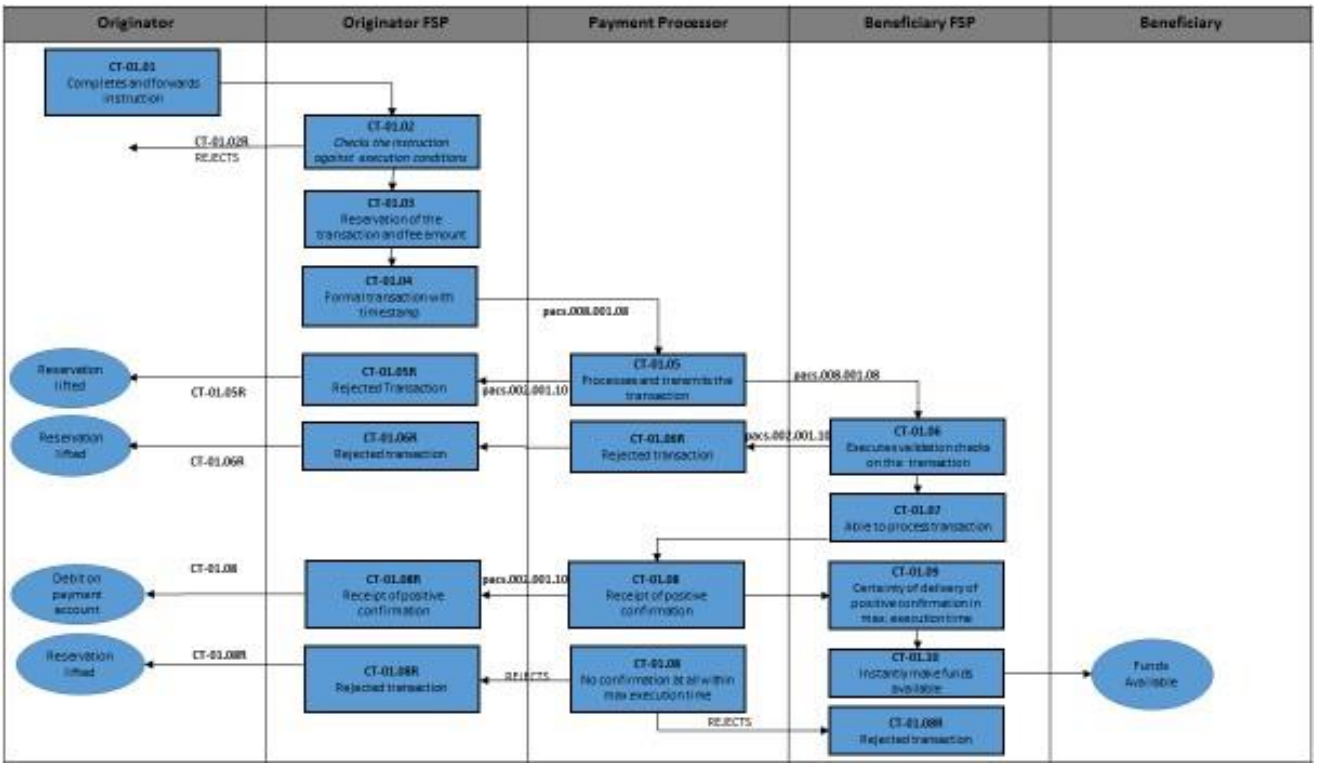
There are circumstances under which a transaction may not be successful, these can be broadly classified under the categories of:

- Reject – sometimes referred to as decline. These occur when any of the participating entities receive a request to carry out a P2P instruction and actively decline. A reject can be done by any of the participating entities:
    - *Originator FSP* – the originator FSP can decline an originator's request to initiate a P2P credit transfer. This can be due to a number of reasons not restricted to a block on the Originator's account, suspected fraudulent activity, etc
    - *Switching platform* – the inter participant switching platform may reject an instruction to process a P2P transfer due to a number of reasons such as insufficient liquidity in Originator participant online clearing account, suspected fraudlent activity, transaction not permitted to Originator, Recipient account blocked or suspended in Lookup Directory, transaction velocity for Originator or Recipient reached etc.
    - *Recipient FSP* – the Recipient FSP can decline a request to have a Recipient's account credited due to a number of reasons including but not limited to a block on Recipient account, Recipient account closed, suspected fraudulent activity etc.
- Failure – a failure occurs when, due to extraordinary circumstances, any of the entities involved in the processing of a P2P transaction fail to process the transaction as per normal conditions. This can be due to external factors such as network outage, or internal factors such as power failure, incorrectly formatted messaging resulting in failure etc.

Both Rejecrs and Failures are treated as exceptions and are handled in a manner to ensure no loss of funds and all participating entities have a similar view and position in terms of the final transaction status.

Negative confirmation

A negative confirmation occurs when, due to a reject or failure, a negative confirmation indicating instruction was not carried out is returned. The transaction itself is processed under the normal P2P transaction flow with the party rejecting indicating via the relevant reason code as to why instruction has been rejected.



CT-01.01 The Originator completes and forwards the P2P Instant Credit Transfer Instruction. The Instruction will be submitted by any means agreed between the Originator and the Originator FSP.
The data elements to be provided are defined in dataset DS-01 in section 4.5.

CT-01.02 The Originator FSP receives the P2P Instant Credit Transfer Instruction. It Instantly checks if the Instruction fulfils the execution conditions required by its procedures including the authenticity of the Instruction, the availability of Funds and the checking of the format.
Rejected P2P Instant Credit Transfer Instructions in this step are covered by procedures described in section 4.3.2.

CT-01.03 When these execution conditions are successful, the Originator FSP instantly makes a reservation of the sum of the transfer amount and fees on the Originator's payment account with this information instantly accessible to the Originator.
This step may be bypassed by the Originator FSP if already carried out in the Lookup related to the transaction.

CT-01.04 The Originator FSP instantly prepares a digitally signed P2P Instant Credit Transfer Transaction based on the P2P Instant Credit Transfer Instruction and puts the time stamp in the created P2P Instant Credit Transfer Transaction. The time stamp marks the start of the execution time cycle of the P2P Instant Credit Transfer Transaction.

CT-01.05 The Originator FSP immediately sends the digitally signed P2P Instant Credit Transfer Transaction message to the Payment Processor the Inter Participant Space to ensure the Beneficiary FSP receives the P2P Instant Credit Transfer Transaction in accordance with the rules of the Scheme within the maximum execution time defined in section 4.2.3. The data elements to be provided are defined in dataset DS-02 in section 4.5.
Rejected P2P Instant Credit Transfer Transactions (*negative confirmations*) in this step are covered by procedures described in section 4.3.2.

CT-01.06 The Beneficiary FSP receives the digitally signed P2P Instant Credit Transfer Transaction from the Payment Processor in the Inter Participant Space, instantly verifies if it can apply the P2P Instant Credit Transfer Transaction to the Beneficiary's payment account and executes various validation checks.
Rejected P2P Instant Credit Transfer Transactions (negative confirmations) in this step are covered by procedures described in section 4.3.2.

CT-01.07 The Beneficiary FSP avails the status of the transaction on its loopback url for the Payment Processor to retrieve within the maximum execution time defined in section 4.2.3. The status update indicates that the Beneficiary FSP:
- has received the P2P Instant Credit Transfer Transaction and
- is able to process the P2P Instant Credit Transfer Transaction (*positive confirmation*)

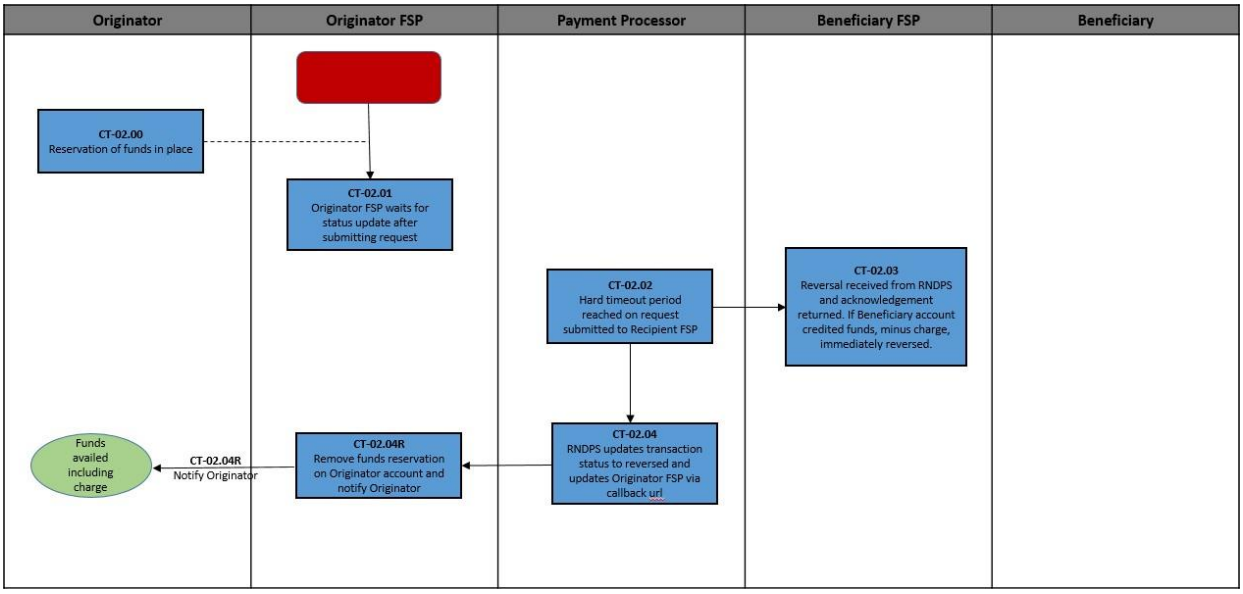
CT-01.08 The Payment Processor retrieves the *positive confirmation* message within the maximum execution time defined in section 4.2.3 and instantly acknowledges to the Beneficiary FSP that the transaction status has been retrieved. The Payment Processor immediately updates the transaction status on its loopback url in order for the Originator FSP to retrieve via a *status update query message.* On retrieval of the *positive confirmation* by the Originator FSP the Originator FSP debits as soon as possible the payment account of the Originator.
Rejected P2P Instant Credit Transfer Transactions (*negative confirmations*) in this step are covered by procedures described in section 4.3.2.

CT-01.09 The Beneficiary FSP has received the certainty that its *positive confirmation* message has been successfully queried and retrieved by the Payment Processor within the maximum execution time defined in section 4.2.3.

CT-01.10 The Beneficiary FSP instantly makes the funds available to the Beneficiary. The Beneficiary FSP will make the information of DS-04 available to the Beneficiary on the basis agreed between the Beneficiary and his Beneficiary FSP.
This action means that the Beneficiary has immediate use of the funds subject to the Terms and Conditions governing the use of the payment account of the Beneficiary.

Reversal

A reversal occurs when a downstream entity, typically the Originator FSP platform, is not availed of the status of a submitted P2P instruction within the scheme defined hard timeout period.



CT-02.00 On submission of P2P transfer request a funds reservation of transfer amount and transaction fees is placed on the Originator's account. Only when a positive confirmation is received will the funds be debited.

CT-02.01 The Originator FSP, having submitted the transfer request, waits for the R-NDPS system to update transaction status via the callback url.

CT-02.02 R-NDPS platform reaches hard timeout period for submitted request. R-NDPS updates status of message and generates reversal to Recipient FSP.

CT-02.03 On receiving the reversal request from R-NDPS platform the Recipient FSP system checks the transaction to be reversed:
Initial request not received/processed – Recipient FSP platform logs transaction as not having been received and generates reversal response indicating successful reversal. No action on recipient account.
Initial request received and reject response submitted to switch – Recipient FSP platform logs transaction as having been reversed and generates reversal response indicating successful reversal. No action on Recipient account.
Initial request received and successful response submitted to switch – Recipient FSP platform logs transaction as having been reversed and generates reversal response indicating successful reversal. Funds on Recipient account immediately reversed and Recipient notified.
Initial request received and successful response not submitted to switch – Recipient FSP platform logs transaction as having been reversed and generates reversal response indicating successful reversal. Funds on Recipient account immediately reversed and Recipient notified.

CT-02.04	Having sent reversal to Recipient FSP R-NDPS platform sends status report to Originator FSP via callback url indicating that transactions has been reversed.
CT-02.04R	Originator FSP platform, on receiving status update from R-NDPS via callback url, updates record of transaction and removes funds reservation on Originator account whilst notifying Originator that initial request was not successful. Notification should inform Originator that funds have been released and made available to them.

Directory Services

R-NDPS provides a unified directory service, sometimes informally referred to as "LookUp Database". Through this unified directory service participants can look up the customer information or account information for the purposes of their customers to verify who they are sending funds to.

For example, it allows a participant FSP to get the customer name based on account number, MSISDN or account proxy. This information is used through the participant front end channel as an additional verification step shown to the payer before initiating financial transaction.

In order to provide comprehensive information to all system participants, participants must upload their customer information to the system, this information will be processed and consolidated to create a unified end customer profile at R-NDPS system level that will be used during the lookup operation.

Upload of customer information can be done in single mode through any of the available channels. In case of batch mode CSV file upload over SFTP is used to upload the participant's customer data in bulk.

Proxy Scheme

Aliasing allows individuals who partake in P2P transactions to be able to receive, and to an extent send, funds without having to reveal their personal details.

The proxy account should be unique across the industry. This would enable a simple and easy navigation by avoiding unnecessary steps, delay or friction in the customer journey.

It is a function of eKash Platform that allows users to link to their account an easy-to-remember pieces of information in alphanumeric format with 9 digits maximum length, such as:

- Alias/Nick name
- Email address
- Business identifier

Users can then provide their eKash_Id instead of their bank account number, to people or organizations from whom they wish to receive payments via RNDPS. The RNDPS proxy does not replace a bank account number entirely. It just provides an alternative and simpler way to address payments for people or businesses who do not want to share their account number.

The current system allows also addressing payees using account number and sending money to Bank Account, using beneficiary account number. When sending to MNO wallet, beneficiary phone number.

For the R-NDPS implementation is has been decided to use the "eKash-id" as it provides a unique and easy way of identifying customers whilst also ensuring there is a brand awareness that comes about through usage of the services.

Lookup using "eKash-Id" proxy

1. In account lookup request message, customer only enters the account proxy
2. In account lookup response message, payee's FSP code, FSP name and account number are populated
3. Originator's FSP channel displays only beneficiary names and amount for confirmation,
4. Originator's FSP uses account number plus payee's FSP info to build a Credit Request message upon confirmation by originator.

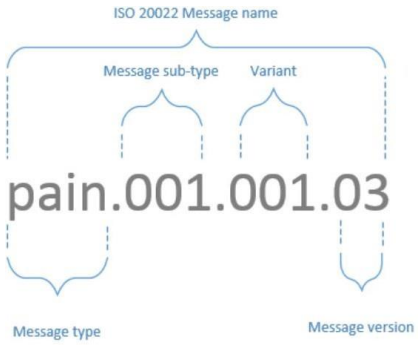
"eKash-Id" Proxy Scheme account registration process

- An Account must be registered to RNDPS Directory Services
- FSP Customer facing channel menu will have an account modification option/menu
- End user/customer selects "Modify account" or register "eKash-ID" and submits
- FSP's back end system will build an account modification message to RNDPS
- RNDPS will check and confirm on uniqueness of the chosen Proxy, in case it already registered by someone else, a rejection message is sent back with a proper message indicating that the selected eKash_id were already used. In this situation, the Customer will have to choose another eKash_id.
- In case the proxy entered in step 5 is unique, a positive message is sent back to the FSP who sends a success SMS and display to the used channel

ISO20022 Message

Naming scheme

In ISO 20022's naming scheme, message type is described with four letters followed by three sets of numbers as depicted in the figure below:



An abbreviation is used for the message type, followed by message sub-type number, variant number and finally a version number.

The ISO 20022 message identifiers correspond to the XML Schemas (XSDs).

Message type is the abbreviated code identifying which business area the message area serves. The types are as defined below:

PAIN (PAyment Initiation) - Pain messages are used by originators to send instructions to the processor and receive status report about their execution from the beneficiary.

ACMT (ACcount ManagemenT) - Acmt messages are used for account management, for example uploading a customer's details into the Lookup database.

CAMT (CAsh ManagemenT) - Camt messages are used to send to cancel orders or transactions as well, but in addition to reply on cancellation requests.

PACS (PAyment Clearing & Settlement) - Pacs messages are used to transfer funds from one financial institution to another financial institution.

Message sub-type is the code allocated to a specific message in a business area. For example, the account management area has several messages: 001 refers to an account opening instruction message, while 011 refers to an account request rejection message. You can find all the different ISO 20022 messages directly on the full catalogue.

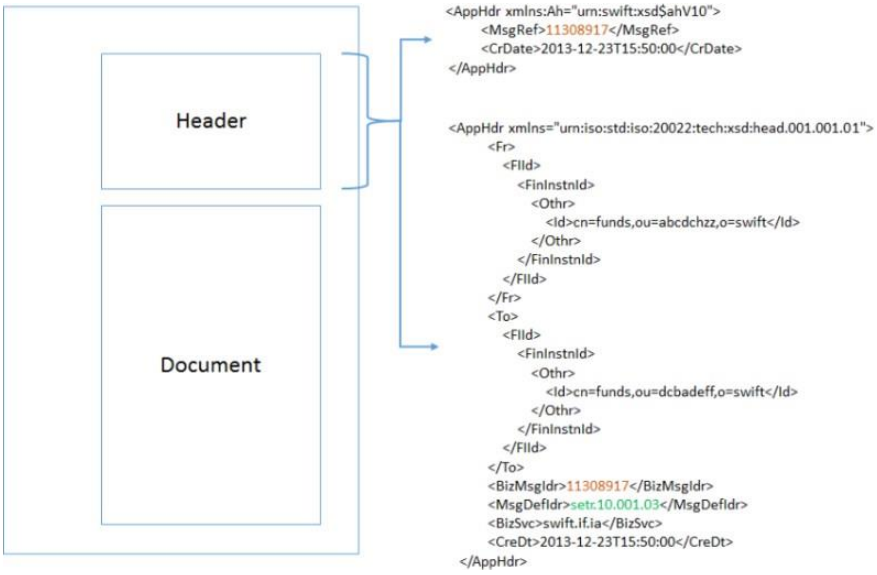
Variant is a simplified version of a message. Certain financial institutions might decide that they only need a subset of the elements/attributes in a message. They can then go ahead and create what is

called a variant of the global message definition. A particular submission process needs to be followed before a variant can be created. When the global message changes, e.g. an element is dropped then the variant needs to be adopted as well.

Versions cater for changes or modifications to the message, e.g. an element is dropped, added, or its name is changed.

Message structure

ISO20022 messages are generally sent as Document and Header pair.

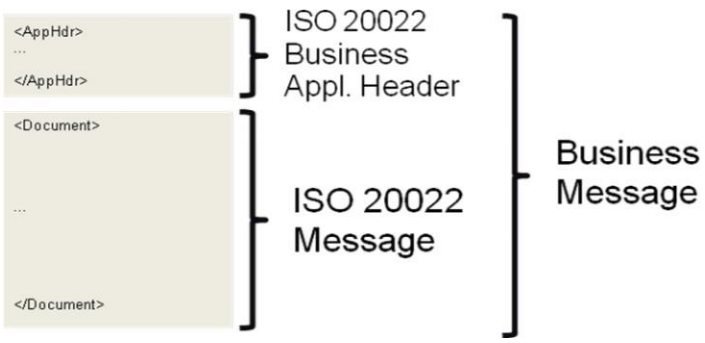


Header: This block is presented only once and it contains elements such as Message Identification, Creation Date and Time and Initiating Party.

Document: This block is repetitive and it contains elements related to the payment side of the transaction, such as Debtor, Debtor Account, Payment Type Information and Requested Execution Date and also one or several Credit Transfer Transaction Information parts which contain elements related to the credit side of the transaction, such as Creditor, Creditor Agent and Remittance Information.

Business Application Header (BAH)

R-NDPS makes use of a Business Application Header (BAH). The Business Application Header is a business header and should not be confused with a file or transport header. It is created before the transport routing header is applied to the business message and is retained after the transport header is removed. Specifically, the BAH is an ISO20022 message definition (head.001.001.0x) which can be combined with any other ISO20022 message definition to form a business message. An ISO 20022 Message together with its Business Application Header forms a Business Message.



The BAH gathers together, in one place, data about the message, such as which organisation has sent the business message, which organisation should be receiving it, the identity of the message itself, a reference for the message and so on.

The purpose of the BAH is to provide a consistent and predictable way for this data to be conveyed with the message, regardless of implementation factors such as the choice of network. This does not prevent such data being conveyed either within the ISO 20022 message definition itself, or as part of a network header.

Signature guidelines

The optional signature element in the business application header (BAH) can only be used if the creator of the signature and all verifiers for that signature agree on how the signature is structured.

A guideline for using a business application header message states: "the signature contains the digital signature of the person authorized to sign this Business Message (based on the W3C XML Signature Standard)".

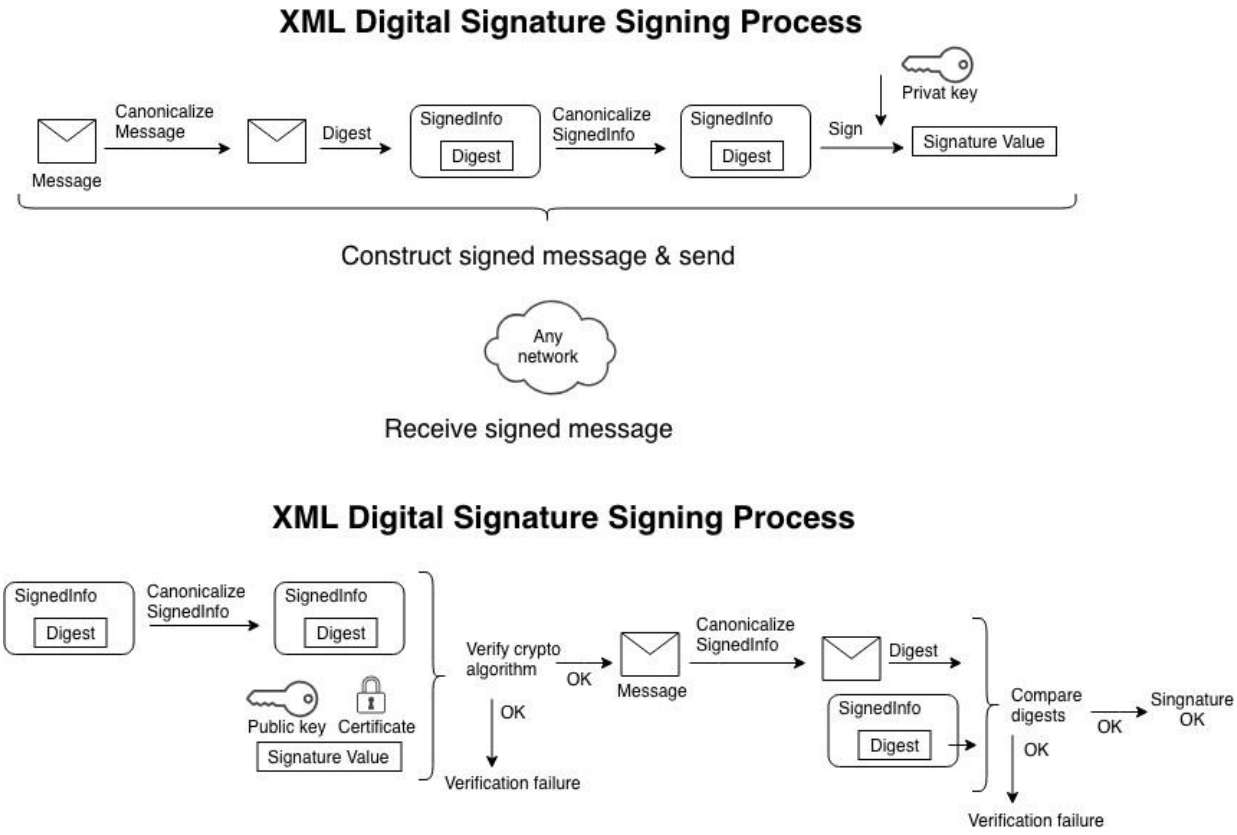
It means that:

- The Signature element complies with W3C signature syntax and signature guidelines.
- Business message header of a business application in ISO 20022 format and ISO 20022 messages
- The person authorized to sign is not additionally indicated; this depends on the specific context in which the message is sent.

W3C Signature

The XML Signature is a method of associating a key with referenced data (octets); it does not normatively specify how keys are associated with persons or institutions, nor the meaning of the data being referenced and signed.

Request Digital Signature



Message to be signed becomes available and first step in the signing process is to canonize the message. It is a transformation that creates a canonical form of signed XML. Thus, the digest algorithm input is robust enough to be independent of the parsing technology used.

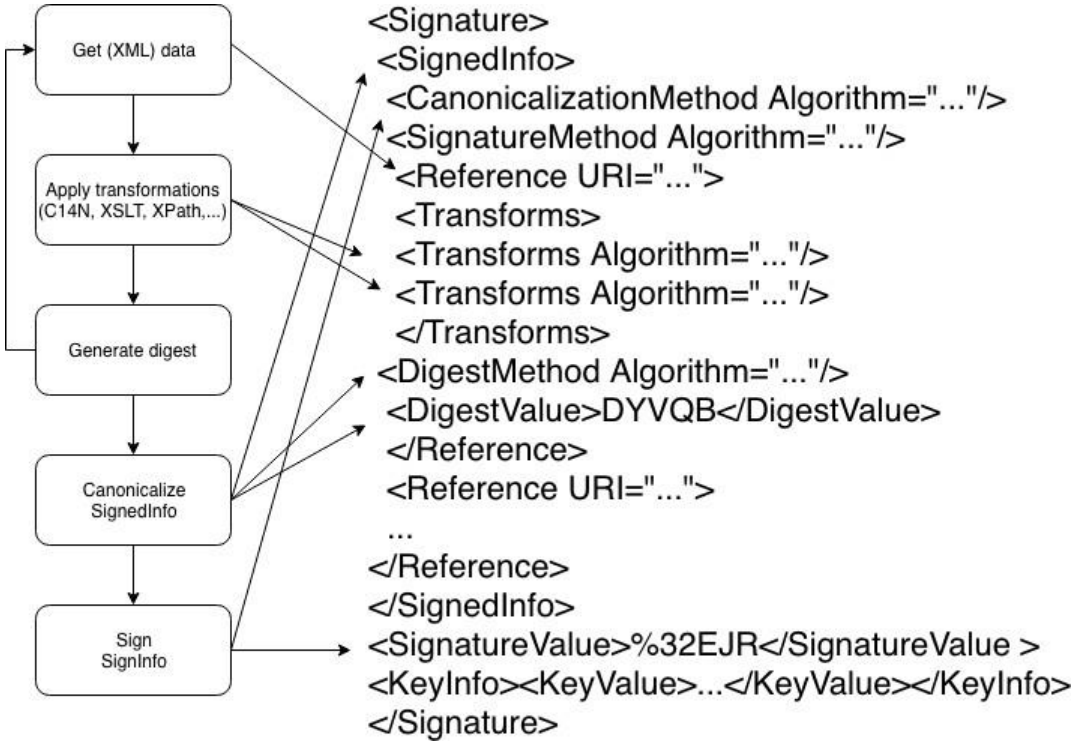
The calculated digest of the SignedInfo is placed in. The exact display is clearly shown in the figure below. The SignedInfo element itself is canonized, and as a last step, the SignedInfo itself is signed using a signature algorithm. The diagram shows the private key used for this purpose.

The message and its signature are then sent to the beneficiary. Signature verification occurs in reverse order. First, the correctness of SignatureValue is Checked. The input to the validation algorithm is a canonized SignedInfo, a certificate that contains a certified public key, and a

SignatureValue that contains the result of the signing operation. In case of successful validation and SignedInfo is signed by a genuine signer. The verification process continues and verifies that the digest in SignedInfo matches the message that is covered by the digest.

This is done by canonizing the message, and then digest the canonized message. The check is performed normally if the calculated digest is equal to the digest in SignedInfo.

The signature elements used are illustrated in the following image:



As shown, SignedInfo contains one or more Reference elements. Each link identifier the XML resource that needs to be signed. The example in the figure shows a KeyInfo element with KeyValue content. The use of public key infrastructure

The scope of the document the Manual signature

This document does not make any changes to the business requirements associated with the signature in the business application header.

This paper proposes an approach to implementing the current signature rules. This applies to the following

- The structure of the signature
  - Used algorithm
  - KeyInfo
  - Structure of reference elements
- The process used to sign and verify

Signature Structure

Security algorithms are chosen to be widely available but still strong enough to provide enough security. It is possible that the algorithms need to be upgraded to a stronger version, such as SHA3 for the digest algorithm. Applications should take this into account.

The currently selected algorithms are as follows

- Signature algorithm - RSA based on Sha-256 digest on signed information.
- Digest algorithm - SHA-256
- The canonization algorithm is the exclusive canonization of XML. This algorithm is applied before the XML is digested. Using canonization allows applications to use XML processing and XML data analysis without breaking the signature. The exclusive canonization algorithm is chosen to avoid the influence of envelope elements when sending or receiving business messages.

This is shown in the following table:

Purpose	Element	Algorithm attribute value
PKI sign algorithm	SignMethod	http://www.w3.org/2001/04/xmldsig-more#rsa- sha256
Digest algorithm	DigestMethod	http://www.w3.org/2001/04/xmlenc#sha256
Canonicalization algorithm	CanonicalizationMethod	http://www.w3.org/2001/10/xml-exc-c14n#

The key information must contain an X509v3 certificate containing the verification key. If necessary, it may also contain certificates that are part of a chain of certificates. It depends on the allowed PKI infrastructures used in the business context. For example, when the same PKI is always used between originator and beneficiary, it may be better to use the root CA certificate from the environment than to verify that the correct CA root certificate is used in KeyInfo. No other items are required in KeyInfo.

PAY ATTENTION – in the integration process and messaging from sandbox (test side) the R-NDPS can perform role CA, but in production the CA role should be another member (RSwitch or Central Bank).

In R-NDPS have “Security Storage” module which safety collect and store information about private keys. Using private key R-NDPS signing messages.

Notes

Before attempting to implement signatures it is highly advisable one has a clear understanding of how XML signatures work. Recommended references are:

https://www.xml.com/pub/a/2001/08/08/xmldsig.html

Introductory tutorial recommended as a starting point providing a good introduction to the standard and its usage.

https://docs.oracle.com/javase/9/security/java-xml-digital-signature-api-overview-and-tutorial.htm#JSSEC-GUID-BBFA7B90-3EA2-49DE-964B-8A60D4134343

Tutorial that explains how to use the Java XML Digital Signature API, which is a standard Java API for generating and validating XML Signatures.

Important considerations for how the signature is implemented for the R-NDPS implementation:

- The modulus node is a base64 encoding of your certificate's public key.
- The x509Data node contains the ssl certificate you are using and extracted as X509 certificate.

First Digest value is calculated on the KeyInfo node

Second Digest is calculated on the Business Application Header (BAH)
and is always static to element <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01"></AppHdr>

It is advisable implementers use this to validate the digest calculations as it is the easiest due to it being static and common for all message requests with digest value always
cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=

Third Digest is calculated on the whole <Document></Document> node

NB: Any slight change in the element being referenced for digest calculation will make the calculated values on both systems to differ. so line breaks, space, … do matter in this case

Example of signature used in BAH

```
<AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#8f503934-1799-46d4-bd4c-66e44301209f">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>eTkq2+FXTON6YCcEvw4jm5VwmvL7tgDdhQ4npB6tc70=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
```

```
          <ds:DigestValue>X8lUysIGIHOqHVUwGBXdlrMd1k7SCVM90Vy+OrX6S68=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>
<ds:SignatureValue>rH77qX4LxUckO8jvVXPJsnOhoiLeBXQVtOftqkga2xazE72rL1WPnfDQjIp7hjjtInXMONGKlomH
        87U+JdTP6noA5PWdnATO9MbhoN358M/eRcLb72Mk6Lcpm766oKPXmeh3bLevWc4OOGjT170HQP0V
        aRUBr69Ol870SdZz7gvzThCN4gLCrWIauLh68aapZiyGKF7jqb4YnzKDxsnSsQHaJArxrXFgpvly
        NYeeh8rkh8ngknnHrfb1xM/56YF9gW8tWi6+bHV8iQnojiRcttzYk2T4fEri573dbIsMwHi1IebE
      pqeGyicdIMxeh6QxKR5FdZB76kdAjVWQK5lnjQ==</ds:SignatureValue>
      <ds:KeyInfo Id="8f503934-1799-46d4-bd4c-66e44301209f">
        <ds:KeyValue>
          <ds:RSAKeyValue>
<ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
              ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
              d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
              MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
              2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>
<ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
            BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
            AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
            QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
            ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
            oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
            Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
            gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
            FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
            A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
            OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
            hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
            ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
            LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
            9Q==</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
```

Example of full message with signature (lookup request)

```
<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#8f503934-1799-46d4-bd4c-66e44301209f">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
```

```
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>eTkq2+FXTON6YCcEvw4jm5VwmvL7tgDdhQ4npB6tc70=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
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        </ds:Reference>
        <ds:Reference>
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          </ds:Transforms>
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        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>rH77qX4LxUckO8jvVXPJsnOhoiLeBXQVtOftqkga2xazE72rL1WPnfDQjIp7hjjtInXMONGKlomH
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        aRUBr69Ol870SdZz7gvzThCN4gLCrWIauLh68aapZiyGKF7jqb4YnzKDxsnSsQHaJArxrXFgpvly
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      pqeGyicdIMxeh6QxKR5FdZB76kdAjVWQK5lnjQ==</ds:SignatureValue>
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        <ds:KeyValue>
          <ds:RSAKeyValue>

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              d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
              MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
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            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
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<ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
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            VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
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            LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
            9Q==</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
```

```
    </ds:Signature>
  </AppHdr>
  <Document xmlns="urn:iso:std:iso:20022:tech:xsd:camt.003.001.07"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:camt.003.001.07 camt.003.001.07.xsd">
    <GetAcct>
      <MsgHdr>
        <MsgId>RNDPS/4e9b19494e5f0c7d61a607</MsgId>
        <CreDtTm>2019-10-08T11:51:10+02:00</CreDtTm>
      </MsgHdr>
      <AcctQryDef>
        <AcctCrit>
          <NewCrit>
            <SchCrit>
              <AcctId>
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                  <Othr>
                    <Id>000400078911122</Id>
                  </Othr>
                </EQ>
              </AcctId>
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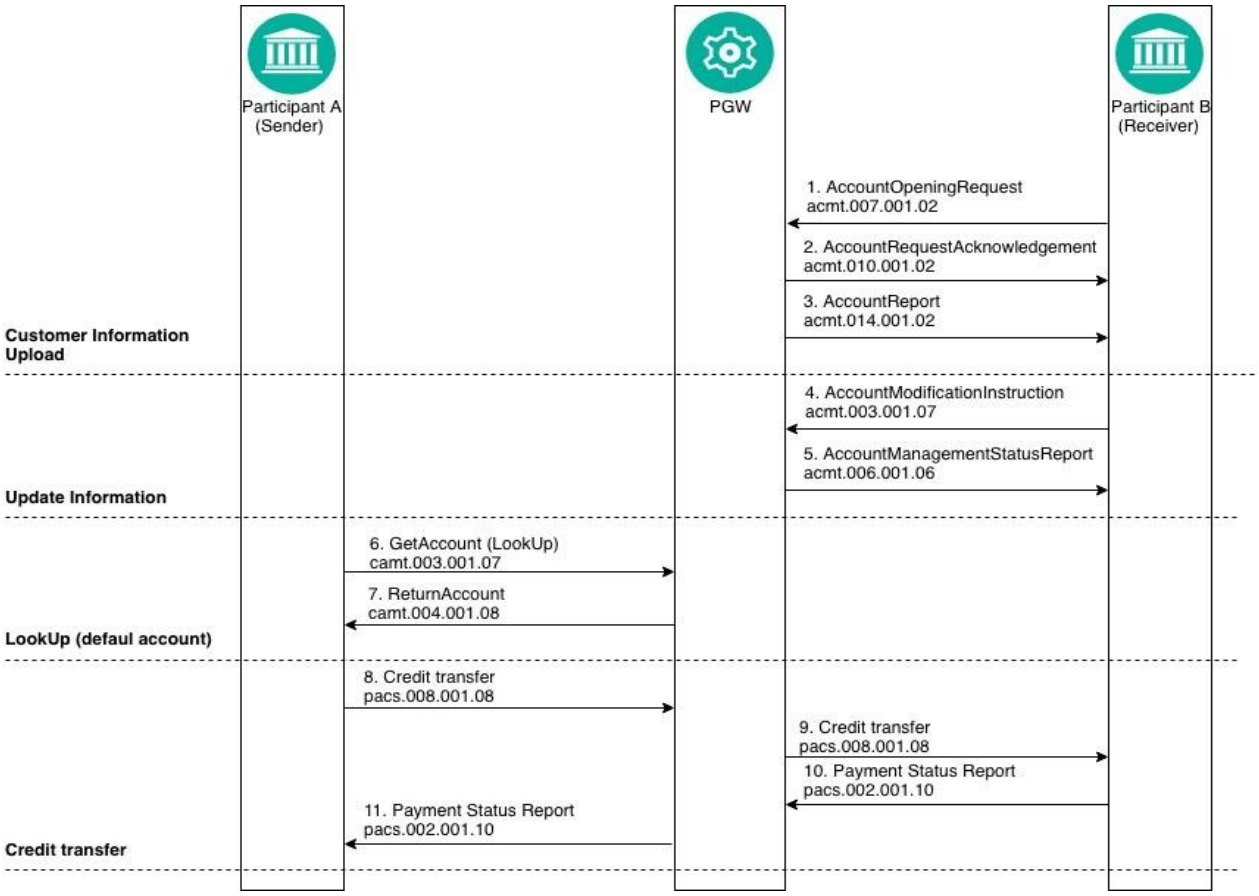
            </SchCrit>
          </NewCrit>
        </AcctCrit>
      </AcctQryDef>
    </GetAcct>
  </Document>
</BusinessMessage>
```

Message Specifications

The following section details the message specifications used by the R-NDPS platform for the P2P use case. High level view depicting the different message exchanges in the use case is depicted below:



**R-NDPS commonly refers to sender as originator and receiver as beneficiary*

Directory Services information management

The central Directory Service consists of a lookup database which is a secure repository in which customer information is securely stored for the purpose of Fraud Prevention, Anti-Money Laoundering and verifying beneficiary details to be used while carrying out a transfer type transaction. Customer details stored in the lookup database are:

- Full customer name as provided by customer's FSP
- Customer account\wallet id
- Customer mobile number
- FSP identifier code

- National identification number

The transactions applicable for lookup database management are

- customer information upload
- update information

Applicable messages are as detailed below

acmt.007.001.02: AccountOpeningRequest

Message	acmt.007.001.02
Purpose	Transfer of customer Lookup DB information by FSP to R-NDPS platform. Done once per account or during account information update. In the context of R-NDPS this message is used for the uploading of customer data into the Lookup (account & proxy) table.
Method	POST /iso20022/v1/infoUpload

Message fields

Name	Description	Type	Sample	Status
AcctOpngReq/Refs/MsgId/Id	Identification of the message. Unique for each message generated	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/23a6fa59797770998de80f	M
AcctOpngReq/Refs/MsgId/CreDtTm	Date of creation of the message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-04T16:43:06+02:00	M
AcctOpngReq/Refs/PrcId/Id	Identification of the message.	**Alphanumeric Text (14)** Hex value	b3947e1ced2226	M
AcctOpngReq/Refs/PrcId/CreDtTm	Date of creation of the message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-04T16:43:06+02:00	M
AcctOpngReq/Refs/AttchdDocNm	File name of a document logically related to the request.	**Alphanumeric Text (max. 70)**	4c9771	M
AcctOpngReq/Acct/Id/Othr/Id	Identification assigned by an institution. This is the id of the account to be added to loaded to Lookup Directory	**Alphanumeric Text (max. 70)**	000400078911122	M

AcctOpngReq/Acct/Nm	Name of customer as on account for record being added to Lookup Directory	**Text (max. 140)**	Charlie Mike	M
AcctOpngReq/Acct/Sts	Account status code	**Text (4)**	ENAB	M
AcctOpngReq/Acct/Ccy	Medium of exchange of value.	**ISO4217 Alphabetic currency code**	RWF	M
AcctOpngReq/AcctSvcrId/FinInstnId/Othr/Id	Unique and unambiguous identification of financial institution uploading record as assigned by regulator	**Alphanumeric Text (max. 70)**	040	M
AcctOpngReq/Org/FullLglNm	National identification number of individual whose account is to be loaded to Lookup Directory	**Alphanumeric Text (max. 70)**	1198976543219002111	M
AcctOpngReq/Org/CtryOfOpr	Country in which the organisation has its business activity.	**ISO3166-1 Alpha 2 country code**	RW	M
AcctOpngReq/Org/RegnDt	Date and time at which a given organisation was officially registered.	**YYYY-MM-DD**	2018-01-10	O
AcctOpngReq/Org/LglAdr/AdrTp	Address type code. Identifies the nature of the postal address.	**Text (max. 35)**	BIZZ	O
AcctOpngReq/Org/OrgId/AnyBIC	Company registration code of FSP	**Text (max. 35)**	BKIGRWRW	O
AcctOpngReq/OrgId/Othr/Id	Identification assigned by an institution.	**Numeric (4)**	9876	O
AcctOpngReq/OrgId/SchmeNm/Cd	Name of the identification scheme, in a coded form as published in an external list.	**Numeric (max. 15)**	9876	O
AcctOpngReq/OrgId/Issr	Entity that assigns the identification.	**Numeric (max. 15)**	9876	O
AcctOpngReq/Org/Sndr/PstlAdr/AdrTp	Identifies the nature of the postal address.	**Text (max. 35)**	BIZZ	O

AcctOpngReq/Org/ Sndr/Id/ DtAndPlcOfBirth/ BirthDt	Date on which a person is born.	**YYYY-MM-DD**	1950-12-10	O
AcctOpngReq/Org/ Sndr/Id/ DtAndPlcOfBirth/ CityOfBirth	Code of City\Town in which a person was born	Text (3)	KGL	O
AcctOpngReq/Org/ Sndr/Id/ DtAndPlcOfBirth/ CtryOfBirth	Code of country in which person was born	**ISO3166-1 Alpha 2 country code**	RW	O
AcctOpngReq/Org/ Sndr/Id/Othr/Id	National identity number\passport number of person being registered	**Numeric (19)**	1198976543219002111	M
AcctOpngReq/Org/ Sndr/CtctDtls/Nm	Name by which a party is known, and which is usually used to identify that party.	**Text (max. 70)**	Charlie Mike	M
AcctOpngReq/Org/ Sndr/CtctDtls /MobNb	Collection of information that identifies a mobile phone number, as defined by telecom services.	**Numeric mobile number with country code prefix**	2507212345678	M
AcctOpngReq/Org Sndr/CtctDtls/ EmailAdr	Address for electronic mail (e-mail).	**Alphanumeric Text (max. 70)**	charlie.mike@test.com	O
AcctOpngReq/Org/ Sndr/CtctDtls /Othr	Descriptive details about person whose details are being uploaded to Lookup Directory	**Alphanumeric Text (max. 70)**	driver	O
AcctOpngReq/ SplmtryData/ PlcAndNm	Name/Description of Proxy/Alias Identification and command preceeding the name specifying the action to be taken, in this case 'INSE' (insert)	Alphanumeric Text (max. 70)	INSE|nickname	O
AcctOpngReq/ SplmtryData/	Proxy / Alias Identification	Alphanumeric Text 11	788980694BK	O

PlcAndNm/ Envlp/text/ value				

acmt.010.001.02: AccountRequestAcknowledgement

Message	acmt.010.001.02
Purpose	Response sent by R-NDPS platform to FSP as confirmation of receipt of the account Registration request. Message is asynchronous
Method	POST /api/v2/rndps/callbacks/account_opening_status
Result	Positive: Success response code returned *Refer to Appendix 1 (response codes) for full details on response codes.*

Message fields

Name	Description	Type	Sample	Status
AcctReqAck/Refs/ ReqTp	Identifies the type of acknowledged request.	**Text (max. 35)**	OPEN	M
AcctReqAck/Refs/ MsgId/Id	Identification of the message. Unique for each message generated	**Alphanumeric text (max. 75)**	01a55271-04a8-4bef-b62e-e8d70c81312f	M
AcctReqAck/Refs/ MsgId/CreDtTm	Date of creation of the message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-04T16:43:06+02:00	M
AcctReqAck/Refs/ PrcId/Id	Identification of the message.	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/ZCSSA000105	M
AcctReqAck/Refs/ AckdMsgId/Id	Identification of the acknowledgement message.	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/ZCSSA000105	M
AcctReqAck/Refs/ AckdMsgId/ CreDtTm	Date of creation of the acknowledgement message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2020-07-21T14:16:00.000+02:00	M
AcctReqAck/Refs/ AckdMsgId/Id	Identification of the acknowledgement message. Unique for each message generated	**Alphanumeric text (max. 75)**	01a55271-04a8-4bef-b62e-e8d70c81312f	M

AcctReqAck/Refs/ AckdMsgId/ CreDtTm	Date of creation of the acknowledgement message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2020-07-21T14:16:00.000+02:00	M
AcctReqAck/Refs/ Sts	Status of the request.	Text (max. 35)	accepted	M

acmt.011.001.02: AccountRequestRejection

Message	acmt.011.001.02
Purpose	Response sent by R-NDPS platform to FSP as confirmation that customer information has not been uploaded into Lookup database. Message is asynchronous
Method	POST /api/v2/rndps/callbacks/account_opening_status
Result	Negative: Appropriate decline or failure response code returned. *Refer to Appendix 1 (response codes) for full details on response codes.*

Message fields

Name	Description	Type	Sample	Status
AcctReqRjctn/Refs/ RjctdReqTp	Instruction that is being declined or not approved	**Text (max. 140)**	OPEN	M
AcctReqRjctn/Refs/ RjctnRsn	Reason for rejection	**Text (max. 140)**	Account or customer already exists	M
AcctReqRjctn/Refs/ RjctdReqId/Id	Identification of the message.	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/04edc4950bbdb2ee7e9523	M
AcctReqRjctn/Refs/ RjctdReqId/CreDtTm	Date of creation of the message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:05.000Z	M
AcctReqRjctn/Refs/ MsgId/Id	Identification of the message.	**Alphanumeric text (max. 75)**	6b2a272d-f32b-4c18-8ea6-a78a150def62	M
AcctReqRjctn/Refs/ MsgId/CreDtTm	Date of creation of the reject message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:16.730Z	M

AcctReqRjctn/Refs/ PrcId/Id	Identification of the reject message.	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/04edc4950bbdb2ee7e9523	M
AcctReqRjctn/Refs/ PrcId/CreDtTm	Date of creation of the reject message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:05.000Z	M
AcctReqRjctn/ AcctSvcrId/ FinInstnId/Othr/Id	Unique identification of financial institution uploading record as assigned by regulator	**Alphanumeric Text (max. 70)**	040	M
AcctReqRjctn/ OrgId/Othr/Id	Unique identification of financial institution uploading record as assigned by regulator	**Alphanumeric Text (max. 70)**	040	M

acmt.014.001.02: AccountReport

Message	acmt.014.001.02
Purpose	Generated on completion of Lookup DB data transfer and is sent to FSP platform to inform of completion status. Message is asynchronous R-NDPS Lookup DB data upload consists of requests and responses, which enable participants to look up this information in R-NDPS system. Information uploaded to Lookup DB is not necessary for the financial transaction processing where the originator transfer request has beneficiary account\wallet id but is useful for payee verification.
Method	POST /api/v2/rndps/callbacks/account_report
Response	Positive: Success response code returned Negative: Appropriate decline or failure response code returned. *Refer to Appendix 1 (response codes) for full details on response codes.*

Message fields

Name	Description	Type	Sample	Status
AcctRpt/Refs/ ReqTp	Instruction that is being reported on	**Text (max. 140)**	OPEN	M
AcctRpt/Refs/ MsgId/Id	Identification of the message.	**Alphanumeric text (max. 75)**	050f4b0e-3e7b-46df-bdc0-96ec38e13c59	M
AcctRpt/Refs/ MsgId/CreDtTm	Date of creation of the message.	**ISODateTime**	2019-10-08T07:26:22.802Z	M

		YYYY-MM-DDThh:mm:ss.sss+/-hh:mm		
AcctRpt/Refs/PrcId/Id	Identification of the message.	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/04edc4950bbdb2ee7e9523	M
AcctRpt/Refs/PrcId/CreDtTm	Date of processing of the message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:05.000Z	M
AcctRpt/Refs/AckdMsgId/Id	Identification of the acknowledgement message	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/04edc4950bbdb2ee7e9523	M
AcctRpt/Refs/AckdMsgId/CreDtTm	Date of processing of the acknowledgement message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:05.000Z	M
AcctRpt/Refs/AckdMsgId/Id	Identification of the acknowledgement message	**Alphanumeric text (max. 75)**	050f4b0e-3e7b-46df-bdc0-96ec38e13c59	M
AcctRpt/Refs/AckdMsgId/CreDtTm	Date of processing of the acknowledgement message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:22.802Z	M
AcctRpt/Refs/Sts	Status of request submitted	**Alphanumeric text (max. 75)**	accepted	M
AcctRpt/Fr/Othr/Id	Financial Institution Id of account that was uploaded into Lookup Directory	**Alphanumeric Text (max. 70)**	130	M
AcctRpt/AcctSvcrId/FinInstnId /Othr/Id	Financial Institution Id of account that was uploaded into Lookup Directory	**Alphanumeric Text (max. 70)**	130	M
AcctRpt/Rpt/Acct/Id/Othr/Id	Account id of account that was uploaded into Lookup Directory	**Alphanumeric text (max. 75)**	000400078911122	M

acmt.003.001.07: AccountModificationInstruction

Message	acmt.003.001.07
Purpose	Sent by FSP to R-NDPS platform when FSP customer would like to update their customer information.
Method	POST /iso20022/v1/AccountModificationInstruction

Message fields

Name	Description	Type	Sample	Status
AcctModInstr/ MsgId/Id	Identification of the message.	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/522958571e78afd3fcccdb	M
AcctModInstr/ MsgId/CreDtTm	Date of modification message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctModInstr/ InvstmtAcctSelctn/ OthrAcctSelctnData/ SctyDtls/Id/ OthrPrtryId/Id	Account of the account being reported on	**Alphanumeric text (max. 75)**	000400078911122	M
AcctModInstr/ InvstmtAcctSelctn/ OthrAcctSelctnData/ SctyDtls/Id/ OthrPrtryId/IdSrc/ Prtry	Generic identification of institution requesting modification	**Alphanumeric text (max. 75)**	Bank of Kigali	O
AcctModInstr/ InvstmtAcctSelctn/ OthrAcctSelctnData/ AcctSvcr/ AnyBIC	Unique identification of financial institution modifying record as assigned by regulator	**Alphanumeric Text (max. 70)**	040	M
AcctModInstr/ ModfdAcctPties/ ModScpIndctn	Type of update being requested	**Alphanumeric Text (max. 70) as per request codeset**	UPDT	M
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/	Name account holder whose account is being modified	**Alphanumeric Text (max. 70)**	Charlie Mike	M

PmryOwnr/Pty/ IndvPrsn/Nm				
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/ PmryOwnr/ ModfdInvstrPrflVldtn /ModScpIndctn	Data modification code identifying the data entry type	**Alphanumeric Text (max. 70)**	INSE	O
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/ PmryOwnr/ ModfdInvstrPrflVldtn /InvstrPrflVldtn/ KnowYourCstmrDBChck /DBChck	Indication of KYC status check	**Alphanumeric Text (max. 70)**	false	O
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/ PmryOwnr/ ModfdInvstrPrflVldtn /InvstrPrflVldtn/ KnowYourCstmrDBChck /Id	KYC check value identifier	**Alphanumeric Text (max. 70)**	asjdaskj	O
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/ PmryOwnr/OthrId/ Id	Free text description of reason for account modification request	**Alphanumeric Text (max. 70)**	Test7	O
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/ PmryOwnr/OthrId/ Tp/Prtry/Id	Generic identifier. Can be used by FSP as an additional means of identification	**Alphanumeric Text (max. 70)**	1234	O
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/	Generic identifier. Can be used by FSP as an additional	**Alphanumeric Text (max. 70)**	1234	O

PmryOwnr/OthrId/ Tp/Prtry/Issr	means of identification			
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/ PmryOwnr/ PmryComAdr/ Email	Email address of customer whose details are being modified	**Alphanumeric Text (max. 70)**	charlie.mike@test.com	O
AcctModInstr/ ModfdAcctPties/ PrncplAcctPty/ PmryOwnr/ PmryComAdr/ Mob	Mobile number of customer whose details are being modified	**Numeric mobile number with country code prefix**	2507212345678	M
AcctRpt/Rpt/ Acct/Id/Othr/Id	Account id of account that was uploaded into Lookup Directory	**Alphanumeric text (max. 75)**	000400078911122	M

acmt.003.001.07: ProxyModificationInstruction

Message	acmt.003.001.07
Purpose	Sent by FSP to R-NDPS platform when FSP customer would like to update their customer proxy information.
Method	POST /iso20022/v1/AccountModificationInstruction

Message fields

Name	Description	Type	Sample	Status
AcctModInstr/ MsgId/Id	Identification of the message.	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/522958571e78afd3fcccdb	M
AcctModInstr/ MsgId/CreDtTm	Date of modification message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctModInstr/ InvstmtAcctSelctn/AcctId	Account of the account being reported on	**Alphanumeric text (max. 75)**	000400078911122	M

AcctModInstr/ ModfdAcctPties/ ModScpIndctn	Type of update being requested	**Alphanumeric Text (max. 70) as per request codeset**	UPDT	M
AcctModInstr/Xtnsn/ PlcAndNm	Name/Description of Proxy to be updated preceded with 'INSE'(insert) command to specify the action to be taken	**Alphanumeric Text (max. 70)**	INSE|Myoscarmikeproxy23	M
AcctModInstr/Xtnsn/**Txt**	The actual Proxy identification to be inserted in proxy lookup database	**Alphanumeric Text (equal. 11)**	789836596BK	M
AcctModInstr/Xtnsn/ PlcAndNm	Name/Description of Proxy to be Deleted preceded with 'DELT'(delete) command to specify the action to be taken	**Alphanumeric Text (max. 70)**	DELT|Myoscarmikeproxy23	M
AcctModInstr/Xtnsn/**Txt**	The actual Proxy identification to be deleted in proxy lookup database	**Alphanumeric Text (equal. 11)**	788985694BK	M

acmt.006.001.06: AccountManagementStatusReport (Successful)

Message	acmt.006.001.06
Purpose	Sent by R-NDPS platform on completion of update back to FSP as response to lookup data update request indicating that customer information has been updated successfully. Message is asynchronous
Method	POST /api/v2/rndps/account_management/modifications
Result	Positive: Success response code returned *Refer to Appendix 1 (response codes) for full details on response codes.*

Message fields

Name	Description	Type	Sample	Status
AcctMgmtStsRpt /MsgId/Id	Identification of the message.	**Alphanumeric text (max. 75)**	b0f25c7c-dc68-4e3f-827d-7a2e15b60c0d	M
AcctMgmtStsRpt /MsgId/CreDtTm	Date of message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctMgmtStsRpt /RltdRef/Ref	Id of account modification request message being responded to	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/5fda7b402cd583fb92e541	M
AcctMgmtStsRpt /StsRpt/Sts/Sts	Status code indicating status of request as per status codes	**Alphanumeric Text (28)**	ACCP	M
AcctRpt/Rpt/ Acct/Id/Othr/Id	Account id of account that was uploaded into Lookup Directory	**Alphanumeric text (max. 75)**	000400078911122	M

acmt.006.001.06: AccountManagementStatusReport (Unsuccessful)

Message	acmt.006.001.06
Purpose	Sent by R-NDPS platform on completion of update back to FSP as response to lookup data update request indicating that customer information has been updated successfully. Message is asynchronous
Method	POST /api/v2/rndps/account_management/modifications
Result	Negative: Decline response code returned *Refer to Appendix 1 (response codes) for full details on response codes.*

Message fields

Name	Description	Type	Sample	Status
AcctMgmtStsRpt /MsgId/Id	Identification of the message.	**Alphanumeric text (max. 75)**	b0f25c7c-dc68-4e3f-827d-7a2e15b60c0d	M
AcctMgmtStsRpt /MsgId/CreDtTm	Date of message.	**ISODateTime** YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctMgmtStsRpt /RltdRef/Ref	Id of account modification request message being responded to	**Alphanumeric Text (28)** RNDPS/<hex value length 22>	RNDPS/5fda7b402cd583fb92e541	M
AcctMgmtStsRpt /StsRpt/Sts/ Rjctd/Rsn/Cd	Reject code indicating status of request as per status codes	**Alphanumeric Text (28)**	NSLA	M
AcctMgmtStsRpt /StsRpt/Sts/ Rjctd/AddtlRsnInf	Reason for rejection of request	**Alphanumeric text (max. 75)**	There is no document number in request	M

Account lookup

Account lookup is carried out to retrieve beneficiary account details to allow for the originator to verify beneficiary prior to submitting a credit transfer transaction.

camt.003.001.07: GetAccount (LookUp)

Message	camt.003.001.07
Purpose	Generated by originator FSP and submitted to R-NDPS platform when originator wants to verify the beneficiary account details via the Lookup database for purposes of transferring funds to the beneficiary. *Can be implemented as either asynchronous or synchronous*
Method	POST /iso20022/v1/lookup

Message fields

Name	Description	Type	Sample	Status
GetAcct/ MsgHdr/MsgId	Unique identifier of message	**Alphanumeric Text (28)** **RNDPS/<hex value length 22>**	RNDPS/ZCSSA000033	M
GetAcct/ MsgHdr/ CreDtTm	Date of generation of lookup request	**ISODateTime** **YYYY-MM-DDThh:mm:ss.sss+/-hh:mm**	2020-06-10T15:41:42+02:00	M
GetAcct/ AcctQryDef/ AcctCrit/ NewCrit/SchCrit /AcctId/EQ/Othr/Id Or GetAcct/AcctQryDef/ AcctCrit/NewCrit/ SchCrit/AcctOwnr/ CtctDtls/MobNb	Account / Proxy id of account whose details are being requested Or MSISDN of account whose details are being requested	**Alphanumeric Text (35)**	000400078911122 Or 250788304045/250738304045	M
GetAcct/ AcctQryDef/ AcctCrit/ NewCrit/SchCrit /AcctOwnr/ CtctDtls/MobNb	Mobile number of customer requesting account details	**Numeric mobile number with country code prefix**	250788304045	O

GetAcct/ AcctQryDef/AcctCrit /NewCrit/SchCrit /AcctSvcr/ FinInstnId/ Othr/Id	Unique identification of financial institution holding record being looked up as assigned by regulator	**Alphanumeric Text (70)**	175	O

camt.004.001.08: ReturnAccount

Message	camt.004.001.08
Purpose	Sent by R-NDPS platform back to originator FSP in response to account lookup request with all necessary account data for money remittance and payee verification as retrieved from Lookup database.
Method	N/A. Synchronous answer
Response	Positive: full beneficiary name, mobile number and email address (if available) is returned as retrieved from R-NDPS platform. Negative: Appropriate decline response code returned. Most common decline response shall serve to inform that record does not exist.

Message fields

Name	Description	Type	Sample	Status
RtrAcct/ /MsgHdr /MsgId	Unique identifier of message	**Alphanumeric Text (28) RNDPS/<hex value length 22>**	RNDPS/ZCSSA000033	M
RtrAcct/ RptOrErr/ AcctRpt/AcctId/ Othr/Id	Account id of account whose details were requested	**Alphanumeric Text (35)**	000400078911122	M
RtrAcct/ RptOrErr/ AcctRpt/AcctOrErr /Acct/Ownr /CtctDtls/Nm	Name of accountholder for account whose details were requested	**Alphanumeric Text (70)**	Charlie Mike	M
RtrAcct/ RptOrErr/ AcctRpt/AcctOrErr /Acct/Ownr /CtctDtls/MobNb	Mobile number of account holder whose details were requested	**Numeric mobile number with country code prefix**	250788304045	O

RtrAcct/ RptOrErr/ AcctRpt/AcctOrErr /Acct/Ownr /CtctDtls/EmailAdr	Email address of account holder whose details were requested	**Alphanumeric Text (70)**	charlie.mike@test.com	O
RtrAcct/ RptOrErr/ AcctRpt/AcctOrErr /Acct/Svcr/ FinInstnId/ Othr/Id	Unique identification of financial institution holding record that was looked up	**Alphanumeric Text (70)**	175	M

Account closure

In the event that an account has been closed and shall no longer participate in P2P transactions a participant can send an account closure message which the Directory Service treats as an instruction to remove the account record from the directory service and block any subsequent transfer requests to the account.

Applicable messages are as detailed below:

acmt.019.001.03: AccountClosingRequest

Message	acmt.019.001.03
Purpose	Request by FSP for R-NDPS platform to close a valid existing customer account record on the Directory Services. On successful completion of the request the account is flagged as closed in the Directory Services and any originator FSP system that, on carrying out a lookup request receives response indicating intended beneficiary account is closed, should terminate request without sending a transfer request and an appropriate rejection reason must communicated to the originator.

Message fields

Name	Description	Type	Sample	Status
AcctClsgReq/Refs / MsgId/Id	Identification of the message. Unique for each message generated	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/23a6fa5979777 0998de80f	M
AcctClsgReq/Refs / MsgId/CreDtTm	Date of creation of the message.	ISODateTime	2019-10-04T16:43:06+02:00	M

		YYYY-MM-DDThh:mm:ss.sss+/-hh:mm		
AcctClsgReq/Refs / PrcId/Id	Identification of the message.	Alphanumeric Text (14) Hex value	b3947e1ced2226	M
AcctClsgReq/Refs / PrcId/CreDtTm	Date of creation of the message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-04T16:43:06+02:00	M
AcctClsgReq/Refs / AttchdDocNm	File name of a document logically related to the request.	Alphanumeric Text (max. 70)	4c9771	M
AcctClsgReq/Fr/ Othr/Id	Unique and unambiguous identification of financial institution requesting that account be closed	Alphanumeric Text (max. 70)	040	M
AcctClsgReq/Acct / Id/Othr/Id	Identification assigned by an institution. This is the id of the account to be closed in the Directory Service	Alphanumeric Text (max. 70)	000400078911122	M
AcctClsgReq /AcctId/Nm	Name of customer as on account for record being closed in Directory Service	Text (max. 140)	Charlie Mike	M
AcctClsgReq/Acct Id/ Ccy	Medium of exchange of value.	ISO4217 Alphabetic currency code	RWF	M
AcctClsgReq/ AcctSvcrId/ FinInstnId/Othr/ Id	Unique and unambiguous identification of financial institution requesting that account be closed	Alphanumeric Text (max. 70)	040	M
AcctClsgReq/ OrgId/OrgId/ Other/Id	Identification assigned by an institution.	Numeric (4)	0001	O
AcctClsgReq/ OrgId/OrgId/ Other/SchmeNm/ Cd	Name of the identification scheme, in a coded form as published in an external list.	Numeric (max. 15)	0001	O
AcctClsgReq/ OrgId/OrgId/ Other/Issr	Entity that assigns the identification.	Numeric (max. 15)	0001	O

AcctClsgReq/ CtrctDts/ TrgtClsgDt	Date on which request to close account has been submitted	ISODate YYYY-MM-DD	2020-11-27	M
AcctClsgReq/ CtrctDts/ UrgcyFlg	Urgency flag advising whether request is urgent or not. For R-NDPS implementation to be set as 'True'	Text ('True' or 'False')	True	M
AcctClsgReq/ CtrctDts/ RmvlInd	Indicates whether requests sent to closed account should be declined or not. For R-NDPS implementation to be set as 'True'	Text ('True' or 'False')	True	M
AcctClsgReq/ BalTrfAcct/Id/ Other/Id	Unique and unambiguous identification of financial institution requesting that account be closed	Alphanumeric Text (max. 70)	040	M
AcctClsgReq/ BalTrfAcct/Ccy	Medium of exchange of value	ISO4217 Alphabetic currency code	RWF	M
AcctClsgReq/ TrfAcctSvcrId/ FinInstnId/ Other/Id	Unique and unambiguous identification of financial institution requesting that account be closed	Alphanumeric Text (max. 70)	040	M
AcctClsgReq/ TrfAcctSvcrId/ BrnchId/Id	Unique and unambiguous identification of the branch of the financial institution requesting that account be closed. For R-NDPS this is set to id of financial institution.	Alphanumeric Text (max. 70)	040	M
AcctClsgReq/ TrfAcctSvcrId/ BrnchId/Nm	Name of financial institution requesting that account be closed.	Alphanumeric Text (max. 70)	Test Bank	M

Account Suspension

In the event that an account has been suspended and is temporarily blocked from participating in P2P transfers a participant can send an account suspension message which the Directory Service treats as an instruction to suspend the account record from the directory service until such a point the suspensed status needs to be removed.

acmt.003.001.07: AccountModificationInstruction (Suspend Account)

Message	acmt.003.001.07
Purpose	Sent by FSP to R-NDPS platform when FSP customer would like to update their customer information.
Method	POST /iso20022/v1/AccountModificationInstruction

Message fields

Name	Description	Type	Sample	Status
AcctModInstr/ MsgId/Id	Identification of the message.	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/522958571e78afd3fcccdb	M
AcctModInstr/ MsgId/CreDtTm	Date of modification message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctModInstr/ InvstmtAcctSelctn/ AcctId	Account of the account being reported on	Alphanumeric text (max. 75)	403227922410188	M
AcctModInstr/ ModfdAcctPties/ ModScpIndctn	Generic identification of institution requesting modification	Alphanumeric text (max. 75)	UPDT	O
AcctModInstr/ Xtnsn/PlcAndNm	Type of update being requested	Alphanumeric Text (max. 70) as per request codeset	DISABLE|account	M
AcctModInstr/ Xtnsn/Txt	Unique identification of financial institution modifying record	Alphanumeric Text (max. 70)	400	M

	as assigned by regulator			

acmt.003.001.07: AccountModificationInstruction (Reactivate suspended Account)

Message	acmt.003.001.07
Purpose	Sent by FSP to R-NDPS platform when FSP customer would like to update their customer information.
Method	POST /iso20022/v1/AccountModificationInstruction

Message fields

Name	Description	Type	Sample	Status
AcctModInstr/ MsgId/Id	Identification of the message.	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/522958571e78afd3fcccdb	M
AcctModInstr/ MsgId/CreDtTm	Date of modification message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctModInstr/ InvstmtAcctSelctn/ AcctId	Account of the account being reported on	Alphanumeric text (max. 75)	403227922410188	M
AcctModInstr/ ModfdAcctPties/ ModScpIndctn	Generic identification of institution requesting modification	Alphanumeric text (max. 75)	UPDT	O
AcctModInstr/ Xtnsn/PlcAndNm	Type of update being requested	Alphanumeric Text (max. 70) as per request codeset	ENABLE|account	M
AcctModInstr/ Xtnsn/Txt	Unique identification of financial institution modifying record as assigned by regulator	Alphanumeric Text (max. 70)	400	M

Responses for account suspension

acmt.006.001.06: Account Modification RequestAcknowledgement

Message	acmt.006.001.06
Purpose	Response sent by R-NDPS platform to FSP as confirmation of receipt of the account suspension or reactivation request. Message is asynchronous
Method	POST /api/v2/rndps/callbacks/account_opening_status
Result	Positive: Success response code returned

Message fields

Name	Description	Type	Sample	Status
AcctMgmtStsRpt/ MsgId/Id	Identification of the message.	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/522958571e78afd3fcccdb	M
AcctMgmtStsRpt/ MsgId/CreDtTm	Date of modification message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctMgmtStsRpt/ RltdRef/ Ref	Identification of the acknowledgement message	Alphanumeric text (max. 75)	PROXY_CHG_22yyy09m13d104547	M
AcctMgmtStsRpt/ StsRpt / Sts/ Sts	Status of the request.	Alphanumeric Text (max. 70) as per request codeset	ACCP	M

acmt.010.001.02: AccountRequestAcknowledgement

Message	acmt.010.001.02
Purpose	Response sent by R-NDPS platform to FSP as confirmation of receipt of the account closing or suspension request. Message is asynchronous
Method	POST /api/v2/rndps/callbacks/account_opening_status
Result	Positive: Success response code returned

Message fields

Name	Description	Type	Sample	Status
AcctReqAck/Refs/ ReqTp	Identifies the type of acknowledged request.	Text (max. 35)	OPEN	M
AcctReqAck/Refs/ MsgId/Id	Identification of the message. Unique for each message generated	Alphanumeric text (max. 75)	01a55271-04a8-4bef-b62e-e8d70c81312f	M
AcctReqAck/Refs/ MsgId/CreDtTm	Date of creation of the message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-04T16:43:06+02:00	M
AcctReqAck/Refs/ PrcId/Id	Identification of the message.	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/ZCSSA000105	M
AcctReqAck/Refs/ AckdMsgId/Id	Identification of the acknowledgement message.	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/ZCSSA000105	M
AcctReqAck/Refs/ AckdMsgId/ CreDtTm	Date of creation of the acknowledgement message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2020-07-21T14:16:00.000+02:00	M
AcctReqAck/Refs/ AckdMsgId/Id	Identification of the acknowledgement message. Unique for each message generated	Alphanumeric text (max. 75)	01a55271-04a8-4bef-b62e-e8d70c81312f	M
AcctReqAck/Refs/ AckdMsgId/ CreDtTm	Date of creation of the acknowledgement message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2020-07-21T14:16:00.000+02:00	M
AcctReqAck/Refs/ Sts	Status of the request.	Text (max. 35)	PNDG	M

acmt.014.001.02: AccountReport

Message	acmt.014.001.02
Purpose	Generated on completion of request and is sent to FSP platform to inform of completion status. Message is asynchronous
Method	POST /api/v2/rndps/callbacks/account_report
Response	Positive: Success response code returned Negative: Appropriate decline or failure response code returned.

Message fields

Name	Description	Type	Sample	Status
AcctRpt/Refs/ ReqTp	Instruction that is being reported on	Text (max. 140)	CLOSE	M
AcctRpt/Refs/ MsgId/Id	Identification of the message.	Alphanumeric text (max. 75)	050f4b0e-3e7b-46df-bdc0-96ec38e13c59	M
AcctRpt/Refs/ MsgId/CreDtTm	Date of creation of the message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:22.802Z	M
AcctRpt/Refs/ PrcId/Id	Identification of the message.	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/04edc4950bbdb2ee7e9523	M
AcctRpt/Refs/ PrcId/CreDtTm	Date of processing of the message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:05.000Z	M
AcctRpt/Refs/ AckdMsgId/Id	Identification of the acknowledgement message	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/04edc4950bbdb2ee7e9523	M
AcctRpt/Refs/ AckdMsgId/ CreDtTm	Date of processing of the acknowledgement message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T07:26:05.000Z	M
AcctRpt/Refs/ AckdMsgId/Id	Identification of the acknowledgement message	Alphanumeric text (max. 75)	050f4b0e-3e7b-46df-bdc0-96ec38e13c59	M
AcctRpt/Refs/ AckdMsgId/CreDtTm	Date of processing of the	ISODateTime	2019-10-08T07:26:22.802Z	M

	acknowledgement message.	YYYY-MM-DDThh:mm:ss.sss+/-hh:mm		
AcctRpt/Refs/Sts	Status of request submitted	Alphanumeric text (max. 75)	accepted	M
AcctRpt/Rpt/Acct/Id/Othr/Id	Account id of account that was uploaded into Lookup Directory	Alphanumeric text (max. 75)	000400078911122	M

acmt.006.001.06: AccountManagementStatusReport (Successful)

Message	acmt.006.001.06
Purpose	Sent by R-NDPS platform on completion of update back to FSP as response to lookup data update request indicating that customer account has been suspended successfully. Message is asynchronous
Method	POST /api/v2/rndps/account_management/modifications
Result	Positive: Success response code returned

Message fields

Name	Description	Type	Sample	Status
AcctMgmtStsRpt/MsgId/Id	Identification of the message.	Alphanumeric text (max. 75)	b0f25c7c-dc68-4e3f-827d-7a2e15b60c0d	M
AcctMgmtStsRpt/MsgId/CreDtTm	Date of message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctMgmtStsRpt/RltdRef/Ref	Id of account modification request message being responded to	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/5fda7b402cd583fb92e541	M
AcctMgmtStsRpt/StsRpt/Sts/Sts	Status code indicating status of request as per status codes	Alphanumeric Text (28)	ACCP	M
AcctRpt/Rpt/Acct/Id/Othr/Id	Account id of account that was uploaded into Lookup Directory	Alphanumeric text (max. 75)	000400078911122	M

acmt.006.001.06: AccountManagementStatusReport (Unsuccessful)

Message	acmt.006.001.06
Purpose	Sent by R-NDPS platform on completion of update back to FSP as response to lookup data update request indicating that suspension of customer account has not been successful. Message is asynchronous
Method	POST /api/v2/rndps/account_management/modifications
Result	Negative: Decline response returned with description for failure

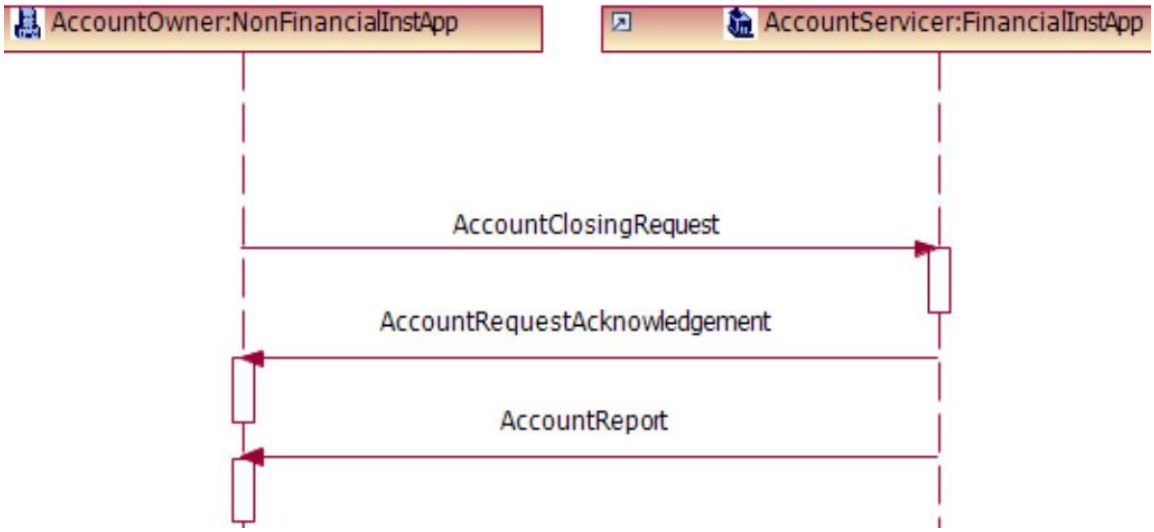
Message fields

Name	Description	Type	Sample	Status
AcctMgmtStsRpt /MsgId/Id	Identification of the message.	Alphanumeric text (max. 75)	b0f25c7c-dc68-4e3f-827d-7a2e15b60c0d	M
AcctMgmtStsRpt /MsgId/CreDtTm	Date of message.	ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm	2019-10-08T09:30:33+02:00	M
AcctMgmtStsRpt /RltdRef/Ref	Id of account modification request message being responded to	Alphanumeric Text (28) RNDPS/<hex value length 22>	RNDPS/5fda7b402cd583fb92e541	M
AcctMgmtStsRpt /StsRpt/Sts/ Rjctd/Rsn/Cd	Reject code indicating status of request as per status codes	Alphanumeric Text (28)	NSLA	M
AcctMgmtStsRpt /StsRpt/Sts/ Rjctd/AddtlRsnInf	Reason for rejection of request	Alphanumeric text (max. 75)	There is no document number in request	M

Account Closing Process

The below summarises the process by which a record on the Directory Services is closed via a request by the FSP hosting the customer's record.

- The FSP hosting the account decides to close the account and sends an *AccountClosingRequest* message.
- The received request is checked for authentication and authorisation. When these two checks are passed:
- The Directory Services platform sends an *AccountRequestAcknowledgement* message to the requesting FSP as a confirmation of a valid message receipt. The Directory Services continues to process the closing request by analysing all the information. When this analysis ends successfully, the Directory Services can close the account and the account components in its back office.
- The *AccountReport* message is sent by the Directory Services to inform the requesting FSP about the closure of the account (either successful or failed as indicated by response code and reason). This *AccountReport* can be used by the requesting FSP to verify the details compared with the original request.



Credit Transfer

A credit transfer in the context of R-NDPS refers to the crediting of a beneficiary account\wallet from an originator account\wallet were originator and beneficiary FSP are not the same entity and are connected to R-NDPS.

pacs.008.001.08: Credit transfer

Message	pacs.008.001.08
Purpose	Sent by originator FSP to R-NDPS for routing to beneficiary FSP for the purpose of crediting beneficiary account\wallet
Method	POST /iso20022/v1/creditTransfer

Message fields

Name	Description	Type	Sample	Status
FIToFICstmrCdtTrf /GrpHdr/MsgId	Unique identifier of message	**Alphanumeric Text (28) RNDPS/<hex value length 22>**	RNDPS/ZCSSA000033	M
FIToFICstmrCdtTrf /GrpHdr /CreDtTm	Date on which request is generated	**ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm**	2019-10-16T11:30:53+02:00	M
FIToFICstmrCdtTrf /GrpHdr /NbOfTxs	Number of unique transfer requests included in the request	**Numeric**	1	M
FIToFICstmrCdtTrf /GrpHdr/SttlmInf /SttlmMtd	Code indicating method by which transaction shall be settled	**Alphanumeric Text (max. 35)**	INDA	M
FIToFICstmrCdtTrf /GrpHdr/ InstgAgt /FinInstnId/Othr/Id	FSP code of entity initiating request (originator)	**Alphanumeric Text (max. 35)**	040	M
FIToFICstmrCdtTrf /GrpHdr/InstdAgt /FinInstnId/Othr/Id	To which request is being sent (recipient)	**Alphanumeric Text (max. 35)**	130	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ /PmtId/InstrId	Unique identifier of transaction	**Alphanumeric Text (28) RNDPS/<hex value length 22>**	RNDPS/ZCSSA0F0033	M

FIToFICstmrCdtTrf /CdtTrfTxInf/ /PmtId/ EndToEndId	Unique identifier for transaction assigned by initiating entity. This identification is passed on, unchanged, throughout the entire end-to-end chain.	**Alphanumeric Text (35)**	ABC/0404/2019-10-10	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ /PmtId/TxId	Unique identification, as assigned by the first instructing agent, to Identify the transaction that is passed on unchanged through the entire interbank chain.	**Alphanumeric Text (35)**	191010000004	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ PmtTpInf/CtgyPurp /Cd	Category purpose code for transaction as published in an external purpose code list.	**Numeric**	000	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ IntrBkSttlmAmt Ccy="RWF"	Transfer amount (in minor denomination)	**Numeric**	5000.00	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ IntrBkSttlmDt	Settlement date for transaction	**YYYY-MM-DD**	2019-10-17	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ ChrgBr		**Alphanumeric text (35)**	SHAR	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ InitgPty/Nm	Name of initiating FSP	**Alphanumeric text (35)**	Bank of Kigali	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ InitgPty/Id/OrgId /Othr/Id	Unique FSP id of initiating FSP	**Alphanumeric Text (35)**	040	M

FIToFICstmrCdtTrf /CdtTrfTxInf/ InitgPty/Id/OrgId /Othr/SchmeNm/Cd	Account scheme name code	**Alphanumeric Text (35)**	CHAN	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ Dbtr/Nm	Name of account holder initiating transaction	**Alphanumeric Text (35)**	Mike Tango	O
FIToFICstmrCdtTrf /CdtTrfTxInf/ DbtrAcct/Id/ Othr/Id	Account id of account from which transaction initiated	**Alphanumeric Text (35)**	000400078911111	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ DbtrAgt/ FinInstnId/ Othr/Id	Unique FSP id of initiating FSP	**Alphanumeric Text (35)**	040	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ CdtrAgt/ FinInstnId/ Othr/Id	Unique FSP id of recipient FSP	**Alphanumeric Text (35)**	130	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ Cdtr/Nm	Name of recipient as retrieved in related lookup	**Alphanumeric Text (35)**	Mike Tango	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ CdtrAcct/Id/Othr/Id	Account id of recipient account to which fuds are to be transferred	**Alphanumeric Text (35)**	000400078911122	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ Purp/Cd	Purpose code of transaction as per external list	**Alphanumeric Text (35)**	GDDS	M
FIToFICstmrCdtTrf /CdtTrfTxInf/ RmtInf/Ustrd	Remittance information of transaction	**Alphanumeric Text (35)**	Testing pacs008 - clearing transaction	O
FIToFICstmrCdtTrf /CdtTrfTxInf/ RmtInf/Strd/ RfrdDocInf/Tp	Referred document type code	**Alphanumeric Text (35)**	CINV	O

CdOrPrtry/Cd				
FIToFICstmrCdtTrf /CdtTrfTxInf/ RmtInf/Strd/ RfrdDocInf/Nb	Remittance code	**Alphanumeric Text (35)**	191010000004	O
FIToFICstmrCdtTrf /CdtTrfTxInf/ RmtInf/Strd/ RfrdDocInf/ RltdDt	Date of transaction	**YYYY-MM-DD**	2019-10-16	O

pacs.002.001.10 Payment Status Report (pending)

Message	pacs.002.001.10
Purpose	Generated and sent back to R-NDPS platform by beneficiary in response to credit transfer on completion of crediting beneficiary account. Message is asynchronous
Method	POST /iso20022/v1/PaymentStatusReport
Response	Positive: Success response code returned *Refer to Appendix 1 (response codes) for full details on response codes.*

Message fields

Name	Description	Type	Sample	Status
FIToFIPmtStsRpt /GrpHdr/ MsgId	Unique identifier of acknowledgement message	**Alphanumeric Text (35)**	ad837d6f-8c4f-45bf-a4d0-9acc5761abb1	M
FIToFIPmtStsRpt /GrpHdr/ CreDtTm	Date of response	**ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm**	2019-10-09T08:25:26.592Z	M
FIToFIPmtStsRpt /TxInfAndSts/ OrgnlInstrId	Instruction Id of transaction being responded to	**Alphanumeric Text (35)**	69	M
FIToFIPmtStsRpt /TxInfAndSts/ OrgnlEndToEndId	End to end Id of transaction being responded to	**Alphanumeric Text (35)**	ABC/1414/2019-10-09	M

FIToFIPmtStsRpt /TxInfAndSts/ OrgnlTxId	Transaction Id of transaction being responded to	**Alphanumeric Text (35)**	BBBB/191009-CCT/130/14	M
FIToFIPmtStsRpt /TxInfAndSts/ TxSts	Status of transaction as per approval codes	**Alphanumeric Text (35)**	PDNG	M

pacs.002.001.10 Payment Status Report (reject)

Message	pacs.002.001.10
Purpose	Generated and sent back to R-NDPS platform by beneficiary in response to credit transfer on completion of crediting beneficiary account. Message is asynchronous
Method	POST /iso20022/v1/PaymentStatusReport
Response	Decline: decline response code returned *Refer to Appendix 1 (response codes) for full details on response codes.*

Message fields

Name	Description	Type	Sample	Status
FIToFIPmtStsRpt /GrpHdr/ MsgId	Unique identifier of acknowledgement message	**Alphanumeric Text (35)**	ad837d6f-8c4f-45bf-a4d0-9acc5761abb1	M
FIToFIPmtStsRpt /GrpHdr/ CreDtTm	Date of response	**ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm**	2019-10-09T08:25:26.592Z	M
FIToFIPmtStsRpt /TxInfAndSts/ StsId	Code indicating status of transaction	**Alphanumeric Text (35)**	RJCT	M
FIToFIPmtStsRpt /TxInfAndSts/ OrgnlEndToEndId	End to end Id of transaction being responded to	**Alphanumeric Text (35)**	ABC/1414/2019-10-09	M
FIToFIPmtStsRpt /TxInfAndSts/ OrgnlTxId	Transaction Id of transaction being responded to	**Alphanumeric Text (35)**	BBBB/191009-CCT/130/14	M

pacs.028.001.03: Check payment status request

Message	pacs.028.001.03
Purpose	Generated by originator platform for purpose of checking status of previously submitted request
Method	POST /iso20022/v1/checkStatus

Message fields

Name	Description	Type	Sample	Status
FIToFIPmtStsReq /GrpHdr/MsgId	Unique identifier of acknowledgement message	**Alphanumeric Text (35)**	ad837d6f-8c4f-45bf-a4d0-9acc5761abb1	M
FIToFIPmtStsReq /GrpHdr/CreDtTm	Date of request	**ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm**	2019-10-09T08:25:26.592Z	M
FIToFIPmtStsReq /TxInf/OrgnlEndToEndId	Transaction Id of transaction being queried	**Alphanumeric Text (35)**	ABC/1414/2019-10-09	M
FIToFIPmtStsReq /TxInf/InstgAgt/ /FinInstnId/ Othr/Id	Id of FSP initiating request	**Alphanumeric Text (35)**	140	M

pacs.007.001.10: Payment Reversal Request

Message	pacs.007.001.10
Purpose	Sent by R-NDPS to Beneficiary FSP for the purpose of reversing a pending P2P transfer request whose final status has not been received.
Method	POST /iso20022/v1/PaymentReversal

Message Fields

Name	Description	Type	Sample	Status
FIToFIPmtRvsl/ GrpHdr/ MsgId	Unique identifier of message	**Alphanumeric Text (28)**	AAAAUS29-REVERSAL/0012	M
FIToFIPmtRvsl/ GrpHdr/ CreDtTm	Date on which request is generated	**ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm**	2019-10-16T11:30:53+02:00	M
FIToFIPmtRvsl/ GrpHdr/NbOfTxs	Number of unique transfer requests included in the request	**Numeric**	1	M
FIToFIPmtRvsl/ GrpHdr/IntrBkSttlmDt	Settlement date of reversal being actioned	**YYYY-MM-DD**	2020-07-06	M
FIToFIPmtRvsl/GrpHdr/SttlmInf /SttlmMtd	Code specifying type of transaction being reversed (settlement or clearing)	**Text (4)**	CLRG	M
FIToFIPmtRvsl/GrpHdr/ /InstgAgt /FinInstnId/Othr/Id	FSP code of entity initiating request (originator FSP)	**Alphanumeric Text (max. 35)**	130	M
FIToFIPmtRvsl/GrpHdr /InstdAgt /FinInstnId/Othr/Id	FSP code of entity request should be actioned by (recipient FSP)	**Alphanumeric Text (max. 35)**	040	M
FIToFIPmtRvsl/OrgnlGrpInf /OrgnlMsgId	Unique identifier of transaction that is to be reversed	**Alphanumeric Text (28)**	RNDPS/ZCSSA0F0033	M

FIToFIPmtRvsl/OrgnlGrpInf /OrgnlMsgNmId	ISO20022 message type of message that is to be reversed	**Alphanumeric Text (15)**	pacs.008.001.08	M
FIToFIPmtRvsl/OrgnlGrpInf /OrgnlCreDtTm	Transaction date and timestamp of transaction to be reversed. This is the timestamp of initial trasnaction as on the platform of the system initiating reversal	**ISODateTime YYYY-MM-DDThh:mm:ss.sss+/-hh:mm**	2015-06-28T10:05:00	M
FIToFIPmtRvsl/TxInf/RvslId	Unique identifier assigned to the reversal. This identifies the specific reversal and not just the message	**Alphanumeric Text (35)**	AAAAUS29_REV2563	M
FIToFIPmtRvsl/TxInf /OrgnlEndToEndId	End to end Id of transaction being reversed	**Alphanumeric Text (35)**	VA060327/0123	M
FIToFIPmtRvsl/TxInf /OrgnlTxId	Transaction Id of transaction being reversed	**Alphanumeric Text (35)**	AAAAUS29/150628/ad458	M
FIToFIPmtRvsl/TxInf /RvsdIntrBkSttlmAmt Ccy="RWF"	Settlement amount of transaction being reversed	**Numeric**	5000	M
FIToFIPmtRvsl/TxInf /RvsdInstdAmt Ccy="RWF"	Transaction amount of transaction being reversed	**Numeric**	5000	M
FIToFIPmtRvsl/TxInf /RvslRsnInf/Orgtr/Id /OrgId/Othr/Id	Unique identifier of participant initiating reversal request	**Alphanumeric text (15)**	AAAAUS29	M

FIToFIPmtRvsl/TxInf /RvslRsnInf/Rsn/Code	Code indicating reason for reversal to be carried out	**Alphanumeric text (15)**	A000	M
FIToFIPmtRvsl/TxInf /OrgnlTxRef /MndtRltdInf/MndtId	Reference/narration of transaction being reversed	**Alphanumeric Text (35)**	VIRGAY123	M
FIToFIPmtRvsl/TxInf /OrgnlTxRef /DbtrAcct/Id/Othr/Id	Account id of account that received initial P2P transfer	**Alphanumeric Text (35)**	123456	M
FIToFIPmtRvsl/TxInf /OrgnlTxRef /DbtrAgt /FinInstnId/Othr/Id	Unique FSP code of participant holding account that received initial P2P transfer	**Alphanumeric Text (35)**	Mike Tango	O

Appendices

Appendix 1: Payment transaction status

	Code	Name	Definition
1	ACCC	AcceptedSettlementCompleted	Settlement on the creditor's account has been completed.
2	ACCP	AcceptedCustomerProfile	Preceding check of technical validation was successful. Customer profile check was also successful.
3	***ACFC***	***AcceptedFundsChecked***	***Preceding check of technical validation and customer profile was successful and an automatic funds check was positive.***
4	ACSC	AcceptedSettlementCompleted	Settlement on the debtor's account has been completed. Usage : this can be used by the first agent to report to the debtor that the transaction has been completed. Warning : this status is provided for transaction status reasons, not for financial information. It can only be used after bilateral agreement
5	ACSP	AcceptedSettlementInProcess	All preceding checks such as technical validation and customer profile were successful and therefore the payment initiation has been accepted for execution.
6	ACTC	AcceptedTechnicalValidation	Authentication and syntactical and semantical validation are successful
7	ACWC	AcceptedWithChange	Instruction is accepted but a change will be made, such as date or remittance not sent.
8	ACWP	AcceptedWithoutPosting	Payment instruction included in the credit transfer is accepted without being posted to the creditor customer's account.
9	***CANC***	***Cancelled***	***Payment initiation has been successfully cancelled after having received a request for cancellation. Usage: code to be used in the context of APIs only.***
10	***PATC***	***PartiallyAcceptedTechnicalCorrect***	***Payment initiation needs multiple authentications, where some but not yet all have been performed. Syntactical and semantical validations are successful.***
11	PDNG	Pending	Payment initiation or individual transaction included in the payment initiation is pending. Further checks and status update will be performed.
12	RCVD	Received	Payment initiation has been received by the receiving agent.
13	RJCT	Rejected	Payment initiation or individual transaction included in the payment initiation has been rejected.

Appendix 2: Message samples

Acmt.007.001.02 AccountOpeningRequest (with no proxy)

```
<BusinessMessage>
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      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#37e359f5-e08b-4193-9fe7-b84c888f14df">
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          </ds:Transforms>
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        </ds:Reference>
      </ds:SignedInfo>

    <ds:SignatureValue>S0++9FooK6BODusCq8T6x0vujF92FVeu/FScuSOl4Qb7MPfxpHHt+0B93eKlHpja4v54cXxRhX0Y
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```

Acmt.007.001.02 AccountOpeningRequest (with proxy)

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      <ds:SignedInfo>
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        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
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            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
```

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          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>C7jBl5/HqdfJ1NvfBmmwJpVRYBfT65Vd5mox8HoaZL8=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>
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        4JW6Brj+pbSACAJzMIhMrw3uuoS2Co9UPqx5w4Vd2YXGRlCo93zPnumpSmT1Aa7PhsmCitWQW6XT
        LUxmcpUtWSUbVWXmvTrGv9sSLVLVUil57SHdIqQ6bx0NEGHW5YwQB48HhyhtrGzF+v+maLePwVPI
      k2qX7lmb3YH3wkvRbYTxduqTRwVZloREYdnEGA==</ds:SignatureValue>
      <ds:KeyInfo Id="37e359f5-e08b-4193-9fe7-b84c888f14df">
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              9lUxlTDgvRly1mZqM4VVIi7tRbnX90ISPdrGKiEaip/mBvYHWDPGf5cgB7zLwzww9ihj2nkelJYW
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            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
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            CBMGTW9zY293MQ8wDQYDVQQHEwZNb3Njb3cxEzARBgNVBAoTCngtaW5mb3RlY2gxEzARBgNVBAsT
            CngtaW5mb3RlY2gxFzAVBgNVBAMTDngtaW5mb3RlY2guY29tMB4XDTE5MDYwNjEwMTkxOVoXDTIw
            MDUzMTEwMTkxOVowcjELMAkGA1UEBhMCUlUxDzANBgNVBAgTBk1vc2NvdzEPMA0GA1UEBxMGTW9z
            Y293MRMwEQYDVQQKEwp4LWluZm90ZWNoMRMwEQYDVQQLEwp4LWluZm90ZWNoMRcwFQYDVQQDEw54
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            MdG3ZDQVhVzQjBadAIEdsnHbvkXiEHL6taXgdkzg2Y0pSIhXSXpVAGabhmnhTmgB</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Documentxmlns="urn:iso:std:iso:20022:tech:xsd:acmt.007.001.02"
  xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:acmt.007.001.02 acmt.007.001.02.xsd">
    <AcctOpngReq>
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          <CreDtTm>2022-07-06T13:45:57+02:00</CreDtTm>
        </MsgId>
        <PrcId>
          <Id>c7f0ebb0b59812</Id>
          <CreDtTm>2022-07-06T13:45:57+02:00</CreDtTm>
        </PrcId>
        <AttchdDocNm>oscarmike21</AttchdDocNm>
      </Refs>
      <Acct>
        <Id>
          <Othr>
            <Id>000410078900816</Id>
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          </Othr>
        </Id>
        <Nm>Oscar Mike21</Nm>
        <Sts>ENAB</Sts>
        <Ccy>RWF</Ccy>
      </Acct>
      <AcctSvcrId>
        <FinInstnId>
          <Othr>
            <Id>040</Id>
          </Othr>
        </FinInstnId>
      </AcctSvcrId>
      <Org>
        <FullLglNm>oscarmike21</FullLglNm>
        <CtryOfOpr>RW</CtryOfOpr>
        <RegnDt>2019-02-04</RegnDt>
        <LglAdr>
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        </LglAdr>
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              <CtryOfBirth>RW</CtryOfBirth>
            </DtAndPlcOfBirth>
            <Othr>
              <Id>oscarmike21</Id>
            </Othr>
          </Id>
          <CtctDtls>
            <Nm>Oscar Mike21</Nm>
            <MobNb>250788999135</MobNb>
            <emailadr>oscar.mike21@test.com</EmailAdr>
            <Othr>oscarmike21proxygsd</Othr>
          </CtctDtls>
        </Sndr>
      </Org>
      <SplmtryData>
        <PlcAndNm>INSE|nickname</PlcAndNm>
        <Envlp>
          <text>
            <value>788980694Bk</value>
          </text>
        </Envlp>
      </SplmtryData>
    </AcctOpngReq>
  </Document>
</BusinessMessage>
```

acmt.010.001.02 AccountRequestAcknowledgement

```
1.   <?xml version="1.0" encoding="UTF-8" standalone="no"?>
2.  <?xml version="1.0" encoding="UTF-8" standalone="no"?>
3.  <BusinessMessage>
4.    <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
5.  <?xml version="1.0" encoding="UTF-8" standalone="no"?>
6.  <BusinessMessage>
7.  <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
8.  <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
9.  <ds:SignedInfo>
10. <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
11. <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
12. <ds:Reference URI="#c89b0679-0e8f-4c90-891d-608062646ccd">
13. <ds:Transforms>
14. <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
15. </ds:Transforms>
16. <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
17. <ds:DigestValue>a2s4rAfc5+cp9IZUfBcFi75B6iCjbAsdEVU5MNgZCYE=</ds:DigestValue>
18. </ds:Reference>
19. <ds:Reference URI="">
20. <ds:Transforms>
21. <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
22. <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
23. </ds:Transforms>
24. <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
25. <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
26. </ds:Reference>
27. <ds:Reference>
28. <ds:Transforms>
29. <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
30. </ds:Transforms>
31. <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
32. <ds:DigestValue>id7Rr9BDv2cxmXweLr9RlJMMaiSetGM+FMS9HwN6yyc=</ds:DigestValue>
33. </ds:Reference>
34. </ds:SignedInfo>
35. <ds:SignatureValue>O1lsxYOI08C43SpANDgAE14QTB2EjaPPUqQPuMsB5ShHciJWfykk8FExFrSECnm2oQi8GfVluXqT
36. CTrrpLGVc4b0JAvPlvHqRU1CD0EwzNb5JEjGXUtc8hwg+Yjk4JL1m4ToEdF/DFpY2Z0p0vZBlH2Y
37. V+J8OkQsQmQEisFa+mE0vOW2xOyoCTWXiWnv5gJ+T+iXBbArucwDCWNOY9c+ldbbLdPI7vFKvmWS
38. XqJSNVbkw7xHS0BgaFyrRmP5egDKqMequRO0tGAVad8WHqSOivwGuoTY6wJ6ij/5L9VT/WutbmLI
39. 3gjPvNmwpN+hJNMhJiHGYnMIlbqSs0C88rKTOw==</ds:SignatureValue>
40. <ds:KeyInfo Id="c89b0679-0e8f-4c90-891d-608062646ccd">
41. <ds:KeyValue>
42. <ds:RSAKeyValue>
43. <ds:Modulus>3FArd3r8nUyd4/mydPxTF6CKdotl0IcQt9mU2dZhQ7ooQfToJExXMEVh0KT97rm/RhERoSw5kAdi
44. 9gA6y6TPuveMlaoP484klN1t5ngx1x4s7lDjar1FlrrxZemXbtnbIWyaqYBXtzP9ByCgbO+aCZ+w
45. uSfS/+5BA2RzlFW/uIEAmnwlbyhti2EV6RU3ujRjf2qAKJMawGsaHNe0DOS6afFqUL5I7tFSSu3V
46. VVM36l8XDJbjywaP9ojcCxJmTBF9FRYvNTBHlALb9dbBzLDbfeqHbUfLtyeJExUEgLr2+cACgQ3N
47. czw0FAY8B629RSeK3IBMGVqHzcBGC4qzkbf5hQ==</ds:Modulus>
48. <ds:Exponent>AQAB</ds:Exponent>
49. </ds:RSAKeyValue>
50. </ds:KeyValue>
51. <ds:X509Data>
52. <ds:X509Certificate>MIID7zCCAtegAwIBAgIBBDANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
53. BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
54. MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
55. LnJ3MB4XDTE5MDEwMTEzMjYwMFoXDTI5MDEwMTEzMjYwMFowgYkxCzAJBgNVBAYTAlJXMQ8wDQYD
56. VQQIEwZLaWdhbGkxCzAJBgNVBAcTAlJXMRAwDgYDVQQKEwdSU3dpdGNoMQ8wDQYDVQQLEwZSLU5E
57. UFMxEzARBgNVBAMTClItTkRQUyBQR1cxJDAiBgkqhkiG9w0BCQEWFWluZm9zZWNAcnN3aXRjaC5j
58. by5ydzCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBANxQK3d6/J1MneP5snT8UxeginaL
```

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ZdCHELfZlNnWYUO6KEH06CRMVzBFYdCk/e65v0YREaEsOZAHYvYAOsukz7r3jJWqD+POJJTdbeZ4
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IqLwfgtXjsn02d9Tjg1PXw3B2UdD3JyZmUU3UbEnBsiB1/80hFeU26AU</ds:X509Certificate>
</ds:X509Data>
</ds:KeyInfo>
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</AppHdr>
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    </MsgId>
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    </AckdMsgId>
    <Sts>PNDG</Sts>
  </Refs>
 </AcctReqAck>
</Document>
</BusinessMessage>
```

acmt.014.001.02 AccountReport

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
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  <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#30ef4b23-34cc-4beb-a085-aff6dbb57b6a">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>2cFdUoB9ckgIuMVbvz8PCtqOKSqVDbCu/Vh2JGNp26w=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
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```
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
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          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
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              VVM36l8XDJbjywaP9ojcCxJmTBF9FRYvNTBHlALb9dbBzLDbfeqHbUfLtyeJExUEgLr2+cACgQ3N
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            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>
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            LnJ3MB4XDTE5MDEwMTEzMjYwMFoXDTI5MDEwMTEzMjYwMFowgYkxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxCzAJBgNVBAcTAlJXMRAwDgYDVQQKEwdSU3dpdGNoMQ8wDQYDVQQLEwZSLU5E
            UFMxEzARBgNVBAMTClItTkRQUyBQR1cxJDAiBgkqhkiG9w0BCQEWFWluZm9zZWNAcnN3aXRjaC5j
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            fRUWLzUwR5QC2/XWwcyw233qh21Hy7cniRMVBIC69vnAAoENzXM8NBQGPAetvUUnityATBlah83A
            RguKs5G3+YUCAwEAAaNdMFswDAYDVR0TAQH/BAIwADAdBgNVHQ4EFgQUmkiJWrn4Rb2XcqjdsYcQ
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            ref0XpDUgBcMZcEXScwfD3g6cpxkx2qO4pSDYFm00zs+4/I0/ts9DQmEnza9+/kwAZkugTWV2cjd
            cMStohl4x5pui8IYkqTwyDch6D7Q6UbAVJUEkFJHaGFweP7OKW9Tsyqm/YjuYWqF1IT6lU63Uk+r
            IqLwfgtXjsn02d9Tjg1PXw3B2UdD3JyZmUU3UbEnBsiB1/80hFeU26AU</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns="urn:iso:std:iso:20022:tech:xsd:acmt.014.001.02"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:acmt.014.001.02 acmt.014.001.02.xsd">
    <AcctRpt>
```

```
      <Refs>
        <ReqTp>OPEN</ReqTp>
        <MsgId>
          <Id>RNDPS/15abae6e2d71c6abf95bc6</Id>
          <CreDtTm>2022-09-07T09:42:50+02:00</CreDtTm>
        </MsgId>
        <PrcId>
          <Id>CGBKA000909</Id>
          <CreDtTm>2022-09-07T09:42:12+02:00</CreDtTm>
        </PrcId>
        <AckdMsgId>
          <Id>CGBKA000909</Id>
          <CreDtTm>2022-09-07T09:42:12+02:00</CreDtTm>
        </AckdMsgId>
        <Sts>accepted</Sts>
      </Refs>
      <Fr>
        <Othr>
          <Id>130</Id>
        </Othr>
      </Fr>
      <AcctSvcrId>
        <FinInstnId>
          <Othr>
            <Id>130</Id>
          </Othr>
        </FinInstnId>
      </AcctSvcrId>
      <Rpt>
        <Acct>
          <Id>
            <Othr>
              <Id>00003-01390178450-73</Id>
            </Othr>
          </Id>
          <Ccy>RWF</Ccy>
        </Acct>
      </Rpt>
    </AcctRpt>
  </Document>
</BusinessMessage>
```

acmt.003.001.07 AccountModificationInstruction

```
<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>wBaRZEDIer2fWCFVYwC0ty7aDFrV8lV3/4KtOlDg6mI=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
```

```
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>M+3tbdx1vyQG/5XMqNsJhU8DL0zADG5kDj5y+GdRFBQ=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>IAHkWVZGMkUylYhLpC6xt7asjqYP/jl60ASC8WDgZckoyGtUo1V/e/4k/VpAWMG7AysMFwKes1k0
        VnqTO8oTWUWLGpYGGXxSVPr6OYhdytBTHebhpC5YZMaGP2GJeKxdhal+SVp0yfSt6nrmnNJ+U5Ro
        bqPQbss+3rETsP87jXSFX52zNBwY1UkPgMqDGUfpwO9fv64zphO/PKrWXDiq0m6xk01mUpvcPn5I
        lyVrCydPyQVv+Lc5nNdaCTWpkYKZ9/EIT4qJtFvQBd28qRfcdyBA9m0mwqFf4M+odNsE1NhiPkSn
      klOytXr2a2z3qw0CaY3V83bvwu5L0m3E22evig==</ds:SignatureValue>
      <ds:KeyInfo Id="a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
        <ds:KeyValue>
          <ds:RSAKeyValue>

<ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
              ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
              d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
              MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
              2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>

<ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
            BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
            AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
            QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
            ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
            oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
            Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
            gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
            FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
            A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
            OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
            hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
            ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
            LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
            9Q==</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns="urn:iso:std:iso:20022:tech:xsd:acmt.003.001.07"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:acmt.003.001.07 acmt.003.001.07.xsd">
    <AcctModInstr>
```

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      <MsgId>
        <Id>RNDPS/522958571e78afd3fcccdb</Id>
        <CreDtTm>2019-10-08T09:30:33+02:00</CreDtTm>
      </MsgId>
      <InvstmtAcctSelctn>
        <OthrAcctSelctnData>
          <SctyDtls>
            <Id>
              <OthrPrtryId>
                <Id>000400078911122</Id>
                <IdSrc>
                  <Prtry>Bank of Kigali</Prtry>
                </IdSrc>
              </OthrPrtryId>
            </Id>
          </SctyDtls>
          <AcctSvcr>
            <AnyBIC>040</AnyBIC>
          </AcctSvcr>
        </OthrAcctSelctnData>
      </InvstmtAcctSelctn>
      <ModfdAcctPties>
        <ModScpIndctn>UPDT</ModScpIndctn>
        <PrncplAcctPty>
          <PmryOwnr>
            <Pty>
              <IndvPrsn>
                <Nm>Charlie Mike</Nm>
              </IndvPrsn>
            </Pty>
            <ModfdInvstrPrflVldtn>
              <ModScpIndctn>INSE</ModScpIndctn>
              <InvstrPrflVldtn>
                <KnowYourCstmrDBChck>
                  <DBChck>false</DBChck>
                  <Id>asjdaskj</Id>
                </KnowYourCstmrDBChck>
              </InvstrPrflVldtn>
            </ModfdInvstrPrflVldtn>
            <OthrId>
              <Id>TEST7</Id>
              <Tp>
                <Prtry>
                  <Id>1234</Id>
                  <Issr>1234</Issr>
                </Prtry>
              </Tp>
            </OthrId>
            <PmryComAdr>
              <Email>charlie.mike@test.com</Email>
              <Mob>2507212345678</Mob>
            </PmryComAdr>
          </PmryOwnr>
        </PrncplAcctPty>
      </ModfdAcctPties>
    </AcctModInstr>
  </Document>
</BusinessMessage>
```

Acmt.003.001.07 AccountModificationInstruction (update existing Proxy_id)

```
<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>wBaRZEDIer2fWCFVYwC0ty7aDFrV8lV3/4KtOlDg6mI=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>M+3tbdx1vyQG/5XMqNsJhU8DL0zADG5kDj5y+GdRFBQ=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>IAHkWVZGMkUylYhLpC6xt7asjqYP/jl60ASC8WDgZckoyGtUo1V/e/4k/VpAWMG7AysMFwKes1k0
        VnqTO8oTWUWLGpYGGXxSVPr6OYhdytBTHebhpC5YZMaGP2GJeKxdhal+SVp0yfSt6nrmnNJ+U5Ro
        bqPQbss+3rETsP87jXSFX52zNBwY1UkPgMqDGUfpwO9fv64zphO/PKrWXDiq0m6xk01mUpvcPn5I
        lyVrCydPyQVv+Lc5nNdaCTWpkYKZ9/EIT4qJtFvQBd28qRfcdyBA9m0mwqFf4M+odNsE1NhiPkSn
      klOytXr2a2z3qw0CaY3V83bvwu5L0m3E22evig==</ds:SignatureValue>
      <ds:KeyInfo Id="a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
        <ds:KeyValue>
          <ds:RSAKeyValue>

<ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
              ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
              d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
              MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
              2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>

<ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
            BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
            AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
            QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
```

```
            ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
            oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
            Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
            gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
            FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
            A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
            OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
            hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
            ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
            LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
            9Q==</ds:X509Certificate>
          </ds:X509Data>
        </ds:KeyInfo>
      </ds:Signature>
    </AppHdr>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:acmt.003.001.07"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="urn:iso:std:iso:20022:tech>
      <AcctModInstr>
        <MsgId>
          <Id>IMB-ACMT003-652237652018</Id>
          <CreDtTm>2022-09-14T07:52:01.780Z</CreDtTm>
        </MsgId>
        <InvstmtAcctSelctn>
          <AcctId>200020330001</AcctId>
          <OthrAcctSelctnData>
            <SctyDtls>
              <Id>
                <OthrPrtryId>
                  <Id>200020330001</Id>
                  <IdSrc>
                    <Prtry>IMRWRWRW</Prtry>
                  </IdSrc>
                </OthrPrtryId>
              </Id>
            </SctyDtls>
            <AcctSvcr>
              <PrtryId>
                <Id>010</Id>
              </PrtryId>
            </AcctSvcr>
          </OthrAcctSelctnData>
        </InvstmtAcctSelctn>
        <ModfdAcctPties>
          <ModScpIndctn>UPDT</ModScpIndctn>
        </ModfdAcctPties>
        <Xtnsn>
          <PlcAndNm>INSE|nickname</PlcAndNm>
          <Txt>788521487Bk</Txt>
        </Xtnsn>
        <Xtnsn>
          <PlcAndNm>DELT|nickname</PlcAndNm>
          <Txt>788980694Bk</Txt>
        </Xtnsn>
      </AcctModInstr>
    </Document>
</BusinessMessage>
```

Acmt.003.001.07 AccountModificationInstruction (Add Proxy_id to an existing account_id)

```
<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>wBaRZEDIer2fWCFVYwC0ty7aDFrV8lV3/4KtOlDg6mI=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>M+3tbdx1vyQG/5XMqNsJhU8DL0zADG5kDj5y+GdRFBQ=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>IAHkWVZGMkUylYhLpC6xt7asjqYP/jl60ASC8WDgZckoyGtUo1V/e/4k/VpAWMG7AysMFwKes1k0
        VnqTO8oTWUWLGpYGGXxSVPr6OYhdytBTHebhpC5YZMaGP2GJeKxdhal+SVp0yfSt6nrmnNJ+U5Ro
        bqPQbss+3rETsP87jXSFX52zNBwY1UkPgMqDGUfpwO9fv64zphO/PKrWXDiq0m6xk01mUpvcPn5I
        lyVrCydPyQVv+Lc5nNdaCTWpkYKZ9/EIT4qJtFvQBd28qRfcdyBA9m0mwqFf4M+odNsE1NhiPkSn
      klOytXr2a2z3qw0CaY3V83bvwu5L0m3E22evig==</ds:SignatureValue>
      <ds:KeyInfo Id="a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
        <ds:KeyValue>
          <ds:RSAKeyValue>

<ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
              ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
              d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
              MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
              2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>

<ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
            BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
            AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
            QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
```

```
            ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
            oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
            Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
            gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
            FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
            A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
            OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
            hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
            ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
            LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
            9Q==</ds:X509Certificate>
          </ds:X509Data>
        </ds:KeyInfo>
      </ds:Signature>
    </AppHdr>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:acmt.003.001.07"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="urn:iso:std:iso:20022:tech>
      <AcctModInstr>
        <MsgId>
          <Id>IMB-ACMT003-652237652018</Id>
          <CreDtTm>2022-09-14T07:52:01.780Z</CreDtTm>
        </MsgId>
        <InvstmtAcctSelctn>
          <AcctId>200020330001</AcctId>
          <OthrAcctSelctnData>
            <SctyDtls>
              <Id>
                <OthrPrtryId>
                  <Id>200020330001</Id>
                  <IdSrc>
                    <Prtry>IMRWRWRW</Prtry>
                  </IdSrc>
                </OthrPrtryId>
              </Id>
            </SctyDtls>
            <AcctSvcr>
              <PrtryId>
                <Id>010</Id>
              </PrtryId>
            </AcctSvcr>
          </OthrAcctSelctnData>
        </InvstmtAcctSelctn>
        <ModfdAcctPties>
          <ModScpIndctn>UPDT</ModScpIndctn>
        </ModfdAcctPties>
        <Xtnsn>
          <PlcAndNm>INSE|nickname</PlcAndNm>
          <Txt>788980694Bk</Txt>
        </Xtnsn>
      </AcctModInstr>
    </Document>
</BusinessMessage>
```

acmt.003.001.07 AccountModificationInstruction (Suspend Account)

```
<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
```

```
5.        <ds:SignedInfo>
6.          <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
7.          <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
8.          <ds:Reference URI="#a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
9.            <ds:Transforms>
10.             <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
11.           </ds:Transforms>
12.           <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
13.           <ds:DigestValue>wBaRZEDIer2fWCFVYwC0ty7aDFrV8lV3/4KtOlDg6mI=</ds:DigestValue>
14.         </ds:Reference>
15.         <ds:Reference URI="">
16.           <ds:Transforms>
17.             <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
18.             <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
19.           </ds:Transforms>
20.           <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
21.           <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
22.         </ds:Reference>
23.         <ds:Reference>
24.           <ds:Transforms>
25.             <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
26.           </ds:Transforms>
27.           <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
28.           <ds:DigestValue>M+3tbdx1vyQG/5XMqNsJhU8DL0zADG5kDj5y+GdRFBQ=</ds:DigestValue>
29.         </ds:Reference>
30.       </ds:SignedInfo>
31.
    <ds:SignatureValue>IAHkWVZGMkUylYhLpC6xt7asjqYP/jl60ASC8WDgZckoyGtUo1V/e/4k/VpAWMG7AysMFwKes1k0
32.         VnqTO8oTWUWLGpYGGXxSVPr6OYhdytBTHebhpC5YZMaGP2GJeKxdhal+SVp0yfSt6nrmnNJ+U5Ro
33.         bqPQbss+3rETsP87jXSFX52zNBwY1UkPgMqDGUfpwO9fv64zphO/PKrWXDiq0m6xk01mUpvcPn5I
34.         lyVrCydPyQVv+Lc5nNdaCTWpkYKZ9/EIT4qJtFvQBd28qRfcdyBA9m0mwqFf4M+odNsE1NhiPkSn
35.       klOytXr2a2z3qw0CaY3V83bvwu5L0m3E22evig==</ds:SignatureValue>
36.       <ds:KeyInfo Id="a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
37.         <ds:KeyValue>
38.           <ds:RSAKeyValue>
39.
    <ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
40.               ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
41.               d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
42.               MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
43.               2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
44.             <ds:Exponent>AQAB</ds:Exponent>
45.           </ds:RSAKeyValue>
46.         </ds:KeyValue>
47.         <ds:X509Data>
48.
    <ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
49.             BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
50.             MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
51.             LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
52.             VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
53.             BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
54.             AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
55.             QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
56.             ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
57.             oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
58.             Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
59.             gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
60.             FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
61.             A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
62.             OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
```

```
            hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
            ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
            LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
            9Q==</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns="urn:iso:std:iso:20022:tech:xsd:acmt.003.001.07"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:acmt.003.001.07 acmt.003.001.07.xsd">
    <AcctModInstr>
      <MsgId>
        <Id>PROXY_CHG_22yyy09m13d092517</Id>
        <CreDtTm>2022-09-13T10:25:36+02:00</CreDtTm>
      </MsgId>
      <InvstmtAcctSelctn>
        <AcctId>403227922410188</AcctId>
      </InvstmtAcctSelctn>
      <ModfdAcctPties>
        <ModScpIndctn>UPDT</ModScpIndctn>
      </ModfdAcctPties>
      <Xtnsn>
        <PlcAndNm>DISABLE|account</PlcAndNm>
        <Txt>400</Txt>
      </Xtnsn>
    </AcctModInstr>
  </Document>
</BusinessMessage>
```

acmt.003.001.07 AccountModificationInstruction (Reactivate Suspended Account)

```
<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>wBaRZEDIer2fWCFVYwC0ty7aDFrV8lV3/4KtOlDg6mI=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
```

```
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>M+3tbdx1vyQG/5XMqNsJhU8DL0zADG5kDj5y+GdRFBQ=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>
<ds:SignatureValue>IAHkWVZGMkUylYhLpC6xt7asjqYP/jl60ASC8WDgZckoyGtUo1V/e/4k/VpAWMG7AysMFwKes1k0
        VnqTO8oTWUWLGpYGGXxSVPr6OYhdytBTHebhpC5YZMaGP2GJeKxdha1+SVp0yfSt6nrmnNJ+U5Ro
        bqPQbss+3rETsP87jXSFX52zNBwY1UkPgMqDGUfpwO9fv64zphO/PKrWXDiq0m6xk01mUpvcPn5I
        lyVrCydPyQVv+Lc5nNdaCTWpkYKZ9/EIT4qJtFvQBd28qRfcdyBA9m0mwqFf4M+odNsE1NhiPkSn
      klOytXr2a2z3qw0CaY3V83bvwu5L0m3E22evig==</ds:SignatureValue>
      <ds:KeyInfo Id="a9d468d9-50b7-4b6f-aaf7-007d5cae69a1">
        <ds:KeyValue>
          <ds:RSAKeyValue>
<ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
              ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
              d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
              MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
              2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>
<ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
            BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
            AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
            QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
            ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
            oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
            Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
            gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
            FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
            A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
            OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
            hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
            ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
            LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
            9Q==</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns="urn:iso:std:iso:20022:tech:xsd:acmt.003.001.07"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:acmt.003.001.07 acmt.003.001.07.xsd">
    <AcctModInstr>
      <MsgId>
        <Id>PROXY_CHG_22yyy09m13d104547</Id>
        <CreDtTm>2022-09-13T10:45:48+02:00</CreDtTm>
      </MsgId>
      <InvstmtAcctSelctn>
        <AcctId>403227922410188</AcctId>
      </InvstmtAcctSelctn>
      <ModfdAcctPties>
        <ModScpIndctn>UPDT</ModScpIndctn>
```

```
      </ModfdAcctPties>
      <Xtnsn>
        <PlcAndNm>ENABLE|account</PlcAndNm>
        <Txt>400</Txt>
      </Xtnsn>
    </AcctModInstr>
  </Document>
</BusinessMessage>
```

acmt.019.001.03: AccountClosingRequest

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#05c82b43-777a-42cd-8734-0bffc35bcc93">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>ogrsJnSPE0L+lJt7Cds4FVQv6Wmzc+RrqduFP/FRu4o=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>LalBgcUjK960iFupTM6BE97UYf2vCO/mvC4DfHZ5Pz8=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>o9gDYoDAZraMa27WP7Q6PwDbELg2sqsXLDg9BiwJnHD7VJ7wW1Kl2anRglt/BvyGmSMOmfyyAYAR
        NJscDL7UjviV4kZQcI3b2GBnxtp3vjJWCLCrnohnGNTHyZxiQRzW+jfTSzmK8Zix2vwas9VyfYNP
        M0insGm32DUnZdkzj8hlxEtXiK8zA/6IBjrDZNKuKilRCkHxt+TFhcTtyyEUCfFMcaJhSZPlDa/f
        aIx5gHMnX5RQCZNwSsJ6FqDg0zy2YRhQRsuuXy2/HCkPYNDkj8AhSMPJuA1aPN7vnnVvj7r+sADW
      oTg8VP/BEJthr/cGrT9y6sIkSFXLoCIV9JtcZA==</ds:SignatureValue>
      <ds:KeyInfo Id="05c82b43-777a-42cd-8734-0bffc35bcc93">
        <ds:KeyValue>
          <ds:RSAKeyValue>

<ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
              ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
              d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
              MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
              2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
```

```
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>
<ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
            BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
            AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
            QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
            ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
            oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
            Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
            gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
            FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
            A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
            OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
            hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
            ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
            LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
            9Q==</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns="urn:iso:std:iso:20022:tech:xsd:acmt.019.001.03"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:acmt.019.001.03 acmt.019.001.03.xsd">
    <AcctClsgReq>
      <Refs>
        <MsgId>
          <Id>RNDPS/250781111111</Id>
          <CreDtTm>2020-11-27T15:16:45+02:00</CreDtTm>
        </MsgId>
        <PrcId>
          <Id>d2f5b93411cc6f</Id>
          <CreDtTm>2020-11-27T15:16:45+02:00</CreDtTm>
        </PrcId>
        <AttchdDocNm>7cbb64</AttchdDocNm>
      </Refs>
      <Fr>
        <Othr>
          <Id>040</Id>
        </Othr>
      </Fr>
      <AcctId>
        <Id>
          <Othr>
            <Id>00123456</Id>
          </Othr>
        </Id>
        <Nm>TEST BK 1</Nm>
        <Ccy>RWF</Ccy>
      </AcctId>
      <AcctSvcrId>
        <FinInstnId>
          <Othr>
            <Id>040</Id>
```

```
          </Othr>
        </FinInstnId>
      </AcctSvcrId>
      <OrgId>
        <OrgId>
          <Othr>
            <Id>0001</Id>
            <SchmeNm>
              <Cd>0001</Cd>
            </SchmeNm>
            <Issr>0001</Issr>
          </Othr>
        </OrgId>
      </OrgId>
      <CtrctDts>
        <TrgtClsgDt>2020-11-27</TrgtClsgDt>
        <UrgcyFlg>true</UrgcyFlg>
        <RmvlInd>true</RmvlInd>
      </CtrctDts>
      <BalTrfAcct>
        <Id>
          <Othr>
            <Id>040</Id>
          </Othr>
        </Id>
        <Ccy>RWF</Ccy>
      </BalTrfAcct>
      <TrfAcctSvcrId>
        <FinInstnId>
          <Othr>
            <Id>040</Id>
          </Othr>
        </FinInstnId>
        <BrnchId>
          <Id>040</Id>
          <Nm>BKBank</Nm>
        </BrnchId>
      </TrfAcctSvcrId>
    </AcctClsgReq>
  </Document>
</BusinessMessage
```

acmt.011.001.02 AccountManagementMandateRequest

```
<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#f98194d8-e31e-47e7-9416-1ae8bd381e1d">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>2IJFrsTFanyvfpki3SE7W6rBvOkMYnKrvR0k6mTBbVM=</ds:DigestValue>
```

```
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>1Fsgi8UDVmcdzU09oBXxi6+7icTc04jsTC6dUkAAFx0=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

    <ds:SignatureValue>k4hF1xzKfsWAmlKr5X2tS5WVSCqItZVTcaVlefJ+7whLLkv62cKMKCUDj68p+1hTE9NsTG8h0xmq
5DYYsJuLmsmWLO22U6WqeBWUO+Q976D7DCRhsbw8YbX1j0HlK2sLkNdHnHlxKp8h3ZAowSmaQ3RQ
zzoHcLuZfk8NTdOShz1LoaL7+MofqI5SR5F6kwry6nsruMQMnGDsvWio3k93vD2u/tDPA/DGeknL
1JCzbUY4c3e8uPiFav30tNoX8ePTwxy9I0oDT5nOfrGoMJzQVaRkSR9xSCfydn/80i2XPSaqQW2v
43ktX/5fa8FVxJH5nZZQ9CattujtR2XDNCCLCg==</ds:SignatureValue>
    <ds:KeyInfo Id="f98194d8-e31e-47e7-9416-1ae8bd381e1d">
        <ds:KeyValue>
          <ds:RSAKeyValue>

    <ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>

    <ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
9Q==</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
```

```
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:acmt.011.001.02"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:acmt.011.001.02 acmt.011.001.02.xsd">
  <AcctReqRjctn>
    <Refs>
      <RjctdReqTp>OPEN</RjctdReqTp>
      <RjctnRsn>Unable to register account</RjctnRsn>
      <RjctdReqId>
        <Id>RNDPS/c49a3120c239c8a683d437</Id>
        <CreDtTm>2020-05-15T14:52:28+02:00</CreDtTm>
      </RjctdReqId>
      <MsgId>
        <Id>RNDPS/e0d3065839a3854be19463</Id>
        <CreDtTm>2020-05-15T14:52:28+02:00</CreDtTm>
      </MsgId>
      <PrcId>
        <Id>RNDPS/c49a3120c239c8a683d437</Id>
        <CreDtTm>2020-05-15T14:52:28+02:00</CreDtTm>
      </PrcId>
      <AttchdDocNm>fd7d4a</AttchdDocNm>
    </Refs>
    <AcctSvcrId>
      <FinInstnId>
        <Othr>
          <Id>175</Id>
        </Othr>
      </FinInstnId>
    </AcctSvcrId>
    <OrgId>
      <Othr>
        <Id>175</Id>
      </Othr>
    </OrgId>
  </AcctReqRjctn>
</Document>
</BusinessMessage>
```

acmt.006.001.06 AccountManagementStatusReport

Success

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<BusinessMessage>
  <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#fdc68e8a-7280-405b-a131-84b4a210439f">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
```

```
          <ds:DigestValue>bPEwMedskMZgPul/e8mrS4MZmws1myppXqY4O0gX7Jo=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>P3DxfZC48DLOIF+pdwgU9m4e3AUvGu4l+fWxJ+V04Os=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

    <ds:SignatureValue>vYOah524CYcbklsCnhL/JXf8GxsyoaHKpTZqrUNwsSCJfri5Yeci2p+BlwnsD0N8zKR1EvVtOom7
        rWkH0RS6YfCkclH5icCYSoLJ/l8scaGOQBlazP/mBo+PiqeYScSHvgYsmq6VrHQBfEBOMbER9r/4
        pZAMDgak8kxpogqrZ7nTq7zQjadLzMOPeSo2fzpRJ88yLuFIfySi5RlYvnyb4JRmhwujREUvrqfR
        /JQ2dkThWA7l15LIlRoXXTd2B12i866mnQiLBeTJTZmLxsAL5QEeWpQpy9Uk7JyHe3AEofxrXzLi
      eaCiLi9qsHFcg2z4zTy5nW1v5R/9neka5zDooA==</ds:SignatureValue>
      <ds:KeyInfo Id="fdc68e8a-7280-405b-a131-84b4a210439f">
        <ds:KeyValue>
          <ds:RSAKeyValue>

    <ds:Modulus>3FArd3r8nUyd4/mydPxTF6CKdotl0IcQt9mU2dZhQ7ooQfToJExXMEVh0KT97rm/RhERoSw5kAdi
              9gA6y6TPuveMlaoP484klN1t5ngx1x4s7lDjar1FlrrxZemXbtnbIWyaqYBXtzP9ByCgbO+aCZ+w
              uSfS/+5BA2RzlFW/uIEAmnwlbyhti2EV6RU3ujRjf2qAKJMawGsaHNe0DOS6afFqUL5I7tFSSu3V
              VVM36l8XDJbjywaP9ojcCxJmTBF9FRYvNTBHlALb9dbBzLDbfeqHbUfLtyeJExUEgLr2+cACgQ3N
              czw0FAY8B629RSeK3IBMGVqHzcBGC4qzkbf5hQ==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>

    <ds:X509Certificate>MIID7zCCAtegAwIBAgIBBDANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MDEwMTEzMjYwMFoXDTI5MDEwMTEzMjYwMFowgYkxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxCzAJBgNVBAcTAlJXMRAwDgYDVQQKEwdSU3dpdGNoMQ8wDQYDVQQLEwZSLU5E
            UFMxEzARBgNVBAMTClItTkRQUyBQR1cxJDAiBgkqhkiG9w0BCQEWFWluZm9zZWNAcnN3aXRjaC5j
            by5ydzCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBANxQK3d6/J1MneP5snT8UxeginaL
            ZdCHELfZlNnWYUO6KEH06CRMVzBFYdCk/e65v0YREaEsOZAHYvYAOsukz7r3jJWqD+POJJTdbeZ4
            MdceLO5Q42q9RZa68WXpl27Z2yFsmqmAV7cz/QcgoGzvmgmfsLkn0v/uQQNkc5RVv7iBAJp8JW8o
            bYthFekVN7o0Y39qgCiTGsBrGhzXtAzkumnxalC+SO7RUkrt1VVTN+pfFwyW48sGj/aI3AsSZkwR
            fRUWLzUwR5QC2/XWwcyw233qh21Hy7cniRMVBIC69vnAAoENzXM8NBQGPAetvUUnityATBlah83A
            RguKs5G3+YUCAwEAAaNdMFswDAYDVR0TAQH/BAIwADAdBgNVHQ4EFgQUmkiJWrn4Rb2XcqjdsYcQ
            Uvml/4wwHwYDVR0jBBgwFoAUED/a4yWl3w1SfYJmVdKsPof+wyIwCwYDVR0PBAQDAgeAMA0GCSqG
            SIb3DQEBCwUAA4IBAQANG3GbMsjX9I4dNe7YIyhv6YzeDIOgq07KdHm0cv9nFBQ0SpX4Zhx/7xRL
            OTuY+vjH68qUXp+cJ18D+LBOOBuO6CyTO8I/9E4ynHEmLP6WOBbok6Qpsq5qsTwgXjcBC1PI37oT
            ref0XpDUgBcMZcEXScwfD3g6cpxkx2qO4pSDYFm00zs+4/I0/ts9DQmEnza9+/kwAZkugTWV2cjd
            cMStohl4x5pui8IYkqTwyDch6D7Q6UbAVJUEkFJHaGFweP7OKW9Tsyqm/YjuYWqF1IT6lU63Uk+r
            IqLwfgtXjsn02d9Tjg1PXw3B2UdD3JyZmUU3UbEnBsiB1/80hFeU26AU</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns:Doc="urn:iso:std:iso:20022:tech:xsd:acmt.006.001.06">
```

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    <AcctMgmtStsRpt>
      <MsgId>
        <Id>b0f25c7c-dc68-4e3f-827d-7a2e15b60c0d</Id>
        <CreDtTm>2019-10-08T10:54:14.201Z</CreDtTm>
      </MsgId>
      <RltdRef>
        <Ref>RNDPS/5fda7b402cd583fb92e541</Ref>
      </RltdRef>
      <StsRpt>
        <Sts>
          <Sts>ACCP</Sts>
        </Sts>
      </StsRpt>
    </AcctMgmtStsRpt>
  </Document>
</BusinessMessage>
```

Reject

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
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  <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#6ffb7550-2809-4ee4-a4ed-6ca605f8592a">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>mxdNwthn/D45KFml1JWTvM3RB0Ch+HxtIgEQSdDNH5A=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>KjA24fo+hbasrHpZs0CbqgvoHuEN8wjKEuMfDHIlrrg=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>cn9cm4nSlngHLvvclVlMAawMY1+SRnSkb6rZVq0Io2vueDy5nRVwjvXzeJ1AqFuXraWCpj3tMBky
        wZ0GbTAEWM4Z6OxOpupDG8I38X/pCQ+QS+Dmux2jP5c/GT1l3WzEPOAntJPFurcOWkw3N1sZ9BwY
        ruj7jzWSPYOfzMy/5Hhm02DLhqxtv4VeQioW4YfdYrnt0k5Ll0tnTFLIlVKqFhNk2uxdKrEGtHNR
        PDiVPi38PCwAABvD7Xe93lUgC1ekp79oeWjg1HdS3S4J3Soba9F0YuW6+SGCrxQpVSw9cL5tFKlJ
      Ji6t0nIGopZnJ8C/sedGRL9u4iArV4OffzP4qg==</ds:SignatureValue>
      <ds:KeyInfo Id="6ffb7550-2809-4ee4-a4ed-6ca605f8592a">
        <ds:KeyValue>
          <ds:RSAKeyValue>

<ds:Modulus>3FArd3r8nUyd4/mydPxTF6CKdotl0IcQt9mU2dZhQ7ooQfToJExXMEVh0KT97rm/RhERoSw5kAdi
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              9gA6y6TPuveMlaoP484klN1t5ngx1x4s7lDjar1FlrrxZemXbtnbIWyaqYBXtzP9ByCgbO+aCZ+w
              uSfS/+5BA2RzlFW/uIEAmnwlbyhti2EV6RU3ujRjf2qAKJMawGsaHNe0DOS6afFqUL5I7tFSSu3V
              VVM36l8XDJbjywaP9ojcCxJmTBF9FRYvNTBHlALb9dbBzLDbfeqHbUfLtyeJExUEgLr2+cACgQ3N
              czw0FAY8B629RSeK3IBMGVqHzcBGC4qzkbf5hQ==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>

   <ds:X509Certificate>MIID7zCCAtegAwIBAgIBBDANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MDEwMTEzMjYwMFoXDTI5MDEwMTEzMjYwMFowgYkxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxCzAJBgNVBAcTAlJXMRAwDgYDVQQKEwdSU3dpdGNoMQ8wDQYDVQQLEwZSLU5E
            UFMxEzARBgNVBAMTClItTkRQUyBQR1cxJDAiBgkqhkiG9w0BCQEWFWluZm9zZWNAcnN3aXRjaC5j
            by5ydzCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBANxQK3d6/J1MneP5snT8UxeginaL
            ZdCHELfZlNnWYUO6KEH06CRMVzBFYdCk/e65v0YREaEsOZAHYvYAOsukz7r3jJWqD+POJJTdbeZ4
            MdceLO5Q42q9RZa68WXpl27Z2yFsmqmAV7cz/QcgoGzvmgmfsLkn0v/uQQNkc5RVv7iBAJp8JW8o
            bYthFekVN7o0Y39qgCiTGsBrGhzXtAzkumnxalC+SO7RUkrt1VVTN+pfFwyW48sGj/aI3AsSZkwR
            fRUWLzUwR5QC2/XWwcyw233qh21Hy7cniRMVBIC69vnAAoENzXM8NBQGPAetvUUnityATBlah83A
            RguKs5G3+YUCAwEAAaNdMFswDAYDVR0TAQH/BAIwADAdBgNVHQ4EFgQUmkiJWrn4Rb2XcqjdsYcQ
            Uvml/4wwHwYDVR0jBBgwFoAUED/a4yWl3w1SfYJmVdKsPof+wyIwCwYDVR0PBAQDAgeAMA0GCSqG
            SIb3DQEBCwUAA4IBAQANG3GbMsjX9I4dNe7YIyhv6YzeDIOgq07KdHm0cv9nFBQ0SpX4Zhx/7xRL
            OTuY+vjH68qUXp+cJ18D+LBOOBuO6CyTO8I/9E4ynHEmLP6WOBbok6Qpsq5qsTwgXjcBC1PI37oT
            ref0XpDUgBcMZcEXScwfD3g6cpxkx2qO4pSDYFm00zs+4/I0/ts9DQmEnza9+/kwAZkugTWV2cjd
            cMStohl4x5pui8IYkqTwyDch6D7Q6UbAVJUEkFJHaGFweP7OKW9Tsyqm/YjuYWqF1IT6lU63Uk+r
            IqLwfgtXjsn02d9Tjg1PXw3B2UdD3JyZmUU3UbEnBsiB1/80hFeU26AU</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns:Doc="urn:iso:std:iso:20022:tech:xsd:acmt.006.001.06">
    <AcctMgmtStsRpt>
      <MsgId>
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        <CreDtTm>2019-10-08T08:09:29.699Z</CreDtTm>
      </MsgId>
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        <Ref>RNDPS/4607190cad486838281322</Ref>
      </RltdRef>
      <StsRpt>
        <Sts>
          <Rjctd>
            <Rsn>
              <Cd>NSLA</Cd>
            </Rsn>
            <AddtlRsnInf>There is no document number in request</AddtlRsnInf>
          </Rjctd>
        </Sts>
      </StsRpt>
    </AcctMgmtStsRpt>
  </Document>
</BusinessMessage>
```

acmt.006.001.06 AccountModification StatusReport

Success

```
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<BusinessMessage>
  <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
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      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#fdc68e8a-7280-405b-a131-84b4a210439f">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>bPEwMedskMZgPul/e8mrS4MZmws1myppXqY4O0gX7Jo=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>P3DxfZC48DLOIF+pdwgU9m4e3AUvGu4l+fWxJ+V04Os=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

    <ds:SignatureValue>vYOah524CYcbklsCnhL/JXf8GxsyoaHKpTZqrUNwsSCJfri5Yeci2p+BlwnsD0N8zKR1EvVtOom7
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        pZAMDgak8kxpogqrZ7nTq7zQjadLzMOPeSo2fzpRJ88yLuFIfySi5RlYvnyb4JRmhwujREUvrqfR
        /JQ2dkThWA7l15LIlRoXXTd2B12i866mnQiLBeTJTZmLxsAL5QEeWpQpy9Uk7JyHe3AEofxrXzLi
      eaCiLi9qsHFcg2z4zTy5nW1v5R/9neka5zDooA==</ds:SignatureValue>
      <ds:KeyInfo Id="fdc68e8a-7280-405b-a131-84b4a210439f">
        <ds:KeyValue>
          <ds:RSAKeyValue>

    <ds:Modulus>3FArd3r8nUyd4/mydPxTF6CKdotl0IcQt9mU2dZhQ7ooQfToJExXMEVh0KT97rm/RhERoSw5kAdi
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              uSfS/+5BA2RzlFW/uIEAmnwlbyhti2EV6RU3ujRjf2qAKJMawGsaHNe0DOS6afFqUL5I7tFSSu3V
              VVM36l8XDJbjywaP9ojcCxJmTBF9FRYvNTBHlALb9dbBzLDbfeqHbUfLtyeJExUEgLr2+cACgQ3N
              czw0FAY8B629RSeK3IBMGVqHzcBGC4qzkbf5hQ==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>

    <ds:X509Certificate>MIID7zCCAtegAwIBAgIBBDANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
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            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MDEwMTEzMjYwMFoXDTI5MDEwMTEzMjYwMFowgYkxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxCzAJBgNVBAcTAlJXMRAwDgYDVQQKEwdSU3dpdGNoMQ8wDQYDVQQLEwZSLU5E
            UFMxEzARBgNVBAMTClItTkRQUyBQR1cxJDAiBgkqhkiG9w0BCQEWFWluZm9zZWNAcnN3aXRjaC5j
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```

```
            ZdCHELfZlNnWYUO6KEH06CRMVzBFYdCk/e65v0YREaEsOZAHYvYAOsukz7r3jJWqD+POJJTdbeZ4
            MdceLO5Q42q9RZa68WXpl27Z2yFsmqmAV7cz/QcgoGzvmgmfsLkn0v/uQQNkc5RVv7iBAJp8JW8o
            bYthFekVN7o0Y39qgCiTGsBrGhzXtAzkumnxalC+SO7RUkrt1VVTN+pfFwyW48sGj/aI3AsSZkwR
            fRUWLzUwR5QC2/XWwcyw233qh21Hy7cniRMVBIC69vnAAoENzXM8NBQGPAetvUUnityATBlah83A
            RguKs5G3+YUCAwEAAaNdMFswDAYDVR0TAQH/BAIwADAdBgNVHQ4EFgQUmkiJWrn4Rb2XcqjdsYcQ
            Uvml/4wwHwYDVR0jBBgwFoAUED/a4yWl3w1SfYJmVdKsPof+wyIwCwYDVR0PBAQDAgeAMA0GCSqG
            SIb3DQEBCwUAA4IBAQANG3GbMsjX9I4dNe7YIyhv6YzeDIOgq07KdHm0cv9nFBQ0SpX4Zhx/7xRL
            OTuY+vjH68qUXp+cJ18D+LBOOBuO6CyTO8I/9E4ynHEmLP6WOBbok6Qpsq5qsTwgXjcBC1PI37oT
            ref0XpDUgBcMZcEXScwfD3g6cpxkx2qO4pSDYFm00zs+4/I0/ts9DQmEnza9+/kwAZkugTWV2cjd
            cMStohl4x5pui8IYkqTwyDch6D7Q6UbAVJUEkFJHaGFweP7OKW9Tsyqm/YjuYWqF1IT6lU63Uk+r
            IqLwfgtXjsn02d9Tjg1PXw3B2UdD3JyZmUU3UbEnBsiB1/80hFeU26AU</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns:Doc="urn:iso:std:iso:20022:tech:xsd:acmt.006.001.06">
        <AcctMgmtStsRpt>
            <MsgId>
                <Id>42abe828-6ea5-4126-8955-1c861334e37f</Id>
                <CreDtTm>2022-09-13T10:45:11.216+02:00</CreDtTm>
            </MsgId>
            <RltdRef>
                <Ref>PROXY_CHG_22yyy09m13d104547</Ref>
            </RltdRef>
            <StsRpt>
                <Sts>
                    <Sts>ACCP</Sts>
                </Sts>
            </StsRpt>
        </AcctMgmtStsRpt>
    </Document></BusinessMessage>
```

camt.003.001.07 GetAccount

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<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
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      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#df1ad084-31f8-4b21-936f-a2a374a7d2bb">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>tfxb8YOr+Z2ttzNHE3Q5bUuo3NxGnj5w3KiXDHYD2PM=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
```

```
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>ReBx1rX7KzieE4WLer9cS8Wx1zWec+jEZDdSPRovGGg=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>Esemt1nNV3qCfBlMfSKXhJT6tXZBCU6aV2kI4fbnL7I7Su5atVe+uZ+uWqNt6cDYnVZslGpJlO6T
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sUsrO1af5ewJaEE8sPeRJR6E8/e8e3uhIp4ATTJTP6FaXTY5yqWn4ORNhT9rHSceFQlITKhipHFL
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<ds:KeyInfo Id="df1ad084-31f8-4b21-936f-a2a374a7d2bb">
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          <ds:RSAKeyValue>

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d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
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<ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
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Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
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FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
9Q==</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns="urn:iso:std:iso:20022:tech:xsd:camt.003.001.07"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:camt.003.001.07 camt.003.001.07.xsd">
    <GetAcct>
      <MsgHdr>
        <MsgId>RNDPS/ZCSSA000033</MsgId>
        <CreDtTm>2020-06-10T15:41:42+02:00</CreDtTm>
      </MsgHdr>
      <AcctQryDef>
        <AcctCrit>
          <NewCrit>
            <SchCrit>
              <AcctId>
```

```
                <EQ>
                  <Othr>
                    <Id>0124051</Id>
                  </Othr>
                </EQ>
              </AcctId>
              <AcctOwnr>
                <CtctDtls>
                  <MobNb>+250788304045</MobNb>
                </CtctDtls>
              </AcctOwnr>
              <AcctSvcr>
                <FinInstnId>
                  <Othr>
                    <Id>175</Id>
                  </Othr>
                </FinInstnId>
              </AcctSvcr>
            </SchCrit>
          </NewCrit>
        </AcctCrit>
      </AcctQryDef>
    </GetAcct>
  </Document>
</BusinessMessage>
```

camt.004.001.08 ReturnAccount

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<BusinessMessage>
  <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#c0f13e44-6a66-4daf-8fb2-d8f6aa2bd6e0">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>ytWOVGQ25r4ozd2cjhP+6O6UFlFWqe9nDUfJrl94qMQ=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>gqScYPaw7nBKrLDFDH+394nNklSTVCiYAE/abKDSxiQ=</ds:DigestValue>
```

```
        </ds:Reference>
      </ds:SignedInfo>
<ds:SignatureValue>LWEaP1ZnhD3DhQCHdFYlK6FUYEAffZbiSARoc7GngDQnFaqDGjHXKCru+rtKrPchmjbe1xNzuwX2
        XzepZ/YMKplXCCnsavgtlT32rp0Bd4bDHh4l0gP6ORsLLqa3QTVeg08d73u+OwJiZbmbSYBbFKKS
        j1cGF+j+szKmuASOn7E26ET2TtozlX7o2yL/OD2YRN9gsNCk2sTGkFNRp/8dkAiOQNOIvoKKnwRc
        XSd8wbY6AdZY3myfh4mmC2aUvtb20/OH2QYem7nNZJje5n0YRTwWjKNahDwpq/minoZzYnqN1jPn
        pKX6XmptLKm62wBWYQaWD6CgnKGC7juBHDDsmg==</ds:SignatureValue>
      <ds:KeyInfo Id="c0f13e44-6a66-4daf-8fb2-d8f6aa2bd6e0">
        <ds:KeyValue>
          <ds:RSAKeyValue>
<ds:Modulus>3FArd3r8nUyd4/mydPxTF6CKdotl0IcQt9mU2dZhQ7ooQfToJExXMEVh0KT97rm/RhERoSw5kAdi
              9gA6y6TPuveMlaoP484klN1t5ngx1x4s7lDjar1FlrrxZemXbtnbIWyaqYBXtzP9ByCgbO+aCZ+w
              uSfS/+5BA2RzlFW/uIEAmnwlbyhti2EV6RU3ujRjf2qAKJMawGsaHNe0DOS6afFqUL5I7tFSSu3V
              VVM36l8XDJbjywaP9ojcCxJmTBF9FRYvNTBHlALb9dbBzLDbfeqHbUfLtyeJExUEgLr2+cACgQ3N
              czw0FAY8B629RSeK3IBMGVqHzcBGC4qzkbf5hQ==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>
<ds:X509Certificate>MIID7zCCAtegAwIBAgIBBDANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MDEwMTEzMjYwMFoXDTI5MDEwMTEzMjYwMFowgYkxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxCzAJBgNVBAcTAlJXMRAwDgYDVQQKEwdSU3dpdGNoMQ8wDQYDVQQLEwZSLU5E
            UFMxEzARBgNVBAMTClItTkRQUyBQR1cxJDAiBgkqhkiG9w0BCQEWFWluZm9zZWNAcnN3aXRjaC5j
            by5ydzCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBANxQK3d6/J1MneP5snT8UxeginaL
            ZdCHELfZlNnWYUO6KEH06CRMVzBFYdCk/e65v0YREaEsOZAHYvYAOsukz7r3jJWqD+POJJTdbeZ4
            MdceLO5Q42q9RZa68WXpl27Z2yFsmqmAV7cz/QcgoGzvmgmfsLkn0v/uQQNkc5RVv7iBAJp8JW8o
            bYthFekVN7o0Y39qgCiTGsBrGhzXtAzkumnxalC+SO7RUkrt1VVTN+pfFwyW48sGj/aI3AsSZkwR
            fRUWLzUwR5QC2/XWwcyw233qh21Hy7cniRMVBIC69vnAAoENzXM8NBQGPAetvUUnityATBlah83A
            RguKs5G3+YUCAwEAAaNdMFswDAYDVR0TAQH/BAIwADAdBgNVHQ4EFgQUmkiJWrn4Rb2XcqjdsYcQ
            Uvml/4wwHwYDVR0jBBgwFoAUED/a4yWl3w1SfYJmVdKsPof+wyIwCwYDVR0PBAQDAgeAMA0GCSqG
            SIb3DQEBCwUAA4IBAQANG3GbMsjX9I4dNe7YIyhv6YzeDIOgq07KdHm0cv9nFBQ0SpX4Zhx/7xRL
            OTuY+vjH68qUXp+cJ18D+LBOOBuO6CyTO8I/9E4ynHEmLP6WOBbok6Qpsq5qsTwgXjcBC1PI37oT
            ref0XpDUgBcMZcEXScwfD3g6cpxkx2qO4pSDYFm00zs+4/I0/ts9DQmEnza9+/kwAZkugTWV2cjd
            cMStohl4x5pui8IYkqTwyDch6D7Q6UbAVJUEkFJHaGFweP7OKW9Tsyqm/YjuYWqF1IT6lU63Uk+r
            IqLwfgtXjsn02d9Tjg1PXw3B2UdD3JyZmUU3UbEnBsiB1/80hFeU26AU</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns:Doc="urn:iso:std:iso:20022:tech:xsd:camt.004.001.08">
    <RtrAcct>
      <MsgHdr>
        <MsgId>9e0534a9-f595-4ad5-bdc7-f576dc081d75</MsgId>
      </MsgHdr>
      <RptOrErr>
        <AcctRpt>
          <AcctId>
            <Othr>
              <Id>000400078911122</Id>
            </Othr>
          </AcctId>
          <AcctOrErr>
            <Acct>
              <Ownr>
                <PstlAdr/>
                <Id>
```

```
                  <PrvtId/>
                </Id>
                <CtctDtls>
                  <Nm>Charlie Mike</Nm>
                  <MobNb>2507212345678</MobNb>
                  <EmailAdr>charlie.mike@test.com</EmailAdr>
                </CtctDtls>
              </Ownr>
              <Svcr>
                <FinInstnId>
                  <Othr>
                    <Id>040</Id>
                  </Othr>
                </FinInstnId>
              </Svcr>
            </Acct>
          </AcctOrErr>
        </AcctRpt>
      </RptOrErr>
    </RtrAcct>
  </Document>
</BusinessMessage>
```

pacs.008.001.08 Credit transfer

```
<?xml version="1.0"?>
<BusinessMessage>
  <AppHdr xmlns="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#996fca06-db08-41ab-835a-721578ba49d4">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>RADJV+HXE14zRuxjFibcyU5UOIYsV1a9p74W+DnErNc=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>cehRxP8BxyK5Xo+ozB3HDMQIlNBDLP5WAEo5sBLry4E=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>KeTI9ZiUtajyjO08YeojoZwNpDLQNugXTsuhwt5SlAg=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>
```

```
31.
    <ds:SignatureValue>tkf/dgPjOLjpqW0lCOgTEK8qK7PaytlzK3/ncCEpPb/GPY+0GRBhqL+T3+MM4dVAxd067si32Ppm
32.         knKH9gPJb5o5zahP1nkjIAFoTjvrqfKe0Jw99ScFzWsVG1yDBJiNlRyiBQbgyQAH5Ms7dFrZSOvD
33.         /1mKRKLu5+jjzlWtVz/0casJEUerCPQEGCgwlr8hZDiALEPAXfNzszXEUq2XQY9eqH2rrWNjxNnC
34.         N5e/EYynNRcjCyQeIMVur6jd6SzMzlW1C0TzfN/eeSKlZVdEy+MaMMZVh9Ovjhaiu04YCq/PbAKF
35.       8tjMAxzFO2SGj2npMqPQ7lBQAwyElKIKWHyV6w==</ds:SignatureValue>
36.       <ds:KeyInfo Id="996fca06-db08-41ab-835a-721578ba49d4">
37.         <ds:KeyValue>
38.           <ds:RSAKeyValue>
39.
    <ds:Modulus>uUFRZyRC6kM4HS5yS4tL8VhvnoWMxvu+yoCyiZXJEhcXqY0DY1hD2Dcy8NOOsprJ4dZlqxcqYZEq
40.               ElC1q1IHmuZk4BVIMWqglZMKfVsYmYOSB0OrT1Crlhm/1y25IqTmDKISa2itHghFP/VXK8bkWQao
41.               d6MYOnnEjNFwPUGF+TPEEu5cFS/LNyET4QpxhY9ZzOszLLWXjbxksEpqtvIjj+COj/xgPTwzWcwv
42.               MmJm4f3o5b3Ez5GMHZK7AV1vi4Dt3UlbraFUWXSjMMZ4b3Jbjg3qGvDemNyLbZyoQGTkbT//3DOa
43.               2YLYyd8ncHjotuMjY8ihLK2gA17S0p8Sho622Q==</ds:Modulus>
44.             <ds:Exponent>AQAB</ds:Exponent>
45.           </ds:RSAKeyValue>
46.         </ds:KeyValue>
47.         <ds:X509Data>
48.
    <ds:X509Certificate>MIID/zCCAuegAwIBAgIBBTANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
49.             BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
50.             MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
51.             LnJ3MB4XDTE5MTAwNzA4NTEwMFoXDTI0MTAwNzA4NTEwMFowgZwxCzAJBgNVBAYTAlJXMQ8wDQYD
52.             VQQIEwZLaWdhbGkxDzANBgNVBAcTBktpZ2FsaTEUMBIGA1UEChMLUlN3aXRjaCBMdGQxFjAUBgNV
53.             BAsTDUlUIERlcGFydG1lbnQxGjAYBgNVBAMTEUludGVncmF0aW9uIExheWVyMSEwHwYJKoZIhvcN
54.             AQkBFhJpbmZvQHJzd2l0Y2guY28ucncwggEiMA0GCSqGSIb3DQEBAQUAA4IBDwAwggEKAoIBAQC5
55.             QVFnJELqQzgdLnJLi0vxWG+ehYzG+77KgLKJlckSFxepjQNjWEPYNzLw046ymsnh1mWrFyphkSoS
56.             ULWrUgea5mTgFUgxaqCVkwp9WxiZg5IHQ6tPUKuWGb/XLbkipOYMohJraK0eCEU/9VcrxuRZBqh3
57.             oxg6ecSM0XA9QYX5M8QS7lwVL8s3IRPhCnGFj1nM6zMstZeNvGSwSmq28iOP4I6P/GA9PDNZzC8y
58.             Ymbh/ejlvcTPkYwdkrsBXW+LgO3dSVutoVRZdKMwxnhvcluODeoa8N6Y3IttnKhAZORtP//cM5rZ
59.             gtjJ3ydweOi24yNjyKEsraADXtLSnxKGjrbZAgMBAAGjWjBYMAkGA1UdEwQCMAAwHQYDVR0OBBYE
60.             FBfCLyY6cAjbHtZ+5sOgrE+jbR2JMB8GA1UdIwQYMBaAFBA/2uMlpd8NUn2CZlXSrD6H/sMiMAsG
61.             A1UdDwQEAwIHgDANBgkqhkiG9w0BAQsFAAOCAQEATOUOuX+8U0MmZeY2sGZ6yMsSFtk4WGBpldSp
62.             OJh6PJqt68LoUdzEgPeVqI9r/WobmQxet6J04ILrMbkXqAXWN6bQ8yHEk7U6YP0CZuT3ti9yfKxK
63.             hXKym6f0/zcNvYzoa5Mi0XCMoX5iPFLSoBWvT8o7pDoX/m+xMkXlQGUsVu9b+ILudaz5lYXg2+tT
64.             ol3fQWx5ccf/KeEEoTDthLWUOkLmwyTHHS1JDPc5tOMZvAY5epJbBwB6MeO6SF/5y+nmbW/O/iN9
65.             LKbtyZzKR5Li7c7+lvs61W3XezCuvgBzX6+R7QEH7RRL+fztfWdKp9cKEa62F9vudqkBbpxQMC88
66.             9Q==</ds:X509Certificate>
67.         </ds:X509Data>
68.       </ds:KeyInfo>
69.     </ds:Signature>
70.   </AppHdr>
71.   <Document xmlns="urn:iso:std:iso:20022:tech:xsd:pacs.008.001.08"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:pacs.008.001.08 pacs.008.001.08.xsd">
72.     <FIToFICstmrCdtTrf>
73.       <GrpHdr>
74.         <MsgId>RNDPS/4c0c3c56698f785dee7b2</MsgId>
75.         <CreDtTm>2019-10-16T11:30:53+02:00</CreDtTm>
76.         <NbOfTxs>1</NbOfTxs>
77.         <SttlmInf>
78.           <SttlmMtd>INDA</SttlmMtd>
79.         </SttlmInf>
80.         <InstgAgt>
81.           <FinInstnId>
82.             <Othr>
83.               <Id>040</Id>
84.             </Othr>
85.           </FinInstnId>
86.         </InstgAgt>
```

```
87.         <InstdAgt>
88.           <FinInstnId>
89.             <Othr>
90.               <Id>130</Id>
91.             </Othr>
92.           </FinInstnId>
93.         </InstdAgt>
94.       </GrpHdr>
95.       <CdtTrfTxInf>
96.         <PmtId>
97.           <InstrId>RNDPS/191010-FICT/RWF/130/04</InstrId>
98.           <EndToEndId>ABC/0404/2019-10-10</EndToEndId>
99.           <TxId>191010000004</TxId>
100.        </PmtId>
101.        <PmtTpInf>
102.          <CtgyPurp>
103.            <Cd>000</Cd>
104.          </CtgyPurp>
105.        </PmtTpInf>
106.        <IntrBkSttlmAmt Ccy="RWF">5000.00</IntrBkSttlmAmt>
107.        <IntrBkSttlmDt>2019-10-17</IntrBkSttlmDt>
108.        <ChrgBr>SHAR</ChrgBr>
109.        <InitgPty>
110.          <Nm>Bank of Kigali</Nm>
111.          <Id>
112.            <OrgId>
113.              <Othr>
114.                <Id>12</Id>
115.                <SchmeNm>
116.                  <Cd>CHAN</Cd>
117.                </SchmeNm>
118.              </Othr>
119.            </OrgId>
120.          </Id>
121.        </InitgPty>
122.        <Dbtr>
123.          <Nm>Mike Tango</Nm>
124.        </Dbtr>
125.        <DbtrAcct>
126.          <Id>
127.            <Othr>
128.              <Id>000400078911111</Id>
129.            </Othr>
130.          </Id>
131.        </DbtrAcct>
132.        <DbtrAgt>
133.          <FinInstnId>
134.            <Othr>
135.              <Id>040</Id>
136.            </Othr>
137.          </FinInstnId>
138.        </DbtrAgt>
139.        <CdtrAgt>
140.          <FinInstnId>
141.            <Othr>
142.              <Id>130</Id>
143.            </Othr>
144.          </FinInstnId>
145.        </CdtrAgt>
146.        <Cdtr>
147.          <Nm>Mike Tango</Nm>
```

```
        </Cdtr>
        <CdtrAcct>
          <Id>
            <Othr>
              <Id>000400078911122</Id>
            </Othr>
          </Id>
        </CdtrAcct>
        <Purp>
          <Cd>GDDS</Cd>
        </Purp>
        <RmtInf>
          <Ustrd>Testing pacs008 - clearing transaction</Ustrd>
          <Strd>
            <RfrdDocInf>
              <Tp>
                <CdOrPrtry>
                  <Cd>CINV</Cd>
                </CdOrPrtry>
              </Tp>
              <Nb>191010000004</Nb>
              <RltdDt>2019-10-16</RltdDt>
            </RfrdDocInf>
          </Strd>
        </RmtInf>
      </CdtTrfTxInf>
    </FIToFICstmrCdtTrf>
  </Document>
</BusinessMessage>
```

pacs.002.001.10 Payment Status Report

Pending

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<BusinessMessage>
  <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#1ad0aadf-4271-4af9-920b-813ec215ccf8">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>j45eqgOKkXu7eBfy0S7O7NET+agUnZW+EWrhN6QGuvY=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
```

```
          <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>FwKp0bTh5nYW9s1TJTAh8ZCp0/n/S9eP9tHsFOjBlg8=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>zLXi6ciA3/QRrqDLlPFdk4Pf4efTleV3Py5HUcuJ56PpUKUX6iw/hITpwniZC2Un6kgFaBbbBuvB
        x7a37EmGG8D9SD6y98kXMh7rV9lKs9G8atD42ELAeqpvqFnG3p38JgmqR3BCsxoexAzQwwlnG4sB
        iQk3yZBWY+58R6VQmKCLawe3WgJ8UMqm0Cjk9yOkt+xNj/7Kzuf2mgZxdUnQPFZss1drUqxZ9c/g
        XdR7XNn9/3+f4pFZWoGc/7LyVS9qnobwgLuEzu5zNGT/tLP3D8apPQ3n518+Vl1RJvRNC9LgFa92
      t2M3V69AA1crjy62cPZ8i43iUI4OIOP4Ev1RFQ==</ds:SignatureValue>
      <ds:KeyInfo Id="1ad0aadf-4271-4af9-920b-813ec215ccf8">
        <ds:KeyValue>
          <ds:RSAKeyValue>

<ds:Modulus>3FArd3r8nUyd4/mydPxTF6CKdotl0IcQt9mU2dZhQ7ooQfToJExXMEVh0KT97rm/RhERoSw5kAdi
              9gA6y6TPuveMlaoP484klN1t5ngx1x4s7lDjar1FlrrxZemXbtnbIWyaqYBXtzP9ByCgbO+aCZ+w
              uSfS/+5BA2RzlFW/uIEAmnwlbyhti2EV6RU3ujRjf2qAKJMawGsaHNe0DOS6afFqUL5I7tFSSu3V
              VVM36l8XDJbjywaP9ojcCxJmTBF9FRYvNTBHlALb9dbBzLDbfeqHbUfLtyeJExUEgLr2+cACgQ3N
              czw0FAY8B629RSeK3IBMGVqHzcBGC4qzkbf5hQ==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>

<ds:X509Certificate>MIID7zCCAtegAwIBAgIBBDANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
            BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
            MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
            LnJ3MB4XDTE5MDEwMTEzMjYwMFoXDTI5MDEwMTEzMjYwMFowgYkxCzAJBgNVBAYTAlJXMQ8wDQYD
            VQQIEwZLaWdhbGkxCzAJBgNVBAcTAlJXMRAwDgYDVQQKEwdSU3dpdGNoMQ8wDQYDVQQLEwZSLU5E
            UFMxEzARBgNVBAMTClItTkRQUyBQR1cxJDAiBgkqhkiG9w0BCQEWFWluZm9zZWNAcnN3aXRjaC5j
            by5ydzCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBANxQK3d6/J1MneP5snT8UxeginaL
            ZdCHELfZlNnWYUO6KEH06CRMVzBFYdCk/e65v0YREaEsOZAHYvYAOsukz7r3jJWqD+POJJTdbeZ4
            MdceLO5Q42q9RZa68WXpl27Z2yFsmqmAV7cz/QcgoGzvmgmfsLkn0v/uQQNkc5RVv7iBAJp8JW8o
            bYthFekVN7o0Y39qgCiTGsBrGhzXtAzkumnxalC+SO7RUkrt1VVTN+pfFwyW48sGj/aI3AsSZkwR
            fRUWLzUwR5QC2/XWwcyw233qh21Hy7cniRMVBIC69vnAAoENzXM8NBQGPAetvUUnityATBlah83A
            RguKs5G3+YUCAwEAAaNdMFswDAYDVR0TAQH/BAIwADAdBgNVHQ4EFgQUmkiJWrn4Rb2XcqjdsYcQ
            Uvml/4wwHwYDVR0jBBgwFoAUED/a4yWl3w1SfYJmVdKsPof+wyIwCwYDVR0PBAQDAgeAMA0GCSqG
            SIb3DQEBCwUAA4IBAQANG3GbMsjX9I4dNe7YIyhv6YzeDIOgq07KdHm0cv9nFBQ0SpX4Zhx/7xRL
            OTuY+vjH68qUXp+cJ18D+LBOOBuO6CyTO8I/9E4ynHEmLP6WOBbok6Qpsq5qsTwgXjcBC1PI37oT
            ref0XpDUgBcMZcEXScwfD3g6cpxkx2qO4pSDYFm00zs+4/I0/ts9DQmEnza9+/kwAZkugTWV2cjd
            cMStohl4x5pui8IYkqTwyDch6D7Q6UbAVJUEkFJHaGFweP7OKW9Tsyqm/YjuYWqF1IT6lU63Uk+r
            IqLwfgtXjsn02d9Tjg1PXw3B2UdD3JyZmUU3UbEnBsiB1/80hFeU26AU</ds:X509Certificate>
        </ds:X509Data>
      </ds:KeyInfo>
    </ds:Signature>
  </AppHdr>
  <Document xmlns:Doc="urn:iso:std:iso:20022:tech:xsd:pacs.002.001.10">
    <FIToFIPmtStsRpt>
      <GrpHdr>
        <MsgId>ad837d6f-8c4f-45bf-a4d0-9acc5761abb1</MsgId>
        <CreDtTm>2019-10-09T08:25:26.592Z</CreDtTm>
      </GrpHdr>
      <TxInfAndSts>
        <OrgnlInstrId>69</OrgnlInstrId>
        <OrgnlEndToEndId>ABC/1414/2019-10-09</OrgnlEndToEndId>
```

```
        <OrgnlTxId>BBBB/191009-CCT/130/14</OrgnlTxId>
        <TxSts>PDNG</TxSts>
      </TxInfAndSts>
    </FIToFIPmtStsRpt>
  </Document>
</BusinessMessage>
```

Reject

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<BusinessMessage>
  <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
    <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
      <ds:SignedInfo>
        <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
        <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256"/>
        <ds:Reference URI="#645a4ac2-f0eb-4491-8070-83d890f1caf2">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>6Symj9kxjsatMGU9v0Q+WfhHNGS4Q1T5dNFb9da6nYo=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference URI="">
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature"/>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
        </ds:Reference>
        <ds:Reference>
          <ds:Transforms>
            <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
          </ds:Transforms>
          <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
          <ds:DigestValue>ywB4SMNCq0aVj8Rzn11MoJdwVGDYUz6RwuWUP/GXjkE=</ds:DigestValue>
        </ds:Reference>
      </ds:SignedInfo>

<ds:SignatureValue>G+sic791AasETcn9WpxDu1qwZ9ENcCHwqS+0WAqDHzdc3RgUmgtjxGCJqkBfrlnTBA9WR2FnV2ep
        pklY1OtoPsl7SgaDng+JlSuzdC5/KpbmJeTJIFPR03O2b5VYxmVHQ4kE4yEt0K6aMGgfHusrojwI
        YyBV2mxlHwHB0TyNzOU2aCkYRR9U7D/Ye2CTOVdFf8UKsSmquONCyZ7M+5+giByae9VvrKT6R+9B
        FAtpkly/kNHBjtOAbwQQLpMeyzqIt/mRQ5wGZm5qBAYYP71j/rmraZULUpMSpypdZezUHY/EKC3z
      08RC6rCo6OIX6SpvyZdvtE/ANgql3t0FJBmjMg==</ds:SignatureValue>
      <ds:KeyInfo Id="645a4ac2-f0eb-4491-8070-83d890f1caf2">
        <ds:KeyValue>
          <ds:RSAKeyValue>

<ds:Modulus>3FArd3r8nUyd4/mydPxTF6CKdotl0IcQt9mU2dZhQ7ooQfToJExXMEVh0KT97rm/RhERoSw5kAdi
              9gA6y6TPuveMlaoP484klN1t5ngx1x4s7lDjar1FlrrxZemXbtnbIWyaqYBXtzP9ByCgbO+aCZ+w
              uSfS/+5BA2RzlFW/uIEAmnwlbyhti2EV6RU3ujRjf2qAKJMawGsaHNe0DOS6afFqUL5I7tFSSu3V
              VVM36l8XDJbjywaP9ojcCxJmTBF9FRYvNTBHlALb9dbBzLDbfeqHbUfLtyeJExUEgLr2+cACgQ3N
              czw0FAY8B629RSeK3IBMGVqHzcBGC4qzkbf5hQ==</ds:Modulus>
            <ds:Exponent>AQAB</ds:Exponent>
          </ds:RSAKeyValue>
        </ds:KeyValue>
        <ds:X509Data>
```

```
48.
    <ds:X509Certificate>MIID7zCCAtegAwIBAgIBBDANBgkqhkiG9w0BAQsFADCBjDELMAkGA1UEBhMCUlcxDzANBgNVBAgT
49.             BktpZ2FsaTELMAkGA1UEBxMCUlcxEDAOBgNVBAoTB1JTd2l0Y2gxDzANBgNVBAsTBlItTkRQUzEW
50.             MBQGA1UEAxMNUi1ORFBTIFNVQiBDQTEkMCIGCSqGSIb3DQEJARYVaW5mb3NlY0Byc3dpdGNoLmNv
51.             LnJ3MB4XDTE5MDEwMTEzMjYwMFoXDTI5MDEwMTEzMjYwMFowgYkxCzAJBgNVBAYTAlJXMQ8wDQYD
52.             VQQIEwZLaWdhbGkxCzAJBgNVBAcTAlJXMRAwDgYDVQQKEwdSU3dpdGNoMQ8wDQYDVQQLEwZSLU5E
53.             UFMxEzARBgNVBAMTClItTkRQUyBQR1cxJDAiBgkqhkiG9w0BCQEWFWluZm9zZWNAcnN3aXRjaC5j
54.             by5ydzCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBANxQK3d6/J1MneP5snT8UxeginaL
55.             ZdCHELfZlNnWYUO6KEH06CRMVzBFYdCk/e65v0YREaEsOZAHYvYAOsukz7r3jJWqD+POJJTdbeZ4
56.             MdceLO5Q42q9RZa68WXpl27Z2yFsmqmAV7cz/QcgoGzvmgmfsLkn0v/uQQNkc5RVv7iBAJp8JW8o
57.             bYthFekVN7o0Y39qgCiTGsBrGhzXtAzkumnxalC+SO7RUkrt1VVTN+pfFwyW48sGj/aI3AsSZkwR
58.             fRUWLzUwR5QC2/XWwcyw233qh21Hy7cniRMVBIC69vnAAoENzXM8NBQGPAetvUUnityATBlah83A
59.             RguKs5G3+YUCAwEAAaNdMFswDAYDVR0TAQH/BAIwADAdBgNVHQ4EFgQUmkiJWrn4Rb2XcqjdsYcQ
60.             Uvml/4wwHwYDVR0jBBgwFoAUED/a4yWl3w1SfYJmVdKsPof+wyIwCwYDVR0PBAQDAgeAMA0GCSqG
61.             SIb3DQEBCwUAA4IBAQANG3GbMsjX9I4dNe7YIyhv6YzeDIOgq07KdHm0cv9nFBQ0SpX4Zhx/7xRL
62.             OTuY+vjH68qUXp+cJ18D+LBOOBuO6CyTO8I/9E4ynHEmLP6WOBbok6Qpsq5qsTwgXjcBC1PI37oT
63.             ref0XpDUgBcMZcEXScwfD3g6cpxkx2qO4pSDYFm00zs+4/I0/ts9DQmEnza9+/kwAZkugTWV2cjd
64.             cMStohl4x5pui8IYkqTwyDch6D7Q6UbAVJUEkFJHaGFweP7OKW9Tsyqm/YjuYWqF1IT6lU63Uk+r
65.             IqLwfgtXjsn02d9Tjg1PXw3B2UdD3JyZmUU3UbEnBsiB1/80hFeU26AU</ds:X509Certificate>
66.         </ds:X509Data>
67.       </ds:KeyInfo>
68.     </ds:Signature>
69.   </AppHdr>
70.   <Document xmlns:Doc="urn:iso:std:iso:20022:tech:xsd:pacs.002.001.10">
71.     <FIToFIPmtStsRpt>
72.       <GrpHdr>
73.         <MsgId>ee39c54d-3a97-4a7c-b51e-4a564bea0ce5</MsgId>
74.         <CreDtTm>2019-10-09T07:26:15.097Z</CreDtTm>
75.       </GrpHdr>
76.       <TxInfAndSts>
77.         <StsId>RJCT</StsId>
78.         <OrgnlEndToEndId>ABC/1313/2019-06-12</OrgnlEndToEndId>
79.         <OrgnlTxId>BBBB/190612-CCT/130/13</OrgnlTxId>
80.       </TxInfAndSts>
81.     </FIToFIPmtStsRpt>
82.   </Document>
83. </BusinessMessage>
```

Pacs.007.001.10: Payment reversal

```
1.  <BusinessMessage>
2.      <AppHdr xmlns:Ah="urn:iso:std:iso:20022:tech:xsd:head.001.001.01">
3.          <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
4.              <ds:SignedInfo>
5.                  <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
6.                  <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-
    sha256"/>
7.                  <ds:Reference URI="#8a4eca16-45fe-4785-9694-63ed464cb241">
8.                      <ds:Transforms>
9.                          <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
10.                     </ds:Transforms>
11.                     <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
12.                     <ds:DigestValue>U5dx49RQKifsQUKEc9NPvjKBwbL+w7DKcHjGe/Dh3OM=</ds:DigestValue>
13.                 </ds:Reference>
14.                 <ds:Reference URI="">
15.                     <ds:Transforms>
16.                         <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-
    signature"/>
```

```
                        <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
                    </ds:Transforms>
                    <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
                    <ds:DigestValue>Z1DgKV/Vyf5zaYnJT5iiX4M5QrMaxRrfFFOr/e/9v7c=</ds:DigestValue>
                </ds:Reference>
                <ds:Reference>
                    <ds:Transforms>
                        <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>
                    </ds:Transforms>
                    <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
                    <ds:DigestValue>yNY0KL7tEECN7nSTsuZYZSwGZTRnB4dAw34Qcpswis8=</ds:DigestValue>
                </ds:Reference>
            </ds:SignedInfo>

    <ds:SignatureValue>QZ98OHwncqDr/QHgHbmoIRicpFe++yCRkkFFK+4eP36C0kvxy/bRUgJvcPwepPF+C+WKfQpA9mVr
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i5kXMKQRKg1/WTsYMdIM8c8IYunKK8HVGtpk/gWGc8JTxu/MNMct8qad6lxIeoBj7fcvqJA/oa6d
scdVWoE0RE/Hyb3DJ98/r3VlbKyG9z2jMOqRsV1LH32tHjirv9P4Qp2CsuvduECYXX/YrB+egWUz
NhdltfGbfTGmBM58FY2W4k6QKL3wRRkvfFjovA==</ds:SignatureValue>
            <ds:KeyInfo Id="8a4eca16-45fe-4785-9694-63ed464cb241">
                <ds:KeyValue>
                    <ds:RSAKeyValue>

    <ds:Modulus>zjTOYvyCwXJw1l1RJjeg1qg75bVzNmBSzRRkFqXlqulvLl9guBjjjSPi6a6MwFV3Iy2NGQ1yBiG1
zeL+UDURCUVo5kV3b6yvSfpTesBlKJesTZ+uuDi/lG9hjkPvhhzr9zrs5kbv8AH2JgKbOlzWPdDJ
uYztJ5ORpVp8ABMXeTvgBl+nH3+uc5UM+VuZBqxRu67jjBCI8JXaLab+mYhl8MY6XZoWf+YGCAec
9lUxlTDgvRly1mZqM4VVIi7tRbnX90ISPdrGKiEaip/mBvYHWDPGf5cgB7zLwzww9ihj2nkelJYW
dpF1OZIdAAlu9Cld8T1o0vbuIPUC/sLtYfkYJQ==</ds:Modulus>
                        <ds:Exponent>AQAB</ds:Exponent>
                    </ds:RSAKeyValue>
                </ds:KeyValue>
                <ds:X509Data>

    <ds:X509Certificate>MIIDgzCCAmugAwIBAgIEYxXh7DANBgkqhkiG9w0BAQsFADByMQswCQYDVQQGEwJSVTEPMA0GA1UE
CBMGTW9zY293MQ8wDQYDVQQHEwZNb3Njb3cxEzARBgNVBAoTCngtaW5mb3RlY2gxEzARBgNVBAsT
CngtaW5mb3RlY2gxFzAVBgNVBAMTDngtaW5mb3RlY2guY29tMB4XDTE5MDYwNjEwMTkxOVoXDTIw
MDUzMTEwMTkxOVowcjELMAkGA1UEBhMCUlUxDzANBgNVBAgTBk1vc2NvdzEPMA0GA1UEBxMGTW9z
Y293MRMwEQYDVQQKEwp4LWluZm90ZWNoMRMwEQYDVQQLEwp4LWluZm90ZWNoMRcwFQYDVQQDEw54
LWluZm90ZWNoLmNvbTCCASIwDQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAM40zmL8gsFycNZd
USY3oNaoO+W1czZgUs0UZBal5arpby5fYLgY440j4umujMBVdyMtjRkNcgYhtc3i/lA1EQlFaOZF
d2+sr0n6U3rAZSiXrE2frrg4v5RvYY5D74Yc6/c67OZG7/AB9iYCmzpc1j3QybmM7SeTkaVafAAT
F3k74AZfpx9/rnOVDPlbmQasUbuu44wQiPCV2i2m/pmIZfDGOl2aFn/mBggHnPZVMZUw4L0ZctZm
ajOFVSIu7UW51/dCEj3axiohGoqf5gb2B1gzxn+XIAe8y8M8MPYoY9p5HpSWFnaRdTmSHQAJbvQp
XfE9aNL27iD1Av7C7WH5GCUCAwEAAaMhMB8wHQYDVR0OBBYEFFhPwYCI/pEF99teE33ak2XzS1QE
MA0GCSqGSIb3DQEBCwUAA4IBAQBzNuML7jIWdm5rF+9dLkZ+mwuyv7NRWXUuREdeXwD91aLjfrda
MhjFmH15FxdyEPwOhgKf1bkbgbBYCz2qXa/eXBD3dOKYTT+BPSIcjrNtK9MvgYU7g3hKvLdognrb
/oqUcpAwiYVimcb6veImjLRnA6fkvMjJ92fZQUWduIebsZjmIZIuYNHrNeRBmpOlYDYwcrvQUrkj
1TGvWgzo5kvZJxqBS/ba9yiyS8RZz2PnnMML6crY8JGYrxx7stsyIbNCbx8g+/2YaoRIRKBzhJDS
MdG3ZDQVhVzQjBadAIEdsnHbvkXiEHL6taXgdkzg2Y0pSIhXSXpVAGabhmnhTmgB</ds:X509Certificate>
                </ds:X509Data>
            </ds:KeyInfo>
        </ds:Signature>
    </AppHdr>
    <Document xmlns:Doc="urn:iso:std:iso:20022:tech:xsd:pacs.007.001.10">
        <FIToFIPmtRvsl>
    <GrpHdr>
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      <CreDtTm>2015-07-06T10:35:00</CreDtTm>
      <NbOfTxs>1</NbOfTxs>
      <IntrBkSttlmDt>2015-07-06</IntrBkSttlmDt>
      <SttlmInf>
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      </SttlmInf>
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        </FinInstnId>
      </InstgAgt>
      <InstdAgt>
        <FinInstnId>
          <Othr><Id>ABABUS23</Id></Othr>
        </FinInstnId>
      </InstdAgt>
    </GrpHdr>
    <OrgnlGrpInf>
      <OrgnlMsgId>AAAA120628-123v</OrgnlMsgId>
      <OrgnlMsgNmId>pacs.008.001.08</OrgnlMsgNmId>
      <OrgnlCreDtTm>2015-06-28T10:05:00</OrgnlCreDtTm>
    </OrgnlGrpInf>
    <TxInf>
      <RvslId>AAAAUS29_REV2563</RvslId>
      <OrgnlEndToEndId>VA060327/0123</OrgnlEndToEndId>
      <OrgnlTxId>AAAAUS29/150628/ad458</OrgnlTxId>
      <RvsdIntrBkSttlmAmt Ccy="RWF">1025</RvsdIntrBkSttlmAmt>
      <RvsdInstdAmt Ccy="RWF">1025</RvsdInstdAmt>
      <RvslRsnInf>
        <Orgtr>
          <Id>
            <OrgId>
              <Othr><Id>AAAAUS29</Id></Othr>
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        </Orgtr>
        <Rsn>
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        </Rsn>
      </RvslRsnInf>
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        </MndtRltdInf>
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            </Othr>
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        </DbtrAcct>
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          </FinInstnId>
        </DbtrAgt>
      </OrgnlTxRef>
    </TxInf>
  </FIToFIPmtRvsl>
    </Document>
</BusinessMessage>
```

Pacs.028.001.03 Check payment status request

```
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pacs.028.001.03">
 <FIToFIPmtStsReq>
  <GrpHdr>
      <MsgId>2345676543</MsgId>
      <CreDtTm>2008-09-29T05:49:45</CreDtTm>
  </GrpHdr>
  <TxInf>
    <OrgnlEndToEndId>12166353600534458088834911447</OrgnlEndToEndId>
    <InstgAgt>
    <FinInstnId>
      <Othr><Id>1000</Id></Othr>
    </FinInstnId>
   </InstgAgt>
  </TxInf>
 </FIToFIPmtStsReq>
</Document>
```

Appendix 3: Lookup data bulk upload

The platform allows for participants to upload customer lookup information by bulk registration.

Bulk registration is based on a comma separated value (csv) file. For each file uploaded the participant can download a results file from the processor; the results file contains additional columns, status and description, which provide information about upload result.

It is recommended to use not more that 10 000 lines of records for upload bulk registration csv file

The primary key is national Id number with below fields being mandatory:

- ☐ document type
- ☐ document number

This means that all data with same national Id will be rejected, except MSISN, account number and bank code. For customer update user should send ISO 20022 standard message acmt.003.001.07 Account Modification Instruction.

In case of file upload errors participant can find status and description for each line of record in results file.

The upload file should be sent by SFTP channel

Bulk upload file fields (input file)

Field name	Description
DOCUMENT_TYPE	Type of entering document
DOCUMENT_NUMBER	Document number
ACCOUNT_NO	Account number
CURRENCY_CODE	Currency Code
BANK_CODE	Bank code according list bank codes
DEFAULT_ACCOUNT	Type of default account, if account is default enter “Y”, otherwise “N”.
FIRST_NAME	First Name
OTHER_NAME	Other Name
LAST_NAME	Last Name
MSISDN	Customer cellphone number
EMAIL	Customer email

Sample contents in upload file:

```
DOCUMENT_TYPE,DOCUMENT_NUMBER,ACCOUNT_NO,CURRENCY_CODE,BANK_CODE,DEFAULT_ACCOUNT,FIRST_NAME,OTHER_NAME,LAST_NAME,MSISDN,EMAIL
NATIONAL_ID,1199999999999991,0788888881,,078,Y,john,,smith,0788888881,
NATIONAL_ID,1199999999999992,0788888882,,078,Y,jane,,doe,0788888882,
NATIONAL_ID,1199999999999993,0788888883,,078,Y,james,,harper,0788888883,
```

Results file fields (output file)

Field name	Description
DOCUMENT_TYPE	Type of entering document
DOCUMENT_NUMBER	Document number
ACCOUNT_NO	Account number
BANK_CODE	Bank code according list bank codes
DEFAULT_ACCOUNT	Type of default account, if account is default enter “Y”, otherwise “N”.
NAME	Customer first name and last name
MSISDN	Customer cellphone number
EMAIL	Customer email
STATUS	Status of processed data
DESCRIPTION	Description about processed data

Sample contents in results file:

```
DOCUMENT_TYPE,DOCUMENT_NUMBER,ACCOUNT_NO,BANK_CODE,DEFAULT_ACCOUNT,NAME,MSISDN,EMAIL,STATUS,DESCRIPTION
NATIONAL_ID,123,4124121231231,040,Y,ANTON IVANOV,2543853453,A.IVANOV@IVA.COM,FAIL,Object already exist
NATIONAL_ID,123,4197897866431,040,N,ANTON IVANOV,254385233,A.IVANOV@IVANOV.COM,FAIL,Object already exist
NATIONAL_ID,0123,412435641231,012,Y,IVAN SAFRONOV,25433463433,I.SAFRONOV@SAFRONOV.COM,SUCCESS,record upload successful
```

Bulk upload file fields (with Proxy)

Field name	Description
DOCUMENT_TYPE	Type of entering document
DOCUMENT_NUMBER	Document number
ACCOUNT_NO	Account number
CURRENCY_CODE	Currency Code
BANK_CODE	Bank code according list bank codes
DEFAULT_ACCOUNT	Type of default account, if account is default enter “Y”, otherwise “N”.
FIRST_NAME	First Name
OTHER_NAME	Other Name
LAST_NAME	Last Name
MSISDN	Customer cellphone number
EMAIL	Customer email
NICKNAME	Proxy identification

Sample contents in upload file (with proxy) :

Appendix 4: Complete list of External Code Sets

Code	Name	Definition
AB01	AbortedClearingTimeout	Clearing process aborted due to timeout.
AB02	AbortedClearingFatalError	Clearing process aborted due to a fatal error.
AB03	AbortedSettlementTimeout	Settlement aborted due to timeout.
AB04	AbortedSettlementFatalError	Settlement process aborted due to a fatal error.
AB05	TimeoutCreditorAgent	Transaction stopped due to timeout at the Creditor Agent.
AB06	TimeoutInstructedAgent	Transaction stopped due to timeout at the Instructed Agent.
AB07	OfflineAgent	Agent of message is not online. Generic usage if it cannot be determined who exactly is not online.
AB08	OfflineCreditorAgent	Creditor Agent is not online.
AB09	ErrorCreditorAgent	Transaction stopped due to error at the Creditor Agent.
AB10	ErrorInstructedAgent	Transaction stopped due to error at the Instructed Agent.
AB11	TimeoutDebtorAgent	Transaction stopped due to timeout at the Debtor Agent.
AC01	IncorrectAccountNumber	Account number is invalid or missing.
AC02	InvalidDebtorAccountNumber	Debtor account number invalid or missing
AC03	InvalidCreditorAccountNumber	Creditor account number invalid or missing
AC04	ClosedAccountNumber	Account number specified has been closed on the bank of account's books.
AC05	ClosedDebtorAccountNumber	Debtor account number closed

AC06	BlockedAccount	Account specified is blocked, prohibiting posting of transactions against it.
AC07	ClosedCreditorAccountNumber	Creditor account number closed
AC08	InvalidBranchCode	Branch code is invalid or missing
AC09	InvalidAccountCurrency	Account currency is invalid or missing
AC10	InvalidDebtorAccountCurrency	Debtor account currency is invalid or missing
AC11	InvalidCreditorAccountCurrency	Creditor account currency is invalid or missing
AC12	InvalidAccountType	Account type missing or invalid. Generic usage if cannot specify between group and payment information levels
AC13	InvalidDebtorAccountType	Debtor account type missing or invalid
AC14	InvalidCreditorAccountType	Creditor account type missing or invalid
AC15	AccountDetailsChanged	The account details for the counterparty have changed.
AG01	TransactionForbidden	Transaction forbidden on this type of account (formerly NoAgreement)
AG02	InvalidBankOperationCode	Bank Operation code specified in the message is not valid for receiver
AG03	TransactionNotSupported	Transaction type not supported/authorized on this account
AG04	InvalidAgentCountry	Agent country code is missing or invalid. Generic usage if cannot specify between group and payment information levels.
AG05	InvalidDebtorAgentCountry	Debtor agent country code is missing or invalid
AG06	InvalidCreditorAgentCountry	Creditor agent country code is missing or invalid
AG07	UnsuccesfulDirectDebit	Debtor account cannot be debited for a generic reason. Code value may be used in general purposes and as a

		replacement for AM04 if debtor bank does not reveal its customer's insufficient funds for privacy reasons
AG08	InvalidAccessRights	Transaction failed due to invalid or missing user or access right
AG09	PaymentNotReceived	Original payment never received.
AG10	AgentSuspended	Agent of message is suspended from the Real Time Payment system. Generic usage if it cannot be determined who exactly is suspended.
AG11	CreditorAgentSuspended	Creditor Agent of message is suspended from the Real Time Payment system.
AG12	NotAllowedBookTransfer	Payment orders made by transferring funds from one account to another at the same financial institution (bank or payment institution) are not allowed.
AG13	ForbiddenReturnPayment	Returned payments derived from previously returned transactions are not allowed.
AGNT	IncorrectAgent	Agent in the payment workflow is incorrect
AM01	ZeroAmount	Specified message amount is equal to zero
AM02	NotAllowedAmount	Specific transaction/message amount is greater than allowed maximum
AM03	NotAllowedCurrency	Specified message amount is an non processable currency outside of existing agreement
AM04	InsufficientFunds	Amount of funds available to cover specified message amount is insufficient.
AM05	Duplication	Duplication
AM06	TooLowAmount	Specified transaction amount is less than agreed minimum.
AM07	BlockedAmount	Amount specified in message has been blocked by regulatory authorities.
AM09	WrongAmount	Amount received is not the amount agreed or expected

AM10	InvalidControlSum	Sum of instructed amounts does not equal the control sum.
AM11	InvalidTransactionCurrency	Transaction currency is invalid or missing
AM12	InvalidAmount	Amount is invalid or missing
AM13	AmountExceedsClearingSystemLimit	Transaction amount exceeds limits set by clearing system
AM14	AmountExceedsAgreedLimit	Transaction amount exceeds limits agreed between bank and client
AM15	AmountBelowClearingSystemMinimum	Transaction amount below minimum set by clearing system
AM16	InvalidGroupControlSum	Control Sum at the Group level is invalid
AM17	InvalidPaymentInfoControlSum	Control Sum at the Payment Information level is invalid
AM18	InvalidNumberOfTransactions	Number of transactions is invalid or missing. Generic usage if cannot specify between group and payment information levels.
AM19	InvalidGroupNumberOfTransactions	Number of transactions at the Group level is invalid or missing
AM20	InvalidPaymentInfoNumberOfTransactions	Number of transactions at the Payment Information level is invalid
AM21	LimitExceeded	Transaction amount exceeds limits agreed between bank and client.
AM22	ZeroAmountNotApplied	Unable to apply zero amount to designated account. For example, where the rules of a service allow the use of zero amount payments, however the back-office system is unable to apply the funds to the account. If the rules of a service prohibit the use of zero amount payments, then code AM01 is used to report the error condition.
AM23	AmountExceedsSettlementLimit	Transaction amount exceeds settlement limit.

BE01	InconsistenWithEndCustomer	Identification of end customer is not consistent with associated account number. (formerly CreditorConsistency).
BE04	MissingCreditorAddress	Specification of creditor's address, which is required for payment, is missing/not correct (formerly IncorrectCreditorAddress).
BE05	UnrecognisedInitiatingParty	Party who initiated the message is not recognised by the end customer
BE06	UnknownEndCustomer	End customer specified is not known at associated Sort/National Bank Code or does no longer exist in the books
BE07	MissingDebtorAddress	Specification of debtor's address, which is required for payment, is missing/not correct.
BE08	MissingDebtorName	Debtor name is missing
BE09	InvalidCountry	Country code is missing or Invalid. Generic usage if cannot specifically identify debtor or creditor
BE10	InvalidDebtorCountry	Debtor country code is missing or invalid
BE11	InvalidCreditorCountry	Creditor country code is missing or invalid
BE12	InvalidCountryOfResidence	Country code of residence is missing or Invalid. Generic usage if cannot specifically identify debtor or creditor
BE13	InvalidDebtorCountryOfResidence	Country code of debtor's residence is missing or Invalid
BE14	InvalidCreditorCountryOfResidence	Country code of creditor's residence is missing or Invalid
BE15	InvalidIdentificationCode	Identification code missing or invalid. Generic usage if cannot specifically identify debtor or creditor.
BE16	InvalidDebtorIdentificationCode	Debtor or Ultimate Debtor identification code missing or invalid

BE17	InvalidCreditorIdentificationCode	Creditor or Ultimate Creditor identification code missing or invalid
BE18	InvalidContactDetails	Contact details missing or invalid
BE19	InvalidChargeBearerCode	Charge bearer code for transaction type is invalid
BE20	InvalidNameLength	Name length exceeds local rules for payment type.
BE21	MissingName	Name missing or invalid. Generic usage if cannot specifically identify debtor or creditor.
BE22	MissingCreditorName	Creditor name is missing
CERI	CheckERI	Credit transfer is not tagged as an Extended Remittance Information (ERI) transaction but contains ERI.
CH03	RequestedExecutionDateOrRequestedCollectionDateTooFarInFuture	Value in Requested Execution Date or Requested Collection Date is too far in the future
CH04	RequestedExecutionDateOrRequestedCollectionDateTooFarInPast	Value in Requested Execution Date or Requested Collection Date is too far in the past
CH07	ElementIsNotToBeUsedAtB-andC-Level	Element is not to be used at B- and C-Level
CH09	MandateChangesNotAllowed	Mandate changes are not allowed
CH10	InformationOnMandateChangesMissing	Information on mandate changes are missing
CH11	CreditorIdentifierIncorrect	Value in Creditor Identifier is incorrect
CH12	CreditorIdentifierNotUnambiguouslyAtTransaction-Level	Creditor Identifier is ambiguous at Transaction Level
CH13	OriginalDebtorAccountIsNotToBeUsed	Original Debtor Account is not to be used
CH14	OriginalDebtorAgentIsNotToBeUsed	Original Debtor Agent is not to be used
CH15	ElementContentIncludesMoreThan140Characters	Content Remittance Information/Structured includes more than 140 characters
CH16	ElementContentFormallyIncorrect	Content is incorrect
CH17	ElementNotAdmitted	Element is not allowed

CH19	ValuesWillBeSetToNextTARGETday	Values in Interbank Settlement Date or Requested Collection Date will be set to the next TARGET day
CH20	DecimalPointsNotCompatibleWithCurrency	Number of decimal points not compatible with the currency
CH21	RequiredCompulsoryElementMissing	Mandatory element is missing
CH22	COREandB2BwithinOnemessage	SDD CORE and B2B not permitted within one message
CNOR	CreditorBankIsNotRegistered	Creditor bank is not registered under this BIC in the CSM
CURR	IncorrectCurrency	Currency of the payment is incorrect
CUST	RequestedByCustomer	Cancellation requested by the Debtor
DNOR	DebtorBankIsNotRegistered	Debtor bank is not registered under this BIC in the CSM
DS01	ElectronicSignaturesCorrect	The electronic signature(s) is/are correct
DS02	OrderCancelled	An authorized user has cancelled the order
DS03	OrderNotCancelled	The user's attempt to cancel the order was not successful
DS04	OrderRejected	The order was rejected by the bank side (for reasons concerning content)
DS05	OrderForwardedForPostprocessing	The order was correct and could be forwarded for postprocessing
DS06	TransferOrder	The order was transferred to VEU
DS07	ProcessingOK	All actions concerning the order could be done by the EBICS bank server
DS08	DecompressionError	The decompression of the file was not successful
DS09	DecryptionError	The decryption of the file was not successful
DS0A	DataSignRequested	Data signature is required.

DS0B	UnknownDataSignFormat	Data signature for the format is not available or invalid.
DS0C	SignerCertificateRevoked	The signer certificate is revoked.
DS0D	SignerCertificateNotValid	The signer certificate is not valid (revoked or not active).
DS0E	IncorrectSignerCertificate	The signer certificate is not present.
DS0F	SignerCertificationAuthoritySignerNotValid	The authority of the signer certification sending the certificate is unknown.
DS0G	NotAllowedPayment	Signer is not allowed to sign this operation type.
DS0H	NotAllowedAccount	Signer is not allowed to sign for this account.
DS0K	NotAllowedNumberOfTransaction	The number of transaction is over the number allowed for this signer.
DS10	Signer1CertificateRevoked	The certificate is revoked for the first signer.
DS11	Signer1CertificateNotValid	The certificate is not valid (revoked or not active) for the first signer.
DS12	IncorrectSigner1Certificate	The certificate is not present for the first signer.
DS13	SignerCertificationAuthoritySigner1NotValid	The authority of signer certification sending the certificate is unknown for the first signer.
DS14	UserDoesNotExist	The user is unknown on the server
DS15	IdenticalSignatureFound	The same signature has already been sent to the bank
DS16	PublicKeyVersionIncorrect	The public key version is not correct. This code is returned when a customer sends signature files to the financial institution after conversion from an older program version (old ES format) to a new

		program version (new ES format) without having carried out re-initialisation with regard to a public key change.
DS17	DifferentOrderDataInSignatures	Order data and signatures don't match
DS18	RepeatOrder	File cannot be tested, the complete order has to be repeated. This code is returned in the event of a malfunction during the signature check, e.g. not enough storage space.
DS19	ElectronicSignatureRightsInsufficient	The user's rights (concerning his signature) are insufficient to execute the order
DS20	Signer2CertificateRevoked	The certificate is revoked for the second signer.
DS21	Signer2CertificateNotValid	The certificate is not valid (revoked or not active) for the second signer.
DS22	IncorrectSigner2Certificate	The certificate is not present for the second signer.
DS23	SignerCertificationAuthoritySigner2NotValid	The authority of signer certification sending the certificate is unknown for the second signer.
DS24	WaitingTimeExpired	Waiting time expired due to incomplete order
DS25	OrderFileDeleted	The order file was deleted by the bank server (for multiple reasons)
DS26	UserSignedMultipleTimes	The same user has signed multiple times
DS27	UserNotYetActivated	The user is not yet activated (technically)
DT01	InvalidDate	Invalid date (eg, wrong or missing settlement date)
DT02	InvalidCreationDate	Invalid creation date and time in Group Header (eg, historic date)
DT03	InvalidNonProcessingDate	Invalid non bank processing date (eg, weekend or local public holiday)

DT04	FutureDateNotSupported	Future date not supported
DT05	InvalidCutOffDate	Associated message, payment information block or transaction was received after agreed processing cut-off date, i.e., date in the past.
DT06	ExecutionDateChanged	Execution Date has been modified in order for transaction to be processed
DU01	DuplicateMessageID	Message Identification is not unique.
DU02	DuplicatePaymentInformationID	Payment Information Block is not unique.
DU03	DuplicateTransaction	Transaction is not unique.
DU04	DuplicateEndToEndID	End To End ID is not unique.
DU05	DuplicateInstructionID	Instruction ID is not unique.
DUPL	DuplicatePayment	Payment is a duplicate of another payment
ED01	CorrespondentBankNotPossible	Correspondent bank not possible.
ED03	BalanceInfoRequest	Balance of payments complementary info is requested
ED05	SettlementFailed	Settlement of the transaction has failed.
ED06	SettlementSystemNotAvailable	Interbank settlement system not available.
ERIN	ERIOptionNotSupported	Extended Remittance Information (ERI) option is not supported.
FF01	InvalidFileFormat	File Format incomplete or invalid
FF02	SyntaxError	Syntax error reason is provided as narrative information in the additional reason information.
FF03	InvalidPaymentTypeInformation	Payment Type Information is missing or invalid. Generic usage if cannot specify Service Level or Local Instrument code
FF04	InvalidServiceLevelCode	Service Level code is missing or invalid
FF05	InvalidLocalInstrumentCode	Local Instrument code is missing or invalid
FF06	InvalidCategoryPurposeCode	Category Purpose code is missing or invalid

FF07	InvalidPurpose	Purpose is missing or invalid
FF08	InvalidEndToEndId	End to End Id missing or invalid
FF09	InvalidChequeNumber	Cheque number missing or invalid
FF10	BankSystemProcessingError	File or transaction cannot be processed due to technical issues at the bank side
FF11	ClearingRequestAborted	Clearing request rejected due it being subject to an abort operation.
G000	PaymentTransferredAndTracked	In an FI To FI Customer Credit Transfer: The Status Originator transferred the payment to the next Agent or to a Market Infrastructure. The payment transfer is tracked. No further updates will follow from the Status Originator. In a Financial Institution Credit Transfer with cover: The Status Originator performed the account booking and transferred the cover transaction to the next Reimbursement Agent or to a Market Infrastructure. The payment transfer is tracked. No further updates will follow from the Status Originator.
G001	PaymentTransferredAndNotTracked	In an FI To FI Customer Credit Transfer: The Status Originator transferred the payment to the next Agent or to a Market Infrastructure. The payment transfer is not tracked. No further updates will follow from the Status Originator. In a Financial Institution Credit Transfer with cover: The Status Originator performed the account booking and transferred the cover transaction to the next Reimbursement Agent or to a Market Infrastructure. The payment transfer is not tracked. No further updates will follow from the Status Originator.

G002	CreditDebitNotConfirmed	In a FIToFI Customer Credit Transfer: Credit to the creditor's account may not be confirmed same day. Update will follow from the Status Originator. In a Financial Institution Credit Transfer with cover: Debit/credit to nostro account may not be confirmed same day or Financial Institution Credit Transfer may not be transferred same day. Update will follow from the Status Originator.
G003	CreditPendingDocuments	In a FIToFI Customer Credit Transfer: Credit to creditor's account is pending receipt of required documents. The Status Originator has requested creditor to provide additional documentation. Update will follow from the Status Originator. In a Financial Institution Credit Transfer with cover: Status Originator has requested a previous Agent to provide additional information/correct information. Update will follow from the Status Originator.
G004	CreditPendingFunds	In a FIToFI Customer Credit Transfer: Credit to the creditor's account is pending, status Originator is waiting for funds provided via a cover. Update will follow from the Status Originator.
G005	DeliveredWithServiceLevel	Payment has been delivered to creditor agent with service level.
G006	DeliveredWIthoutServiceLevel	Payment has been delivered to creditor agent without service level.
ID01	CorrespondingOriginalFileStillNotSent	Signature file was sent to the bank but the corresponding original file has not been sent yet.
MD01	NoMandate	No Mandate
MD02	MissingMandatoryInformationInMandate	Mandate related information data required by the scheme is missing.
MD05	CollectionNotDue	Creditor or creditor's agent should not have collected the direct debit
MD06	RefundRequestByEndCustomer	Return of funds requested by end customer

MD07	EndCustomerDeceased	End customer is deceased.
MS02	NotSpecifiedReasonCustomerGenerated	Reason has not been specified by end customer
MS03	NotSpecifiedReasonAgentGenerated	Reason has not been specified by agent.
NARR	Narrative	Reason is provided as narrative information in the additional reason information.
NERI	NoERI	Credit transfer is tagged as an Extended Remittance Information (ERI) transaction but does not contain ERI.
RC01	BankIdentifierIncorrect	Bank identifier code specified in the message has an incorrect format (formerly IncorrectFormatForRoutingCode).
RC02	InvalidBankIdentifier	Bank identifier is invalid or missing. Generic usage if cannot specify between debit or credit account
RC03	InvalidDebtorBankIdentifier	Debtor bank identifier is invalid or missing
RC04	InvalidCreditorBankIdentifier	Creditor bank identifier is invalid or missing
RC05	InvalidBICIdentifier	BIC identifier is invalid or missing. Generic usage if cannot specify between debit or credit account.
RC06	InvalidDebtorBICIdentifier	Debtor BIC identifier is invalid or missing
RC07	InvalidCreditorBICIdentifier	Creditor BIC identifier is invalid or missing
RC08	InvalidClearingSystemMemberIdentifier	ClearingSystemMemberidentifier is invalid or missing. Generic usage if cannot specify between debit or credit account
RC09	InvalidDebtorClearingSystemMemberIdentifier	Debtor ClearingSystemMember identifier is invalid or missing
RC10	InvalidCreditorClearingSystemMemberIdentifier	Creditor ClearingSystemMember identifier is invalid or missing
RC11	InvalidIntermediaryAgent	Intermediary Agent is invalid or missing

RC12	MissingCreditorSchemeId	Creditor Scheme Id is invalid or missing
RCON	RMessageConflict	Conflict with R-Message
RECI	ReceiverCustomerInformation	Further information regarding the intended recipient.
RF01	NotUniqueTransactionReference	Transaction reference is not unique within the message.
RR01	MissingDebtorAccountOrIdentification	Specification of the debtor's account or unique identification needed for reasons of regulatory requirements is insufficient or missing
RR02	MissingDebtorNameOrAddress	Specification of the debtor's name and/or address needed for regulatory requirements is insufficient or missing.
RR03	MissingCreditorNameOrAddress	Specification of the creditor's name and/or address needed for regulatory requirements is insufficient or missing.
RR04	RegulatoryReason	Regulatory Reason
RR05	RegulatoryInformationInvalid	Regulatory or Central Bank Reporting information missing, incomplete or invalid.
RR06	TaxInformationInvalid	Tax information missing, incomplete or invalid.
RR07	RemittanceInformationInvalid	Remittance information structure does not comply with rules for payment type.
RR08	RemittanceInformationTruncated	Remittance information truncated to comply with rules for payment type.
RR09	InvalidStructuredCreditorReference	Structured creditor reference invalid or missing.
RR10	InvalidCharacterSet	Character set supplied not valid for the country and payment type.
RR11	InvalidDebtorAgentServiceID	Invalid or missing identification of a bank proprietary service.
RR12	InvalidPartyID	Invalid or missing identification required within a particular country or payment type.

S000	ValidRequestForCancellationAcknowledged	Request for Cancellation is acknowledged following validation.
S001	UETRFlaggedForCancellation	Unique End-to-end Transaction Reference (UETR) relating to a payment has been identified as being associated with a Request for Cancellation.
S002	NetworkStopOfUETR	Unique End-to-end Transaction Reference (UETR) relating to a payment has been prevent from traveling across a messaging network.
S003	RequestForCancellationForwarded	Request for Cancellation has been forwarded to the payment processing/last payment processing agent.
S004	RequestForCancellationDeliveryAcknowledgement	Request for Cancellation has been acknowledged as delivered to payment processing/last payment processing agent.
SL01	SpecificServiceOfferedByDebtorAgent	Due to specific service offered by the Debtor Agent.
SL02	SpecificServiceOfferedByCreditorAgent	Due to specific service offered by the Creditor Agent.
SL03	ServiceofClearingSystem	Due to a specific service offered by the clearing system.
SL11	CreditorNotOnWhitelistOfDebtor	Whitelisting service offered by the Debtor Agent; Debtor has not included the Creditor on its “Whitelist” (yet). In the Whitelist the Debtor may list all allowed Creditors to debit Debtor bank account.
SL12	CreditorOnBlacklistOfDebtor	Blacklisting service offered by the Debtor Agent; Debtor included the Creditor on his “Blacklist”. In the Blacklist the Debtor may list all Creditors not allowed to debit Debtor bank account.
SL13	MaximumNumberOfDirectDebitTransactionsExceeded	Due to Maximum allowed Direct Debit Transactions per period service offered by the Debtor Agent.
SL14	MaximumDirectDebitTransactionAmountExceeded	Due to Maximum allowed Direct Debit Transaction amount service offered by the Debtor Agent.
TA01	TransmissonAborted	The transmission of the file was not successful – it had to be aborted (for technical reasons)
TD01	NoDataAvailable	There is no data available (for download)

TD02	FileNonReadable	The file cannot be read (e.g. unknown format)
TD03	IncorrectFileStructure	The file format is incomplete or invalid
TK01	TokenInvalid	Token is invalid.
TK02	SenderTokenNotFound	Token used for the sender does not exist.
TK03	ReceiverTokenNotFound	Token used for the receiver does not exist.
TK09	TokenMissing	Token required for request is missing.
TKCM	TokenCounterpartyMismatch	Token found with counterparty mismatch.
TKSG	TokenSingleUse	Single Use Token already used.
TKSP	TokenSuspended	Token found with suspended status.
TKVE	TokenValueLimitExceeded	Token found with value limit rule violation.
TKXP	TokenExpired	Token expired.
TM01	InvalidCutOffTime	Associated message, payment information block, or transaction was received after agreed processing cut-off time.
TS01	TransmissionSuccessful	The (technical) transmission of the file was successful.
TS04	TransferToSignByHand	The order was transferred to pass by accompanying note signed by hand

Appendix 5: References

Topic	Reference link
Rwanda Interoperability blueprint	https://www.bnr.rw/browse-in/payment-systems/policies-and-procedures/
Business Application Header guide	https://www.iso20022.org/sites/default/files/documents/general/ISO_20022_BusinessApplicationHeader_MUG_v1_9.pdf
XML Signatures	https://www.w3.org/TR/xmldsig-core1/
ISO20022 Payment messages	https://www.iso20022.org/payments_dashboard.page
ISO20022 Business Application Header	https://www.iso20022.org/bah.page
XSD Files (Message definitions)	https://www.iso20022.org/catalogue-messages/iso-20022-messages-archive
ISO 20022 External codesets	https://www.iso20022.org/catalogue-messages/additional-content-messages/external-code-sets