

MobileMart Fulcrum Integration



Welcome to the MobileMart Fulcrum Integration

www.mobilemart.co.za

Introduction

Fulcrum is MobileMart's new, innovative VAS platform that is focused on secure, fast, functional, efficient and reliable delivery of VAS products and services to our customers, guaranteeing up-time of 98%.

Fulcrum is designed and developed with our customer's needs in mind by sourcing VAS products and services from multiple suppliers ensuring the widest product range.

Our products and services are available to our customers through a single API integration reducing your technology costs and improving your speed to market.

API Integration Overview

- MobileMart Fulcrum uses Swagger as a front-end tool to represent the API.
- Any authenticated Merchant can perform various transactions per VAS (Value Added Service) type.

Getting Started

- Each Merchant will be issued with a unique Merchant Client Id and Client Secret, this will be provided via email.
- The email will be shared with one person dedicated to the integration.
- Once the Merchant is authenticated on the MobileMart Fulcrum API, the API can then be accessed.

Pre-requisites that will be done as part of the Merchant Onboarding

- A Merchant account needs to be loaded with funds or a credit limit needs to be set to process transactions.
- Products should be exposed to the Merchant to process transactions.
- MobileMart will configure credit and/or cash balance alerts for the merchant.
- The Balance Report and Low Balance Email Notifications will be configured per Merchant.
- The Fulcrum Rate Limit should be discussed with the Merchant/MobileMart.

Information required from each Merchant

- Merchants are to provide email addresses for the alerts.
 - Multiple email addresses can be added.

Secure Authentication

- Client credentials (Client ID and Client Secret) are used to authenticate the Merchant via the MobileMart Fulcrum API.
- The authentication token is valid for 2 hours.
- Re-authentication is required when a Merchant's authentication token expires.

Environments

- [Fulcrum Swagger Conformance Environment](#)
- The link to the Fulcrum Production Environment will be provided after all testing protocols have been concluded on the test environment.

Fulcrum Support

Please follow the links for the support process and to log a support ticket:

- [Log a Ticket](#)
- [Fulcrum Support Process](#)

API Compliance Tests

- [Compliance Test Pack - Variable Pinless Airtime](#)
- [Compliance Test Pack - Variable Pinned Airtime](#)
- [Compliance Test Pack - Fixed Pinless Airtime & Data](#)
- [Compliance Test Pack - Fixed Pinned Airtime & Data](#)

- [Compliance Test Pack - Pinned Vouchers](#)
- [Compliance Test Pack - Bill Payments](#)
- [Compliance Test Pack - Prepaid Utilities](#)

Swagger Layout

- The API layout will follow VAS Types with different requests and responses.
- Information that can be found in the Swagger documentation:
 - VAS Type Tag Descriptions
 - Endpoint Descriptions
 - Response and Requests Schema Field Value Descriptions
 - Endpoints and Response Codes per Endpoints

Airtime	This API is for processing Pinned and Pinless Airtime transactions and reprinting.
Data	This API is for processing Pinned and Pinless Data transactions and reprinting.
Voucher	This API is for processing Pinned Voucher transactions and reprinting.
Bill Payment	This API is for processing Bill Payment transactions and prevent a Bill Payment product and reprinting.
Prepaid Utility	This API is for processing Utility transactions, prevent a Utility product and reprinting a Utility transaction and reprinting.

GET Products Endpoint

- All the MobileMart products are available through the GET products endpoint for each VAS Type.
- Use the unique merchantProductId from the GET products endpoint in the request to purchase a product.

Swagger API Release Notes

- [Fulcrum Swagger API Release Notes](#)

Error Codes & Reasons

- For the HTTP Status Codes in the 400-499 range please refer to the below error codes:

Error Code	Error Message	Possible Error Code Reasons
1000	ProductDoesNotExist	<ul style="list-style-type: none"> MerchantProductId provided in the request is not found on the Fulcrum API.
1001	AmountInvalid	<ul style="list-style-type: none"> The amount on the request is outside of the minimum and maximum values. The product is a fixed amount but an amount value is added to the request.
1002	CannotSourceProduct	<ul style="list-style-type: none"> If a Provider request has been initiated, and Fulcrum cannot source the product. This error can occur with a valid request payload.
1003	TransactionDoesNotExist	<ul style="list-style-type: none"> Fulcrum TransactionId cannot be found. Can be returned on reprints and reversals.
1004	UpstreamProviderError	<ul style="list-style-type: none"> An upstream Provider error.
1005	PlatformError	<ul style="list-style-type: none"> Internal Fulcrum error. This is an internal system error. Notify MobileMart of this error for us to resolve the issue.
1006	UserNotAuthenticated	<ul style="list-style-type: none"> The merchant is not Authenticated.
1007	ReversalsNotAllowed	<ul style="list-style-type: none"> Reversals are not allowed on pinless products, reprints, or on a previous reversal for the same TransactionId.
1008	MerchantCreditLimitReached	<ul style="list-style-type: none"> The Merchant has reached their credit limit.
1009	MerchantNotFound	<ul style="list-style-type: none"> The Merchant cannot be validated on the Fulcrum API.

		<ul style="list-style-type: none"> Merchant is either suspended, or Merchant cannot be found.
1010	MerchantError	<ul style="list-style-type: none"> When a new Merchant has not been set up on Fulcrum initially.
1011	ProductNotAvailable	<ul style="list-style-type: none"> Fulcrum API cannot find MerchantProductId. The Merchant does not have access to that product.
1012	ReprintNotAllowed	<ul style="list-style-type: none"> Cannot reprint a failed transaction. Cannot reprint a reversed transaction. Cannot reprint a utility pre-transaction.
1013	MobileNumberInvalid	<ul style="list-style-type: none"> The mobile number provided is not valid.
1014	AccountNumberInvalid	<ul style="list-style-type: none"> The account number provided is not valid.
1015	MobileNetworkOperatorError	<ul style="list-style-type: none"> Mobile Network Operator error. This error is received from the Mobile Network Operator.
1016	ConsumerAccountError	<ul style="list-style-type: none"> There is a problem with the Consumer's Account. The account/meter number can be blocked, not exist or be inactive.
1017	InvalidMeterNumber	<ul style="list-style-type: none"> The meter number is invalid with all the Providers. The meter number is not within the accepted character limit. Not less than 4, not more than 13 characters.
1018	ContentCreatorInvalid	<ul style="list-style-type: none"> Filtering on the incorrect content creator in any get products endpoint.

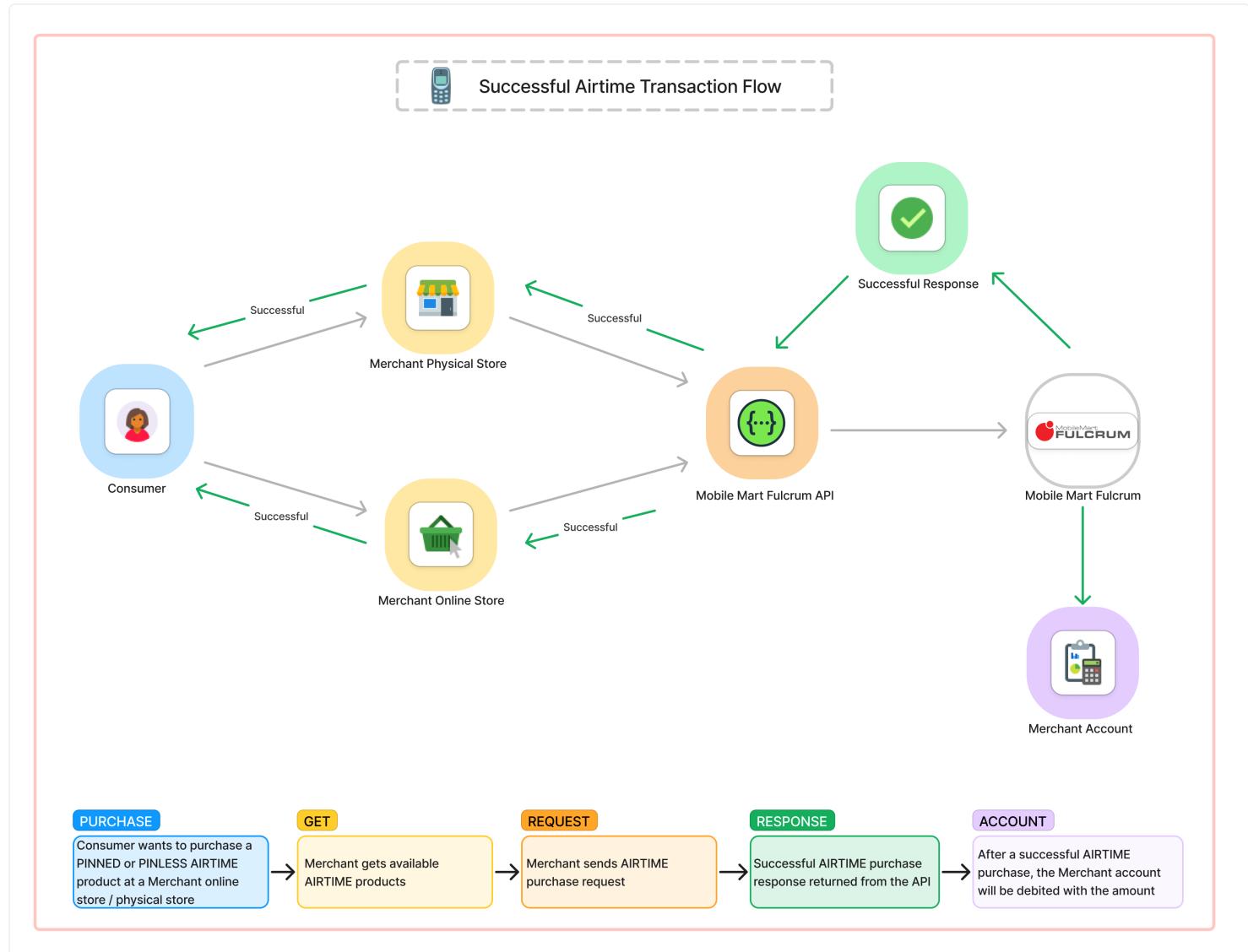
1019	PurchaseNotAllowed	<ul style="list-style-type: none"> If a Utility prevent transaction failed and the failed prevent TransactionId is used to attempt a purchase.
1020	ElectricityKeyChange	<ul style="list-style-type: none"> TID Rollover Key Change required for meter number. The consumer must contact their prepaid meter service provider for key change tokens and more information regarding the TID Rollover. www.tidrollover.com Notification sent on 22 August 2023.
1021	TenderPanError	<ul style="list-style-type: none"> TenderPAN validation failed because the length of 10 digits is incorrect. It could also fail if the TenderType and TenderPAN combination is not valid.
1022	MerchantCashLimitReached	<ul style="list-style-type: none"> The Merchant has reached their cash limit.
1023	RicaError	<ul style="list-style-type: none"> RICA Error. This error is received from the RICA provider.
1024	TransactionInProgress	<ul style="list-style-type: none"> The current transaction is in progress. Please try reprint this transaction at a later stage. You may need to reprint it up to 15 minutes later.
1100	UnknownError	<ul style="list-style-type: none"> Internal Fulcrum error. This is an internal system error. Notify MobileMart of this error for us to resolve the issue.
1102	DeadlineExceeded	<ul style="list-style-type: none"> Internal Deadline Exceeded.

		<ul style="list-style-type: none"> This typically means that we aborted the transaction because we exceeded the timeout required by the merchant.
1103	OperationCancelled	<ul style="list-style-type: none"> Transaction Cancelled.

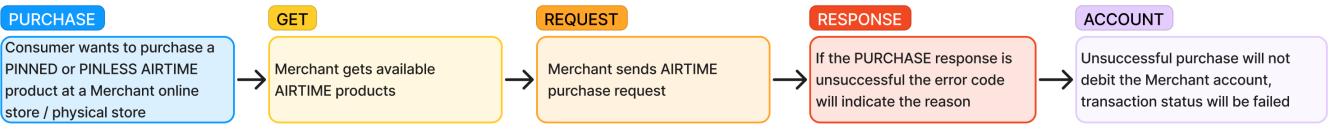
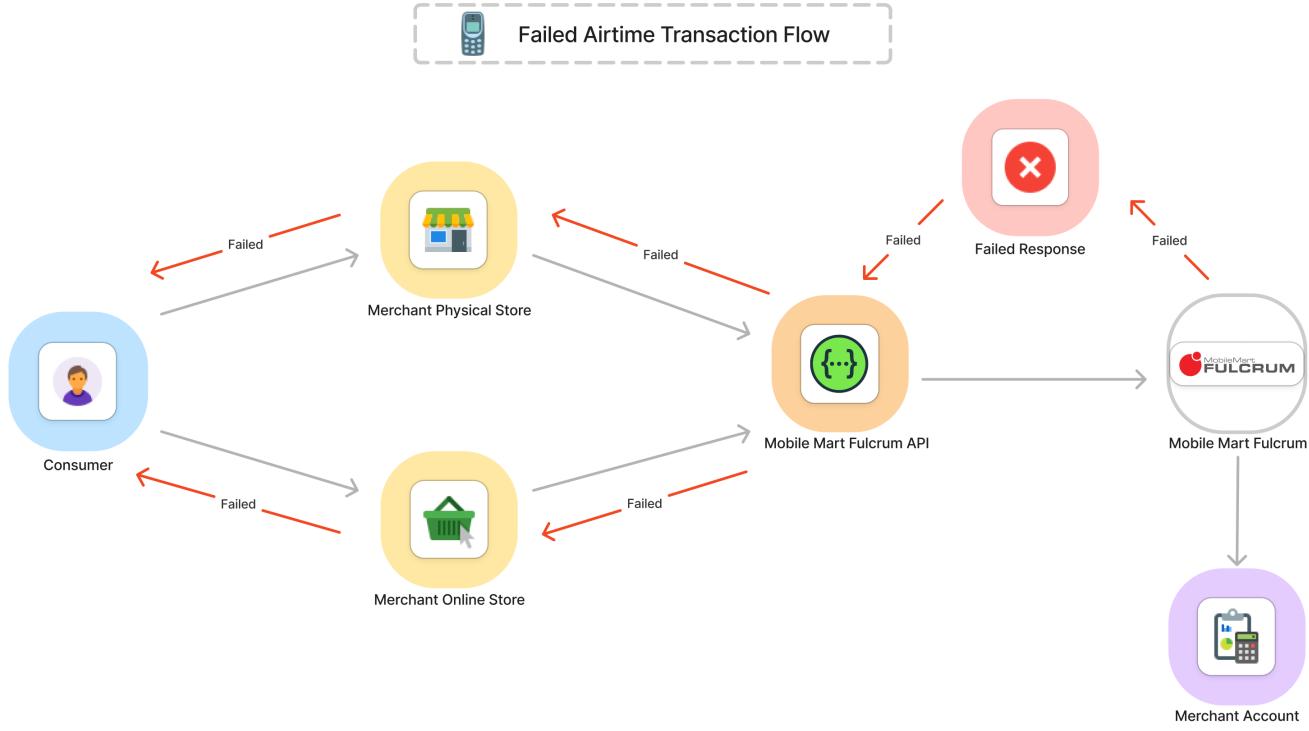
Transaction Flow Diagrams per VAS Type

Airtme

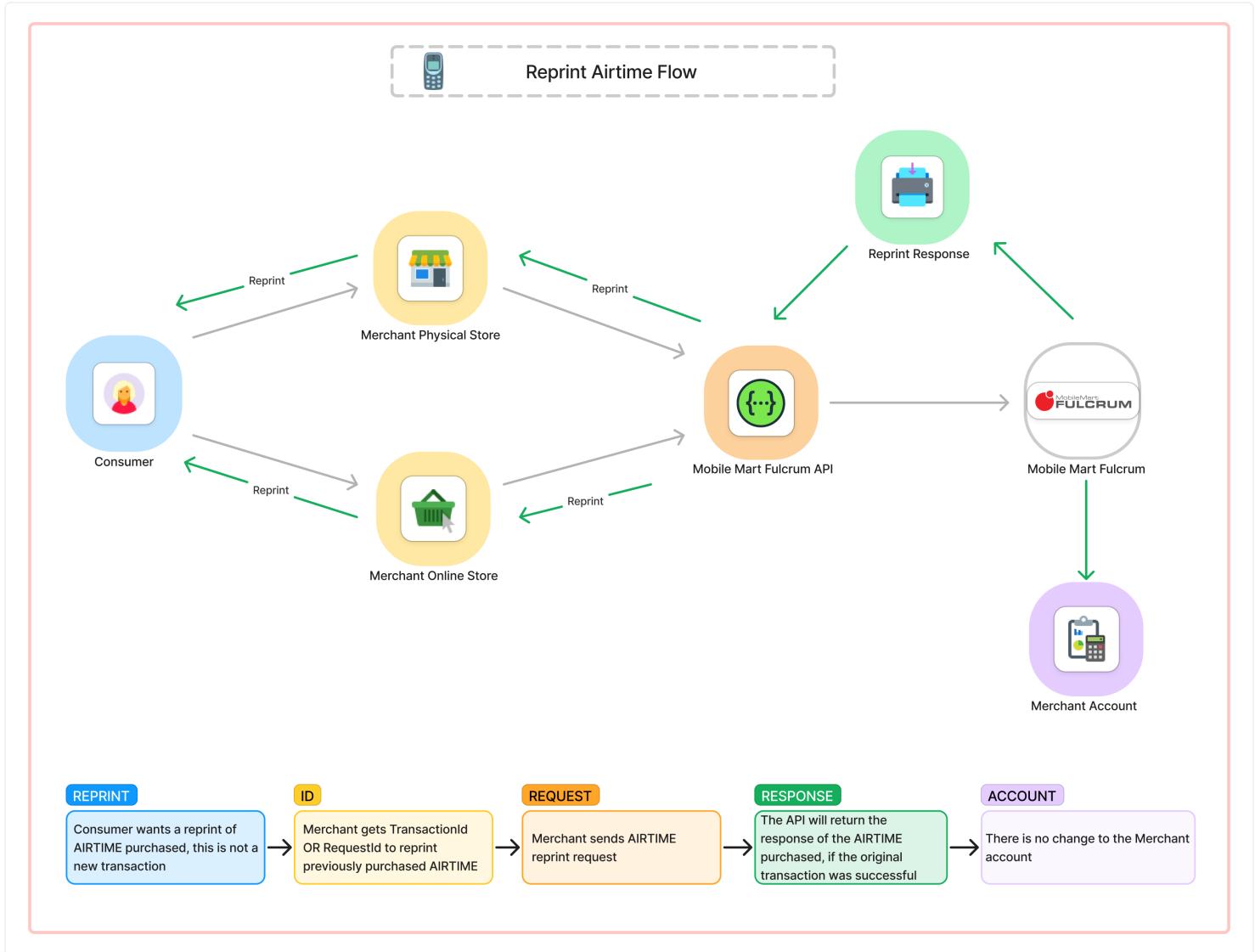
Successful Airtime Transaction Flow



Failed Airtime Transaction Flow

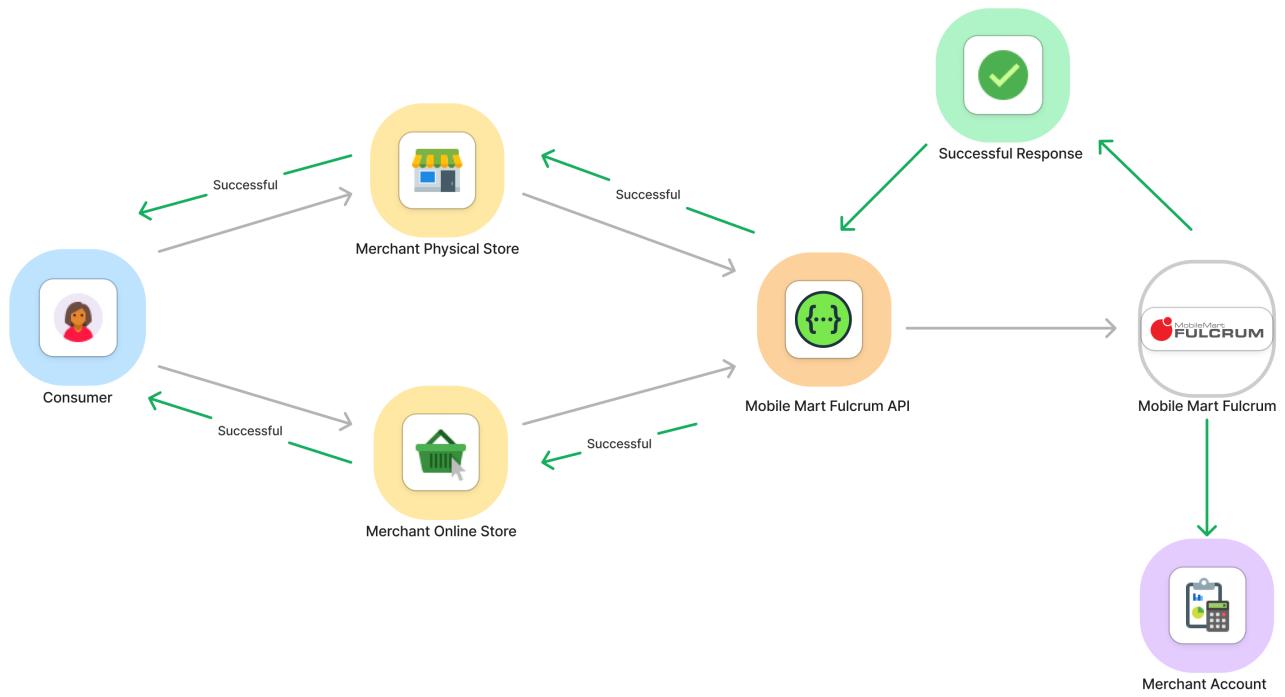


Reprint Airtime Flow

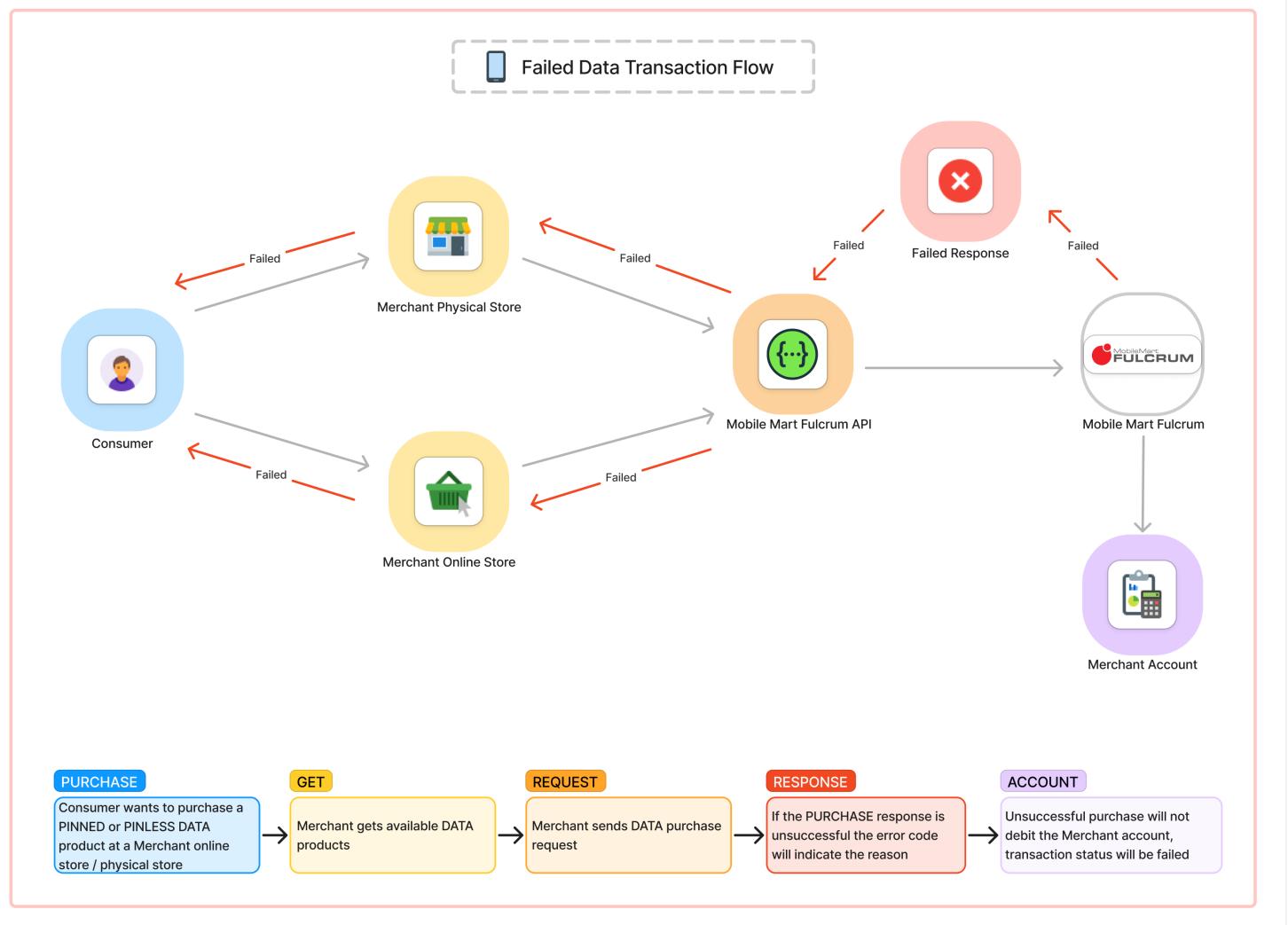


Data

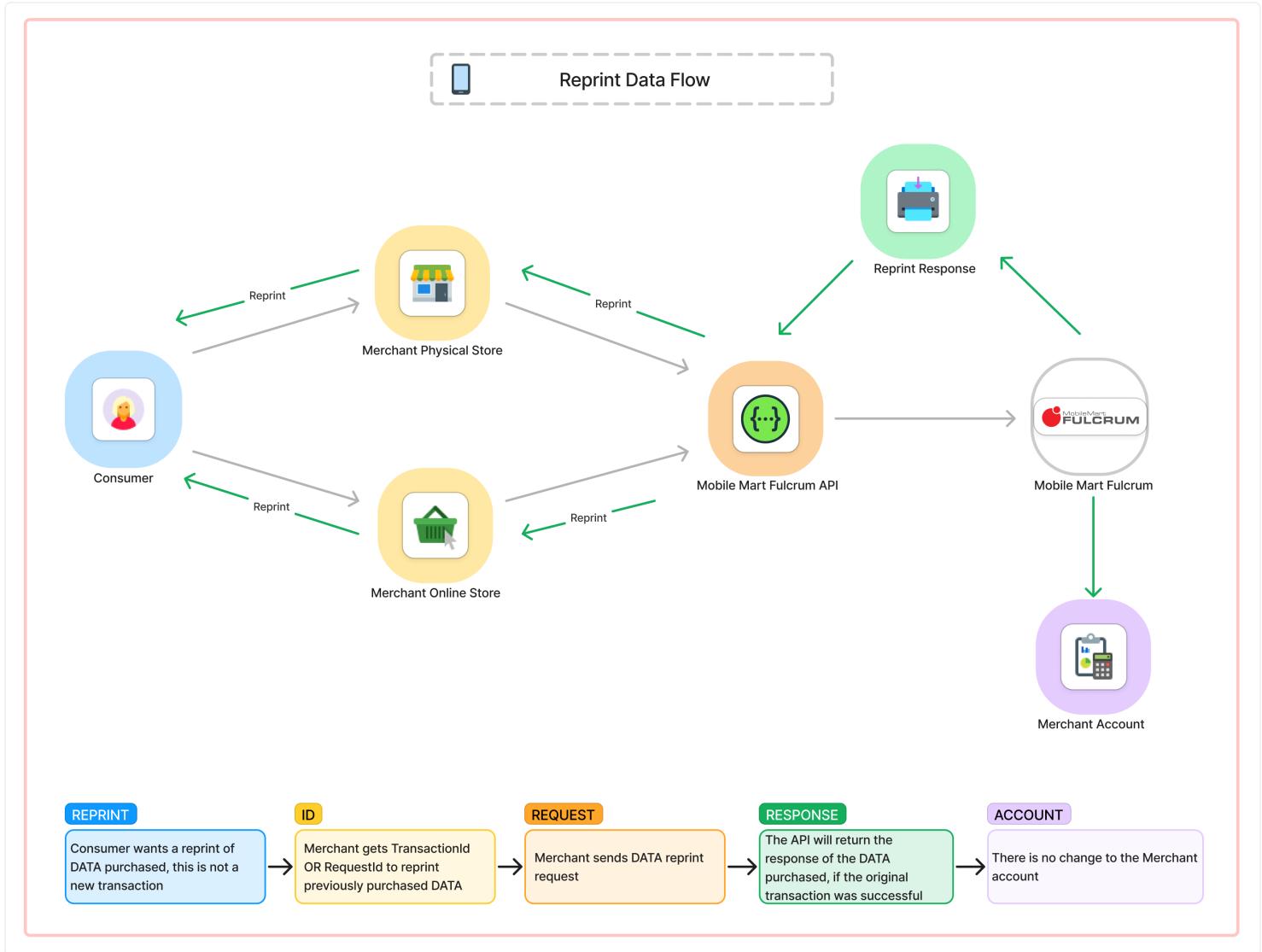
Successful Data Transaction Flow



Failed Data Transaction Flow

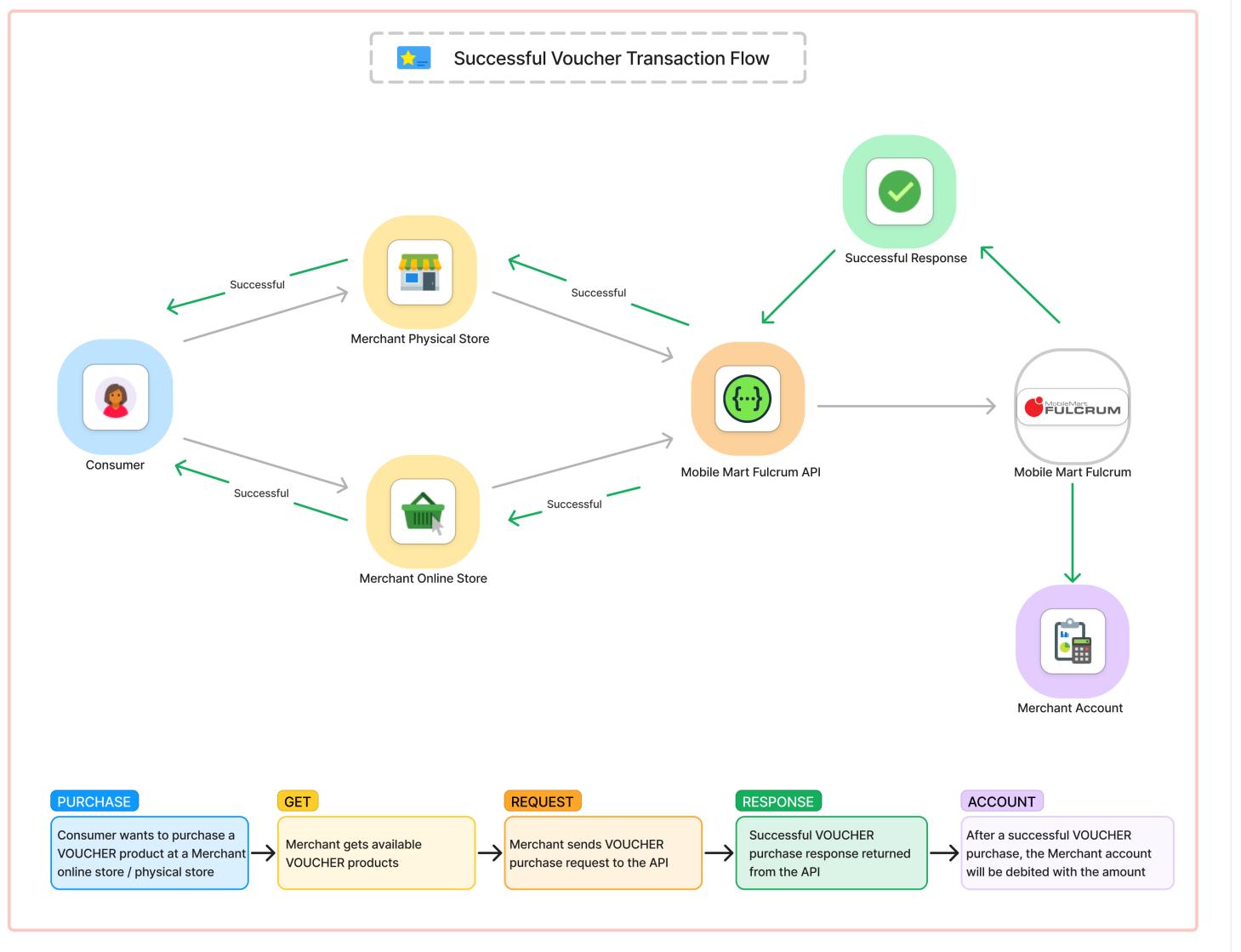


Reprint Data Flow

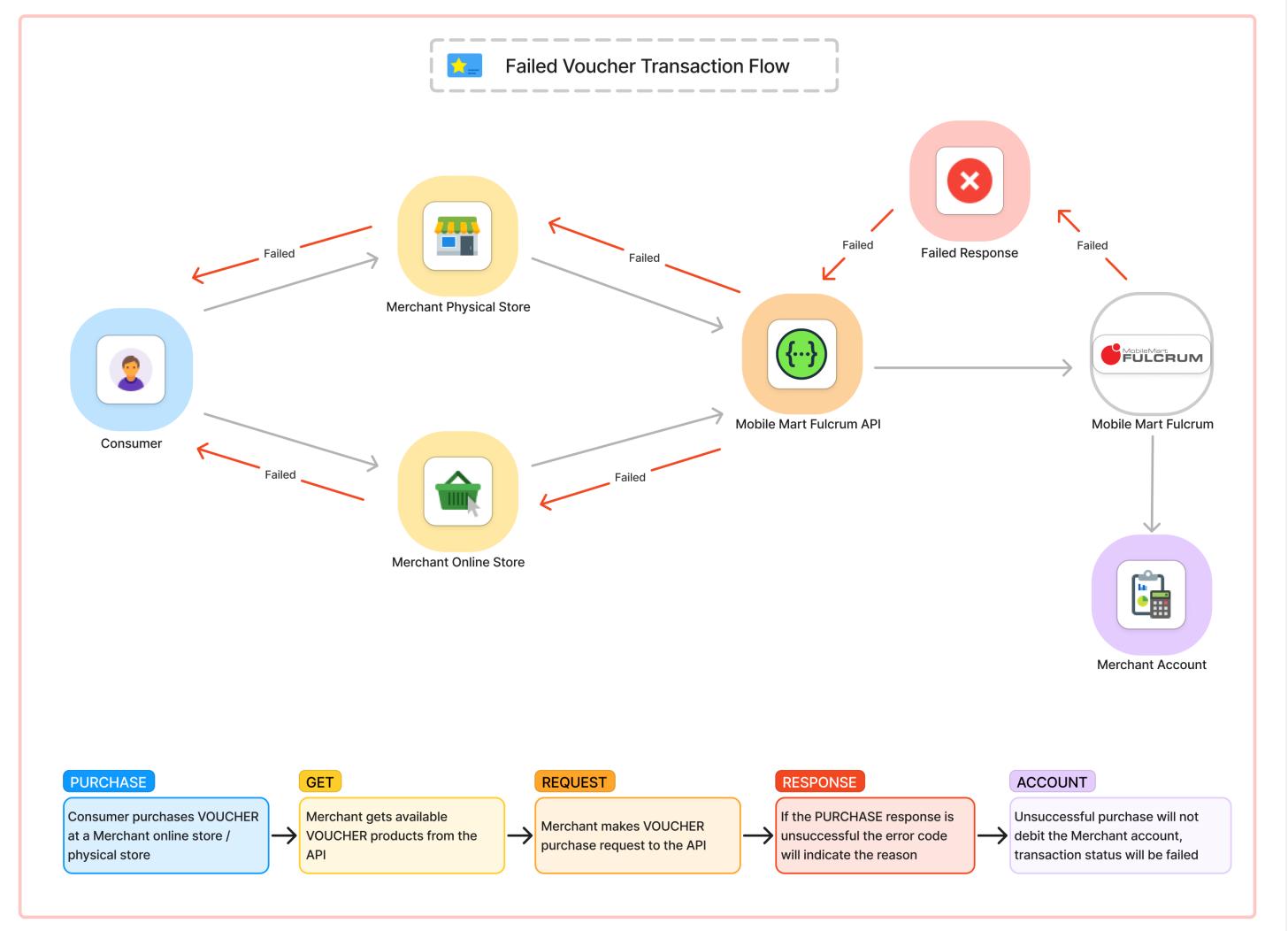


Voucher

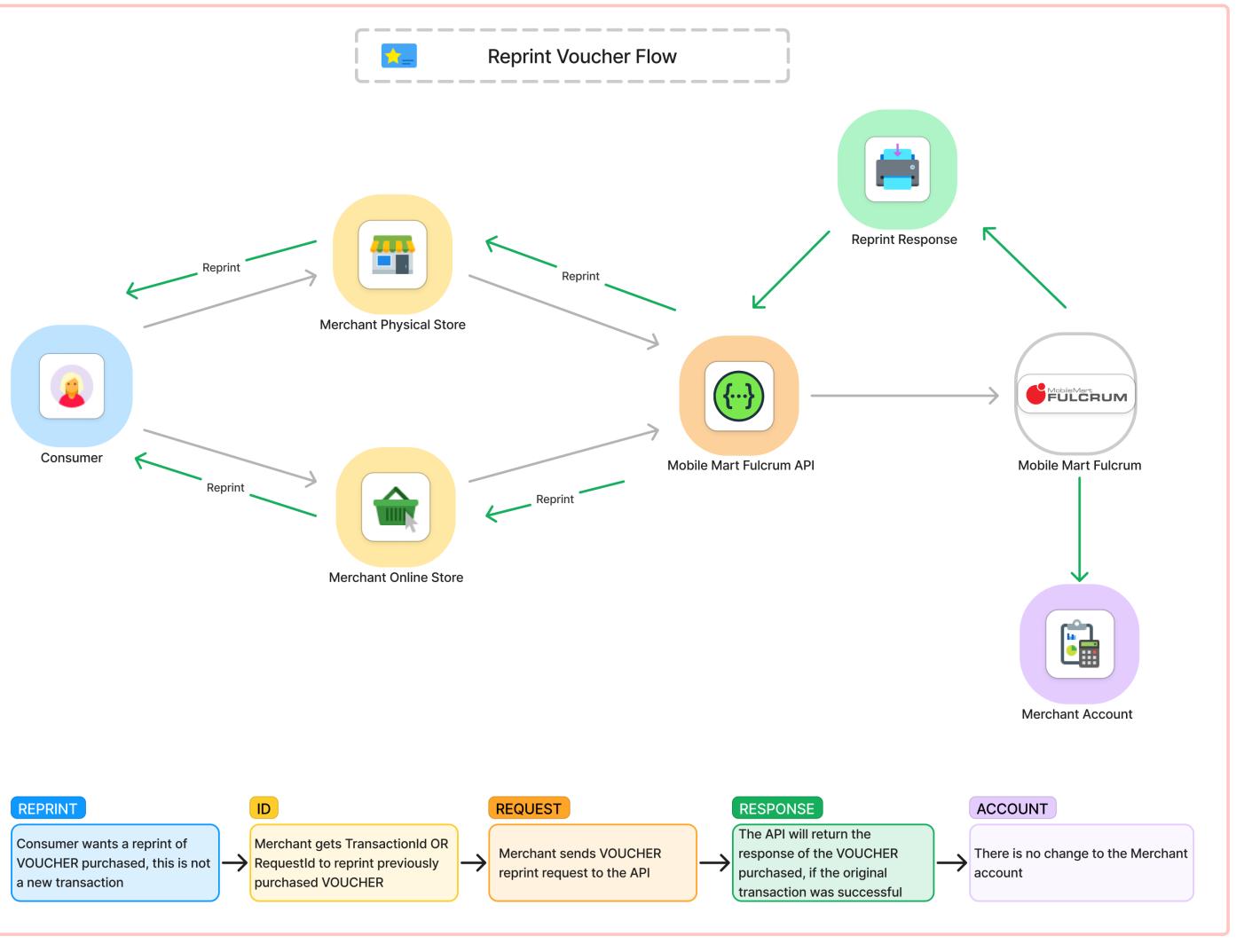
Successful Voucher Transaction Flow



Failed Voucher Transaction Flow

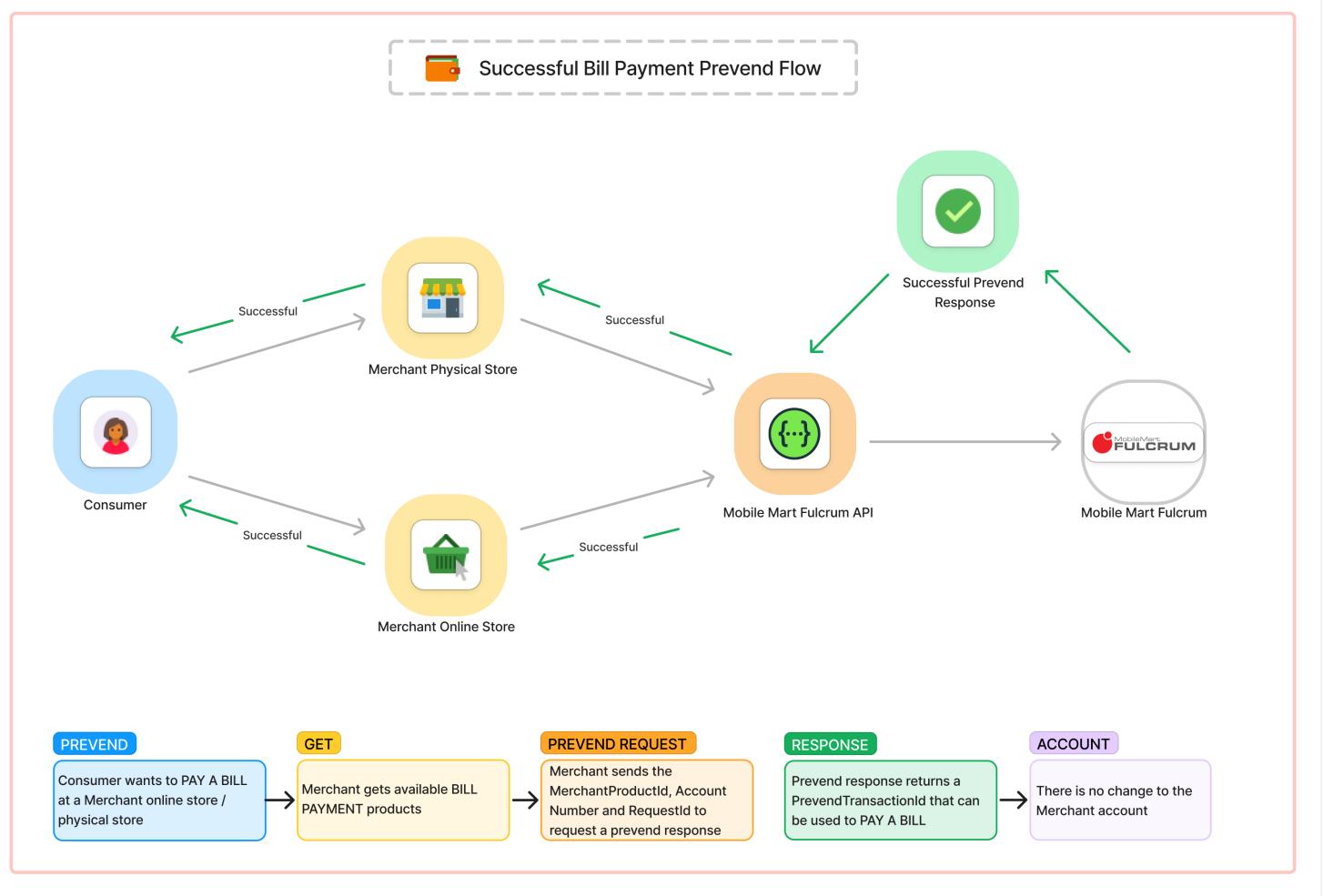


Reprint Voucher Flow

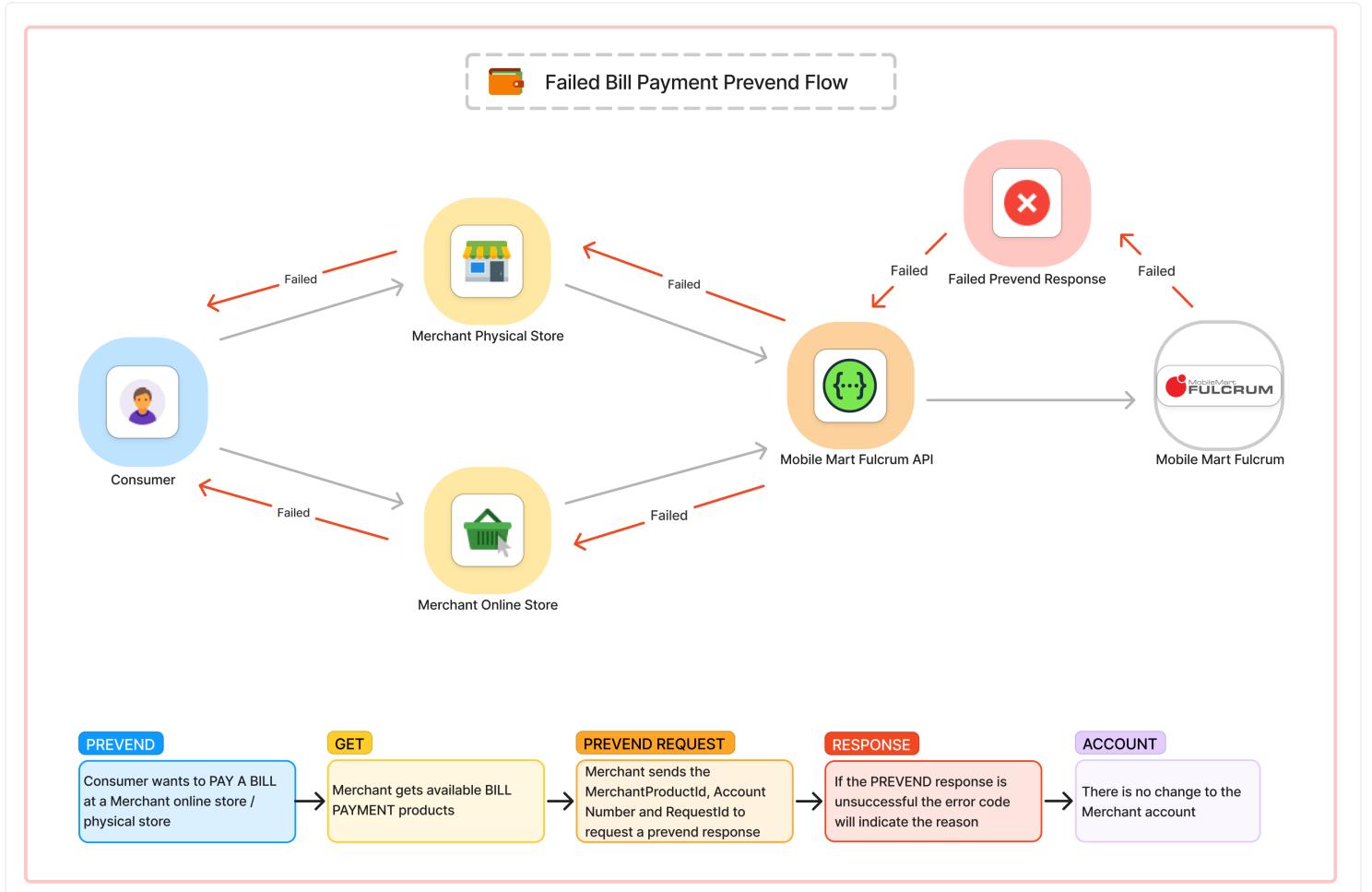


Bill Payment

Successful Pre vend Bill Payment Flow

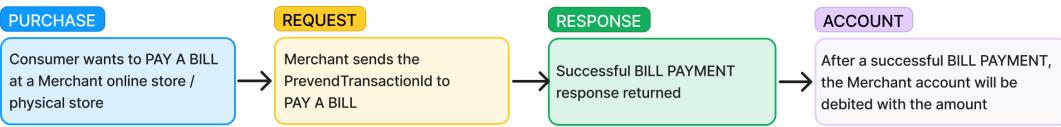
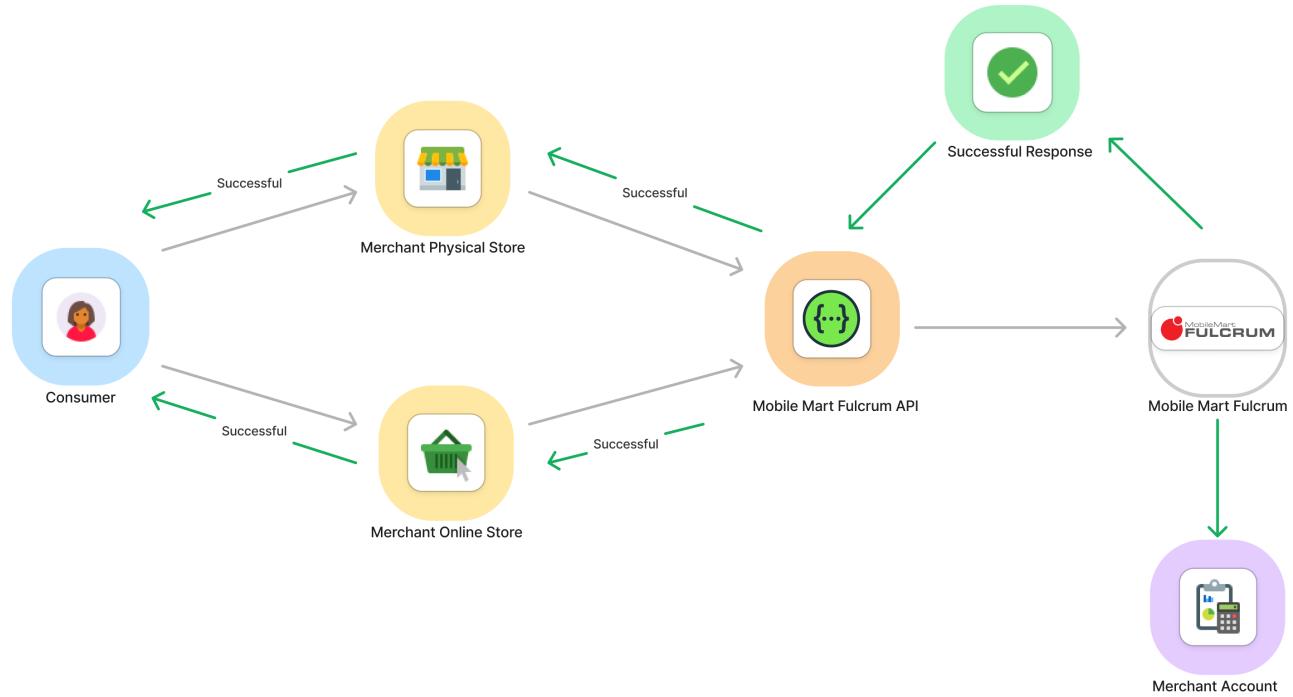


Failed Prevend Bill Payment Flow

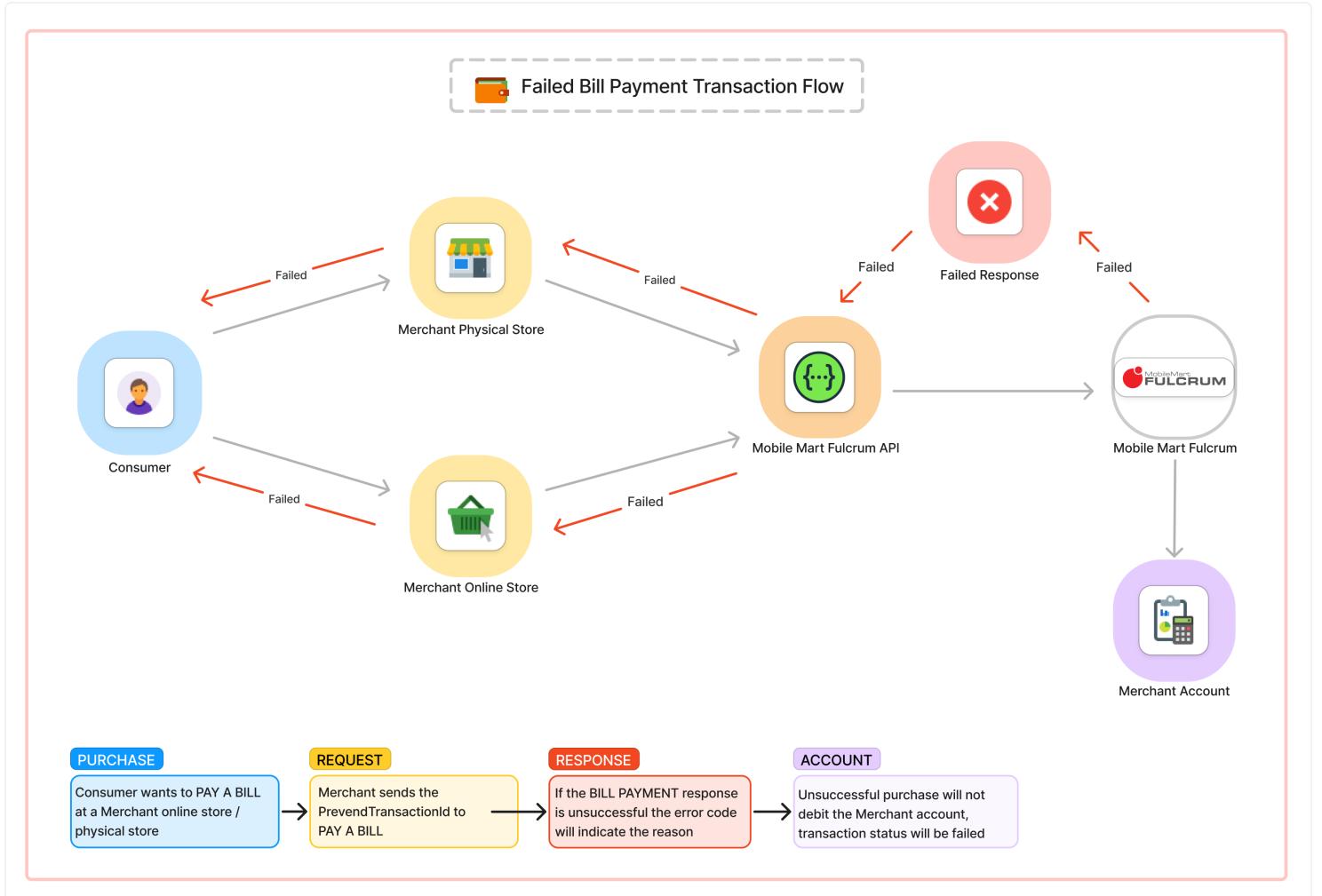


Successful Bill Payment Transaction Flow

 Successful Bill Payment Transaction Flow



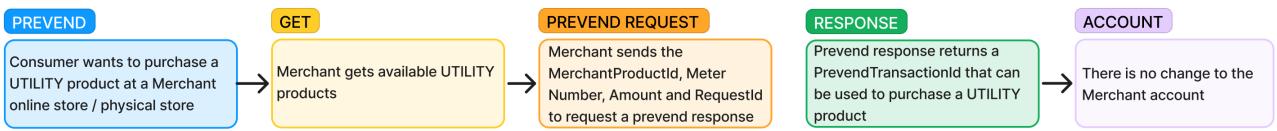
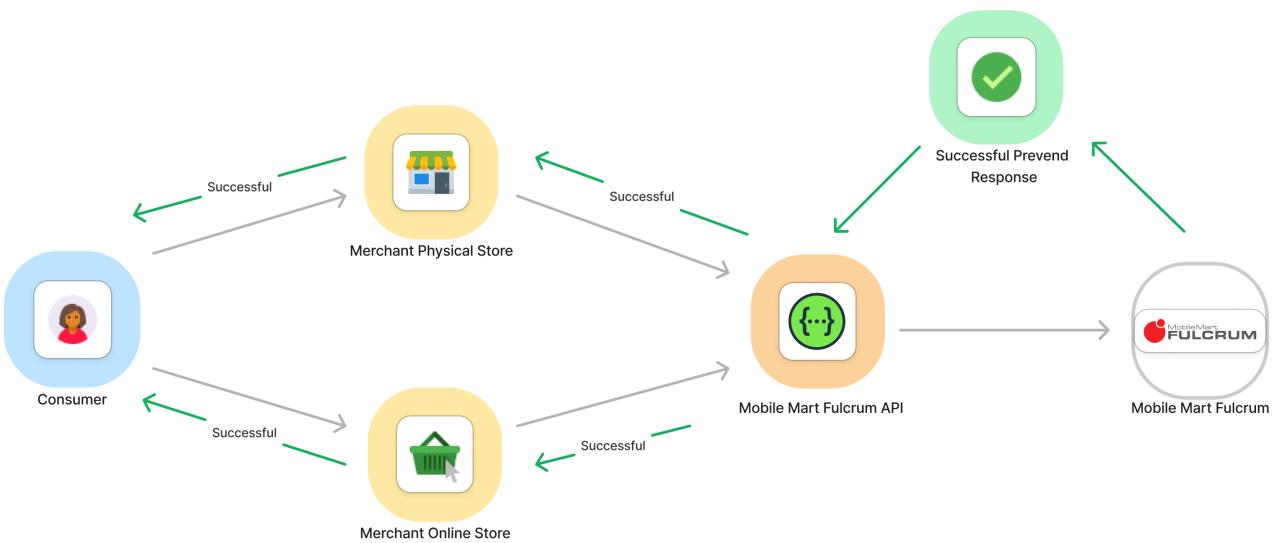
Failed Bill Payment Transaction Flow



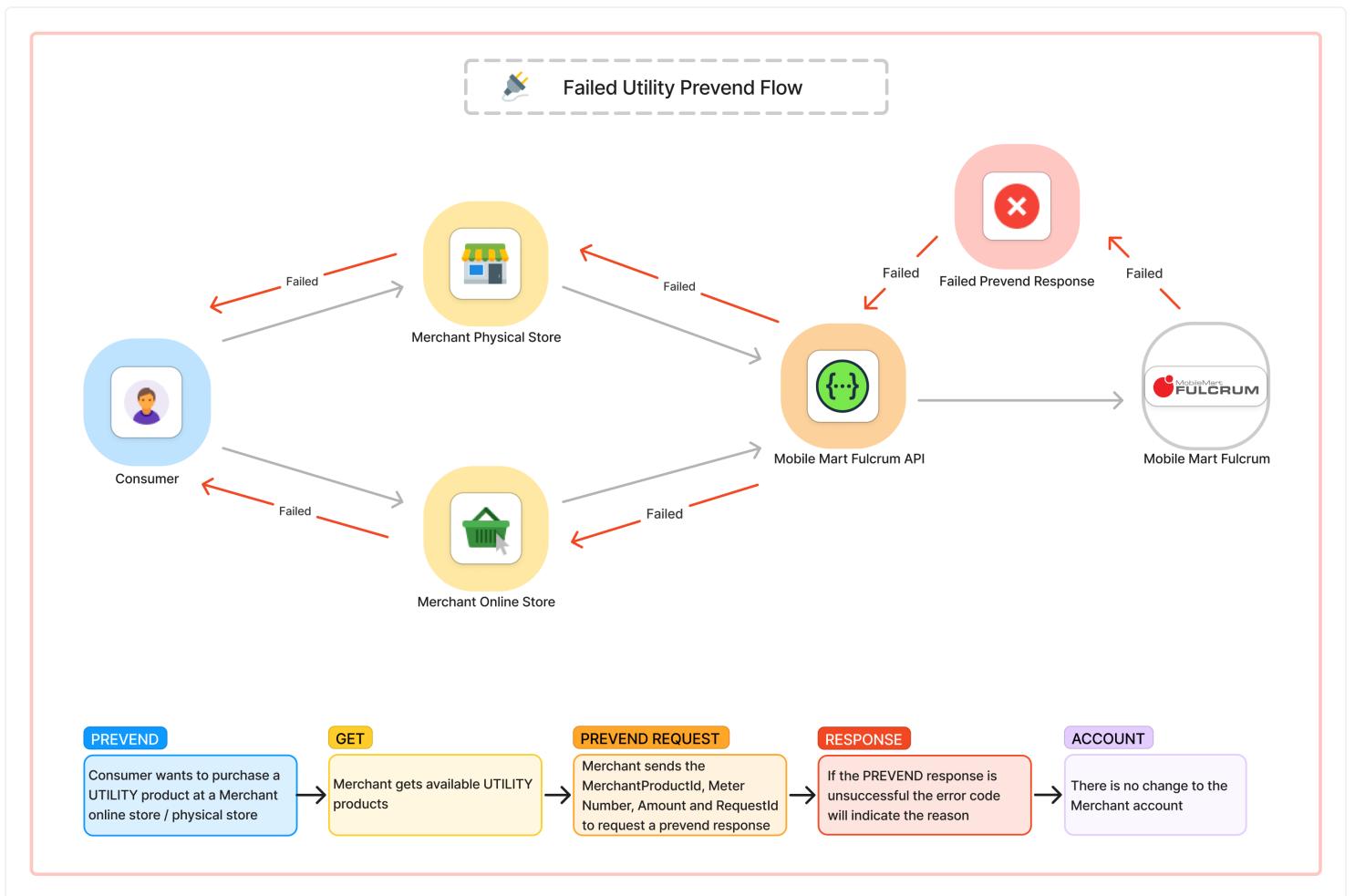
Prepaid Utility

Successful Pre vend Prepaid Utility Flow

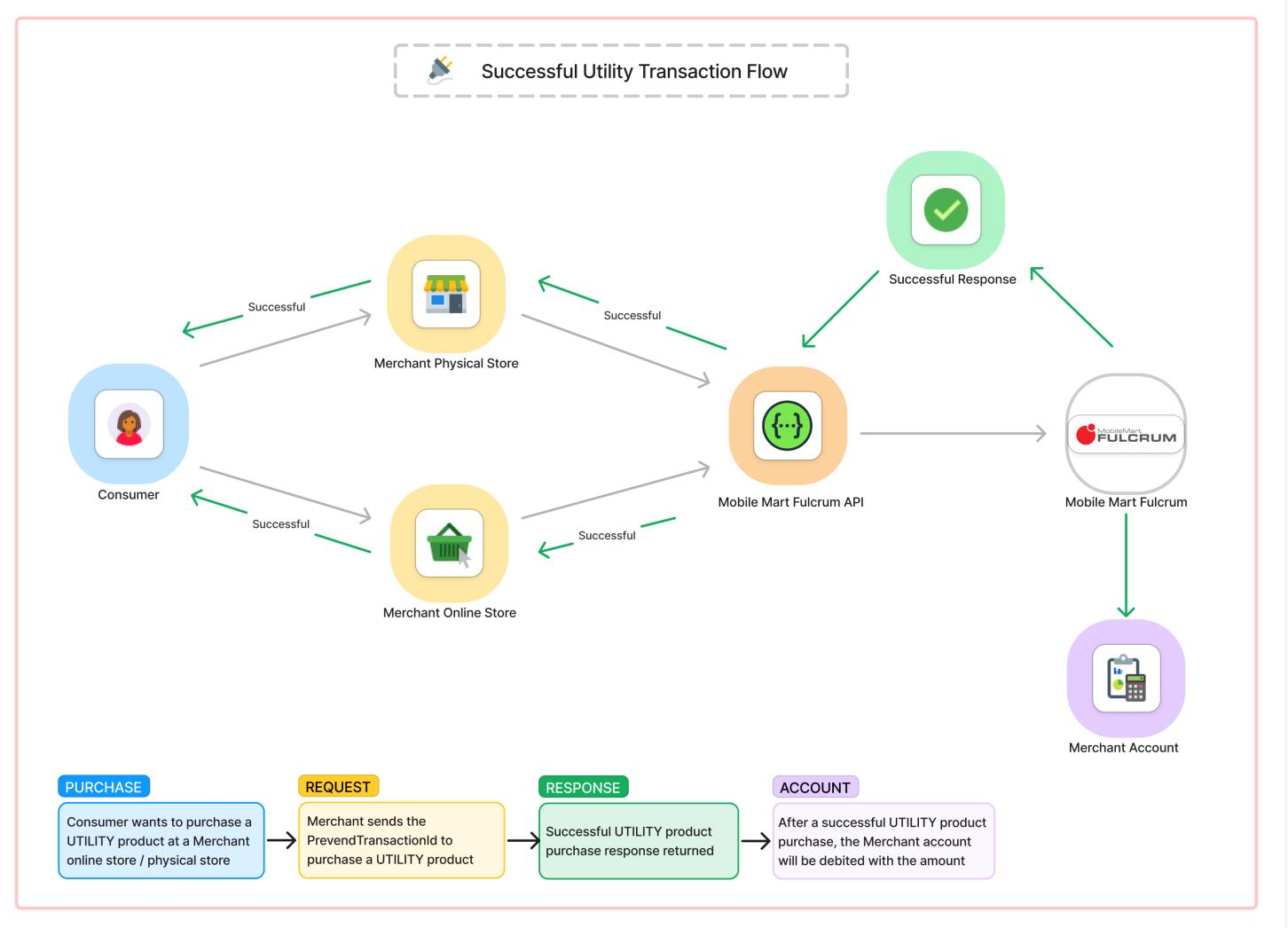
 Successful Utility Prevend Flow



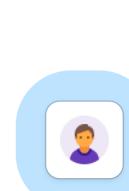
Failed Prevend Prepaid Utility Flow



Successful Prepaid Utility Transaction Flow



Failed Prepaid Utility Transaction Flow



Consumer



Merchant Online Store



Merchant Physical Store



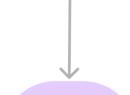
Merchant Online Store



Failed Response



Mobile Mart Fulcrum API



Mobile Mart Fulcrum



Merchant Account

PURCHASE

Consumer wants to purchase a UTILITY product at a Merchant online store / physical store

REQUEST

Merchant sends the PrevidTransactionId to purchase a UTILITY product

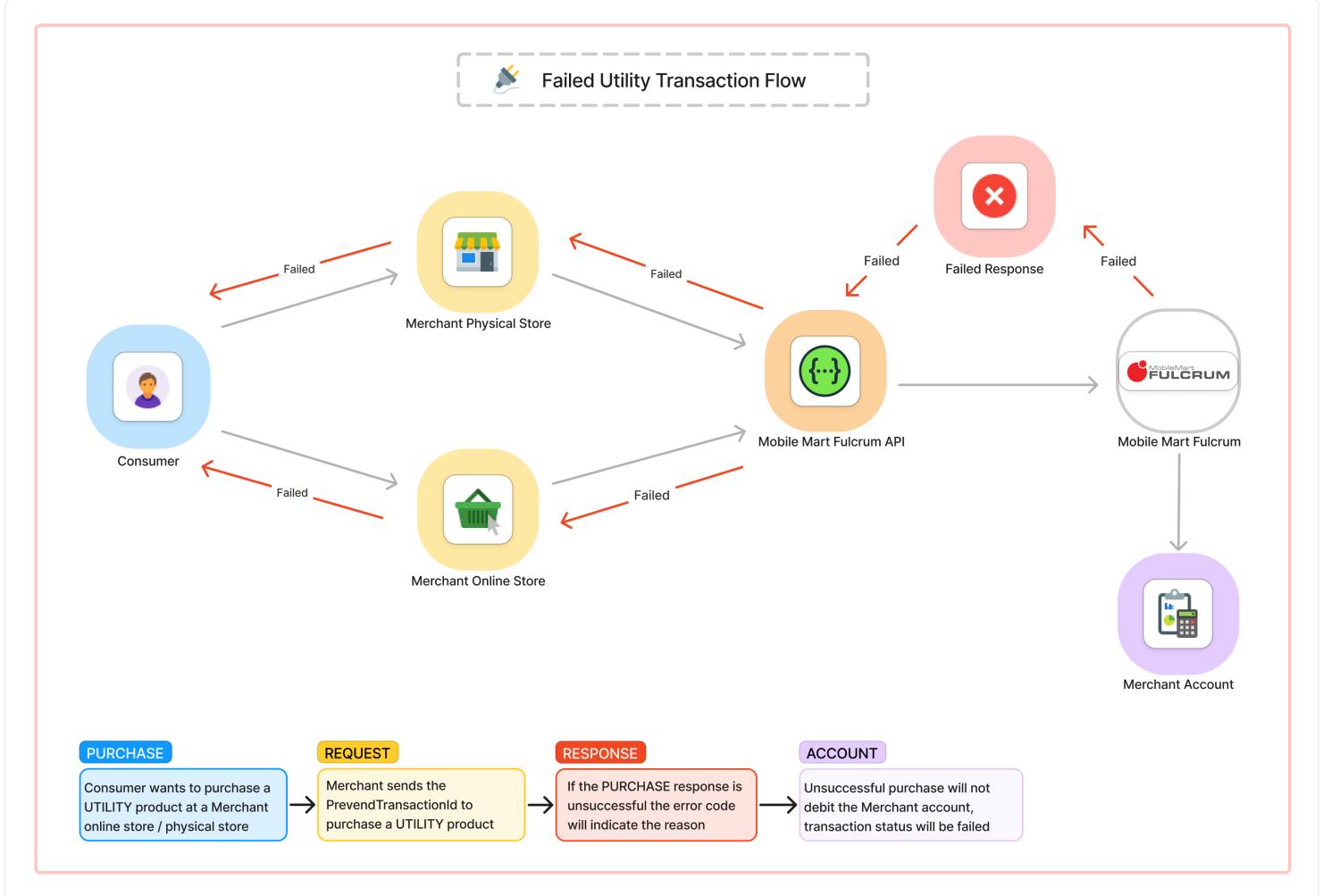
RESPONSE

If the PURCHASE response is unsuccessful the error code will indicate the reason

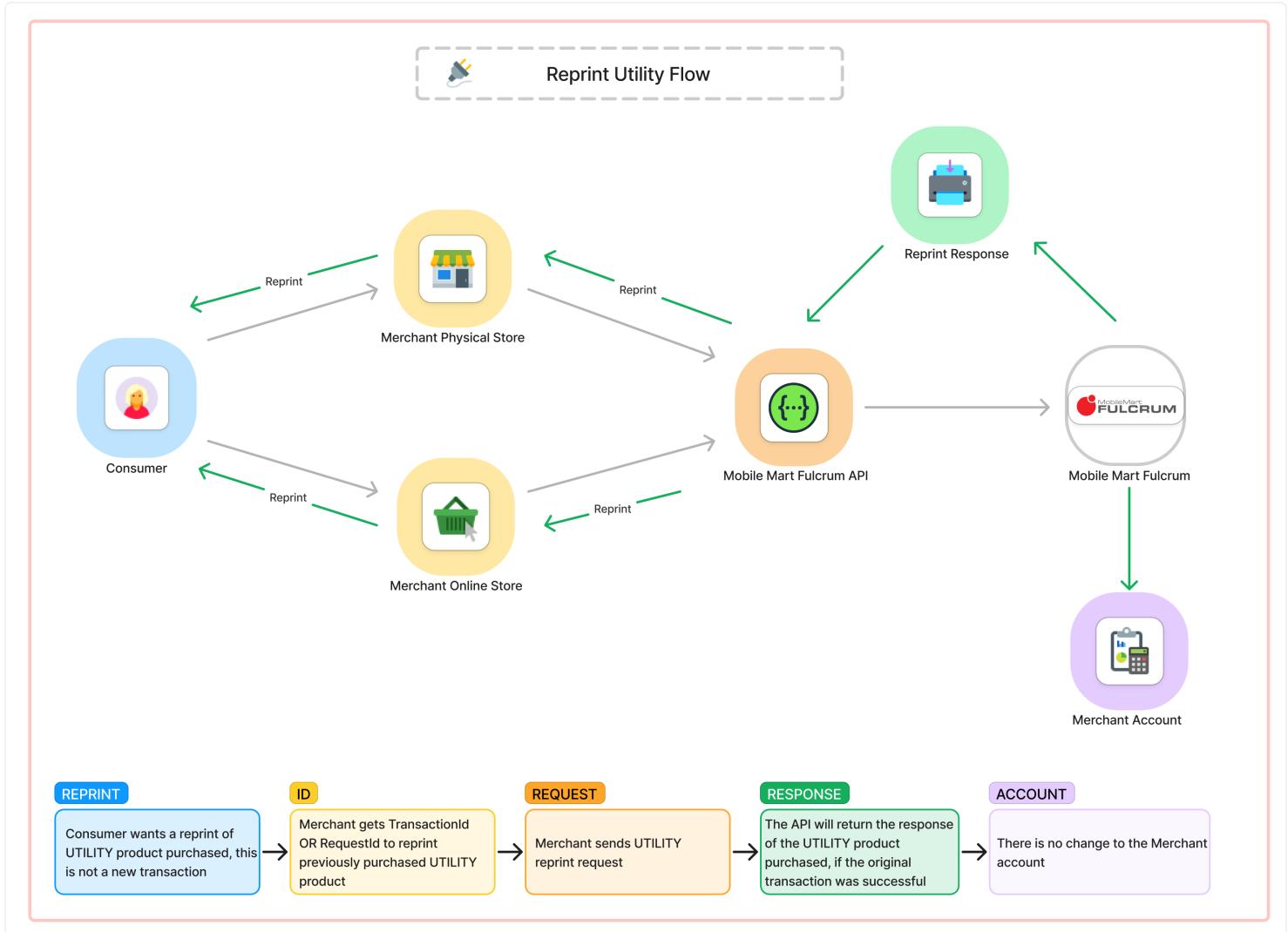
ACCOUNT

Unsuccessful purchase will not debit the Merchant account, transaction status will be failed

Failed Utility Transaction Flow



Reprint Prepaid Utility Flow



MobileMart Fulcrum Integration Document Version Control

Version	Changes	Section	Date
Rev 0	First Version	-	16 Nov 2022
Rev 1	API Release Notes updated.	API Release Notes	21 Nov 2022
Rev 2	Utility Prevend information added.	Swagger Layout	8 Dec 2022
	Utility Prevend flow diagrams added.	Transaction Flow Diagrams per VAS Type	
	Utility Reversal information removed.	Swagger Layout	
	API Release Notes were removed and sent as a separate document.	(removed from page 4)	

Rev 3	Error Codes updated and the possible reason/s for error codes added.	Error Codes returned on Swagger	16 Jan 2023
	Integration Support email address updated.	MobileMart Fulcrum Integration Support	
Rev 4	Error Codes updated and the possible reason/s for error codes added.	Error Codes returned on Swagger	31 Jan 2023
	Test Pack Template and Instructions added to each Compliance Test Pack.	API Compliance Test Packs	
Rev 5	Reprint Flows updated - TransactionId and RequestId can be used to do a reprint and to verify if a transaction was successful with a transaction timeout.	Transaction Flow Diagrams per VAS Type	9 Feb 2023
	Compliance Test Packs are updated for all VAS Types.	API Compliance Test Packs	
	Error Codes reasons updated.	Error Codes returned on Swagger	
Rev 6	Bill Payments Compliance Test Pack updated.	API Compliance Test Packs	13 April 2023
	Swagger Layout section updated with Bill Payment endpoint Prevend implementation.	Swagger Layout	
	Bill Payments Prevend and Transaction Flows updated.	Transaction Flow Diagrams per VAS Type	
	MobileMart Products on GET Products Endpoint section added.	Swagger Layout	
	Link added to view Fulcrum Swagger API Release Notes.	Swagger Layout	
Rev 7	Fulcrum Error Code added - 1017 - MeterNumberInvalid.	Error Codes returned on Swagger	1 June 2023
	MobileMart Account Application Form & Banking Details added.	Getting Started	

Rev 8	Fulcrum Error Codes added - 1018,1019, 1100	Error Codes returned on Swagger	22 June 2023
Rev 9	Fulcrum Error Code added - 1020	Error Codes returned on Swagger	22 Aug 2023
Rev 10	Fulcrum Error Code added - 1021	Error Codes returned on Swagger	18 Sep 2023
Rev 11	Fulcrum Error Code added - 1102	Error Codes returned on Swagger	3 Nov 2023
Rev 12	Fulcrum Error Code added - 1022	Error Codes returned on Swagger	13 Dec 2023