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Description automatically generated

**Mercury API Specification Processor – Payment Status Request**

**Inbound From Client**

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# Document Purpose

The purpose of this document is to provide a detailed specification of the **Payment Status Request** call to be received by the **Mercury Processor AP**I from the **Client (Mercury Client)** as part of the **Mercury Credit Transfer Process**.

This document will focus on the **Inbound Message** from the **Mercury Client** to the **Mercury Processor API** and will indicate the processing to be completed before constructing the **Payment Status Request** message to be sent to the **Host (Enterprise or External).**

**NOTE:** Some of the values contained in the Outgoing Message Structure will be retrieved from the Configuration Settings that are specific to the Mercury Processor API for the specified Entity.

# Process Flow

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The **Mercury Payment Status Request** process flow indicated above is initiated on the **Mercury Client** (when a Payment Status Report for a Credit Transfer Request have not been received) and the request will be processed from the **Mercury Client** to the **Mercury Processor API**. After decryption and validation of the message by the **Mercury Processor API**, the Mercury System will check whether a **Payment Status Report** for the request already exists.

If a **Payment Status Report** for the Request is found, a **Payment Status Report (Out to Client)** message will be constructed and sent to the **Mercury Client.**

If a **Payment Status Report** for the Request is not found, a **Payment Status Request (Out to Host)** message will be constructed and sent to the **Host (Enterprise or External).**

The response to the **Mercury Client** will be based on the decryption and validation results and sent to the **Mercury Client** before proceeding with the process of validating whether an existing Payment Status Report exists for the request.

If the request to the **Host (Enterprise or External)** was successful (indicated by a **200 HTTP Response**), the request will be processed by the **Host (Enterprise or External).**

The **Host (Enterprise or External)** will send the response (**Payment Status Report**), as a separate message (Not as a response to the original Payment Status Request) based on the result of the processing of the request. The **Payment Status Report (In from Host)** will be processed from the **Host (Enterprise or External)** to the **Mercury Host API**. After decryption and validation of the message by the **Mercury Host API**, the associated Transaction Ledger Entry will be Updated as Settled (Based on the Internal Mercury Reference) and then the **Payment Status Report (Out to Client)** message will be constructed and sent to the **Mercury Client.**

The response to the **Host (Enterprise or External)** will be based on the decryption and validation results and sent to the **Host (Enterprise or External)** before proceeding with the Transaction Ledger Entry Update, Out to Client Message construction and sending of the message to the **Mercury Client.**

# Mercury Payment Status Request Message from Client

## Overview

This **Payment Status Request API** is invoked during the processing of the Payment Status Request received from the **Mercury Client**.

## Process Flow

A screenshot of a computer screen

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When receiving the **Mercury Payment Status Request** message from the **Mercury Client** for processing, the **Mercury Processor API** need to validate and respond to the Mercury Client, before validating the existence of the Payment Status Report on the Mercury System and then initiating a separate **Mercury Payment Status Request** from the **Mercury Processor API** to the relevant **Host (Enterprise or External)** if the Payment Status Report was not found, or initiating a separate **Mercury Payment Status Report** from the **Mercury Processor API** to the **Mercury Client** if the Payment Status Report was found.

As part of the basic API Processing the following steps need to be followed:

|  |  |
| --- | --- |
| **STEP** | **DESCRIPTION** |
| 1. | Store and Log the Message Request Details in the Message Request Detail table for auditing purposes.  **Table Name:** mrd\_Message\_Request\_Detail |
| 2. | Initialize the **Payment Status Request (In From Client)** Message Class with the details received in the API Call from the **Mercury Client.**  Message Class: **procIFCPaymentStatusRequest** |
| 3. | Validate the **Secure Token** contained in the Message against the content of the **Payment Status Request** Message received from the **Mercury Client**.  Error Response Code: **ECL8110006** |
| 4. | Complete the following basic validations on the Message Class   * **Field Types**   Validate if the values received in the message are of the correct type as specified by the Message Class Structure.  Error Response Code: **ECL8110001**   * **Field Lengths**   Validate if the values received conform to the field lengths specified by the Message Class Structure.  Error Response Code: **ECL8110002**   * **Required Fields**   Validate if all the required fields have been received as specified by the Message Class Structure.  Error Response Code: **ECL8110004**   * **Duplicates**   Validate that the message received is not a duplicate. Base validation on the following fields:   * + Source Transaction Identifier   + Message Request Type   + Subscriber ID   + HTTP Response Code (200 cannot already exist)   Error Response Code: **ECL8110021** |
| 5. | Complete the following custom validations on the Message Class   * **Creation Date Time**   Ensure that the Creation Date Time value received conforms to the structure specified in the Message Class Structure.  Error Response Code: **ECL8110003**   * **Source Transaction Identifier**   Validate if the Transaction Identifier value is unique for the specific Mercury Client.  Error Response Code: **ECL8110021**   * **Original Message Identification**   Validate if the Message Identification for the Original Credit Transfer Request can be found to match this value.  Error Response Code: **ECL8110003**   * **Original UETR Structure**   Validate if the Original UETR value conforms to the specification and structure of a UETR value.  Error Response Code: **ECL8110003**   * **Subscriber ID**   Validate if the Subscriber ID exist on the Client API Configuration Table.  Table Name: **cac\_Client\_API\_Configuration**  Error Response Code: **ECL8110022** |
| 6. | If any of the validations have **failed**, respond to the **Mercury Client** with the appropriate Error Response Code and description of the error detected.  Use the [**Message Request Response**](#Response) structure.  The details of the response to the Mercury Client should also be logged against the Entry that was added to the Message Request Detail table. |
| 7. | If any of the validations have **passed**, respond to the **Mercury Client** with the appropriate Error Response Code (Success).  Use the [**Message Request Response**](#Response) structure.  The details of the response to the **Mercury Client** should also be logged against the Entry that was added to the Message Request Detail table. |
| 8. | After responding to the **Mercury Client**, attempt to locate the **Payment Status Report** for the details received. |
| 9.1 | If the **Payment Status Report** for the **Payment Status Request** could be located, proceed to construct the **Payment Status Report (Out to Client)** Message.  Message Class: **procOTCPaymentStatusReport**  **NOTE:**  The details of this Message Structure are contained in the **Mercury – OTC – Payment Status Report** specification document. |
| 9.2 | Process the constructed **Payment Status Report (Out to Client)** Message to the **Mercury Client**.  **NOTE:** The details of the **Payment Status Report (Out to Client)** should be logged in the Message Request Detail Table. |
| 10.1 | If the **Payment Status Report** for the **Payment Status Request** could **NOT** be located, proceed to construct the **Payment Status Request (Out to Host)** Message.  Message Class: **procOTHPaymentStatusRequest**  **NOTE:**  The details of this Message Structure are contained in the **Mercury – OTH – Payment Status Request** specification document. |
| 10.2 | Process the **Payment Status Request (Out to Operator)** Message to the **Operator (Bankserv**).  **NOTE:** The details of the **Payment Status Request (Out to Host)** should be logged in the Message Request Detail Table. |

## Message Requirements

|  |  |
| --- | --- |
| DEVELOPMENT | |
| **ENDPOINT** | [https://payments-test.azurefd.net/api/beapiGlobalMercuryClientProcessor](https://payments-test.azurefd.net/api/beapirapidpaymentparticipant) |
| **HEADERS** | x-beapiglobalmercuryclientprocessor-api-version  **1.0.0-dev**  Ocp-Apim-Subscription-Key  **TBC**  environment  **LIVE**  subscriberID  **TBC** |

|  |  |
| --- | --- |
| **STAGING** | |
| **ENDPOINT** | [https://payments-test.azurefd.net/api/beapiGlobalMercuryClientProcessor](https://payments-test.azurefd.net/api/beapirapidpaymentparticipant) |
| **HEADERS** | x-beapiglobalmercuryclientprocessor-api-version  **1.0.0-staging**  Ocp-Apim-Subscription-Key  **TBC**  environment  **LIVE**  subscriberID  **TBC** |

|  |  |
| --- | --- |
| **PRODUCTION** | |
| **ENDPOINT** | https://dt-apim-zan-prod-paymenthub.directtransact.co.za/api/beapiGlobalMercuryClientProcessor |
| **HEADERS** | x-beapiglobalmercuryclientprocessor-api-version  **1.0.0**  Ocp-Apim-Subscription-Key  **TBC**  environment  **LIVE**  subscriberID  **TBC** |

## Request

|  |  |
| --- | --- |
| **REQUEST DETAIL** | |
| **ENDPOINT** | {Processor Endpoint}/procIFCPaymentStatusRequest |
| **METHOD** | POST |

|  |  |
| --- | --- |
| **REQUEST BODY** | |
| **CLASS NAME** | clsIFCPaymentStatusRequest |
| **FIELD** | **DESCRIPTION** |
| secureToken | **Required**  Unique encrypted value constructed from the field values contained in the message.  **Format:**  String |
| subscriberID | **Required**  Unique Subscriber ID that is issued by the Payment Hub to uniquely identify the source from where the call is received.  **Format:**  String  **Example:**  910 |
| primaryHostReference | **Required**  Primary Reference Value to the Host (Enterprise or External) or to the Payment Hub to assist in identifying the Account on the Host (when sent to a Host). This value will be returned in messages from the Host or Payment Hub to assist in identification of the original transaction and routing details back to the Mercury Client.  **Usage:**   * To **Internal Host (Enterprise)** – Populate with the Profile Id linked to the Account from where the Credit Transfer was made from. * To **External Host** – Populate with Profile Identification on the External Host system to which the Account where the Credit Transfer was made from, is linked to. * To **Payment Hub** – Populate with the Profile Identifier linked to the Account from where the Credit Transfer was made from.   **Format:**  String  **Example:**  2023083100001 |
| secondaryHostReference | **Required**  Secondary Reference Value to the Host (Enterprise or External) or to the Payment Hub to assist in identifying the Account on the Host (when sent to a Host). This value will be returned in messages from the Host or Payment Hub to assist in identification of the original transaction and routing details back to the Mercury Client.  **Usage:**   * To **Internal Host (Enterprise)** – Populate with the Account Number from where the Credit Transfer was made from. * To **External Host** – Populate with Account Number on the External Host system from where the Credit Transfer was made from. * To **Payment Hub** – Populate with the Account Number from where the Credit Transfer was made from.   **Format:**  String  **Example:**  78602467923 |
| creationDateTime | **Required**  Creation Date Time of the request from the Mercury Client. SAST to UTC time format in both incoming & outgoing messages in header across all the messages.  **Format:** String  yyyy-MM-ddThh:mm:ss.SSSSSS  **Example:**  2021-11-17T11:27:53.015708 |
| transactionIdentifier | **Required**  Unique Identification value assigned by the Mercury Client, to unambiguously identify the transaction on the Mercury Client System. This identification is used to link the Transaction received from the Mercury Client to the Transaction that is to be processed by the Mercury Client Processor. This value will also be used to ensure the transaction is unique and will be used for duplicate validation.  **Format:**  String  **Example:**  54000000000000001 |
| originalTransactionIdentifier | **Required**  Unique Transaction Identification for the Original Credit Transfer Request the Payment Status Request is for. Point to point reference assigned by the Mercury Client to unambiguously identify the original message.  **Format:**  String  **Example:**  3400004456400001 |
| originalUETR | **Required**  Universally unique identifier to provide the original end-to-end reference of a payment transaction. This should be the **transactionUETR** that was received in the Credit Transfer Request received by the Mercury Client.  **Format:** String  [a-f0-9]{8}-[a-f0-9]{4}-4[a-f0-9]{3}-[89ab][a-f0-9]{3}-[a-f0-9]{12}  **Example:**  f22dd32f-07db-488b-b648-dab6b3ffc4ef |

## Response

API responses will return HTTP status code in the 2xx range. The response body will contain the response of the API as described in this specification.

|  |  |
| --- | --- |
| **RESPONSE** | |
| **CLASS NAME** | clsMessageRequestResponse |
| **FIELD** | **DESCRIPTION** |
| messageIdentification | **Required**  Unique Message Identification for the Message Request for which this response structure is created.  **Format:**  String: alphabetic, numeric, and underscores (\_), e.g. spaces are not allowed; max length 35 characters.  YYYYMMDD\_XXXX\_TTTTT\_SSS999999999999   * **YYYYMMDD** - Date the message is created. * **XXXX** – First 4 characters of the senders BICCode * **TTTTT** – Service Code * **SSS** – Unique Subscriber ID * **999999999999** – 12-digit sequence number (for the current day – reset after day)   **Example:**  20231003\_SASF\_PSRQT\_000000000001 |
| messageResultDetail | **Required**  A [**Message Result**](#MessageResult) structure. |

## Response Codes

Internal Response Codes available for the Message Request Response are listed below. The Response Codes will have a format of **ECLABBCCCC** and is compiled as follows:

**ECL** Fixed value for the Response Code Prefix

**A** Service Indicator where **8** will indicate the **Processor API** and **9** will indicate the **Host (Enterprise, External or Payments Hub)** as the origin of the response.

**BB** Message Type Indicator (2 digits) where **11** will indicate the **Payment Status Request** Message Type.

**CCCC** Unique value per Response indicating a unique Response.

|  |  |  |
| --- | --- | --- |
| **RESPONSE CODES** | | |
| **HTTP STATUS** | **RESPONSE CODE** | **RESPONSE DESCRIPTION** |
| 200 | ECL8110000 | SUCCESS |
| 200 | ECL8110001 | ERROR\_INVALID\_FIELD\_TYPE |
| 200 | ECL8110002 | ERROR\_INVALID\_FIELD\_LENGTH |
| 200 | ECL8110003 | ERROR\_INVALID\_FIELD\_VALUE |
| 200 | ECL8110004 | ERROR\_REQUIRED\_DATA\_MISSING |
| 200 | ECL8110005 | ERROR\_INTERNAL\_SYSTEM\_ERROR |
| 200 | ECL8110006 | ERROR\_CRYPTOGRAPHY |
| 200 | ECL8110021 | ERROR\_DUPLICATE\_TRANSACTION |
| 200 | ECL8110022 | ERROR\_INVALID\_SUBSCRIBER\_ID |

## Sample Request

{

    "secureToken": "string",

    "subscriberID": "string",

    "primaryHostReference": "string",

    "secondaryHostReference": "string",

    "creationDateTime": "string",

    "transactionIdentifier": "string",

    "originalTransactionIdentifier": "string",

    "originalUETR": "string"

}

## Sample Request Message

{

    "secureToken": "07ac3cf0add872d8af56e2ac62213b9add6a4fb61977e1fe109c54dda67c1c48",

    "subscriberID": "910",

    "primaryHostReference": "2023083100001",

    "secondaryHostReference": "78602467923",

    "creationDateTime": "2023-10-03T11:27:53.015708",

    "transactionIdentifier": "1A66C164-0EDA-4170-8D13-FBF9E495B680",

    "originalTransactionIdentifier": "CAE4F68F-BFB1-4FB2-B2B0-4AA94096142E",

    "originalUETR": "a1182b47-12ec-3655-8a94-8bb3d95bea55"

}

## Sample Response

{

    "messageRequestID": "string",

    "messageResultDetail": {

        "resultCode": "string",

        "resultDescription": "string",

        "resultMessage": "string",

        "transactionIdentifier": "string",

        "processingTransactionId": "string"

    }

}

## Sample Response Message Success

{

    "messageRequestID": "20231003\_SASF\_PSRQT\_910000000000001",

    "messageResultDetail": {

        "resultCode": "ECL8110000",

        "resultDescription": "SUCCESS",

        "resultMessage": "",

        "transactionIdentifier": "1A66C164-0EDA-4170-8D13-FBF9E495B680",

        "processingTransactionId": "CAE4F68F-BFB1-4FB2-B2B0-4AA94096142E"

    }

}

## Sample Response Message Error

{

    "messageRequestID": "20231003\_SASF\_PSRQT\_910000000000001",

    "messageResultDetail": {

        "resultCode": "ECL8110015",

        "resultDescription": "ERROR\_REQUIRED\_DATA\_MISSING",

        "resultMessage": "The Message Identifier field is required.",

        "transactionIdentifier": "1A66C164-0EDA-4170-8D13-FBF9E495B680"

    }

}

# Embedded Participant Message Structures

## Message Result

Note: This structure is used in various Message Request Structures in the Processor and Participant API to and from the Participant API.

|  |  |
| --- | --- |
| **MESSAGE RESULT** | |
| **CLASS NAME** | clsMessageResult |
| **FIELD** | **DESCRIPTION** |
| resultCode | **Required**  Appropriate Response Code for the Message Type  **Format:** String; length 10 characters. |
| resultDescription | **Required**  Appropriate Response Description for the Message Type  **Format:** String; max length 50 characters. |
| resultMessage | **Optional**  Additional Response Detail associated with the Response Code and Description (Example: Field Name that failed the validation)  **Format:** String; max length 256 characters. |
| transactionIdentifier | **Required**  This will be the Transaction Identifier received from the Mercury Client for the Payment Status Request received by Mercury. |
| processingTransactionId | **Conditional**  Based on whether the Payment Status Request was accepted by the Mercury System that received the request, return the Mercury Transaction Id that was assigned for the request. |