Open Banking Integration Guide

**Web-standard and API integration**

|  |  |
| --- | --- |
| Version | 2.0.1 |
| Initial | 2019.02.12 |
| Revised | 2023.04.21 |
| Made by | Hecto Financial IT Division |

Contents

[1. Outline 5](#_Toc136525550)

[1.1 Purpose 5](#_Toc136525551)

[1.2 Target 5](#_Toc136525552)

[1.3 API URI 5](#_Toc136525553)

[2. Open Banking General API 6](#_Toc136525554)

[2.1 Open Banking Process 6](#_Toc136525555)

[2.2 General 7](#_Toc136525556)

[3. Payment Page Integration 8](#_Toc136525557)

[3.1 Integration Script Support 8](#_Toc136525558)

[3.2 Integration Method 8](#_Toc136525559)

[4. API Invoke 9](#_Toc136525560)

[4.1 API Connection Information 9](#_Toc136525561)

[4.2 Request and Response Headers 9](#_Toc136525562)

[4.3 Timeout 9](#_Toc136525563)

[4.4 Others 9](#_Toc136525564)

[5. Security of Crucial Information 10](#_Toc136525565)

[5.1 Encryption & Decryption of Personal and Crucial Information 10](#_Toc136525566)

[5.2 Encryption Key for Personal Information 10](#_Toc136525567)

[5.3 Forgery Prevention Algorithm 10](#_Toc136525568)

[5.4 Hash Key 10](#_Toc136525569)

[6. Payment Verification (UI) 12](#_Toc136525570)

[6.1 Summary 12](#_Toc136525571)

[6.2 Integration Script Method 12](#_Toc136525572)

[6.3 Request (Form) Parameter 12](#_Toc136525573)

[6.4 Generate Hash Code 15](#_Toc136525574)

[6.5 Response Parameter (Hecto Financial -> Merchant) 15](#_Toc136525575)

[7. Payment Approval (API) 17](#_Toc136525576)

[7.1 API Summary 17](#_Toc136525577)

[7.2 API URL 17](#_Toc136525578)

[7.3 Request (Merchant -> Hecto Financial) 17](#_Toc136525579)

[7.4 Request Hash Code 18](#_Toc136525580)

[7.5 Response (Hecto Financial -> Merchant) 18](#_Toc136525581)

[8. Payment Cancellation/Refund (API) 21](#_Toc136525582)

[8.1 API Summary 21](#_Toc136525583)

[8.2 API URL 21](#_Toc136525584)

[8.3 Request (Merchant -> Hecto Financial) 21](#_Toc136525585)

[8.4 Request Hash Code 22](#_Toc136525586)

[8.5 Response (Hecto Financial -> Merchant) 22](#_Toc136525587)

[9. Network Cancellation (API) 24](#_Toc136525588)

[9.1 API Summary 24](#_Toc136525589)

[9.2 API URL 24](#_Toc136525590)

[9.3 Request (Merchant -> Hecto Financial) 24](#_Toc136525591)

[9.4 Request Hash Code 25](#_Toc136525592)

[9.5 Response (Hecto Financial -> Merchant) 25](#_Toc136525593)

[10. Transaction Result Inquiry (API) 26](#_Toc136525594)

[10.1 API Summary 26](#_Toc136525595)

[10.2 API URL 26](#_Toc136525596)

[10.3 Request (Merchant -> Hecto Financial) 26](#_Toc136525597)

[10.4 Request Hash Code 27](#_Toc136525598)

[10.5 Response (Hecto Financial -> Merchant) 27](#_Toc136525599)

[11. Transaction Details Inquiry (API) 28](#_Toc136525600)

[11.1 API Summary 28](#_Toc136525601)

[11.2 API URL 28](#_Toc136525602)

[11.3 Request (Merchant -> Hecto Financial) 28](#_Toc136525603)

[11.4 Request Hash Code 29](#_Toc136525604)

[11.5 Response (Hecto Financial -> Merchant) 29](#_Toc136525605)

[12. Inquiry for Cash Receipt Issuance(UI) 32](#_Toc136525606)

[12.1 Summary 32](#_Toc136525607)

[12.2 Integration Script Method 32](#_Toc136525608)

[12.3 Request (Form) Parameter 32](#_Toc136525609)

[12.4 Request Hash Code 32](#_Toc136525610)

[13. Issuance of Recurring Payment Key (API) 34](#_Toc136525611)

[13.1 API Summary 34](#_Toc136525612)

[13.2 API URL 34](#_Toc136525613)

[13.3 Request (Merchant -> Hecto Financial) 34](#_Toc136525614)

[13.4 Request Hash Code 35](#_Toc136525615)

[13.5 Response (Hecto Financial -> Merchant) 35](#_Toc136525616)

[14. Recurring Payment Approval (API) 37](#_Toc136525617)

[14.1 API Summary 37](#_Toc136525618)

[14.2 API URL 37](#_Toc136525619)

[14.3 Request (Merchant -> Hecto Financial) 37](#_Toc136525620)

[14.4 Request Hash Code 39](#_Toc136525621)

[14.5 Response (Hecto Financial -> Merchant) 39](#_Toc136525622)

[15. Recurring Payment Cancellation (API) 42](#_Toc136525623)

[15.1 API Summary 42](#_Toc136525624)

[15.2 API URL 42](#_Toc136525625)

[15.3 Request (Merchant -> Hecto Financial) 42](#_Toc136525626)

[15.4 Request Hash Code 42](#_Toc136525627)

[15.5 Response (Hecto Financial -> Merchant) 43](#_Toc136525628)

[16. Others 44](#_Toc136525629)

[16.1 Failure Code 44](#_Toc136525630)

[16.2 Financial Institution Identifier 45](#_Toc136525631)

[16.3 Bank Maintenance Time 46](#_Toc136525632)

# Outline

## Purpose

This document is intended for understanding technical requirements for integration of Open Banking service provided by Hecto Financial and to define detailed specification.

## Target

This document is intended for clients’ developers to integrate with Open Banking provided by Hecto Financial through API integration specification and coding guide.

## API URI

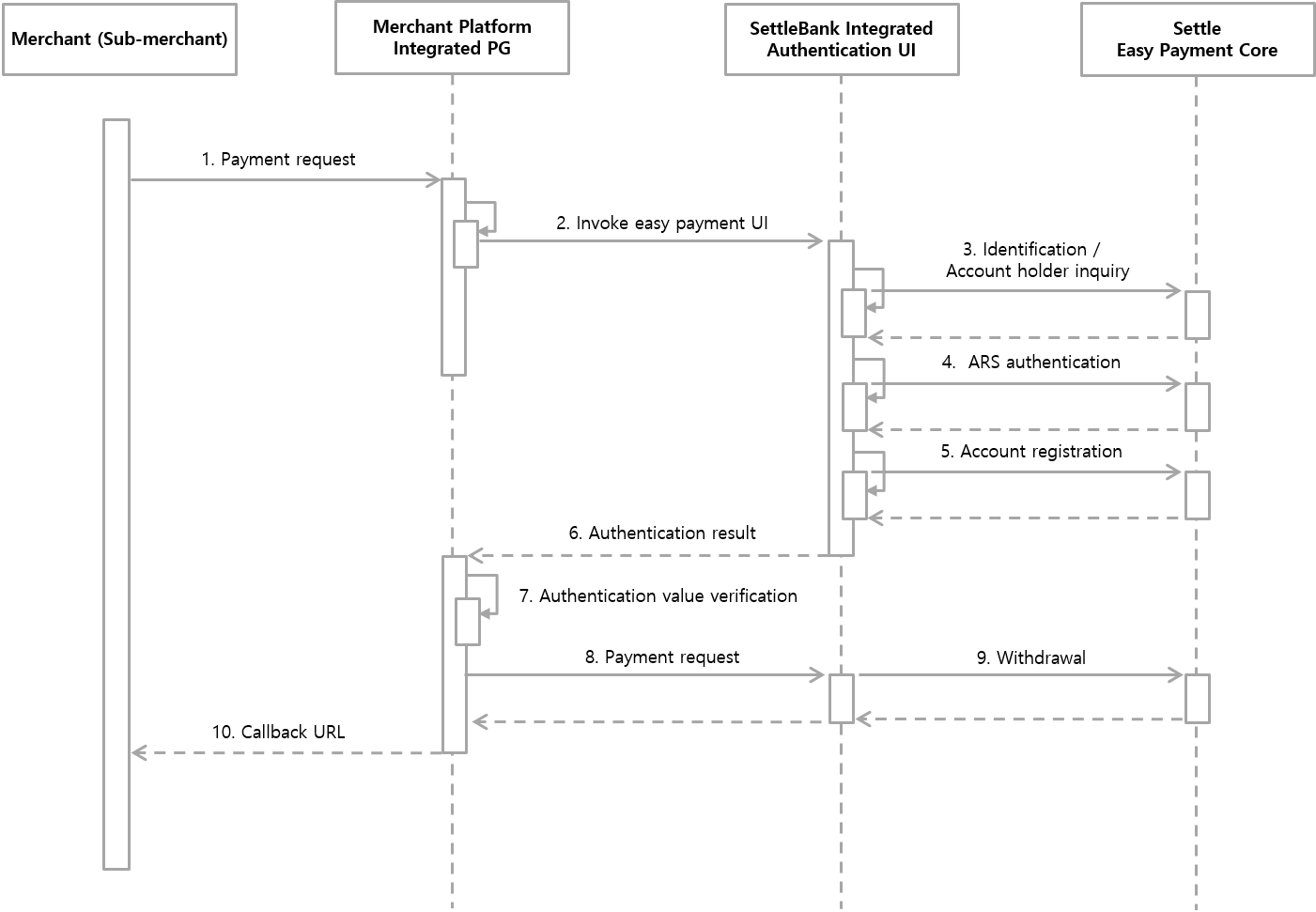
Open Banking API provides the following APIs and each API is mapped to a single web service URI.

|  |  |  |  |
| --- | --- | --- | --- |
| **Function** | **API** | **URI** | **HTTP Method** |
| Payment | Payment authentication (UI) | Integration with payment window | POST |
| Payment approval (Non-UI) | <https://ezauthapi.settlebank.co.kr:8081/v3/APIPayApprov.do> | POST |
| Cancellation / Refund  (Non-UI) | <https://ezauthapi.settlebank.co.kr:8081/v3/APIPayCancel.do> | POST |
| Regular payment key issue (Non-UI) | <https://ezauthapi.settlebank.co.kr:8081/v2/APIRegularpayKey.do> | POST |
| Regular payment approval (Non-UI) | <https://ezauthapi.settlebank.co.kr:8081/v3/APIRegularPayment.do> | POST |
| Regular payment cancellation (Non-UI) | <https://ezauthapi.settlebank.co.kr:8081/APIUnRegistRegular.do> | POST |
| Timeout (Non-UI) | <https://ezauthapi.settlebank.co.kr:8081/APINetPayCancel.do> | POST |
| Inquiry | Transaction result inquiry | <https://ezauthapi.settlebank.co.kr:8081/APIMoInfo.do> | POST |
| Transaction history inquiry | <https://ezauthapi.settlebank.co.kr:8081/APITrInfo.do> | POST |
| Cash receipt issuance inquiry | Integration with payment window | POST |

# Open Banking General API

## Open Banking Process

Open Banking process is as below



1. Request payment from sub-merchant or user
2. Invoke the integration for Open Banking UI
3. Inquire account holder through name and account information after mobile identification
4. ARS Authentication to create withdrawal and transfer registration evidence
5. Account registration (Withdrawal and transfer registration)
6. Response for authentication result

\* Go to the merchant page through callbackUrl and deliver the authentication result.

1. Verify the authentication result
2. After authentication result check, request for payment approval through API
3. Withdrawal process on Open Banking payment core

## General

The following is a general description of the referred integration in this document.

* Required fields in the request/response parameters use ‘●’ symbol and selected fields use the ‘○’ symbol.
* Data Type

N : Numeric Characters

A : Alphabetic Characters

AN : Both alphabetic and numeric

* Request parameter validation

Response code below is returned if something is wrong after the parameter verification, such as missing mandatory values, inconsistent hash data to check forgery, and length of the request variable.

|  |
| --- |
| {  “resultCd”:”-1”,  “errCd“:”ST09”  “resultMsg“:”invalid request parameter”  } |

# Payment Page Integration

## Integration Script Support

The following is API server connection information.

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | [https://tbezauth.settlebank.co.kr/js/SettlePay.js](https://tbezauth.settlebank.co.kr/js/SettlePay.js%20) |
| Production | <https://ezauth.settlebank.co.kr/js/SettlePay.js> |

## Integration Method

Payment page is requested through form post, and the form tag attribute and action are performed by the provided script.

**※ Request for payment window through Iframe tag does not guarantee normal operation in certain mobile browsers. Therefore, iframe tag is not recommended when linking payment windows.**

|  |
| --- |
| <head>  <script language="javascript" type="text/javascript"src="https://tbezauth.settlebank.co.kr/js/SettlePay.js" charset="UTF-8"></script>  <script>SettlePay.execute(sampleFm);</script>  </head>  <body>  <form name="sampleFm">  <input name="">  </form>  </body> |

# API Invoke

## API Connection Information

The following is API server connect information.

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbezauthapi.settlebank.co.kr> |
| Production | <https://ezauthapi.settlebank.co.kr:8081> |

## Request and Response Headers

The following are API request and response headers.

|  |  |
| --- | --- |
| Request | Content-type=application/json;charset=UTF-8 |
| Response | Content-type=text/html;charset=UTF-8 |

## Timeout

The timeout processing of APIs (except UI) applies for 35 seconds. If a timeout occurs in the payment request, the transaction result of the payment can be checked through the API. If the payment is checked to be successful, it can be canceled through the network cancellation API.

## Others

The following describes the general requirement for HTTP specification

* Provided API is REST-oriented, but does not meet the entire specification of REST (Most transaction requests use POST method only)
* ‘Request’ use POST method only.
* Commonly, variable values :,&,?,’,new line, <, > are not allowed.

# Security of Crucial Information

## Encryption & Decryption of Personal and Crucial Information

When sending and receiving data, the following encryption/decryption should be performed for the privacy/crucial information fields:

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Entry** | **Application** | **Encoding** |
| Personal Information | Algorithm | AES-256/ECB/PKCS5Padding | Hex Encoding |
| Field | The name of the person in charge, landline phone number, mobile phone number, e-mail, account holder’s name, account number, etc.;  (The field to be encrypted is specified in the remarks column of the requested field specification of each API) | | |

## Encryption Key for Personal Information

Key information for encryption/decryption of personal information and critical information depends on the operating environment and is as follows:

|  |  |
| --- | --- |
| **Section** | **Encryption/Decryption Key** |
| Testbed key (key for testing) | SETTLEBANKISGOODSETTLEBANKISGOOD(32byte) |
| Production key (Merchant’s own key) | Sent separately when the service is carried out |

## Forgery Prevention Algorithm

To verify whether the request data is forged or falsified, a hash key is used. The hash value generation algorithm is as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Entry** | **Application** | **Encoding** |
| Forgery | Algorithm | SHA-256 | Hex Encoding |

## Hash Key

|  |  |
| --- | --- |
| **Section** | **Authentication key** |
| Testbed key | SETTLEBANKISGOODSETTLEBANKISGOOD(32byte) |
| Production key | Sent separately when the service is carried out |

# Payment Verification (UI)

## Summary

Open Hecto Financial Open Banking payment window UI and transfer the parameters needed for payment.

In the corresponding payment window, proceed with mobile phone verification, account holder’s name inquiry and ARS verification for account withdrawal transfer registration. After withdrawal transfer registration, payment verification is done with the account, and then respond with the result to the Merchant. (For Merchant, URL with success status is invoked)

## Integration Script Method

settlePay.execute(form obj);

## Request (Form) Parameter

The columns requested by Merchant server to Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | Name | Description | Type and length | Required | Example |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “IA\_AUTHPAGE \_1.0\_1.0”  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “1.0”  ※ fixed value |
| processType | Classification Processing | Process section | A(1) | ● | “D”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| ordNo | Order number | Unique order number generated by the Merchant (For the same transaction date, uniqueness must be ensured) | AN(100) | ● | “OID201902210001” |
| trDay | Transaction date | Date of transaction generated by Merchant  yyyyMMdd | N(8) | ● | “20190221” |
| trTime | Transaction time | Time of transaction generated by Merchant  HH24MISS | N(6) | ● | “142120” |
| trPrice | Transaction amount | AES Encryption  Amount of the payment  \*Includes the case with container deposit system | N(13) | ● | Tax amount + Tax-free amount + VAT amount = "12800" |
| taxPrice | Tax amount | AES Encryption  Only applicable if the tax-free status of the tax amount among the payment amount is a compound tax | N(13) | ○ | “8000” |
| vatPrice | VAT amount | AES Encryption  Only applicable if the tax-free status of 10% of VAT amount tax amount among the payment amount is a compound tax | N(13) | ○ | 10% of the tax amount = "800" |
| dutyFreePrice | Tax-free amount | AES Encryption  Only applicable if the tax-free status of non-taxable amount among the payment amount is a compound tax | N(13) | ○ | 4000 |
| containerDeposit | Container deposit system | AES Encryption  The amount if the transaction is target for container deposit system  (Not a target for cash receipt) | N(5) | ○ | 300 |
| productNm | Product name | Product name | AN(15) | ● | “Cabbage” |
| dutyFreeYn | Tax-free status | Y: Tax-free, N: Tax, G: Compound tax | A(1) | ● | “N” |
| criPsblYn | Cash receipt issue | Y: Issuable, N: Not issuable  Recognize as Y if “” (empty) | A(1) | ○ | “Y’ |
| addDeductionYn | Additional deduction classification | Public Transport: Y  Book, performance cost: C  No additional deductions: N | A(1) | ○ | “N" |
| shopNm | Store name |  | AN(10) | ○ | “Farm A” |
| cphoneNo | Mobile phone number | AES Encryption  Customer mobile phone number  Exclude "-" | N(11) | ○ | “01032012938” |
| email | Email | AES Encryption  Customer email | AN(30) | ○ | “\_id@mail.com” |
| custCi | Customer CI | AES Encryption  Customer CI  \*Move to cancelUrl if the value of the parameter and the customer CI value on Open Banking are different | AN(192) | ○ |  |
| callbackUrl | Result notification URL | URL to be called in the payment window after authentication is complete  \*callbackUrl validates the value answered and calls the payment authorization API  When calling form submit (method=POST) to the URL request (\*http://), 'You are trying to submit unsafe information' message can pop up, according to http blocking policy of Chrome browser version 87 and onward. | AN(255) | ● | "https://callback.co.kr" |
| cancelUrl | Cancel Authentication Window URL | URL to be called when user cancels during payment process When calling form submit (method=POST) to the URL request (\*http://), 'You are trying to submit unsafe information' message can pop up, according to http blocking policy of Chrome browser version 87 and onward. | AN(255) | ○ | "https://aaa.co.kr/cancel" |
| regularpayYn | Recurring payment registration status | Whether or not to use recurring payments to the relevant account in the future | A(1) | ○ | “N” |
| mercntParam1 | Merchant Data 1 | Merchant’s additional information 1 (the field is returned when the response and transaction history are inquired) | AN(1000) | ○ |  |
| mercntParam2 | Merchant Data 2 | Merchant’s additional information 2 (the field is returned when the response and transaction history are inquired) | AN(1000) | ○ |  |
| payLimitCd | Payment limitation code | According to the policy set in Open Banking, the payment limitation of the customer is checked. | AN (10) | ○ |  |
| signature | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Generate Hash Code

|  |  |
| --- | --- |
| **Parameter Name** | **Combination field** |
| Signature value | Merchant ID + Order number + Transaction date + Transaction time + Transaction amount (plain value) + Authentication key |

## Response Parameter (Hecto Financial -> Merchant)

In the Payment (Registration) window, the columns that respond to the merchant are as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Parameter | Name | Description | Type and length | Required | Example |
| resultCd | Result Code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure : “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| ordNo | Order number | Unique order number generated upon request from the Merchant | AN(100) | ● | “OID201902210001” |
| authNo | Authentication number | Unique authentication number generated by Hecto Financial | AN(20) | ● | “PAR20190220000000001” |
| trPrice | Transaction amount | The amount requested for the initial payment by the Merchant. | N(13) | ● | “15000” |
| discntPrice | Discount amount | Amount deducted by payment module  (ex: Promotional pre-discount) | N(13) | ● | “1000” |
| payPrice | Payment amount | Final withdrawal amount discounted from initial payment request amount | N(13) | ● | “14000” |
| trDay | Transaction date | Date of transaction generated by Merchant  yyyyMMdd | N(8) | ● | “20190221” |
| trTime | Transaction time | Time of transaction generated by Merchant  HH24MISS | N(6) | ● | “142120” |
| mercntParam1 | Merchant data 1 | Additional information 1 from the merchant (Additional information 1 delivered on initial request) | AN(1000) | ○ |  |
| mercntParam2 | Merchant data 2 | Additional information 2 from the merchant (Additional information 2 delivered on initial request) | AN(1000) | ○ |  |

# Payment Approval (API)

## API Summary

If there is no problem after verifying the value received through callbackUrl set on the Payment Authentication Request page, call WEB API.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbezauthapi.settlebank.co.kr/v3/APIPayApprov.do> |
| Production | <https://ezauthapi.settlebank.co.kr:8081/v3/APIPayApprov.do> |

## Request (Merchant -> Hecto Financial)

The columns requested by Merchant server from Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| hdInfo | Information | Paremeter Information code | AN(50) | ● | “IA\_APPROV”  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “3.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| authNo | Authentication number | Authentication stage response value generated by Hecto Financial | AN(20) | ● | “PAR20190220000000001” |
| reqDay | Request date | Date of request for approved payment generated by the Merchant  Format String)yyyyMMdd | N(8) | ● | “20190221” |
| reqTime | Request time | Time of request for approved payment generated by the Merchant  Format String)HH24MISS | N(6) | ● | “142120” |
| custParam1 | Additional Merchant Field 1 | In addition to request field defined at the time of approval request, field value 1 defined and saved by merchant  The corresponding value is displayed in the response statement when the transaction is inquired. | AN(128) | ○ | "Additional Field Information"  Can view the transaction with the value from the Merchant Portal |
| custParam2 | Additional Merchant Field 2 | In addition to request field defined at the time of approval request, field value 2 defined and saved by merchant  The corresponding value is displayed in the response statement when the transaction is inquired. | AN(128) | ○ | “Additional Field Information"  Can view the transaction with the value from the Merchant Portal |
| custParam3 | Additional Merchant Field 3 | In addition to request field defined at the time of approval request, field value 3 defined and saved by merchant  The corresponding value is displayed in the response statement when the transaction is inquired | AN(128) | ○ | "Additional Field Information"  Can view the transaction with the value from the Merchant Portal |
| custParam4 | Additional Merchant Field4 | In addition to request field defined at the time of approval request, field value 4 defined and saved by merchant  The corresponding value is displayed in the response statement when the transaction is inquired | AN(128) | ○ | “Additional Field Information” |
| signature | Hash data | sha256 method generated hash value | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Authentication number + Request date + Request time + Authentication key |

## Response (Hecto Financial -> Merchant)

The response columns from Hecto Financial server to Merchant are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| resultCd | Result code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure: “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| ordNo | Order number | Unique order number generated upon request from the Merchant | AN(100) | ● | “OID201902210001” |
| trNo | Transaction number | Payment transaction number generated by Hecto Financial | AN(50) | ● | "STFP\_PNPTms00001t00220922182409M1962430" |
| trPrice | Transaction amount | The amount requested for the initial payment by the Merchant. | N(13) | ● | “15000” |
| discntPrice | Discount amount | Amount deducted by payment module  (ex: Promotional pre-discount) | N(13) | ● | “1000” |
| payPrice | Payment amount | Final withdrawal amount discounted from initial payment request amount | N(13) | ● | “14000” |
| criPrice | Amount for issued cash receipt | Amount for issued cash receipt (only cash payment amount to be issued)  \*Only cash payment amount is included in the amount for cash receipt. | N(13) | ● | “13000” |
| criTaxVatPrice | Cash receipt tax amount (including VAT) | Among cash receipt issued amount, only the tax amount is marked (including VAT) | N(13) | ● | “11000” |
| criDutyFreePrice | Cash receipt non-taxable amount | Among cash receipt issued amount, only non-taxable amount marked | N(13) | ● | “2000” |
| trDay | Transaction date | Date of transaction approval  yyyyMMdd | N(8) | ● | “20190221” |
| trTime | Transaction time | Time of transaction approval  HH24MISS | N(6) | ● | “142120” |
| regularpayKey | Recurring payment key | Unique keys generated for recurring payment | AN(32) | ○ |  |
| bankAcctNo | Bank account number | Response of masked account number parameters when issuing recurring payment keys | AN(20) | ○ | “123\*\*\*\*\*789” |
| bankCd | Bank code | Response of bank code parameters is sent when recurring payment key is used | AN(3) | ○ | “011” |

# Payment Cancellation/Refund (API)

## API Summary

Refund function is provided for the paid transaction in a separate WEB API format.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbezauthapi.settlebank.co.kr/v3/APIPayCancel.do> |
| Production | <https://ezauthapi.settlebank.co.kr:8081/v3/APIPayCancel.do> |

## Request (Merchant -> Hecto Financial)

The columns requested by Merchant server from Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| HdInfo | Information | Parameter Information code | AN(50) | ● | “IA\_CANCEL”  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “3.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| oldTrNo | Original transaction number | Transaction number delivered by Hecto Financial in response to a payment request | AN(50) | ● | "STFP\_PNPTms00001t00220922182409M1962430" |
| ordNo | Cancellation order number | Unique order number generated by the Merchant (For the same transaction date, uniqueness must be ensured) | AN(100) | ● | “OID201902210001"  Order number generated for cancel request that is different from the order number generated during the payment request |
| cancelPrice | Cancellation request amount | AES Encryption  Input numbers only  Transaction amount or partial cancellation amount  \*If there is container deposit system, partial cancellation is not possible | N(13) | ● | “9000” |
| taxPrice | Tax amount | AES Encryption  Only applicable if the original transaction tax-free status of the tax amount among the canceled amount is a compound tax  Skip if the total amount is canceled | N(13) | ○ | “5000” |
| vatPrice | VAT amount | AES Encryption  Only applicable if the original transaction tax-free status of the 10% of VAT tax amount among the canceled amount is a compound tax  Skip if the total amount is canceled | N(13) | ○ | “500” |
| dutyFreePrice | Non-taxable amount | AES Encryption  Only applicable if the original transaction tax-free status of the non-taxable amount among the canceled amount is a compound tax  Skip if the total amount is canceled | N(13) | ○ | “3500” |
| reqDay | Request date | Date of request for cancellation of payment generated by merchant  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| reqTime | Request time | Time of request for cancellation of payment generated by merchant  String Format) HH24MISS | N(6) | ● | “142120” |
| Signature | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Transaction number + Cancellation order number + Cancellation request amount (plain value) + Request date + Request time + Authentication key |

## Response (Hecto Financial -> Merchant)

The response columns from Hecto Financial server to Merchant are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| resultCd | Result code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure: “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |
| oldTrNo | Cancellation original transaction number | Payment transaction number to be canceled | AN(50) | ● | “STFP\_PNPTms00001t00220922182409M1962430” |
| trNo | Cancellation transaction number | Transaction number generated upon cancellation | AN(50) | ● | “STFP\_PNPTms00001t00220404134307M1550602" |
| cancelPrice | Cancellation amount | Cancellation transaction amount | N(13) | ● | “9000” |
| disntCancelPrice | Cancellation discount (promotion) amount | Among cancelled transaction amount, discount price cancelled (Instant discount, coupon) | N(13) | ● | “1000” |
| payCancelPrice | Payment cancel amount | Among cancelled transaction amount, cancelled amount excluding the discount | N(13) | ● | “8000” |
| criPrice | Amount for issued cash receipt | Amount for issued cash receipt (issued for only cash payment amount) | N(13) | ● | “7000” |
| criTaxVatPrice | Taxable amount for cancelled cash receipt  (Including VAT) | Among cash receipt cancelled amount, mark the taxable amount only (Including VAT) | N(13) | ● | “5500” |
| criDutyFreePice | Non-taxable amount for cancelled cash receipt | Among cash receipt cancelled amount, mark the non-taxable amount only | N(13) | ● | “1500” |
| cancelDay | Cancellation date | Cancellation date  String Format)yyyyMMdd | N(8) | ● | “20190222” |

# Network Cancellation (API)

## API Summary

Regarding transaction that was timeout by the merchant after requesting for payment on Open Banking, if the transaction result inquiry API’s response status is successful payment, a function to request cancellation of network is provided in a separate WEB API type.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbezauthapi.settlebank.co.kr/APINetPayCancel.do> |
| Production | <https://ezauthapi.settlebank.co.kr:8081/APINetPayCancel.do> |

## Request (Merchant -> Hecto Financial)

The columns requested by Merchant server from Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| hdInfo | Information | Paremeter Information code | AN(50) | ● | "IA\_NC\_1.0\_1.0"  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “1.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| trDay | Transaction date | Date of transaction generated by Merchant | N(8) | ● | “20190221” |
| ordNo | Order number | Order number generated by the Merchant | AN(100) | ● | “OID201902210001” |
| reqDay | Request date | Date of request for transaction inquiry generated by Merchant  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| reqTime | Request time | Time of request for transaction inquiry generated by Merchant  String Format) HH24MISS | N(6) | ● | “142120” |
| Signature | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Order number + Transaction date + Request date + Request time + Authentication key |

## Response (Hecto Financial -> Merchant)

The response columns from Hecto Financial server to Merchant are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Description** | **Example** |
| resultCd | Result code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure: “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |
| apiVer | API version | API version | AN(10) | ● |  |

# Transaction Result Inquiry (API)

## API Summary

Result inquiry function for the transaction is provided separately in a WEB API format.

Its purpose is to check the result of the transaction that happened during timeout when payment was requested. If the result of the timeout transaction is successful, using network cancellation API, the transaction should be canceled.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbezauthapi.settlebank.co.kr/APIMoInfo.do> |
| Production | <https://ezauthapi.settlebank.co.kr:8081/APIMoInfo.do> |

## Request (Merchant -> Hecto Financial)

The columns requested by Merchant server from Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “IA\_MO\_1.0\_1.0”  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “1.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| trDay | Transaction date | Date of transaction generated by Merchant yyyyMMdd | N(8) | ● | “20190221” |
| ordNo | Order number | Order number generated by Merchant | AN(100) | ● | “OID201902210001” |
| reqDay | Request date | Date of request for transaction inquiry generated by Merchant  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| reqTime | Request time | Time of request for transaction inquiry generated by Merchant  String Format) HH24MISS | N(6) | ● | “142120” |
| Signature | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Order number + Transaction date + Request date + Request time + Authentication key |

## Response (Hecto Financial -> Merchant)

The response columns from Hecto Financial server to Merchant are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| resultCd | Result code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure: “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |
| trPrice | Transaction amount | The amount requested for the initial payment by the Merchant. | N(13) | ● | “10000” |
| trNo | Transaction number | Payment transaction number generated by Hecto Financial | AN(50) | ● | "STFP\_PNPTms00001t00220922182409M1962430" |
| trDay | Transaction date | Date of payment approval  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| trTime | Transaction time | Time of payment approval  HH24MISS | N(6) | ● | “142120” |

# Transaction Details Inquiry (API)

## API Summary

The function for information inquiry regarding transactions is provided separately in the form of WEB API.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbezauthapi.settlebank.co.kr/v3/APITrInfo.do> |
| Production | <https://ezauthapi.settlebank.co.kr:8081/v3/APITrInfo.do> |

## Request (Merchant -> Hecto Financial)

The columns requested by Merchant server from Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| hdInfo | Information | Paremeter Information code | AN(50) | ● | “IA\_MO\_1.0\_1.0”  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “1.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| trDay | Transaction date | Date of transaction generated by Merchant | N(8) | ● | “20190221” |
| ordNo | Order number | Payment order number generated by the Merchant | AN(100) | ● | “OID201902210001” |
| reqDay | Request date | Date of request for transaction inquiry generated by Merchant  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| reqTime | Request time | Time of request for transaction inquiry generated by Merchant  String Format) HH24MISS | N(6) | ● | “142120” |
| Signature | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Order number + Transaction date + Request date + Request time + Authentication key |

## Response (Hecto Financial -> Merchant)

The response columns from Hecto Financial server to Merchant are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| resultCd | Result code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure: “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |
| trCnt | Number of transactions | Number of transactions if transaction details exist | N(4) | ● | “2” |
| trList | Transaction list |  | <object> | ● |  |
| --trStatus | Transaction status | Successful transaction: 0021 or 3010 or 0  Transaction failed: 0031  Requesting withdrawal: 0011  Processing refund: 0051 | AN(4) | ● | “0021” |
| --errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| --trType | Transaction type | Payment:RP, Cancel:RT | AN(2) | ● | “RP” |
| --trDay | Transaction date | String Format)yyyyMMdd | N(8) | ● | “20190221” |
| --trTime | Transaction time | String Format)HH24MISS | N(6) | ● | “142120” |
| --bankCd | Withdrawal bank code | Withdrawal bank code of registered user | N(3) | ● | “001” |
| --trPrice | Transaction amount | Amount requested by the Merchant | N(13) | ● | “1000” |
| --discntPrice | Discount amount | Amount deducted by payment module  (ex: Promotional pre-discount) | N(13) | ● | “0” |
| --payPrice | Payment amount | Final withdrawal amount with discount from initial payment request amount | N(13) | ● | “10000” |
| --criPrice | Cash receipt issued amount | Amount for issued cash receipt (only cash payment amount to be issued)  \*Only cash payment amount is included in the amount for cash receipt. | N(13) | ● | “13000” |
| --criTaxVatPrice | Cash receipt taxable amount (including VAT) | Among cash receipt issued amount, only the taxable amount is marked (including VAT) | N(13) | ● | “11000” |
| --criDutyFreePrice | Cash receipt non-taxable amount | Among cash receipt issued amount, only the non-taxable amount is marked | N(13) | ● | “2000” |
| --ordNo | Order number | Merchant’s order number | AN(100) | ● | “OID201902210001” |
| --trNo | Transaction number | Transaction number generated by Hecto Financial | AN(50) | ● | “STFP\_PNPTms00001t00220922182409M1962430” |
| --custParam1 | Customize Merchant field 1 | In addition to request field defined at the time of approval request, value of the field 1 defined and saved by merchant | AN(128) | ○ | “Additional information” |
| --custParam2 | Customize Merchant field 2 | In addition to request field defined at the time of approval request, value of the field 2 defined and saved by merchant | AN(128) | ○ | “Additional information” |
| --custParam3 | Customize Merchant field 3 | In addition to request field defined at the time of approval request, value of the field 3 defined and saved by merchant | AN(128) | ○ | “Additional information” |
| --custParam4 | Customize Merchant field 4 | In addition to request field defined at the time of approval request, value of the field 4 defined and saved by merchant | AN(128) | ○ | “Additional information” |

# Inquiry for Cash Receipt Issuance(UI)

## Summary

If a cash receipt was issued through Open Banking, by integrating with the UI, the details of the cash receipt can be checked.

## Integration Script Method

settlePay.cashRcptInfo(form obj);

## Request (Form) Parameter

The columns requested by Merchant server to Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| hdInfo | Information | Paremeter Information code | AN(50) | ● | “IA\_CASHRCPTINFO\_1.0\_1.0”  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “1.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| ordNo | Order number | Unique order number generated by the Merchant (For the same transaction date, uniqueness must be ensured) | AN(100) | ● | “OID201902210001” |
| trNo | Transaction number | Payment transaction number generated by Hecto Financial | AN(50) | ● | “STFP\_PNPTms00001t00220922182409M1962430” |
| trDay | Transaction date | yyyyMMdd | N(8) | ● | “20190221” |
| Signature | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Order number + Transaction number + Transaction date + Authentication key |

# Issuance of Recurring Payment Key (API)

## API Summary

Invoke WEB API to request issuance of recurring payment key.

After linking the payment window with the settings recurring payment status parameter to ‘Y’ and payment amount to ‘0 KRW and after authentication complete Callback, the API can be invoked to issue a recurring payment key without payment.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbezauthapi.settlebank.co.kr/APIRegularpayKey.do> |
| Production | [https://ezauthapi.settlebank.co.kr:8081/APIRegularpayKey.do](https://ezauthapi.settlebank.co.kr:8081/APIRegularKey.do) |

## Request (Merchant -> Hecto Financial)

The columns requested by Merchant server from Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “IA\_RK\_1.0\_1.0”  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “1.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| authNo | Authentication number | Authentication stage response value generated by Hecto Financial | AN(20) | ● | “PAR20190220000000001” |
| reqDay | Request date | Date of request for transaction inquiry generated by Merchant  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| reqTime | Request Time | Time of request for transaction inquiry generated by Merchant  String Format) HH24MISS | N(6) | ● | “142120” |
| signature | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Authentication number + Request date + Request time + Authentication key |

## Response (Hecto Financial -> Merchant)

The response columns from Hecto Financial server to Merchant are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| resultCd | Result code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure: “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| ordNo | Order number | Unique order number generated upon request from the merchant | AN(100) | ● | “OID201902210001” |
| trNo | Transaction number | Transaction number generated in Hecto Financial | AN(50) | ● | "STFP\_PNPTms00001t00220922182409M1962430" |
| trDay | Transaction date | Merchant initial UI request date  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| trTime | Transaction time | Merchant initial UI request time  HH24MISS | N(8) | ● | “142120” |
| regularpayKey | Recurring payment key | Unique key generated for recurring payments | AN(32) | ● |  |
| bankAcctNo | Bank account number | Reply with masked account number parameters when issuing recurring payment keys | AN(20) | ○ | 123\*\*\*\*\*789 |
| bankCd | Bank Code | Reply to bank code parameters when issuing recurring payment keys | AN(3) | ○ | “011” |

# Recurring Payment Approval (API)

## API Summary

Invoke WEB API to request approval for recurring payment transactions.

If the payment window was linked with recurring payment parameter set to ‘Y’ and the first payment was made, the recurring payment will be registered with the account (billkey response), and after that, the recurring payment can be made through the API using the billkey.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbezauthapi.settlebank.co.kr/v3/APIRegularPayment.do> |
| Production | <https://ezauthapi.settlebank.co.kr:8081/v3/APIRegularPayment.do> |

## Request (Merchant -> Hecto Financial)

The columns requested by Merchant server from Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| hdInfo | Information | Paremeter Information code | AN(50) | ● | “IA\_SP\_1.0\_1.0”  ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “1.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| trDay | Transaction date | Date of transaction generated by Merchant | N(8) | ● | “20190221” |
| trTime | Transaction time | Time of transaction generated by merchant  HH24MISS | N(6) | ● | “142120” |
| ordNo | Order number | Order number of payment generated by Merchant | AN(100) | ● | “OID201902210001” |
| reqDay | Request date | Date of request for transaction inquiry generated by Merchant  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| reqTime | Request time | Time of request for transaction inquiry generated by Merchant  String Format) HH24MISS | N(6) | ● | “142120” |
| trPrice | Transaction amount | AES Encryption  Payment amount  \*Including cases with container deposit | N(13) | ● | “10000” |
| taxPrice | Tax amount | AES Encryption  Only applicable if the tax-free status of the tax amount among the payment amount is a compound tax | N(13) | ○ | “8000” |
| vatPrice | VAT amount | AES Encryption  Only applicable if the tax-free status of 10% of VAT amount tax amount among the payment amount is a compound tax | N(13) | ○ | Tax amount 10% = “800” |
| dutyFreePrice | Tax-free amount | AES Encryption  Only applicable if the tax-free status of non-taxable amount among the payment amount is a compound tax | N(13) | ○ | 4000 |
| Container Deposit | Container deposit amount | AES Encryption  Amount for container deposit transaction  (Not a target for cash receipt) | N(5) | ○ | 300 |
| productNm | Product name | Product name | AN(15) | ● | “Cabbage” |
| dutyFreeYn | Tax-free status | Y: Tax-free, N: Tax, G: Compound tax. | A(1) | ● | “G” |
| criPsblYn | Cash receipt issuance | Y: Issuable, N: Not issuable  Recognize as Y if "(empty) | A(1) | ○ | “Y’ |
| addDeductionYn | Additional deduction classification | Public Transportation: Y  Book, performance cost: C  No additional deductions: N | A(1) | ○ | “N" |
| regularpayKey | Recurring Payment Key | Unique key generated for recurring payment verification | AN(32) | ● |  |
| Signature | hash data | Hash value generated by sha256 method | AN(200) | ● |  |
| custParam1 | Additional Merchant Field1 | In addition to request field defined at the time of approval request, value of this field 1 defined and saved by merchant  The corresponding value is displayed in the response message when the transaction is inquired. | AN(256) | ○ | "Additional Field Information"  You can view transactions with the value from the merchant portal |
| custParam2 | Additional Merchant Field2 | In addition to request field defined at the time of approval request, value of this field 2 defined and saved by merchant  The corresponding value is displayed in the response message when the transaction is inquired. | AN(256) | ○ | "Additional Field Information"  You can view transactions with the value from the merchant portal |
| custParam3 | Additional Merchant Field3 | In addition to request field defined at the time of approval request, value of this field 3 defined and saved by merchant  The corresponding value is displayed in the response message when the transaction is inquired. | AN(256) | ○ | "Additional Field Information"  You can view transactions with the value from the merchant portal |
| custParam4 | Additional Merchant Field4 | In addition to request field defined at the time of approval request, value of this field 4 defined and saved by merchant  The corresponding value is displayed in the response message when the transaction is inquired. | AN(256) | ○ | “Additional Field Information” |
| payLimitCd | Payment limitation code | According to the policy set in Open Banking, the payment limitation of the user is checked | An(1) | ○ |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Order number + Transaction date + Request date + Request time + Transaction amount (plain value) + Recurring payment key + Authentication Key |

## Response (Hecto Financial -> Merchant)

The response columns from Hecto Financial server to Merchant are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| resultCd | Result code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure: “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |
| trNo | Transaction number | Hecto Financial Transaction Number | A(50) | ● | "STFP\_PNPTms00001t00220922182409M1962430" |
| ordNo | Order number | Unique order number generated upon request from the Merchant | AN(100) | ● | “OID201902210001” |
| regularStatus | Recurring payment processing status | Responding to the processing status of recurring payment requests | A(1) | ○ | Need to reprocess recurring payment: R  Subject to termination of recurring payment: C |
| trPrice | Transaction amount | The initial requested payment amount by the merchant | N(13) | ● | “15000” |
| discntPrice | Discount (promotion) amount | Amount deducted by the payment module (instant discount, coupon) | N(13) | ● | “1000” |
| payPrice | Payment amount | Payment amount excluding the discounted amount from the initial transaction request amount | N(13) | ● | “14000” |
| criPrice | Cash receipt issued amount | Cash receipt issued amount (Can be issued for cash payment amount only)  \*Only cash payment amount is included in the cash receipt issued amount. | N(13) | ● | “13000” |
| criTaxVatPrice | Cash receipt taxable amount  (including VAT) | Among cash receipt issued amount, only the taxable amount is marked (including VAT) | N(13) | ● | “11000” |
| criDutyFreePrice | Cash receipt non-taxable amount | Among cash receipt issued amount, only the non-taxable amount is marked | N(13) | ● | “2000” |
| ordDay | Order date | Merchant’s first payment request date  String format) yyyyMMdd | N(8) | ● | “20190221” |
| ordTime | Order time | Merchant’s first payment request time HH24MISS | N(6) | ● | “142120” |
| trDay | Transaction date | Date of transaction on Open Banking  String format) yyyyMMdd | N(8) | ● | “20190221” |
| trTime | Transaction time | Time of transaction on Open Banking  HH24MISS | N(6) | ● | “142122” |

# Recurring Payment Cancellation (API)

## API Summary

Invoke WEB API to cancel the previously registered recurring payment.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | [https://tbezauthapi.settlebank.co.kr/APIUnRegistRegular.do](https://tbezauthapi.settlebank.co.kr/APIUnRegistRegular.do%20) |
| Production | [https://ezauthapi.settlebank.co.kr:8081/APIUnRegistRegular.do](https://ezauthapi.settlebank.co.kr:8081/APIUnRegistRegular.do%20) |

## Request (Merchant -> Hecto Financial)

The columns requested by Merchant server from Hecto Financial are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “IA\_MO\_1.0\_1.0” ※ fixed value |
| apiVer | Version | Version | AN(4) | ● | “1.0”  ※ fixed value |
| mercntId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “settleId” |
| reqDay | Request date | Date of request for transaction inquiry generated by Merchant  String Format)yyyyMMdd | N(8) | ● | “20190221” |
| reqTime | Request Time | Time of request for transaction inquiry generated by Merchant  String Format) HH24MISS | N(6) | ● | “142120” |
| regularpayKey | Recurring Payment Key | Unique key generated for recurring payment verification | AN(32) | ● |  |
| Signature | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| signature value | Merchant ID + Request date + Request time + Recurring payment key + Authentication key |

## Response (Hecto Financial -> Merchant)

The response columns from Hecto Financial server to Merchant are defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type and length** | **Required** | **Example** |
| resultCd | Result code | Result code (success/failure) | N(1) | ● | Success: “0”  Failure: “-1” |
| errCd | Failure Code | Refer to failure code table | AN(5) | ● |  |
| resultMsg | Result message | Visually identifiable message, has the possibility of random change by server side | AN(200) | ● | “Success” |

# Others

## Failure Code

A detailed description of the rejection code field in the server-side response is as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| **Code** | **Description** | **Code** | **Description** |
| 1 | Invalid request | 2 | No IP rights |
| 19 | Internal system error | 1103 | Signature fail |
| 10001 | Non-existent account | 10002 | Invalid account |
| 10003 | Occurrence of double withdrawal | 10004 | System error during VAN request |
| 10005 | No VAN response information | 10006 | No information of transaction number |
| 10007 | Communication disruption | 10008 | Already registered account |
| 10009 | Invalid request | 10010 | Internal system error |
| 10011 | Bank maintenance timel occurredtion | 10012 | Insufficient account balance |
| 10013 | No ARS verification result | 10014 | ARS verification request value is different |
| 10015 | Account for recurring transfer is cancelled | 10016 | Limited withdrawal account transaction |
| 10017 | Resident registration number / business number error | 10018 | Account error (Easy Account registration is not possible) |
| 10019 | Others (transaction is not possible) | 10020 | Account error |
| 10021 | No recipient account | 10022 | Legally restricted account |
| 10023 | Non-real-name account | 10024 | Name of account holder doesn’t match |
| 10025 | Already canceled transaction | 10026 | Cancellation amount error |
| 10027 | Failed ARS verification | 10028 | Unable to receive ARS |
| 10029 | Account registration in progress | 10030 | Refund is in progress |
| 10031 | Double remittance occurred | 10032 | Failed to check payer's name |
| 10033 | Limit per payment has exceeded | 10034 | Daily limit has exceeded |
| 10035 | Fraudulent account | 10036 | Connection was lost after a certain period of time |
| 10037 | Payment cancellation | 10038 | Request in progress |
| 10039 | Duplicated refund request | 10040 | Request in process |
| 10041 | Service capacity exceeded | 10042 | System is BUSY |
| 10043 | Account is already registered | 10044 | Bank impossible for transaction |
| 10050 | Duplicate request | 10051 | Already registered cash receipt user |
| 10052 | Unregistered user for cash receipt | 10053 | Account has been closed |
| 10060 | Failed transaction | 10061 | Amount per time has exceeded |
| 10062 | Amount limit for the day has exceeded | 10063 | Monthly amount limit has exceeded |
| 10064 | Transaction number limit for the day has exceeded | 10065 | Monthly number of transactions has exceeded |
| 10066 | Password registration has failed | 10067 | Password mismatch |
| 10068 | Service suspension | 10069 | The payment service is not available due to policy. Please use another payment method. |
| 10070 | The selected payment service is not available due to policy. Please contact Hecto Financial Customer Center (1600-5220) | 10099 | Maintenance time of Easy Payment system |
| 10100 | Relay Institution TIMEOUT |  |  |

## Financial Institution Identifier

The unique identification codes for financial institutions are as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| **Code of financial institution** | **Name of financial institution** | **Code of financial institution** | **Name of financial institution** |
| 002 | KDB | 088 | Shinhan Bank |
| 003 | IBK | 089 | Kbank |
| 004 | Kookmin Bank | 090 | Kakao Bank |
| 007 | Suhyup Bank | 209 | Yuanta Securities |
| 011 | Nonghyup Bank | 218 | KB Securities |
| 012 | National Agricultural Cooperative Federation | 238 | Mirae Asset Securities |
| 020 | Woori Bank | 240 | Samsung Securities |
| 023 | SC Bank | 243 | Korea Investment & Securities |
| 027 | Citi Bank | 247 | NH Investment & Securities |
| 031 | Daegu Bank | 261 | Kyobo Securities |
| 032 | Busan Bank | 262 | Hi Investment & Securities |
| 034 | Kwangju Bank | 263 | Hyundai Motors Securities |
| 035 | Jeju Bank | 264 | Kiwoom Securities |
| 037 | Jeonbuk Bank | 265 | eBest Securities |
| 039 | Kyongnam Bank | 266 | SK Securities |
| 045 | Korean Federation of Community Credit Cooperatives (KFCC) | 267 | Daishin Securities |
| 048 | National Credit Union Federation of Korea (NACUFOK) | 269 | Hanwha Investment & Securities |
| 050 | Korea Federation of Savings Banks | 270 | Hana Financial Investment |
| 054 | HSBC Bank | 278 | Shinhan Financial Investment |
| 055 | Deutsche Bank | 279 | DB Securities |
| 057 | JP Morgan Chase Bank | 280 | Eugene Investment & Securities |
| 060 | Bank of America | 287 | Meritz Securities |
| 062 | Industrial and Commercial Bank of China | 290 | BOOKOOK Securities |
| 064 | National Forestry Cooperative Federation | 291 | Shinyoung Securities |
| 071 | Korea Post | 292 | CAPE Investment & Securities |
| 081 | KEB Hana Bank | 103 | SBI Saving Bank |
| 092 | Toss Bank | 271 | Toss Securities |

## Bank Maintenance Time

The regular maintenance hours for each bank are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Code** | **Name** | **Maintenance time (Daily)** | **Hecto Financial maintenance time** | | **Regular maintenance** |
| **Start** | **End** |
| 002 | KDB | 23:30~00:30 | 23:50 | 00:15 | Every Sunday 00:00~04:00 |
| 003 | IBK | 24:00~00:30 | 23:50 | 00:12 | None |
| 004 | Kookmin Bank | 24:00:~00:30 | 23:50 | 00:12 | Every 3rd week Sunday  00:00~00:30, 05:00~05:30  01:00~06:00(Intermittent error in transaction) |
| 007 | Suhyup Bank | 23:50~00:30 | 23:30 | 00:30 | None |
| 011 | Nonghyup Bank | 24:00~00:30 | 23:50 | 00:12 | Every 3rd week Monday 00:00~04:00 |
| 020 | Woori Bank | 23:50~00:30 | 23:50 | 00:10 | Every Friday 00:00~00:40, Every 2nd week Sunday 00:00~06:00 |
| 023 | SC Bank | 23:30~00:30 | 23:50 | 00:12 | None |
| 027 | Citi Bank | 23:40~00:30 | 23:50 | 00:30 | The day after holiday 00:00~02:00, Daily 00:30~04:30(Intermittent error in transaction) |
| 031 | Daegu Bank | 23:40~00:30 | 23:50 | 00:05 | The last Saturday of each quarter 00:00~06:00 |
| 032 | Busan Bank | 23:30~00:30 | 23:50 | 00:05 | Monday 00:00~04:00 |
| 034 | Kwangju Bank | 23:40~00:30 | 23:50 | 00:05 | Every 2nd week Sunday 02:00~06:00 |
| 035 | Jeju Bank | 23:40~00:30 | 23:50 | 00:12 | Every Mon/Wednesday 04:30~05:00 |
| 037 | Jeonbuk Bank | 24:00~00:30 | 23:50 | 00:05 | Every 2nd week Saturday 00:00~04:00 |
| 039 | Kyongnam Bank | 23:40~00:30 | 23:50 | 00:05 | Every 2nd week Sunday 02:00~06:00 |
| 045 | KFCC | 23:50~00:30 | 23:30 | 00:30 | None |
| 048 | NACUFOK | 23:40~00:30 | 23:50 | 00:05 | None |
| 071 | Korea Post | 23:40~00:30 | 23:50 | 00:05 | None |
| 081 | KEB Hana Bank | 23:40~00:30 | 23:50 | 00:15 | None |
| 088 | Shinhan Bank | 23:40~00:30 | 23:50 | 00:05 | Between 00:00 ~ 01:00, sequential rebooting of the server |
| 089 | Kbank | 23:40~00:30 | 23:35 | 00:35 | None |
| 090 | Kakao Bank | 23:50~00:10 | 23:50 | 00:05 | None |
| 092 | Toss Bank | 23:55~00:05 | 23:55 | 00:05 | None |
| 209 | Yuanta Securities | 23:50~00:10 | 23:50 | 00:10 | None |
| 247 | NH Investment & Securities | 00:15~23:50 | 23:50 | 00:05 | None |
| 280 | Eugene Investment & Securities | 23:30~00:30 | 23:50 | 00:35 | None |
| 287 | Meritz Securities | 23:50~00:20 | 23:50 | 00:20 | Daily 23:50~00:20 |