Easy Cash Payment (Open Banking) Standard WEB API

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# Outline

## Purpose

This document is intended for understanding technical requirements for Open Banking Non-UI API integration provided by Hecto Financial and to define detailed specification.

## Target

This document is intended for clients’ developers to execute Open Banking service through Hecto Financial’s Open Banking system.

## API URI

Open Banking API provides the following APIs; each API is mapped to a web service URL.

|  |  |  |  |
| --- | --- | --- | --- |
| **Function** | **API Name** | **URI** | **HTTP Method** |
| Account Management | Account registration  (For Open Banking) | <https://npay.settlebank.co.kr/v2/api/acnt/reg> | POST |
| Open Banking account registration | <https://npay.settlebank.co.kr/v2/api/acnt/obreg> | POST |
| Transfer Service | Payment (For Open Banking) | <https://npay.settlebank.co.kr/v2/api/pay/confirm> | POST |
| Payment cancellation/refund | <https://npay.settlebank.co.kr/v1/api/pay/cancel> | POST |
| Remittance | [https://npay.settlebank.co.kr/v1/api/pay/rmt](https://npay.settlebank.co.kr/v1/api/pay/rmt%09) | POST |
| Request for return of funds | [https://npay.settlebank.co.kr/v2/api/fundsReturn/req](https://npay.settlebank.co.kr/v2/api/fundsReturn/req%09) | POST |
| Inquiry Service | Transaction result inquiry | <https://npay.settlebank.co.kr/v1/api/pay/morw> | POST |
| Transaction history inquiry | <https://npay.settlebank.co.kr/v1/api/pay/translist> | POST |
| Account list inquiry | [https://npay.settlebank.co.kr/v1/api/acnt/list](https://npay.settlebank.co.kr/v1/api/acnt/list%09) | POST |
| Confirmation of request for return of funds | <https://npay.settlebank.co.kr/v2/api/fundsReturn/check> | POST |

## General

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

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

N: Numeric Characters

A: Alphabetic Characters

AN: Both alphabetic and numeric

* Request parameter validation

If there is an error with parameter verification, such as missing required values, inconsistency of hash data to determine forgery and requested variable length check, the following response code is returned.

|  |
| --- |
| {  “outStatCd”: ”0031”,  “outRsltCd“: ”ST09”  “outRsltMsg“: “invalid request parameter”  } |

# Invoke API

## API Access Information

The following is API server access information.

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr> |
| Production | <https://npay.settlebank.co.kr> |

## Request and Response Headers

API request and response header format are as below.

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

## Timeout

The timeout process of API’s response is 30 seconds.

## 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 of transaction requests use POST method only)

* For the response value, the response is given with JSON string only.
* For request, use POST method only.
* Commonly, variable values :,&,?,’,new line, <, > are not allowed.

# Crucial Information Security

## Encryption of Personal Information and Crucial Information

When sending and receiving data, the following encryption should be performed for the personal/critical information fields.

|  |  |  |  |
| --- | --- | --- | --- |
| **Classification** | **Entry** | **Application** | **Encoding** |
| Personal information | Algorithm | AES-256/ECB/PKCS5Padding | Base64 Encoding |
| Field | The name of the person in charge, phone number, mobile phone number, e-mail, account holder’s name, account number, etc.  (The fields for encryption are specified in the descriptions of the request field specification of each API.) | | |

## Personal Information Encryption Key

For encryption and decryption of personal information and crucial information, key information differs depending on the operation environment and is as follows.

|  |  |
| --- | --- |
| **Section** | **Encryption Key** |
| Testbed key | SETTLEBANKISGOODSETTLEBANKISGOOD(32byte) |
| Production key | Will be provided by separate notice when the service is carried out |

## Forgery Prevention Algorithm

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

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

## Hash Generation Authentication Key

|  |  |
| --- | --- |
| **Section** | **Authentication key** |
| Testbed key | ST190808090913247723(20byte) |
| Production key | Will be provided by separate notice when the service is carried out |

# Account Registration (For Open Banking)

## API Summary

From Merchant server to Hecto Financial server, account registration is requested. (Firm, Open Banking registration process)

Using transaction number (trdNo), the result value of ‘ARS authentication confirmation’ API, account registration (withdrawal transfer registration) is done. With the registered account, payment (withdrawal) can be made in the future.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v2/api/acnt/reg> |
| Production | <http://npay.settlebank.co.kr/v2/api/acnt/reg> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_RE0W\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID201902210001" |
| trdNo | Transaction Number | Hecto Financial transaction number.  Setting transaction number that was returned during ARS authentication  Required if authMthdCd : ARS | AN(50) | ○ | "T2019022100001" |
| mchtCustId | Customer ID | Unique customer ID or unique key sent by Merchant  **AES Encryption** | AN(100) | ● | “honggildong” |
| reqDt | Request Date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request Time | HH24MISS | AN(6) | ● | “120000” |
| mchtCustNm | Account Holder Name | English / number / Korean **(Korean 3 byte)**  **AES Encryption** | AN(60) | ● | “Hong Gildong” (in Korean) |
| uii | Date of Birth / Business Registration Number | Date of birth: yyMMdd  Business registration number: 10 digits (excluding ‘hyphen’)  **AES Encryption** | AN(10) | ● | “8001012” |
| bankCd | Bank Code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Account Number | Account number excluding ‘hyphen’. Min 9, max 15  **AES Encryption** | AN(15) | ● | “1234567890” |
| authMthdCd | Authorization Classification Code | Withdrawal transfer agreement materials  WR: File in written form  ARS: ARS authentication  PASS: PASS authentication certificate  Default: ARS | AN(5) | ○ | “ARS” |
| custIp | Customer’s IP Address | Customer’s device’s IP address,  not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● |  |
| sexDivCd | Gender Classification Code | The seventh digit of resident registration number | AN(1) | ● |  |
| ci | CI | Customer CI | AN(88) | ● |  |
| email | Email | Customer’s e-mail | AN(100) | ○ |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Customer ID (Plain Text) + Request Date + Request Time + Account Number (Plain Text) + Authentication Key |

## Response (Hecto Financial -> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● | ST08: If it is an account that is already registered, deliver the information on the registered account |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(300) | ● | “Successfully processed.” |
| mchtCustId | Customer ID | Unique customer ID or unique key sent by Merchant  **AES Encryption** | AN(100) | ● | "honggildong" |
| bankCd | Bank Code | Three-digit bank code | AN(3) | ● | "004" |
| custAcntNo | Account Number | Masked account number  ex) 234\*\*\*\*\*\*\*123 | AN(15) | ● | "234\*\*\*\*\*\*\*123" |
| custAcntKey | Account Number Key | Serial number of account registered for withdrawal and transfer | AN(50) | ● | "d894kjd93kd9" |
| svcDivCd | Account Registration Service Classification | Service registered for withdrawal and transfer | N(4) | ● | 1: Firm Banking  2: Open Banking  3: Firm Banking, Open Banking |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ○ | "OID201902210001" |
| trdNo | Transaction Number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |
| obPayerNo | Open Banking Payer Number | Customer’s payer number registered through Open Banking | AN(30) | ○ | “20220630123456789012” |
| fintechUserNo | Fintech Use Number | Open Banking user account identification number | AN(24) | ○ | “123456789012345678901234” |
| userSeqNo | User Serial Number | Open Banking user identification number | AN(10) | ○ | “1234567890” |

# Open Banking Account Registration

## API Summary

From Merchant server to Hecto Financial server, Open Banking account registration is requested.

From customers who registered withdrawal and transfer with the original firm banking system, after agreeing to the terms and conditions of additional registration of Open Banking, Open Banking account registration API should be additionally called. If it is the first-ever account registration, full registration text can be used for plural registration process request.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | [https://tbnpay.settlebank.co.kr/v2/api/acnt/obreg](%20https:/tbnpay.settlebank.co.kr/v2/api/acnt/obreg) |
| Production | <http://npay.settlebank.co.kr/v2/api/acnt/obreg> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_OR0W\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID201902210001" |
| mchtCustId | Customer ID | Unique customer ID or unique key sent by Merchant  **AES Encryption** | AN(100) | ● | "honggildong" |
| reqDt | Request Date | yyyyMMdd | N(8) | ● | “20191231” |
| reqTm | Request Time | HH24MISS | N(6) | ● | “120000” |
| mchtCustNm | Account Holder Name | English / number / Korean **(Korean 3 byte)**  **AES Encryption** | AN(10) | ● | “Hong Gildong” (in Korean) |
| uii | Date of Birth / Business Registration Number | Date of birth: yyMMdd  Business registration number: 10 digits (excluding ‘hyphen’)  **AES Encryption** | N(10) | ● | “8001012” |
| bankCd | Bank Code | Refer to **Table of Financial Institution Codes** | N(3) | ● | “004” |
| custAcntNo | Account Number | Account number excluding ‘hyphen’. Min 9, max 15  **AES Encryption** | AN(15) | ● | “1234567890” |
| custIp | Customer’s IP Address | Customer’s device’s IP address,  not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● |  |
| sexDivCd | Gender Classification Code | The seventh digit of resident registration number | AN(1) | ● |  |
| ci | CI | Customer CI | AN(88) | ● |  |
| email | Email | Customer’s e-mail | AN(100) | ○ |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Customer ID (Plain Text) + Request Date + Request Time + Account Number (Plain Text) + Authentication Key |

## Response (Hecto Financial -> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● | ST08: If it is an account that is already registered, deliver the information on the registered account |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(200) | ● | “Successfully processed.” |
| mchtCustId | Customer ID | Unique customer ID or unique key sent by Merchant  **AES Encryption** | AN(100) | ● | "honggildong" |
| bankCd | Bank Code | Three-digit bank code | N(3) | ● | “004” |
| custAcntNo | Account Number | Masked account number  ex) 234\*\*\*\*\*\*\*123 | AN(15) | ● | "234\*\*\*\*\*\*\*123" |
| svcDivCd | Account Registration Service Classification | Service registered for withdrawal and transfer | N(4) | ● | 1: Firm Banking  2: Open Banking  3: Firm Banking, Open Banking |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ○ | "OID201902210001" |
| trdNo | Transaction Number | Hecto Financial transaction number | AN(50) | ● | “SFP\_FIRM12345678901234567890” |
| obPayerNo | Open Banking Payer Number | Customer’s payer number registered through Open Banking | AN(30) | ○ | “20220630123456789012” |
| fintechUserNo | Fintech Use Number | Open Banking user account identification number | AN(24) | ○ | “123456789012345678901234” |
| userSeqNo | User Serial Number | Open Banking user identification number | AN(10) | ○ | “1234567890” |

# Payment (For Open Banking)

## API Summary

From Merchant server to Hecto Financial server, Open Banking payment is requested. Account registered through account registration (withdrawal and transfer registration) can be used for payment (withdrawal and transfer from customer’s account). As the result of executing this API, cash moves from customer’s account to Merchant’s Open Banking main account.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | [https://tbnpay.settlebank.co.kr/v2/api/pay/confirm](%20https:/tbnpay.settlebank.co.kr/v2/api/pay/confirm) |
| Production | <http://npay.settlebank.co.kr/v2/api/pay/confirm> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_RP0W\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID201902210001" |
| mchtCustId | Customer ID | Unique customer ID or unique key sent by Merchant  **AES Encryption** | AN(100) | ● | "honggildong" |
| reqDt | Request Date | yyyyMMdd | N(8) | ● | “20191231” |
| reqTm | Request Time | HH24MISS | N(6) | ● | “120000” |
| trdAmt | Transaction Amount | Amount to be withdrawn (transaction amount) | N(13) | ● | "1000" |
| bankCd | Withdrawal Bank Code | Registered customer withdrawal bank code | N(3) | ● | "004" |
| custAcntKey | Account Number Key | Serial number of account registered for withdrawal and transfer | AN(50) | ○ | "d894kjd93kd9" |
| splAmt | Supply Price | Supply price | N(13) | ○ | "0" |
| vat | VAT | VAT | N(13) | ○ | "0" |
| svcAmt | Service Charge | Service charge | N(13) | ○ | "0" |
| pmtPrdtNm | Paid Product Name | Set the name of paid product | AN(50) | ○ | “Product name” |
| custAcntSumry | Bank Code Content | Code name that will be on the customer’s account | AN(7) | ○ | “Hong Gildong” (in Korean) |
| csrclssReqYn | Cash Receipt Issue Status | Y: Cash receipt issued  N: Cash receipt not issued | A(1) | ○ | "N" |
| csrclssPsblYn | Cash Receipt Issue Availability | Y: Cash receipt can be issued  N: Cash receipt cannot be issued | A(1) | ○ | "N" |
| taxTypeCd | Tax Exemption Status | Y: Tax-free  N: Taxation  **csrcIssReqYn**  **If it is Y(Issued), it is required** | A(1) | ○ | "N" |
| csrcRegProposYn | Use Classification | 0: Income Deduction,  1: Evidence of Expenditure  **csrcIssReqYn**  **If it is Y(Issued), it is required** | N(1) | ○ |  |
| csrcRegNoDivCd | Issue Information Classification | **1: Card**  **2: Resident registration number**  **3: Business registration number**  **4: Mobile number**  **csrcIssReqYn**  **If it is Y(Issued), it is required** | N(1) | ○ |  |
| csrcRegNo | Issue Information | Actual value according to csrcRegNoDivCd value  **csrclssReqYn**  **If it is Y(Issued), it is required**  AES Encryption | AN(20) | ○ |  |
| addDdtTypeCd | Additional Deduction Classification | Y: Public transport  C: Books, concerts | A(1) | ○ |  |
| rglPmtYn | Recurring Payment Status | Y: Recurring payment  N: General payment | A(1) | ○ | DEFAULT : N |
| rglEdDt | End Date of Recurring Payment | yyyyMMdd | N(8) | ○ | "20210830" |
| custIp | Customer’s IP Address | Customer’s device’s IP address,  not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● |  |
| subCpnNm | Sub-merchant Name | Name of the sub-merchant with transaction | AN(40) | ○ |  |
| subCpnNo | Sub-merchant Number | Number of the sub-merchant with transaction | AN(20) | ○ |  |
| subCpnBizRegNo | Sub-merchant Business Registration Number | Business Registration Number of the sub-merchant with transaction | AN(10) | ○ |  |
| lastStlAcntDprNm | Account Holder of Final Settlement Account | Setting the code name that will be on the sub-merchant’s settlement account | AN(20) | ○ |  |
| latStlAcntBankCd | Bank Code of Final Settlement Account | Bank code of sub-merchant’s settlement account | AN(3) | ○ |  |
| latStlAcntNo | Account Number of Final Settlement Account | Account number of sub-merchant’s settlement account excluding ‘hyphen’  **AES Encryption** | AN(15) | ○ |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Customer ID (Plain Text) + Order Date + Order Time +Transaction Amount +Withdrawal Bank Code + Authentication Key |

## Response (Hecto Financial -> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● |  |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(200) | ● | “Successfully processed.” |
| trdNo | Transaction Number | Hecto Financial transaction number | AN(50) | ● | “SFP\_FIRM12345678901234567890” |
| trdAmt | Transaction Amount | Withdrawn amount (transaction amount) | N(13) | ● | "1000" |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID201902210001" |
| rglChrgKey | Recurring Payment Key | Unique key generated for recurring payment | AN(32) | ○ |  |
| svcDivCd | Service Used During Payment | Paid (withdrawn/ transferred) service | N(4) | ● | 1: Firm Banking  2: Open Banking |
| oboPsblYn | Open Banking Availability | Availability of Withdrawal bank Open Banking | AN(1) | ○ | Y: Used  N: Not used |

# Payment Cancellation / Refund

## API Summary

From Merchant server to Hecto Financial server, payment cancellation/refund is requested.

For transaction that was paid (withdrawn), refund (payment cancellation) is done. Refund can be done with the transaction number of the payment transaction.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/pay/cancel> |
| Production | <http://npay.settlebank.co.kr/v1/api/pay/cancel> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_RT0W\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order Number | Merchant cancellation order number  \*Excluding Korean  **Not the number for the original transaction, but the order number of cancellation request** | AN(100) | ● | "OID201902210001" |
| mchtCustId | Customer ID | Unique customer ID or unique key sent by Merchant  **AES Encryption** | AN(100) | ● | "honggildong" |
| mchtTrdDt | Cancellation Order Date | yyyyMMdd | N(8) | ● | “20191231” |
| mchtTrdTm | Cancellation Order Time | HH24MISS | N(6) | ● | “120000” |
| trdAmt | Transaction Amount | Cancelled transaction amount or partial cancelled amount | N(13) | ● | "1000" |
| custAcntSumry | Bank Code Content | Code name that will be on the customer’s account **(Korean 3 byte)** | AN(30) | ○ | “Hong Gildong” (in Korean) |
| splAmt | Supply Price | Supply price | N(13) | ○ | "910" |
| vat | VAT | VAT | N(13) | ○ | "90" |
| svcAmt | Service Charge | Service charge | N(13) | ○ | "0" |
| trdNo | Original Transaction Number | Hecto Financial transaction number | AN(50) | ● | "SFP\_FIRM12345676709" |
| custIp | Customer’s IP Address | Customer’s device’s IP address,  not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Customer ID (Plain Text) + Cancellation Order Date + Cancellation Order Time + Transaction Amount + Original Transaction Number + Authentication Key |

## Response (Hecto Financial -> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● |  |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(300) | ● | “Successfully processed.” |
| mchtTrdNo | Cancellation Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID201902210001" |
| trdNo | Cancellation Transaction Number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |
| trdAmt | Refund Amount | Withdrawn amount (transaction amount) | N(13) | ● | "1000" |
| svcDivCd | Service Used During Refund | Service used during refund | N(4) | ● | 1: Firm Banking  **2: Open Banking** |

# Remittance

## API Summary

From Merchant server to Hecto Financial server, remittance is requested.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/pay/rmt> |
| Production | <http://npay.settlebank.co.kr/v1/api/pay/rmt> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_AR0W\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID2021083012345" |
| mchtCustId | Customer ID | Unique customer ID or unique key sent by Merchant  **AES Encryption** | AN(100) | ○ | "honggildong" |
| trdDt | Transaction Date | yyyyMMdd | AN(8) | ● | “20191231” |
| trdTm | Transaction Time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Bank Code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Deposit Bank Account Number | Account number excluding ‘hyphen’.  **AES Encryption** | AN(15) | ● | "123456664" |
| custAcntSumry | Deposit Account Code Content | Code name that will be on the customer’s account  **※ Full-width characters used (7 characters)**  **AES Encryption** | AN(14) | ● | “Hong Gildong” (in Korean) |
| directYn | Bank Direct Contract Status | N: Resale (Default)  Y: Direct contract | A(1) | ○ |  |
| macntBankCd | Main Account Bank Code | Refer to **Table of Financial Institution Codes** (for direct contract with bank)  **Required if PDirecYn is Y (direct contract)** | N(3) | ○ |  |
| macntNo | Account Number of Main Deposit Account | Account number of main account excluding ‘hyphen’ (for direct contract with bank)  **AES Encryption**  **Required if directYn is Y (direct contract)** | AN(15) | ○ |  |
| macntSumry | Main Account Code Content | Code content that will be on the main account (for direct contract with bank)  **※ Full-width characters used (6 characters)**  **Required if directYn is Y (direct contract)** | AN(6) | ○ |  |
| scrtCardVal | Security Code Number | Security card number by SC Bank through direct contract  **AES Encryption** | AN(6) | ○ |  |
| firmPktNo | Firm Banking Specialized Number |  | N(6) | ○ |  |
| macntPwd | Main Account Password | Optional input according to contract per bank  **(KFCC required)**  AES Encryption | AN(4) | ○ |  |
| trdAmt | Transaction Amount | Amount that will be remitted (transaction amount)  Max. 1 billion KRW | N(13) | ● | "1000" |
| custIp | Customer’s IP Address | Customer’s device’s IP address,  not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Order Number + Transaction Date + Transaction Time + Deposit Bank Code + Deposit Account Number (Plain Text) + Transaction Amount + Authentication Key |

## Response (Hecto Financial -> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● | ST08: If it is an account that is already registered, deliver the information on the registered account |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(300) | ● | “Successfully processed.” |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID20210830080000" |
| trdNo | Transaction Number | Hecto Financial transaction number | AN(40) | ● | "SFP\_FIRM1233444365430698" |
| trdAmt | Transaction Amount | Remittance | N(13) | ● | "1000" |
| svcDivCd | Service Used During Remittance | Service used during remittance | N(4) | ● | 1: Firm Banking  **2: Open Banking** |

# Transaction Result Inquiry

## API Summary

If the result code for payment approval result or remittance request result is ‘processing’ or if there is a timeout, until ‘success’ or ‘fail’ code is received, the API should be called repeatedly.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/pay/morw> |
| Production | <http://npay.settlebank.co.kr/v1/api/pay/morw> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_LT00\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| pktDivCd | Work Classification | **Default value: RP**  Work classification of order number | AN(2) | ● | "RP" |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean  Order number when transaction is requested | AN(100) | ● | "OID201902210001" |
| mchtTrdDt | Order Date | yyyyMMdd | AN(8) | ● | "20191231" |
| reqDt | Request Date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request Time | HH24MISS | AN(6) | ● | “120000” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Order Number + Order Date + Request Date + Request Time + Authentication Key |

## Response (Hecto Financial-> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● |  |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(300) | ● | “Successfully processed.” |
| trdNo | Transaction Number | Hecto Financial transaction number | AN(40) | ○ | “SFP\_FIRM12345678901234567890” |
| bankCd | Withdrawal Bank Code | Withdrawal bank code | N(3) | ○ | "011" |
| svcDivCd | Service Used During Transaction | Service used during transaction | N(1) | ○ | 1: Firm Banking  **2: Open Banking** |

# Transaction History Inquiry

## API Summary

Transaction history on payment and refund is requested.

With Merchant’s order date and order number, information on transaction (payment/refund) can be checked.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/pay/translist> |
| Production | <http://npay.settlebank.co.kr/v1/api/pay/translist> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_LT00\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| pktDivCd | Work Classification | Pay: RP, Cancel: RT  Work classification of order number | AN(2) | ● | "RP" |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID201902210001" |
| mchtTrdDt | Order Date | yyyyMMdd | AN(8) | ● | "20191231" |
| reqDt | Request Date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request Time | HH24MISS | AN(6) | ● | “120000” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● | “1000” |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Order Number + Order Date + Request Date + Request Time + Authentication Key |

## Response (Hecto Financial -> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● |  |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(100) | ● | “Successfully processed.” |
| dataCnt | Number of Transaction | When transaction history exists | N(4) | ● | "10" |
| trRecords | Transaction History |  | <object> | ● |  |
| --recordOutRsltCd | Transaction Result Code | Refer to **Reject Code Table** | AN(4) | ● | "ST00" |
| --recordOutRsltMsg | Transaction Result Message | Result message | AN(200) | ● | “Success” |
| --recordOutStatCd | Transaction Status Code | Status code | AN(4) | ● | Success: 0021  Fail: 0031 |
| --recordPktDivCd | Transaction Classification | Pay: RP, Cancel: RT | AN(2) | ● | “RP” |
| --recordMchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID203739450" |
| --recordTrdNo | Transaction Number | Hecto Financial transaction number | AN(40) | ○ | "SFP\_FIRM123454667789" |
| --recordTrdDt | Transaction Date | yyyymmdd | AN(8) | ● | "20210820" |
| --recordTrdAmt | Transaction Amount | Amount to be withdrawn (transaction amount) | N(13) | ● | "1000" |
| --recordBankCd | Withdrawal Bank Code | Withdrawal bank code | AN(3) | ● | "011" |
| --recordCustAcntNo | Withdrawal Bank Account | Masked account number | AN(15) | ● | "831\*\*\*\*\*\*\*11" |
| --recordSvcDivCd | Service Used During Transaction | Service used during transaction | N(1) | ○ | 1: Firm Banking  2: Open Banking |

# Account List Inquiry

## API Summary

List of customer’s accounts is requested.

List of accounts registered (withdrawal transfer registration) with the customer’s ID can be viewed.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/acnt/list> |
| Production | <http://npay.settlebank.co.kr/v1/api/acnt/list> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_LA00\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| mchtCustId | Customer ID | Unique customer ID or unique key sent by Merchant  **AES Encryption** | AN(100) | ● | "honggildong" |
| bankCd | Bank Code | Three-digit bank code | AN(3) | ○ | “004” |
| reqDt | Request Date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request Time | HH24MISS | AN(6) | ● | “120000” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● | “1000” |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Customer ID (Plain Text) + Request Date + Request Time + Authentication Key |

## Response (Hecto Financial -> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● |  |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(300) | ● | “Successfully processed.” |
| dataCnt | Number of Transaction | When transaction history exists, the number of transaction | N(4) | ● | "10" |
| acntRecords | Account History |  | <object> | ● |  |
| --recordTrdDt | Registration Date and Time | yyyyMMddhhmmss  20150130080000 | AN(14) | ● | "20210820000000" |
| --recordBankCd | Bank Code | Bank code | AN(3) | ● | "004" |
| --recordCustAcntNo | Account Number | Masked account number  ex) 234\*\*\*\*\*\*\*\*123 | AN(15) | ● | "831\*\*\*\*\*\*\*11" |
| --recordCustAcntKey | Account Number Key | Serial number of account registered for withdrawal and transfer | AN(50) | ● | "d5409fdsl3558" |
| --recordSvcDivCd | Account Registration Service Classification | Service registered for withdrawal and transfer | N(4) | ● | 1: Firm Banking  **2: Open Banking**  **3: Firm Banking, Open Banking** |
| --recordUnregDt | Cancellation Date and Time | yyyyMMddhhmmss | AN(14) | ○ | "20210820000000" |

# Request for Return of Funds

## API Summary

From Merchant server to Hecto Financial server, request for return of funds due to mistake in remittance is requested.

Transaction number (trdNo), the result value of ‘Remittance’ API, is used to request for return of funds.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v2/api/fundsReturn/req> |
| Production | <http://npay.settlebank.co.kr/v2/api/fundsReturn/req> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_FR0W\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean  **Not the number for the original transaction, but the order number of request for return of funds** | AN(100) | ● | "OID201902210001" |
| ornTrdDt | Original Transaction Date | Request for return of funds transaction’s transaction date  YYYYMMDD | AN(8) | ● | "20230330" |
| ornTrdNo | Original Transaction Number | Transaction number for request for return of funds | AN(40) | ● | "SFP\_FIRM1233444365430698" |
| wdBankCd | Withdrawal Bank Code | Three-digit bank code of the bank used for withdrawal | AN(3) | ○ | "004" |
| wdAcntNo | Withdrawal Account Number | Account number of the bank account used for withdrawal  AES Encryption | AN(24) | ○ | "98765432198765" |
| dpBankCd | Deposit Bank Code | Three-digit bank code of the bank used for deposit  \*Used for original transaction verification | AN(3) | ● | "020" |
| dpAcntNo | Deposit Account Number | Account number of the bank account used for deposit  \*Used for original transaction verification  AES Encryption | AN(24) | ● | "45612378945612" |
| trdAmt | Transaction Amount (Billing) | Amount that will be requested to be returned  \*If it is the same as the original amount, full amount returned.  If it is less than the original amount, partial amount returned  AES Encryption | N(13) | ● | "1000" |
| rtnAcntNo | Return Account Number | Account number for receiving the returned amount  AES Encryption | AN(24) | ○ | "12345678912345" |
| rtnRsnCd | Return Reason Code | Request for return of funds reason code  02: Account input error,  03: Amount input error,  04: Duplicate deposit,  05: For other reasons,  08: Customer’s intention to return | AN(2) | ● | "05" |
| rtnRsnMsg | Return Reason Message | Request for return of funds reason | AN(100) | ● | “Request for return due to mistake in remittance” |
| cphoneNo | Phone Number of the Representative | Phone number of the representative  AES Encryption | AN(3) | ● | "01012345678" |
| email | E-mail of the Representative | E-mail of the representative  AES Encryption | AN(100) | ● | "test@hecto.co.kr" |
| custIp | Customer’s IP Address | Customer’s device’s IP address,  not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Original Transaction Date + Original Transaction Number + Deposit Bank Code + Deposit Account Number (Plain Text) + Transaction Amount (Plain Text) + Return Reason Code + Phone Number of the Representative (Plain Text) + E-mail (Plain Text) + Authentication Key |

## Response (Hecto Financial-> Merchant)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● |  |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(300) | ● | “Successfully processed.” |
| trdNo | Transaction Number | Hecto Financial transaction number | AN(40) | ● | "STFP\_FIRM20230330095423555" |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID20230330095512450" |

# Confirmation of Request for Return of Funds

## API Summary

Regarding request for return of funds from Merchant server to Hecto Financial server, process and result are confirmed.

Order number (mchtTrdNo), the result value of ‘Request for Return of Funds’ API, is used as the original merchant transaction number (ornMchtTrdNo) to do request for return of funds confirmation.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | https://tbnpay.settlebank.co.kr/v2/api/fundsReturn/check |
| Production | http://npay.settlebank.co.kr/v2/api/fundsReturn/check |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_FC0W\_1.0”  **※ Fixed value** |
| mchtId | Merchant ID | Unique Merchant ID given by Hecto Financial | AN(8) | ● | “midtest” |
| reqDt | Request Date | yyyyMMdd | AN(8) | ● | "20230330" |
| reqTm | Request Time | HH24MISS | AN(6) | ● | "102623" |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID20230330102623456" |
| ornMchtTrdNo | Original Merchant Transaction Number | Order number given as response when request for return of funds has been made | AN(100) | ● | "OID20230330095512450" |
| custIp | Customer’s IP Address | Customer’s device’s IP address,  not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| pktHash | Hash Data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination Field** |
| pktHash value | Merchant ID + Request Date + Request Time + Original Merchant Transaction Number + Authentication Key |

## Response (Merchant -> Hecto Financial)

The columns that respond from Hecto Financial server to the Merchant are as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Transaction Status | Transaction status code (Success / Fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Reject Code | Refer to **Reject Code Table** | AN(4) | ● |  |
| outRsltMsg | Result Message | When an error occurs, a message on error is sent | AN(300) | ● | “Successfully processed.” |
| trdNo | Transaction Number | Hecto Financial transaction number | AN(40) | ● | "STFP\_FIRM20230330095423555" |
| mchtTrdNo | Order Number | Merchant order number  \*Excluding Korean | AN(100) | ● | "OID20230330095512450" |
| ornTrdDt | Original Transaction Date | Request for return of funds transaction’s transaction date  YYYYMMDD | AN(8) | ● | "20230330" |
| ornTrdNo | Original Transaction Number | Transaction number for request for return of funds | AN(40) | ● | "SFP\_FIRM1233444365430698" |
| wdBankCd | Withdrawal Bank Code | Three-digit bank code of the bank used for withdrawal | AN(3) | ○ | "004" |
| wdAcntNo | Withdrawal Account Number | Account number of the bank account used for withdrawal  AES Encryption | AN(24) | ○ | "98765432198765" |
| dpBankCd | Deposit Bank Code | Three-digit bank code of the bank used for deposit | AN(3) | ● | "020" |
| dpAcntNo | Deposit Account Number | Account number of the bank account used for deposit  AES Encryption | AN(24) | ● | "45612378945612" |
| trdAmt | Transaction Amount (Billing) | Amount that will be requested to be returned  AES Encryption | N(13) | ● | "1000" |
| rtnAcntNo | Return Account Number | Account number for receiving the returned amount  AES Encryption | AN(24) | ○ | "12345678912345" |
| rtnRsnCd | Return Reason Code | Refer to **Request for Return of Funds Confirmation Return Reason Codes** | AN(2) | ○ | "05" |
| rtnRsnMsg | Return Reason Message | Request for return of funds reason | AN(100) | ○ |  |
| cphoneNo | Phone Number of the Representative | Phone number of the representative  AES Encryption | AN(3) | ○ | "01012345678" |
| progressStatCd | Process Status | Request for return of funds process status code  00: First registration,  01: Branch check,  02: Branch cancel,  03: Sent to payment source,  04: Request not allowed,  08: Returned  09 : Return not allowed | AN(2) | ○ | "08" |
| rtnAmt | Returned Amount | Returned amount  AES Encryption | AN(13) | ○ | "1000" |
| rtnDt | Returned Date | Date when the amount was returned  YYYYMMDD | AN(8) | ○ | "20230329" |

# Others

## Table of Reject Codes

The server-side response rejection code field details are as follows.

\*The recent common reject codes can be downloaded from common reject codes.

|  |  |  |  |
| --- | --- | --- | --- |
| **Code** | **Description** | **Code** | **Description** |
| 0021 | Success | 0031 | Fail |
| ST01 | Non-Existent Account | ST02 | Invalid Account |
| ST03 | Double withdrawal has occurred | ST04 | System Error During VAN Request |
| ST05 | No VAN Response Information | ST06 | No transaction number information |
| ST07 | Communication disruption | ST08 | Already registered account |
| ST09 | Invalid Request | ST10 | Internal System Error |
| ST11 | Bank maintenance time | ST12 | Insufficient balance in withdrawal account |
| ST13 | No ARS authentication result | ST14 | ARS authentication request values differ |
| ST15 | Automatic transfer canceled account | ST16 | Withdrawal account transaction restriction |
| ST17 | Resident Number Business Number Error | ST18 | Account error  (Easy Account Registration not possible) |
| ST19 | Other transactions impossible | ST20 | Account error |
| ST21 | No recipient account | ST22 | Legally Restricted Accounts |
| ST23 | A non-real-name account | ST24 | Account holder mismatch |
| ST25 | Already canceled transaction | ST26 | Cancellation amount error |
| ST27 | ARS authentication failed | ST28 | Unable to receive ARS |
| ST29 | Account registration in progress | ST30 | Refund in progress |
| ST31 | Double remittance occurred | ST32 | Failed to check payer's name |
| ST33 | Exceeded the limit per transaction | ST34 | Exceeded the daily limit |
| ST35 | Fraudulent account | ST36 | The connection was lost after a certain period of time. |
| ST37 | Easy Payment cancellation | ST38 | Request in progress |
| ST39 | Duplicate refund request | ST40 | There is a request in progress |
| ST41 | Service capacity exceeded | ST42 | System BUSY |
| ST43 | The account is already registered. | ST44 | A non-tradeable bank |
| ST50 | Duplicate request | ST51 | Cash receipt user already registered |
| ST52 | Unregistered cash receipt user | ST53 | Already canceled account |
| ST60 | Transaction failed | ST61 | Exceeded the limit in amount per transaction |
| ST62 | Exceeded the daily limit in amount | ST63 | Exceeded the monthly limit in amount |
| ST64 | Exceeded the daily limit in number of transactions | ST65 | Exceeded the monthly limit in number of transactions |
| ST66 | Password registration failed | ST67 | Password mismatch |
| ST68 | Service suspension | ST69 | The selected payment service is not available due to policy. Please use another payment method. |
| ST70 | The selected payment service is not available due to policy. Please contact Hecto Financial Customer Center (1600-5220) | ST72 | ARS 2nd Authentication Required for Payment |
| ST75 | Multiple attempts were made with wrong information. The account cannot be used.  Please try again on the next day. | ST76 | Multiple attempts were made with wrong information. The account cannot be used.  Please try again on the next day. |
| ST86 | Authentication failed (Mobile phone verification) | ST87 | Not registered for Easy Self-Authentication.  (Mobile Phone Verification) |
| VTIM | A relay institution TIMEOUT | ST99 | Easy Payment System is under maintenance |
| SE01 | The authentication validity time has expired. | SE02 | Verification number mismatch. |
| SE03 | Exceeded the number of authentications allowed. | SE04 | Open Banking canceled account. Need to be cancelled. |
| SE05 | Open Banking is not valid for the account. Need to be cancelled. |  |  |

※ ST75: Account cannot be used due to account holder inquiry abusing attempt (several account numbers).

※ ST76: Account cannot be used due to account holder inquiry abusing attempt (exceeded number of failures).

## Financial Institution Identifiers

Financial institution unique identification codes provided by Hecto Financial are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Financial Institution Code** | **Name of Financial Institution** | **Financial Institution Code** | **Name of Financial Institution** |
| 002 | KDB | 071 | Korea Post |
| 003 | IBK | 081 | Hana Bank |
| 004 | Kookmin Bank | 088 | Shinhan Bank |
| 007 | Suhyup Bank | 089 | Kbank |
| 011 | Nonghyup Bank | 090 | Kakao Bank |
| 012 | National Agricultural Cooperative Federation (NACF) | 092 | Toss Bank |
| 020 | Woori Bank | 103 | SBI Savings Bank |
| 023 | SC Bank | 209 | Yuanta Securities |
| 027 | Citi Bank | 238 | Mirae Asset Securities |
| 031 | Daegu Bank | 240 | Samsung Securities |
| 032 | Busan Bank | 243 | Korea Investment & Securities |
| 034 | Kwangju Bank | 247 | NH Investment & Securities |
| 035 | Jeju Bank | 266 | SK Securities |
| 037 | Jeonbuk Bank | 267 | Daishin Securities |
| 039 | Kyongnam Bank | 278 | Shinhan Financial Investment |
| 045 | Korean Federation of Community Credit Cooperatives (KFCC) | 280 | Eugene Investment & Securities |
| 048 | National Credit Union Federation of Korea (NACUFOK) | 287 | Meritz Securities |
| 050 | Korea Federation of Savings Banks (KFSB) | 099 | KFTC |
| 064 | National Forestry Cooperative Federation (NFCF) |  |  |

## Bank Regular Maintenance Time

Due to the specifics of bank operating hours, Hecto Financial **recommends transactions between 01:00 and 23:30.**

Maintenance time could be extended by bank.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Code** | **Name** | **Bank Maintenance Time** | **Hecto Financial Maintenance Time** | | **Regular Maintenance** |
| **Start** | **End** |
| 002 | KDB | 23:30~00:30 | 23:50 | 00:15 | Every 2nd Sunday of the month 00:00~04:00 |
| 003 | IBK | 24:00~00:30 | 23:50 | 00:12 | Every Sunday 00:00~00:30 |
| 004 | Kookmin Bank | 24:00:~00:30 | 23:50 | 00:12 | Every 3rd Sunday of the month  00:00~00:30, 05:00~05:30  External work 01:00~06:00(Intermittent transaction error) |
| 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 Monday of the month  00:00 to 04:00  (Next business day if the date is a public holiday) |
| 020 | Woori Bank | 23:50~00:30 | 23:50 | 00:10 | Every 2nd Sunday of the month  02:00 to 06:00  (Work date is notified by bank in advance) |
| 023 | SC Bank | 23:30~00:30 | 23:50 | 00:12 | None |
| 027 | Citi Bank | 23:40~00:30 | 23:50 | 00:30 | Every day 00:30~04:30 |
| 031 | Daegu Bank | 23:40~00:30 | 23:50 | 00:05 | None |
| 032 | Busan Bank | 23:30~00:30 | 23:50 | 00:05 | None |
| 034 | Kwangju Bank | 23:40~00:30 | 23:50 | 00:05 | Every 2nd Sunday of the month 02:00~06:00 |
| 035 | Jeju Bank | 23:40~00:30 | 23:50 | 00:12 | Every Sunday 04:30~05:00 |
| 037 | Jeonbuk Bank | 24:00~00:30 | 23:50 | 00:05 | Every 2nd Saturday of the month 00:00~04:00 |
| 039 | Kyongnam Bank | 23:40~00:30 | 23:50 | 00:05 | Every 2nd Sunday of the month 00:00~07:00 |
| 045 | KFCC | 23:50~00:30 | 23:30 | 00:30 | None |
| 048 | NACUFOK | 23:40~00:30 | 23:50 | 00:05 | None |
| 050 | KFSB | 23:50~00:10 | 23:50 | 00:35 | None |
| 064 | NFCF | 23:30~00:30 | 23:30 | 01:00 | None |
| 071 | Korea Post | 23:40~00:30 | 23:50 | 00:05 | Daily 04:00~05:00 |
| 081 | Hana Bank | 23:40~00:30 | 23:50 | 00:15 | Every 2nd Sunday of the month  00:00~08:00 |
| 088 | Shinhan Bank | 23:40~00:30 | 23:50 | 00:05 | None |
| 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 |
| 103 | SBI Savings Bank | 23:55~00:10 | 23:50 | 00:05 | None |
| 209 | Yuanta Securities | 23:50~00:10 | 23:50 | 00:10 | None |
| 238 | Mirae Asset Securities | 23:30~00:20 | 23:30 | 00:20 | None |
| 240 | Samsung Securities | 23:30~00:20 | 23:50 | 00:10 | None |
| 243 | Korea Investment & Securities | 23:40~00:10 | 23:40 | 00:10 | None |
| 247 | NH Investment & Securities | 23:50~00:15 | 23:50 | 00:05 | None |
| 266 | SK Securities | 23:50~00:30 | 23:30 | 00:30 | None |
| 267 | Daishin Securities | 23:55~00:25 | 23:55 | 00:25 | None |
| 278 | Shinhan Financial Investment | 23:25~00:15 | 23:30 | 00:15 | Every day 23:30~00:10, 03:00~03:10 |
| 280 | Eugene Investment & Securities | 23:30~00:30 | 23:50 | 00:35 | None |
| 287 | Meritz Securities | 23:50~00:20 | 23:50 | 00:20 | None |

## Request for Return of Funds Confirmation Return Reason Codes

Hecto Financial’s request for return of funds confirmation return reason codes are as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| **Return Reason Code** | **Return Reason** | **Return Reason Code** | **Return Reason** |
| 50 | Different original transaction | 51 | Customer rejected |
| 52 | Legally restricted account | 54 | Affiliate and linked account |
| 55 | Closed account | 56 | Unable to contact customer (Different contact number) |
| 58 | Returned by customer | 59 | Institution return (Virtual account) |
| 60 | Suspended payment account (Other payables) | 61 | Special account (Subscription, deceased) |
| 62 | E-commerce fraudulent account (fake account) | 63 | Dispute between individuals |
| 99 | Others |  |  |