Easy Cash Payment Standard WEB API

**Non-UI Integration**

|  |  |
| --- | --- |
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| Made by | Hecto Financial IT Division |

History

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| Date | Version | Description | Made by |
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| 2019.12.19 | 1.1 | Form changed | Hyunwoo Kim |
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Contents

[1. Outline 10](#_Toc134772769)

[1.1 Purpose 10](#_Toc134772770)

[1.2 Target 10](#_Toc134772771)

[1.3 API URI 10](#_Toc134772772)

[1.4 Caution 11](#_Toc134772773)

[2. Easy Cash Payment API General 13](#_Toc134772774)

[2.1 Easy Cash Payment Process 13](#_Toc134772775)

[2.2 General 14](#_Toc134772776)

[3. API Invoke 15](#_Toc134772777)

[3.1 API Connection Information 15](#_Toc134772778)

[3.2 Request and Response Headers 15](#_Toc134772779)

[3.3 Timeout 15](#_Toc134772780)

[3.4 Others 15](#_Toc134772781)

[4. Security of Important Information 16](#_Toc134772782)

[4.1 Encryption & Decryption of Personal Information and Important Information 16](#_Toc134772783)

[4.2 Encryption Key for Personal Information 16](#_Toc134772784)

[4.3 Anti-forgery Algorithm 16](#_Toc134772785)

[4.4 Hash Generation Authentication Key 16](#_Toc134772786)

[5. Mobile Phone Verification Request 18](#_Toc134772787)

[5.1 API Summary 18](#_Toc134772788)

[5.2 API URL 18](#_Toc134772789)

[5.3 Request (Merchant -> Hecto Financial) 18](#_Toc134772790)

[5.4 Request Hash Code 19](#_Toc134772791)

[5.5 Response (Hecto Financial -> Merchant) 19](#_Toc134772792)

[6. Mobile Phone Verification Confirmation 20](#_Toc134772793)

[6.1 API Summary 20](#_Toc134772794)

[6.2 API URL 20](#_Toc134772795)

[6.3 Request (Merchant -> Hecto Financial) 20](#_Toc134772796)

[6.4 Request Hash Code 21](#_Toc134772797)

[6.5 Response (Hecto Financial -> Merchant) 21](#_Toc134772798)

[7. Account Holder Name Inquiry (Date of Birth Excluded) 22](#_Toc134772799)

[7.1 API Summary 22](#_Toc134772800)

[7.2 API URL 22](#_Toc134772801)

[7.3 Request (Merchant -> Hecto Financial) 22](#_Toc134772802)

[7.4 Request Hash Code 23](#_Toc134772803)

[7.5 Response (Hecto Financial -> Merchant) 23](#_Toc134772804)

[8. Account Holder Name Confirmation (Date of Birth Included) 24](#_Toc134772805)

[8.1 API Summary 24](#_Toc134772806)

[8.2 API URL 24](#_Toc134772807)

[8.3 Request (Merchant -> Hecto Financial) 24](#_Toc134772808)

[8.4 Request Hash Code 25](#_Toc134772809)

[8.5 Response (Hecto Financial -> Merchant) 25](#_Toc134772810)

[9. Account Holder Name Inquiry (Including Amount) 27](#_Toc134772811)

[9.1 API Summary 27](#_Toc134772812)

[9.2 API URL 27](#_Toc134772813)

[9.3 Request (Merchant -> Hecto Financial) 27](#_Toc134772814)

[9.4 Request Hash Code 28](#_Toc134772815)

[9.5 Response (Hecto Financial -> Merchant) 28](#_Toc134772816)

[10. Account Ownership Verification 29](#_Toc134772817)

[10.1 API Summary 29](#_Toc134772818)

[10.2 API URL 29](#_Toc134772819)

[10.3 Request (Merchant -> Hecto Financial) 29](#_Toc134772820)

[10.4 Request Hash Code 30](#_Toc134772821)

[10.5 Response (Hecto Financial-> Merchant) 30](#_Toc134772822)

[11. Request for Account Ownership Verification 31](#_Toc134772823)

[11.1 API Summary 31](#_Toc134772824)

[11.2 API URL 31](#_Toc134772825)

[11.3 Request (Merchant -> Hecto Financial) 31](#_Toc134772826)

[11.4 Request Hash Code 33](#_Toc134772827)

[11.5 Response (Hecto Financial -> Merchant) 33](#_Toc134772828)

[12. Confirmation of Account Ownership Verification 35](#_Toc134772829)

[12.1 API Summary 35](#_Toc134772830)

[12.2 API URL 35](#_Toc134772831)

[12.3 Request (Merchant -> Hecto Financial) 35](#_Toc134772832)

[12.4 Request Hash Code 36](#_Toc134772833)

[12.5 Response (Hecto Financial -> Merchant) 36](#_Toc134772834)

[13. ARS Authentication Request 37](#_Toc134772835)

[13.1 API Summary 37](#_Toc134772836)

[13.2 API URL 37](#_Toc134772837)

[13.3 Request (Merchant -> Hecto Financial) 37](#_Toc134772838)

[13.4 Request Hash Code 38](#_Toc134772839)

[13.5 Response (Hecto Financial -> Merchant) 38](#_Toc134772840)

[14. Confirmation of ARS Authentication 40](#_Toc134772841)

[14.1 API Summary 40](#_Toc134772842)

[14.2 API URL 40](#_Toc134772843)

[14.3 Request (Merchant -> Hecto Financial) 40](#_Toc134772844)

[14.4 Request Hash Code 41](#_Toc134772845)

[14.5 Response (Hecto Financial -> Merchant) 41](#_Toc134772846)

[15. Account Registration 43](#_Toc134772847)

[15.1 API Summary 43](#_Toc134772848)

[15.2 API URL 43](#_Toc134772849)

[15.3 Request (Merchant -> Hecto Financial) 43](#_Toc134772850)

[15.4 Request Hash Code 44](#_Toc134772851)

[15.5 Response (Hecto Financial -> Merchant) 44](#_Toc134772852)

[16. Account Cancellation 46](#_Toc134772853)

[16.1 API Summary 46](#_Toc134772854)

[16.2 API URL 46](#_Toc134772855)

[16.3 Request (Merchant -> Hecto Financial) 46](#_Toc134772856)

[16.4 Request Hash Code 47](#_Toc134772857)

[16.5 Response (Hecto Financial -> Merchant) 47](#_Toc134772858)

[17. Merchant Account Registration 48](#_Toc134772859)

[17.1 API Summary 48](#_Toc134772860)

[17.2 API URL 48](#_Toc134772861)

[17.3 Request (Merchant -> Hecto Financial) 48](#_Toc134772862)

[17.4 Request Hash Code 49](#_Toc134772863)

[17.5 Response (Hecto Financial -> Merchant) 49](#_Toc134772864)

[18. Payment 51](#_Toc134772865)

[18.1 API Summary 51](#_Toc134772866)

[18.2 API URL 51](#_Toc134772867)

[18.3 Request (Merchant -> Hecto Financial) 51](#_Toc134772868)

[18.4 Request Hash Code 53](#_Toc134772869)

[18.5 Response (Hecto Financial -> Merchant) 53](#_Toc134772870)

[19. Payment Cancellation/Refund 55](#_Toc134772871)

[19.1 API Summary 55](#_Toc134772872)

[19.2 API URL 55](#_Toc134772873)

[19.3 Request (Merchant -> Hecto Financial) 55](#_Toc134772874)

[19.4 Request Hash Code 56](#_Toc134772875)

[19.5 Response (Hecto Financial -> Merchant) 56](#_Toc134772876)

[20. Approval of Recurring Payment 58](#_Toc134772877)

[20.1 API Summary 58](#_Toc134772878)

[20.2 API URL 58](#_Toc134772879)

[20.3 Request (Merchant -> Hecto Financial) 58](#_Toc134772880)

[20.4 Request Hash Code 60](#_Toc134772881)

[20.5 Response (Hecto Financial -> Merchant) 60](#_Toc134772882)

[21. Cancellation of Recurring Payment 62](#_Toc134772883)

[21.1 API Summary 62](#_Toc134772884)

[21.2 API URL 62](#_Toc134772885)

[21.3 Request (Merchant -> Hecto Financial) 62](#_Toc134772886)

[21.4 Request Hash Code 63](#_Toc134772887)

[21.5 Response (Hecto Financial -> Merchant) 63](#_Toc134772888)

[22. Recurring Payment Information Inquiry 64](#_Toc134772889)

[22.1 API Summary 64](#_Toc134772890)

[22.2 API URL 64](#_Toc134772891)

[22.3 Request (Merchant -> Hecto Financial) 64](#_Toc134772892)

[22.4 Request Hash Code 64](#_Toc134772893)

[22.5 Response (Hecto Financial -> Merchant) 65](#_Toc134772894)

[23. Recurring Payment Transaction History Inquiry 67](#_Toc134772895)

[23.1 API Summary 67](#_Toc134772896)

[23.2 API URL 67](#_Toc134772897)

[23.3 Request (Merchant -> Hecto Financial) 67](#_Toc134772898)

[23.4 Request Hash Code 68](#_Toc134772899)

[23.5 Response (Hecto Financial -> Merchant) 68](#_Toc134772900)

[24. Remittance 70](#_Toc134772901)

[24.1 API Summary 70](#_Toc134772902)

[24.2 API URL 70](#_Toc134772903)

[24.3 Request (Merchant -> Hecto Financial) 70](#_Toc134772904)

[24.4 Request Hash Code 72](#_Toc134772905)

[24.5 Response (Hecto Financial -> Merchant) 72](#_Toc134772906)

[25. Remittance Account Balance Inquiry 73](#_Toc134772907)

[25.1 API Summary 73](#_Toc134772908)

[25.2 API URL 73](#_Toc134772909)

[25.3 Request (Merchant -> Hecto Financial) 73](#_Toc134772910)

[25.4 Request Hash Code 73](#_Toc134772911)

[25.5 Response (Hecto Financial -> Merchant) 73](#_Toc134772912)

[26. Transaction Result Inquiry 75](#_Toc134772913)

[26.1 API Summary 75](#_Toc134772914)

[26.2 API URL 75](#_Toc134772915)

[26.3 Request (Merchant -> Hecto Financial) 75](#_Toc134772916)

[26.4 Request Hash Code 75](#_Toc134772917)

[26.5 Response (Hecto Financial -> Merchant) 76](#_Toc134772918)

[27. Transaction History Inquiry 77](#_Toc134772919)

[27.1 API Summary 77](#_Toc134772920)

[27.2 API URL 77](#_Toc134772921)

[27.3 Request (Merchant -> Hecto Financial) 77](#_Toc134772922)

[27.4 Request Hash Code 77](#_Toc134772923)

[27.5 Response (Hecto Financial -> Merchant) 78](#_Toc134772924)

[28. Account List Inquiry 80](#_Toc134772925)

[28.1 API Summary 80](#_Toc134772926)

[28.2 API URL 80](#_Toc134772927)

[28.3 Request (Merchant -> Hecto Financial) 80](#_Toc134772928)

[28.4 Request Hash Code 80](#_Toc134772929)

[28.5 Response (Hecto Financial -> Merchant) 81](#_Toc134772930)

[29. Bank List Inquiry 82](#_Toc134772931)

[29.1 API Summary 82](#_Toc134772932)

[29.2 API URL 82](#_Toc134772933)

[29.3 Request (Merchant -> Hecto Financial) 82](#_Toc134772934)

[29.4 Request Hash Code 82](#_Toc134772935)

[29.5 Response (Hecto Financial -> Merchant) 82](#_Toc134772936)

[30. Bank Maintenance Inquiry 84](#_Toc134772937)

[30.1 API Summary 84](#_Toc134772938)

[30.2 API URL 84](#_Toc134772939)

[30.3 Request (Merchant -> Hecto Financial) 84](#_Toc134772940)

[30.4 Request Hash Code 85](#_Toc134772941)

[30.5 Response (Hecto Financial -> Merchant) 85](#_Toc134772942)

[31. Account Ownership Verification History Inquiry 86](#_Toc134772943)

[31.1 API Summary 86](#_Toc134772944)

[31.2 API URL 86](#_Toc134772945)

[31.3 Request (Merchant -> Hecto Financial) 86](#_Toc134772946)

[31.4 Request Hash Code 87](#_Toc134772947)

[31.5 Response (Hecto Financial -> Merchant) 87](#_Toc134772948)

[32. Account Ownership Verification Bank Maintenance Inquiry 89](#_Toc134772949)

[32.1 API Summary 89](#_Toc134772950)

[32.2 API URL 89](#_Toc134772951)

[32.3 Request (Merchant -> Hecto Financial) 89](#_Toc134772952)

[32.4 Request Hash Code 89](#_Toc134772953)

[32.5 Response (Hecto Financial -> Merchant) 90](#_Toc134772954)

[33. KFTC Withdrawal Transfer Information Cancellation Inquiry 91](#_Toc134772955)

[33.1 API Summary 91](#_Toc134772956)

[33.2 API URL 91](#_Toc134772957)

[33.3 Request (Merchant -> Hecto Financial) 91](#_Toc134772958)

[33.4 Request Hash Code 91](#_Toc134772959)

[33.5 Response (Hecto Financial -> Merchant) 92](#_Toc134772960)

[35. Test Call 93](#_Toc134772961)

[35.1 API Summary 93](#_Toc134772962)

[35.2 API URL 93](#_Toc134772963)

[35.3 Request (Merchant -> Hecto Financial) 93](#_Toc134772964)

[35.4 Response (Hecto Financial -> Merchant) 93](#_Toc134772965)

[36. Payment Password Confirmation 95](#_Toc134772966)

[36.1 API Summary 95](#_Toc134772967)

[36.2 API URL 95](#_Toc134772968)

[36.3 Request (Merchant -> Hecto Financial) 95](#_Toc134772969)

[36.4 Request Hash Code 96](#_Toc134772970)

[36.5 Response (Hecto Financial -> Merchant) 96](#_Toc134772971)

[37. Others 97](#_Toc134772972)

[37.1 Table of Reject Codes 97](#_Toc134772973)

[37.2 Financial Institution Identifier 98](#_Toc134772974)

[37.3 Bank Regular Maintenance Time. 99](#_Toc134772975)

# Outline

## Purpose

This document is created for understanding the technical requirements for integration of Easy Cash Payment Non-UI API provided by Hecto Financial and to define detailed specification.

## Target

This document is intended for clients’ developers to integrate Easy Cash Payment through easy payment system of Hecto Financial.

## API URI

Easy Cash Payment service provides the following APIs; each API is mapped to a web service URL.

|  |  |  |  |
| --- | --- | --- | --- |
| **Function** | **API** | **URI** | **HTTP Method** |
| Authentication service | Request for self- authentication | <https://npay.settlebank.co.kr/v1/api/auth/mobile/req> | POST |
| Confirmation for self-authentication | <https://npay.settlebank.co.kr/v1/api/auth/mobile/check> | POST |
| Name check of the account holder 1 | <https://npay.settlebank.co.kr/v1/api/auth/acnt/ownercheck1> | POST |
| Name check of the account holder 2 | <https://npay.settlebank.co.kr/v1/api/auth/acnt/ownercheck2> | POST |
| Name check of the account holder (including amount) | <https://npay.settlebank.co.kr/v1/api/auth/acnt/ownercheckWithAmount> | POST |
| Account ownership verification | <https://npay.settlebank.co.kr/v1/api/auth/acnt/ownership> | POST |
| Request for account ownership verification | <https://npay.settlebank.co.kr/v1/api/auth/ownership/req> | POST |
| Confirmation for account ownership verification | <https://npay.settlebank.co.kr/v1/api/auth/ownership/check> | POST |
| ARS authentication request | <https://npay.settlebank.co.kr/v1/api/auth/ars> | POST |
| ARS authentication confirmation | <https://npay.settlebank.co.kr/v1/api/auth/arscheck> | POST |
| ARS authentication (record file is transmitted) | <http://npay.settlebank.co.kr/v1/api/auth/ars>rec | POST |
| Account management | Account registration | <https://npay.settlebank.co.kr/v1/api/acnt/reg> | POST |
| Account cancellation | <https://npay.settlebank.co.kr/v1/api/acnt/unreg> | POST |
| Merchant account registration (\*Open Banking account registration) | <https://npay.settlebank.co.kr/v1/api/acnt/reg>/self | POST |
| Transfer service | Payment | <https://npay.settlebank.co.kr/v1/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> | POST |
| Remittance account confirmation | <https://npay.settlebank.co.kr/v2/api/pay/rmt/blc> | POST |
| Recurring payment | Recurring payment approval | <https://npay.settlebank.co.kr/v1/api/regular/confirm> | POST |
| Unregister recurring payment | <https://npay.settlebank.co.kr/v1/api/regular/unreg> | POST |
| Recurring payment information check | <https://npay.settlebank.co.kr/v1/api/regular/info> | POST |
| Recurring payment transaction history check | <https://npay.settlebank.co.kr/v1/api/regular/translist> | 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> | POST |
| Bank list inquiry | <https://npay.settlebank.co.kr/v1/api/bank/list> | POST |
| Bank maintenance inquiry | <https://npay.settlebank.co.kr/v1/api/bank/timecheck> | POST |
| Account ownership verification history inquiry | <https://npay.settlebank.co.kr/v1/api/auth/ownership/translist> | POST |
| Account ownership verification bank maintenance inquiry | <https://npay.settlebank.co.kr/v1/api/bank/timecheck>/detail | POST |
| KFTC withdrawal transfer information cancellation inquiry | <https://npay.settlebank.co.kr/v1/api/acnt/isttunreg/list> | POST |
| Test call | <http://npay.settlebank.co.kr/v1/api/test/testcall> | POST |
| Check payment password | <http://npay.settlebank.co.kr/v1/api/auth/pwdcnf> | POST |

## Caution

Caution

* If a test in operating environment is needed, there should be a consultation with the Hecto Financial representative. The cost caused by operating test transaction done without prior discussion should be paid by the merchant.
* **Response parameter may be changed without prior notice, when developing, please develop so that there would be no impact caused by the change in parameter.**
* \* [Merchants that use Easy Cash Payment UI standard payment window]

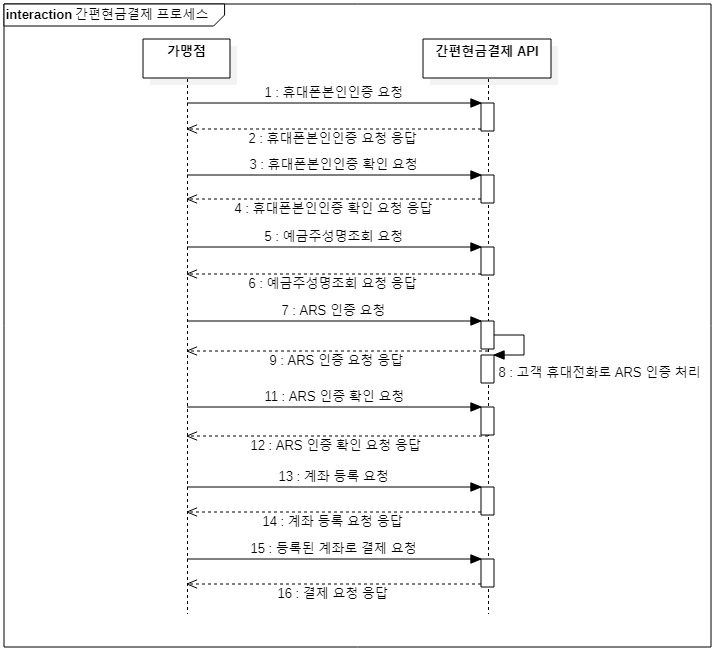
When using Easy Payment UI Standard Payment window, if the standard payment window is invoked through iframe tag, there are cases in which it doesn’t work normally on some browsers or devices. If you are using Easy Payment UI standard payment window, please refrain from using iframe tag.

# Easy Cash Payment API General

## Easy Cash Payment Process

Easy Cash Payment process is as follows.

Easy Cash Payment Process



15. Payment request response

14. Payment request to registered account

13. Account registration request response

12 Account registration request

11. ARS authentication check request response

10. ARS authentication check request

8. ARS authentication w/customer’s mobile

9. ARS authentication request response

6. Account holder name inquiry request response

5.Request account holder name inquiry

2. Mobile verification request response

1.Request mobile verification

3. Request mobile verification check

4. Mobile verification check response

Merchant

Easy Cash Payment API

7. ARS authentication request

(1) Self-authentication with customer’s mobile information

(3) Self-authentication result inquiry

(5) After phone self-authentication, use the name and account details to execute account holder name inquiry.

(7) Withdrawal transfer registration evidence is created through ARS authentication

(12) Account registration (withdrawal transfer registration)

(14) Pay with the registered account

## 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”  } |

# API Invoke

## API Connection Information

The following is API server connection 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 ‘Request’, use POST method only.
* Commonly, variable values :,&,?,’,new line, <, > are not allowed.

# Security of Important Information

## Encryption & Decryption of Personal Information and Important Information

When sending and receiving data, the following encryption & decryption should be performed for the personal/important information fields:

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **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.  - If it is possible to type in Korean in the field, refer to the descriptions for the byte size of Korean. | | |

## Encryption Key for Personal Information

For encryption and decryption of personal information and important 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 |

## Anti-forgery 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 |

# Mobile Phone Verification Request

## API Summary

Request a mobile phone verification from the merchant’s server to Hecto Financial’s server.

To get the name of the customer (account holder) needed for the account holder verification, and one’s mobile phone number which is needed for ARS authentication, mobile phone verification is used. The APP and SMS methods are supported. When there is an APP verification request, the customer’s mobile app is invoked, and when there is an SMS verification request, 6-digit verification number will be sent to the customer’s device through SMS.

\*Mobile phone verification service can only be used for Hecto Financial Easy Payment registration.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/mobile/req> |
| Production | <http://npay.settlebank.co.kr/v1/api/auth/mobile/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\_M100\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| mchtCustId | Customer ID | Unique Customer ID provided by Merchant or Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| Uii | Date of birth  / Business registration number | yymmdd+ gender identification,  Business registration number (hyphen excluded)  AES Encryption | AN(10) | ● | “8001012” |
| telecomCd | Operator | SKT: 1, KT: 2 LGT: 3, SKT MVNO :4 KT MVNO:5 LGT MVNO:6 | N(1) | ● | “1” |
| cphoneNo | Mobile phone number | 010xxxxyyyy (exclude hyphen)  AES Encryption | AN(11) | ● | “01000001234” |
| mchtCustNm | Customer name | Customer name **(Korean 3 byte)**  AES Encryption | AN(60) | ● | “Hong Gildong” (in Korean) |
| authMthdCd | Certification Classification | SMS : 1, APP : 2 | N(1) | ● | “1” |
| custIp | Customer 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) + Request date + Request time + Date of birth (plain text) + Mobile phone (plain text) + Certification Classification + Authentication key |

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter** | **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) | ● | “Success” |
| Tid | Authentication key | Authentication key that matches the verification number sent as message | AN(50) | ● |  |
| trdNo | Transaction number | Hecto Financial transaction number for mobile phone verification | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Mobile Phone Verification Confirmation

## API Summary

API that checks the status for the request on mobile phone verification is provided

Through ‘Mobile Phone Verification Request’ API, SMS is sent or APP verification request is made through the customer’s device. The customer runs this and through the API checks the completion status of the verification.

In the case of SMS verification method, the request to check is done with the verification number sent.

In the case of APP verification, the request to check the completion status is done in the APP.

\*Mobile phone verification service can only be used for Hecto Financial Easy Payment registration.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/mobile/check> |
| Production | <https://npay.settlebank.co.kr/v1/api/auth/mobile/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\_M200\_1.0  ※ Fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| authNo | Authentication number | Authentication number sent by SMS  ※ Required if the authentication classification of the mobile phone verification request is SMS | N(6) | ○ | “123456” |
| Tid | Authentication key | Authentication key value that is sent as the response value when requested | AN(50) | ● | “settlebank20190430034655251226” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(50) | ● | “SFP\_FIRM12345678901234567890” |
| custIp | Customer 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

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

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| outStatCd | Status | Result 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) | ● | “Success” |

# Account Holder Name Inquiry (Date of Birth Excluded)

## API Summary

Provides an API to check the consistency of the bank, account number, and account holder’s name.

Verifies if the account was opened with customer’s name using customer’s (account holder) name obtained through mobile phone verification, and inputted bank and account number.

The name of the account holder is inputted. The name of the account holder inputted during request and the name of the account holder given by the bank are compared by Hecto Financial to see if they match and then the success/fail code is given. If the name of the account holder is not inputted and only the bank code and the account number are given, the name of the account holder given by the bank is given as the result value.

Generally, banks give account holder name with maximum of 12 bytes, but some banks (SC Bank, Nonghyup, Woori, IBK, Jeju. Kwangju, Kakao Bank) give 20 bytes. The account holder names provided by SC Bank use full-width forms. When Hecto Financial provides them to the clients, everything is converted to half-width forms and provided with a maximum of 10 digits.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/acnt/ownercheck1> |
| Production | <https://npay.settlebank.co.kr/v1/api/auth/acnt/ownercheck1> |

## 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) | ● | “SP\_NA00\_1.0“  ※ Fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| mchtCustId | Customer ID | Unique customer ID sent by Merchant or unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Account number | Exclude account number hyphen  AES Encryption | AN(15) | ● | “1234567890” |
| mchtCustNm | Account holder name | English/Number/Korean letter **(Korean 3 byte)**  AES Encryption | AN(30) | ○ | “Hong Gildong” (in Korean) |
| custIp | Customer 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) + 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) | ● |  |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(200) | ● | “Success” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(50) | ● | “SFP\_FIRM12345678901234567890” |
| mchtCustNm | Account | Account holder name checked by bank  AES Encryption | AN(10) | ○ | “Hong Gildong” (in Korean) |

# Account Holder Name Confirmation (Date of Birth Included)

## API Summary

Provides an API to check the consistency of the bank, account number, account holder’s name, and date of birth.

Verifies if the account was opened with customer’s name using customer’s (account holder) name, date of birth obtained through mobile phone verification, and inputted bank and account number.

The name of the account holder is inputted. The name of the account holder inputted during request and the name of the account holder given by the bank are compared by Hecto Financial to see if they match and then the success/fail code is given. If the name of the account holder is not inputted and only the bank code and the account number are given, the name of the account holder given by the bank is given as the result value.

Generally, banks give account holder name with maximum of 12 bytes, but some banks (SC Bank, Nonghyup, Woori, IBK, Jeju. Kwangju, Kakao Bank) give 20 bytes. The account holder names provided by SC Bank use full-width forms. When Hecto Financial provides them to the clients, everything is converted to half-width forms and provided with a maximum of 10 digits.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/acnt/ownercheck2> |
| Production | <https://npay.settlebank.co.kr/v1/api/auth/acnt/ownercheck2> |

## 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) | ● | “SP\_NA00\_1.0“  ※ Fixed value |
| mchtId | Merchant ID | Unique merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean letter | AN(100) | ○ | “OID201902210001” |
| mchtCustId | Customer ID | Unique customer ID sent by Merchant or Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Account number | Exclude hyphen from account number  AES Encryption | AN(15) | ● | “1234567890” |
| mchtCustNm | Account holder name | English/Number/Korean letter **(Korean 3 byte)**  AES Encryption | AN(30) | ○ | “Hong Gildong” (in Korean) |
| Uii | Date of birth /Business registration number | Date of birth: yyMMdd  Business registration number :10 digits  AES Encryption | AN(10) | ● | “800101” |
| custIp | Customer 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) + Request date + Request time + Account number (Plain text) + Date of birth (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) | ● | “Success” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean letter | AN(100) | ○ | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial’s transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |
| mchtCustNm | Account holder name | Account holder number checked in bank **(Korean 3 byte)**  AES Encryption | AN(30) | ○ | “Hong Gildong” (in Korean) |

# Account Holder Name Inquiry (Including Amount)

## API Summary

Provides an API to check the consistency of the bank, account number, account holder’s name, and amount.

Verifies if the account was opened with customer’s name using customer’s (account holder) name obtained through mobile phone verification, and inputted bank, account number, and amount.

The name of the account holder is inputted. The name of the account holder inputted during request and the name of the account holder given by the bank are compared by Hecto Financial to see if they match and then the success/fail code is given. If the name of the account holder is not inputted and only the bank code and the account number are given, the name of the account holder given by the bank is given as the result value.

Generally, banks give account holder name with maximum of 12 bytes, but some banks (SC Bank, Nonghyup, Woori, IBK, Jeju. Kwangju, Kakao Bank) give 20 bytes. The account holder names provided by SC Bank use full-width forms. When Hecto Financial provides them to the clients, everything is converted to half-width forms and provided with a maximum of 10 digits.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/acnt/ownercheckWithAmount> |
| Production | <https://npay.settlebank.co.kr/v1/api/auth/acnt/ownercheckWithAmount> |

## 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) | ● | “SP\_NN00\_1.0“  ※ Fixed value |
| mchtId | Merchant ID | Unique merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| mchtCustId | Customer ID | Unique customer ID sent by Merchant or Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Account number | Exclude hyphen  AES Encryption | AN(15) | ● | “1234567890” |
| mchtCustNm | Account holder name | English/Number/Korean letter **(3 byte)**  AES Encryption | AN(30) | ○ | “Hong Gildong” (in Korean) |
| trdAmt | Transaction amount | Transaction amount  AES Encryption | N(13) | ● | “2000” |
| custIp | Customer 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) + Request date + Request time + Account number(Plain text) + Transaction amount(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) | ● | “Success” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |
| mchtCustNm | Account holder name | Account holder name checked by bank (Korean 3 byte)  AES Encryption | AN(30) | ○ | “Hong Gildong” (in Korean) |

# Account Ownership Verification

## API Summary

Provides the function of sending 1 KRW to the account to check whether the customer actually owns the account. With 1 KRW, the account transaction code that was set when the request was made is sent. The customer can check one’s account and compare the code on the account transaction to verify whether one owns the account.

※ To prevent fraudulent use, the account number check is limited to 5 times a day when operating service starts.

The number of use can be changed upon request.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/acnt/ownership> |
| Production | <https://npay.settlebank.co.kr/v1/api/auth/acnt/ownership> |

## 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\_AA00\_1.0“  ※ Fixed value |
| mchtId | Merchant ID | Unique merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| mchtCustId | Customer ID | Unique customer ID sent by Merchant or Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Account number | Account number exclude hyphen  AES Encryption | AN(15) | ● | “1234567890” |
| custAcntSumry | Account transaction code content | The code content that will be on the account of the customer  **(Korean letter size 2byte)**  AES Encryption | AN(12) | ● | “Hong Gildong” (in Korean) |
| custIp | Customer 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) + Request date + Request time + Account number (plain text) + Authentication key |

## Response (Hecto Financial-> Merchant)

The columns requested by Hecto Financial server to Merchant are defined 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) | ● | “Success” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Request for Account Ownership Verification

## API Summary

Provides the function of sending 1 KRW to the account to check whether the customer actually owns the account. With 1 KRW, the account transaction code that was set when the request was made is sent. The customer can check one’s account and compare the code on the account transaction to verify whether one owns the account.

If there are repeated requests over a certain period of time, 1 KRW will not be deposited. Instead, it will respond with processing. A separate agreement is needed to decide the period of time.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/ownership/req> |
| Production | <https://npay.settlebank.co.kr/v1/api/auth/ownership/req> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter name** | **Description** | **Type (Bytes)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_AA10\_1.0“  ※ Fixed value |
| mchtId | Merchant ID | Unique merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Merchant transaction number | Merchant transaction number  \* exclude Korean | AN(100) | ● | “OID201902210001” |
| mchtCustId | Customer ID | Unique customer ID sent by Merchant or  Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| mchtCustNm | Account holder name | Account holder name **(Korean 3 byte)**  AES Encryption | AN(20) | ○ | “Hong Gildong” (in Korean) |
| bankCd | Bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Account number | Account number exclude hyphen  AES Encryption | AN(15) | ● | “1234567890” |
| authType | Authentication number type | Type of generated authentication number | AN(1) | ● | “1” : Three-digit number  “2” : English capital letter + two-digit number  “3” : Combination of 4 letter Korean word  “4” : 4 digit number |
| remitterNm | Sender information (Remitter name) | Fixed string of letters for the front or back of the code content that will be on the customer’s bank account  English capital letters or Korean letters  **(Korean 2 byte)**  AES Encryption | AN(8) | ○ | “Ebay” or “ㅣ” (Maximum 4 letters)  ※ Three random digits (numbers, Korean letters) are combined and put on the front or the back of the requested letters on the account transaction of the customer  Customer Code Content  e.g) EbayA12 or A12Ebay  ※ If the authentication number type is “3” and the authentication number generator is “automatically generated”, the item could be ignored.  ※ If the authentication number type is “4”, it supports maximum of 3 letters. |
| textPos | Position of sender information (Remitter name) | Sender  information (Remitter name)  Position of letters | AN(1) | ○ | “F” : Prefix or “R” : Postfix Default: “R” |
| authVldTm | Authentication expiry time | Per second | N(5) | ○ | “600”  ※ After requesting account ownership verification and if there was a success response, based on transaction number generation, the verification time is set.  Default : 600 seconds |
| apintTm | Repeat request prevention time | Per second | N(5) | ○ | “600”  ※ When there are repeated requests within the designated time,  1 KRW will not be deposited. Instead, it will respond with processing  Default: 600 seconds |
| custIp | Customer’s IP address | Customer’s device’s IP address,  Not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1”  Needed when setting IP blocking policy |
| pktHash | Hash data | Hash data generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination field** |
| pktHash value | Merchant ID + Request date + Request time + Bank code + 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(Bytes)** | **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) | ● | “Success” |
| mchtTrdNo | Merchant transaction number | Merchant transaction number  \* Excluded Korean | AN(100) | ● | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial Transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |
| mchtCustId | Customer ID | Unique customer ID sent by Merchant or  Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| bankChkYn | Bank maintenance check | Bank maintenance check based on request time | AN(1) | ● | “Y” or “N”  ※ In case of regular/irregular maintenance time of bank, if the bank shares about the fail situation or if delayed transaction can be checked, the response will be bank maintenance. |
| stDtm | Time and date of maintenance starting | yyyyMMddhhmmss | AN(14) | ○ | “20200729000900” |
| edDtm | Time and date of maintenance ending | yyyyMMddhhmmss | AN(14) | ○ | “20200729001000” |

# Confirmation of Account Ownership Verification

## API Summary

Through account ownership verification request, can check the ownership of the account by comparing the account code that was sent with 1 KRW to the customer’s account.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/ownership/check> |
| Production | <https://npay.settlebank.co.kr/v1/api/auth/ownership/check> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Parameter name** | **Description** | **Type (Bytes)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_RC10\_1.0“  ※ Fixed value |
| mchtId | Merchant ID | Unique merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Merchant transaction number | Merchant transaction number  \* Excluded Korean  Merchant transaction number when requesting verification | AN(100) | ● | “OID201902210001” |
| mchtCustId | Customer ID | Unique customer ID provided by merchant or Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| authNo | Authentication number | Authentication number excluding the information of the sender (Remitter’s name) on the customer’s account transaction  AES Encryption | AN(12) | ● | “A12”  ※ Upon request, a random three-digit verification number before or after the sender information  Ex) In case of Ebay A12 or A12 Ebay, request is: “A12”  ※ If authentication number type is “3”, 4 digits of Korean letter combination |
| custIp | Customer 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 + Merchant 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 (Bytes)** | **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) | ● | “Success” |
| mchtCustId | Customer ID | Unique customer ID provided by merchant or Unique key  AES Encryption | AN(100) | ● | “honggildong” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |
| mchtTrdNo | Merchant transaction number | Merchant transaction number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |

# ARS Authentication Request

## API Summary

Request ARS authentication from Merchant server to Hecto Financial server.

The API is provided with the objective to authenticate customer’s account withdrawal transfer registration. Through ARS Authentication Inquiry API, the result of the authentication can be viewed.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/ars> |
| Production | <http://npay.settlebank.co.kr/v1/api/auth/ars> |

## 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\_AU00\_1.0“  **※ Fixed value** |
| mchtId | Merchant ID | Unique merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| procDiv | Process division | A0: Withdrawal registration  XX : ARS Scenario | AN(2) | ○ | “A0”: Basic value  “XX” : ARS Authentication division by type |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| mchtCustId | Customer ID | Unique customer ID provided by Merchant or Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Withdrawal bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Withdrawal account number | Customer’s withdrawal account number. Exclude ‘-’  AES Encryption | AN(15) | ○ | “1234567890” |
| mchtCustNm | Account holder name | English/Number/Korean **(Korean 3 byte)**  AES Encryption | AN(60) | ● | “Hong Gildong” (in Korean) |
| authNo | Authentication number | Number that is 6 digit or less that should be authenticated by the customer's mobile device | N(6) | ● | “910228” (Refrain from using date of birth)  “56” (If there is none, randomly generated) |
| cphoneNo | Cell phone number | Customer’s mobile phone number for ARS authentication  Exclude '-'  AES Encryption | AN(11) | ● | “01000001234” |
| payerNo | Payer number | Payer number for withdrawal  \* Can be used after separate discussion | AN(20) | ○ | "TESTMCHT00000001" |
| custIp | Customer IP address | Customer’s device’s IP address not merchant server 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) + Request date+ Request time + Cell phone 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) | ● |  |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Success” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number regarding mobile phone verification request | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Confirmation of ARS Authentication

## API Summary

ARS authentication result is requested from the merchant server to the Hecto Financial server.

This is an API that checks whether the customer who has been requested for authentication has performed ARS authentication normally. The ARS authentication/verification API is provided for the purpose of authenticating the customer's account withdrawal and transfer registration, and the transaction number, which is the response to the ARS confirmation request, is used for the withdrawal and transfer registration (account registration) API.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/arscheck> |
| Production | <http://npay.settlebank.co.kr/v1/api/auth/arscheck> |

## 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\_RC0W\_1.0“  ※ Fixed value |
| mchtId | Merchant ID | Unique merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order Number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| mchtCustId | Customer ID | Unique ID provided by merchant or Unique Key  AES Encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(50) | ● | "SFP\_FIRM1234465767890998" Received transaction number (generated by Hecto Financial) as the result of ARS authentication request |
| custIp | Customer IP address | Customer’s device’s IP address,  Not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| pktHash | hash data | Hash data generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Section** | **Combination field** |
| pktHash value | Merchant ID + Customer ID (Plain text) + Request date + Request time + 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  No transaction: 0092  Processing: 0000 |
| 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) | ● | “Success” |
| retCd | Error code | Authentication in progress : 000  Success: 00  Fail:  04 Authentication number inconsistency  08 Authentication number input timeout  10 Connection fail (Number does not exist)  11 Connection fail (Receive rejected)  12 Connection fail (Time out)  20 ARS authentication canceled  99 Other error  005 Parameter error  007 Data error  100 ARS authentication default value  700 ARS not requested  800 ARS Request fail  999 DB initial value | AN(3) | ● |  |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Account Registration

## API Summary

The merchant server requests account registration from the Hecto Financial server.

Account registration (withdrawal transfer registration) is carried out using the transaction number (trdNo), which is the result of the ‘ARS authentication confirmation’ API. With the registered account, payment (withdrawal) can be done in the future.

## API URL

|  |  |
| --- | --- |
| **Section** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/acnt/reg> |
| Production | <http://npay.settlebank.co.kr/v1/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 provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number. Setting of transaction number that is returned when doing ARS authentication.  authMthdCd : ARS mandatory for ARS | AN(50) | ○ | “T201902200001” |
| mchtCustId | Customer ID | Unique customer ID provided by merchant or Unique Key  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 (exclude hyphen)  AES Encryption | AN(10) | ● | “8001012” |
| bankCd | Bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Account number | Account number, exclude hyphen  Min 9, Max15  AES Encryption | AN(15) | ● | “1234567890” |
| authMthdCd | Authentication type code | Data on withdrawal and transfer consent  WR : Written file  ARS : ARS authentication  PASS : PASS authentication  Default : ARS | AN(5) | ○ | “ARS” |
| custIp | Customer 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) + 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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Success” |
| mchtCustId | Customer ID | Unique ID provided by merchant or Unique Key  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 numbers of registered withdrawal transfer account | AN(50) | ● | “d894kjd93kd9” |
| svcDivCd | Account registration service type | Registered withdrawal transfer account service | N(1) | ● | 1 : Firm banking |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | “OID20190221001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Account Cancellation

## API Summary

Request to cancel account from Merchant server to the Hecto Financial server.

Through account registration (withdrawal transfer registration), the cancellation of the account’s registration (withdrawal transfer registration) is done.

## API URL

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

## Request (Merchant -> Hecto Financial)

The column requested by Merchant server to Hecto Financial is defined as follows.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_DE0W\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| bankCd | Bank code | Three-digit bank code | AN(3) | ● | “004” |
| custAcntKey | Account number key | Serial numbers of account registered for withdrawal and transfer | AN(50) | ○ | “d894kjd93kd9” |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| custIp | Customer 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

|  |  |
| --- | --- |
| **Parameter name** | **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** | **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Merchant Account Registration

## API Summary

The information of the account registered for withdrawal by the Merchant itself is requested to be registered from the Merchant server to Hecto Financial server. With the registered account, payment (withdrawal) can be done in the future.

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_RB0W\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| payerNo | Payer number | Payer number for withdrawal | AN(20) | ● | “TESTMCHT00000001” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from 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(30) | ● | “Hong Gildong” (in Korean) |
| Uii | Date of birth/business registration number | Date of birth: yymmdd  Business registration number: 10 digits (Exclude hyphen)  AES encryption | AN(10) | ● | “800101” |
| 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” |
| custIp | Customer 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

|  |  |
| --- | --- |
| **Parameter name** | **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** | **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: Delivers registered account information in case of already registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from 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 numbers of account registered for withdrawal and transfer | AN(50) | ○ | "d894kjd93kd9" |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID20190221001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Payment

## API Summary

Request a payment from the Merchant server to the Hecto Financial server.

With the account registered through account registration (withdrawal transfer registration), payment (withdrawal transfer from customer’s account) can be made. As a result of executing this API, cash is transferred from the customer's account to the main account of the Merchant.

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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 provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| trdAmt | Transaction amount | Amount to be withdrawn (transaction amount) | AN(13) | ● | “1000” |
| bankCd | Withdrawal bank code | Registered customer withdrawal bank code | AN(3) | ● | “004” |
| custAcntKey | Account number key | Serial numbers of account registered for withdrawal | AN(50) | ○ | “d894kjd93kd9” |
| splAmt | Supply value | Supply value | N(13) | ○ | “0” |
| Vat | VAT | VAT | N(13) | ○ | “0” |
| svcAmt | Service charge | Service charge | N(13) | ○ | “0” |
| pmtPrdtNm | Name of the paid product | Set the name of the paid product **(Korean 3 byte)** | AN(100) | ○ | “Product name” |
| custAcntSumry | Account code content | Code name that will be on the customer’s account (**Korean 3 byte)** | AN(30) | ○ | “Hong Gildong” (in Korean) |
| csrcIssReqYn | Cash receipt issue status | Y : Cash receipt issued  N : Cash receipt not issued | A(1) | ○ | “N” |
| csrcIssPsblYn | 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 | AN(8) | ○ | "20210830" |
| custIp | Customer IP address | Customer’s device’s IP address,  Not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| cupDepositAmt | Container deposit (Cup deposit) | If container deposit (cup deposit) is included, the container deposit should be included in the transaction amount and then be requested | N(13) | ○ |  |
| pktHash | hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Customer ID (plain text) + Order Date + Order Time + Transaction Amount + Code of Withdrawal Bank + Authentication Key |

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| trdNo | Transaction number | Hecto Financial’s transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |
| trdAmt | Transaction amount | Amount to be withdrawn (transaction amount) | N(13) | ● | “1000” |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| rglChrgKey | Recurring payment key | Unique Key Generated for Recurring Payment | AN(32) | ○ |  |
| svcDivCd | Services used at payment | Service paid (withdraw transfer) | N(4) | ● | 1 : Firm banking |
| custAcntNo | Account number | Masked account number  ex) 234\*\*\*\*\*\*\*\*\*123 | AN(15) | ● | "234\*\*\*\*\*\*\*\*\*\*123" |

# Payment Cancellation/Refund

## API Summary

Request cancellation/refund of payment from merchant server to Hecto Financial server.

Refund (payment cancellation) is done for the transaction that was paid (withdrawn) for. The refund of the transaction can be done with the transaction number of the paid 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** | **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 provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order number | Merchant Cancellation Order Number  \* Exclude Korean  Order number of cancellation request, not the number of original transaction | AN(100) | ● | “OID201902210002” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| mchtTrdDt | Date of cancellation of order | yyyymmdd | AN(8) | ● | “20191231” |
| mchtTrdTm | Time of cancellation of order | HH24MISS | AN(6) | ● | “120000” |
| trdAmt | Transaction amount | Cancellation amount of transaction or  partial cancellation amount | N(13) | ● | “1000” |
| custAcntSumry | Account code content | Code name that will be on the customer’s account **(Korean 3 byte)** | AN(30) | ○ | “Hong Gildong” (in Korean) |
| splAmt | Supply value | Supply value | 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 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

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Customer ID (plain text) + Order cancellation date + Order cancellation 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** | **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| mchtTrdNo | Cancellation order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID201902210002” |
| trdNo | Cancellation transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |
| trdAmt | Refund amount | Amount withdrawn (transaction amount) | N(13) | ● | “1000” |
| svcDivCd | Services Used for Refund | Services used for refund | N(4) | ● | 1 : Firm banking |

# Approval of Recurring Payment

## API Summary

Invoke the WEB API for approval request of recurring payment transactions.

If the first payment was made with the recurring payment status parameter set to ‘Y’ at the time of the request,

Recurring payment is registered to the account (recurring payment key response). After that, the recurring payment key is used to execute recurring payment through the API.

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_SP10\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| trdAmt | Transaction amount | Amount to be withdrawn (transaction amount) | N(13) | ● | “1000” |
| rglChrgKey | Recurring payment | Unique Key Generated for recurring Payment | AN(32) | ● |  |
| splAmt | Supply value | Supply value | N(13) | ○ | “0” |
| Vat | VAT | VAT | N(13) | ○ | “0” |
| svcAmt | Service charge | Service charge | N(13) | ○ | “0” |
| pmtPrdtNm | Name of the paid product | Set the name of the paid product | AN(50) | ○ | “Product name” |
| custAcntSumry | Account code content | Code name that will be on the customer’s account | AN(7) | ○ | “Hong Gildong” (in Korean) |
| csrcIssReqYn | Cash receipt issue status | Y : Cash receipt issued  N : Cash receipt not issued | A(1) | ○ | “N” |
| csrcIssPsblYn | 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” |
| csrcReqPrposYn | Purpose 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 PidentityGb value  csrcIssReqYn  If it is Y(Issued), it is required  AES encryption | AN(20) | ○ |  |
| addDdtTypeCd | Additional deduction classification | Y: Public transportation  C: Books, concerts cost  csrcIssReqYn  If it is Y(Issued), it is required | A(1) | ○ |  |
| custIp | Customer IP Address | Customer’s device’s IP address,  Not the Merchant server’s IP | AN(15) | ○ | “127.0.0.1” |
| cupDepositAmt | Container deposit (Cup deposit) | If container deposit (cup deposit) is included, the container deposit should be included in the transaction amount and then be requested | N(13) | ○ |  |
| pktHash | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Customer ID (plain text)+ Request date + Request time + Transaction amount + Recurring payment key + Authentication key |

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean letters | AN(100) | ● | "OID201902210001" |
| trdNo | Transaction number | Hecto Financial’s transaction number | AN(40) | ○ | “SFP\_FIRM12345678901234567890” |
| rglPmtProcStatCd | Recurring payment processing status | Response of recurring payment processing status | A(1) | ○ | R : Recurring payment reprocessing is required  C : Recurring payment cancellation is required |
| trdAmt | Transaction amount | Withdrawn amount (transaction amount) | N(13) | ○ | “1000” |
| svcDivCd | Services Used at Payment | Service paid (withdraw transfer) | N(4) | ○ | 1 : Firm banking |

# Cancellation of Recurring Payment

## API Summary

Invoke the WEB API to cancel a pre-registered recurring payment.

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_SE00\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | N(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | N(6) | ● | “120000” |
| rglChrgKey | Recurring payment key | Unique Key Generated for Recurring Payment | AN(32) | ● |  |
| custIp | Customer 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

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Customer ID (plain text) + Request date + Request time + Recurring payment key + Authentication key |

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Recurring Payment Information Inquiry

## API Summary

Request customer's recurring payment account information.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | [https://tbnpay.settlebank.co.kr/v1/api/](https://tbnpay.settlebank.co.kr/v1/api/regular/info)  [/info](https://tbnpay.settlebank.co.kr/v1/api/regular/info) |
| Production | <https://npay.settlebank.co.kr/v1/api/regular/info> |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_SO00\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| rglChrgKey | Recurring payment key | Unique Key generated for recurring payment | AN(32) | ● |  |
| pktHash | hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Customer ID (Plain text) + Request Date + Request Time + Recurring Payment Key + Authentication Key |

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Description** | **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(100) | ● | “Processed normally.” |
| bankCd | Bank code | Bank code | N(3) | ○ | “011” |
| bankNm | Bank name | Bank name **(Korean 3 byte)** | AN(45) | ○ | “Kookmin Bank” |
| custAcntNo | Account number | Masked account number  ex) 234\*\*\*\*\*\*\*\*\*123 | AN(15) | ○ | “234\*\*\*\*\*\*\*\*\*123” |
| useStDt | Recurring payment start date | yyyyMMdd | AN(8) | ○ | "20210830" |
| useEdDt | Recurring payment end date | yyyyMMdd | AN(8) | ○ | “20991231” |
| rglPmtAmt | Amount of recurring payment | Amount of the first recurring payment | N(13) | ○ | “1000” |
| pmtAcmAmt | Accumulated payment amount | Accumulated amount of successful recurring payment | N(13) | ○ | “5000” |
| pmtAcmOrd | Accumulated payment round | Recurring payment success count | N(13) | ○ | “5” |
| unregDt | Cancellation date | yyyyMMddhhmmss | AN(14) | ○ | "20210830080000" |
| unregStatCd | Cancellation code | Cancellation details, user input or bank system cancellation code | AN(10) | ○ | EXPIRE: End of Period  FAIL: Payment failed  CANCEL: Merchant cancellation.  ADMIN: Administrator cancellation |

# Recurring Payment Transaction History Inquiry

## API Summary

Request the transaction history related to recurring payment and refund.

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_LS00\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| rglChrgKey | Recurring payment key | Unique key generated for recurring payment | AN(32) | ● |  |
| useStDt | Inquiry start date | yyyyMMdd | AN(8) | ● | Inquiry period is up to 1 year (365 days) |
| useEdDt | Inquiry end date | yyyyMMdd | AN(8) | ● |  |
| pktHash | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Customer ID (plain text) + Request Date + Request Time + Recurring Payment Key + Authentication Key |

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Description** | **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| dataCnt | Number of transactions | Number of transactions if transaction history exists | N(4) | ● | “10” |
| trRecords | Transaction history |  | <object> | ● |  |
| --recordTrdDt | Date and time of transaction | yyyyMMddhhmmss | AN(14) | ○ | "20210830080000" |
| --recordBankCd | Bank code | Bank code | AN(3) | ○ | “011” |
| --recordBankNm | Bank name | Bank name **(Korean 3 byte)** | AN(45) | ○ | “Kookmin bank” |
| --recordCustAcntNo | Bank account | Processing masked account number | AN(15) | ○ | "1234\*\*\*\*\*\*\*\*\*\*\*6546" |
| --recordRglChrgKey | Recurring payment key | Unique key generated for recurring payment | AN(32) | ○ |  |
| --recordTrdNo | Transaction number | Hecto Financial transaction number | AN(50) | ○ | "SFP\_FIRM1234576789890" |
| --recordMchtTrdNo | Order number | Merchant’s order number  \* Exclude Korean | AN(100) | ○ | “OID201902210001” |
| --recordTrdAmt | Transaction amount | Transaction amount | N(13) | ○ | “500000” |
| --recordUseOrd | Number of uses | Number of uses | N(13) | ○ | “1” |
| --recordOutStatCd | Transaction status code | Status code | AN(4) | ○ | Success: 0021  Fail: 0031 |
| --recordOutRsltCd | Transaction result code | Refer to reject code table | AN(4) | ○ | “0000” |
| --recordOutRsltMsg | Transaction result message | Result message | AN(200) | ○ | “Success” |

# Remittance

## API Summary

Request a remittance from the merchant server to the Hecto Financial server.

## 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** | **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 provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | "OID2021083012345" |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ○ | “honggildong” |
| trdDt | Transaction date | yyyyMMdd | AN(8) | ● | “20191231” |
| trdTm | Transaction time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Deposit bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | “004” |
| custAcntNo | Deposit bank account number | Exclude hyphen from account number  AES encryption | AN(15) | ● | "123456664" |
| custAcntSumry | Deposit account code content | Code name that will be on customer’s account  **※ Full-width letters used (7 letters)**  AES encryption | AN(14) | ● | “Hong Gildong” (in Korean) |
| directYn | Status of direct contract with the bank | N : Resale (Default)  Y : Direct contract | A(1) | ○ |  |
| macntBankCd | Bank code of main account | Refer to the **Table of Financial Institution Codes** (for direct contract with bank) Required for PDirectYn Y direct contract | AN(3) | ○ |  |
| macntNo | Deposit account number of main account | Main account’s account number excluding hyphen (for direct contract with bank)  AES encryption  Required if it is directYn Y (direct contract) | AN(15) | ○ |  |
| macntSumry | Bank code content of main account | Code content that will be on the main account (for direct contract with bank)  **※ Full-width letters used (6 letters)**  AES encryption  Required if it is directYn Y (direct contract) | AN(12) | ○ |  |
| scrtCardVal | Security code number | Direct contract SC Bank produced security card number  AES encryption | AN(6) | ○ |  |
| firmPktNo | Firm banking specialty number |  | N(6) | ○ |  |
| macntPwd | Main account password | Optional input based on contract per bank **(Mandatory requirement for KFCC)**  AES encryption | AN(4) | ○ |  |
| trdAmt | Transaction amount | Amount to be remitted (transaction amount)  Max. 1 billion KRW | N(13) | ● | “1000” |
| custIp | Customer 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

|  |  |
| --- | --- |
| **Parameter name** | **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** | **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | "OID20210830080000" |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | "SFP\_FIRM1233444365430698" |
| trdAmt | Transaction amount | Remitted amount | N(13) | ● | “1000” |
| svcDivCd | Service used to remit money | Service used to remit money | N(4) | ● | 1 : Firm banking |

# Remittance Account Balance Inquiry

## API Summary

Inquire the balance of the remittance account from the merchant server to the Hecto Financial server.

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_CA0W\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ● | "OID2021083012345" |
| trdDt | Transaction date | yyyymmdd | AN(8) | ● | “20191231” |
| trdTm | Transaction time | HH24MISS | AN(6) | ● | “120000” |
| pktHash | hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

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

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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, send the information of the registered account |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| mchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean | AN(100) | ● | "OID20210830080000" |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | "SFP\_FIRM1233444365430698" |
| blcAmt | Balance amount | Remittance account balance  AES encryption | N(13) | ● | “1000” |

# Transaction Result Inquiry

## API Summary

For payment approval result and remit request result, if the result code is ‘in progress’ or if there is a timeout, until there is ‘success’ or ‘fail’ codes, the API should be invoked repeatedly.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/pay/morw> |
| Production | <https://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** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_MORW\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| pktDivCd | Task classification | **Default value: RP**  Withdrawal RP, Remittance AR | AN(2) | ● | “RP” |
| mchtTrdNo | Order number | Merchant transaction number  \* Exclude Korean Order number on transaction request | AN(100) | ● | "OID201902210001" |
| mchtTrdDt | Order date | yyyyMMdd | AN(8) | ● | “20201131” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20201231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| pktHash | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **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** | **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) | ● | “Processed normally.” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ○ | “SFP\_FIRM12345678901234567890” |
| bankCd | Withdrawal bank code | Withdrawal bank code | AN(3) | ○ | “011” |
| svcDivCd | Services used for transaction | Services used for transaction | N(1) | ○ | 1 : Firm banking |

# Transaction History Inquiry

## API Summary

Transaction history related to payment and refund is requested.

The information about transaction (payment / refund) can be checked with merchant’s order date, order number.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/pay/translist> |
| Production | <https://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** | **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 provided by Hecto Financial | AN(8) | ● | “midtest" |
| pktDivCd | Task classification | Payment: RP, Cancellation: RT  Task classification of order number | AN(2) | ● | “RP” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude 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) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **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** | **Name** | **Description** | **Type (Length)** | **Description** | **Example** |
| outStatCd | Transaction status | Transaction status code (success/fail) | AN(4) | ● | Success: 0021  Fail: 0031 |
| outRsltCd | Result code | Refer to **reject code table** | AN(4) | ● |  |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| dataCnt | Number of transactions | 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 | Payment:RP, Cancellation:RT | AN(2) | ● | “RP” |
| --recordMchtTrdNo | Order number | Merchant Order Number  \* Exclude Korean letters | 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 |

# Account List Inquiry

## API Summary

Request customer's account list information.

Can inquire the list of accounts registered (withdraw transfer registration) in customer’s ID.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/acnt/list> |
| Production | <https://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** | **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 provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from 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

|  |  |
| --- | --- |
| **Parameter name** | **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) | ● | “Processed normally.” |
| dataCnt | Number of accounts | Number of transactions if transaction history exists | N(4) | ● | “10” |
| acntRecords | Account history |  | <object> | ● |  |
| --recordTrdDt | Registration date and time | yyyyMMddhhmmss | AN(14) | ● | "20210820000000" |
| --recordBankCd | Bank code | Bank code | AN(3) | ● | "011" |
| --recordCustAcntNoMask | Account number | Masked account number  ex) 234\*\*\*\*\*\*\*\*\*123 | AN(15) | ● | "831\*\*\*\*\*\*\*11" |
| --recordCustAcntKey | Account number key | Serial number of account registered for withdrawal transfer | AN(50) | ● | "d5409fdsl3558" |
| --recordSvcDivCd | Account registration service classification | Withdrawal transfer registered service | N(4) | ● | 1 : Firm Banking  2 : Open Banking  3 : Firm & Open Banking |
| --recordUnregDt | Date of cancellation | yyyyMMddhhmmss | AN(14) | ○ | "20210820000000" |

# Bank List Inquiry

## API Summary

Respond to the list of available banks on merchant side.

Usually used to invoke the API in the merchant's payment window and configure the UI.

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_LB00\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| 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

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + 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** | **Name** | **Description** | **Type (Length)** | **Description** | **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) | ● | “Processed normally.” |
| dataCnt | Number of banks | Number of transactions if transaction history exists | N(4) | ● | “10” |
| bankRecords | Bank records |  | <object> | ● |  |
| --recordBankCd | Bank code | Bank code | AN(3) | ● | “004” |
| --recordBankNm | Bank name | Bank name **(Korean 3 byte)** | AN(45) | ● | “Kookmin bank” |
| --recordBankOrd | Order | Displayed order in UI | N(2) | ● |  |
| --recordUseYn | Availability | Bank opening and availability | A(1) | ● | “Y” |

# Bank Maintenance Inquiry

## API Summary

Check the maintenance status of each bank.

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_TP00\_1.0“  ※ fixed value |
| pktDivCd | Task classification | RE, DE, RP, RT, NA, NN, AA, AR | AN(2) | ● | RE: Account registration  DE: Account termination  RP: Payment  RT: Payment cancellation (refund)  NA: Account holder name inquiry (not including date of birth)  NN : Account holder name inquiry (including date of birth)  AA: Account ownership verification  AR: Remittance |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Bank code | Three-digit bank code | AN(3) | ● | “004” |
| pktHash | hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Request date + Request time + 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(300) | ● | “Processed normally.” |
| bankCd | Bank code | Three-digit bank code | AN(3) | ● | “004” |

# Account Ownership Verification History Inquiry

## API Summary

Can inquire account ownership verification history

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/auth/ownership/translist> |
| Production | <http://npay.settlebank.co.kr/v1/api/auth/ownership/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 provided by Hecto Financial | AN(8) | ● | “midtest” |
| orgTrdDt | Original transaction date | Original transaction date (yyyyMMdd) | AN(6) | ● |  |
| mchtTrdNo | Order number | Merchant order number  ※ Exclude Korean  Merchant transaction number when verification is requested | AN(100) | ○ | "OID201902210001" |
| trdNo | Transaction number | Transaction number given as response when Hecto Financial transaction number verification is requested | AN(50) | ● | "SFP\_FIRM123344568901234567890" |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | "honggildong" |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| custIp | Customer ID 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

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Request date + Request time + Merchant transaction number + Authentication Key |

## Response (Hecto Financial -> Merchant)

The columns requested by Merchant server from Hecto Financial are defined 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) | ● | “Success” |
| mchtTrdNo | Merchant transaction number | Merchant transaction number  \*Exclude Korean | AN(100) | ● | "OID20210830000000" |
| mchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ○ | "honggildong" |
| trdNo | Transaction number | Hecto Financial transaction number | AN(50) | ● | "SFP\_FIRM123454657890" |
| bankCd | Bank code | Refer to **Table of Financial Institution Codes** | AN(3) | ● | "004" |
| custAcntNo | Account number (masked) | Account number excluding hyphen | AN(15) | ● | "12345\*\*\*\*\*\*\*\*890" |
| custAcntSumry | Account code content | Code content on the customer’s account  AES encryption | AN(21) | ● | "EbayA12" |
| reqTrdDtm | Date and time of verification request | yyyyMMddhhmmss | AN(14) | ● | "20210830000000" |
| chkTrdDtm | Date and time of checking verification | yyyyMMddhhmmss | AN(14) | ● | "20210830000000" |
| trdStatCd | Verification transaction status | Verification success / fail | AN(4) | ● | Success: 0021  Fail: 0031 |
| trdRsltCd | Verification fail code | Refer to reject code table | AN(4) | ● |  |
| trdRsltMsg | Verification result message | When an error occurs, a message on error is sent | AN(600) | ● | “Success” |

# Account Ownership Verification Bank Maintenance Inquiry

## API Summary

Can check the status of bank maintenance

## API URL

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

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_TP1W\_1.0”  ※ fixed value |
| pktDivCd | Task classification | AA | AN(2) | ● | AA: Account ownership verification  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| bankCd | Bank code | Three-digit bank code | AN(3) | ● | "004" |
| pktHash | Hash data | Hash value generated by sha256 method | AN(200) | ● |  |

## Request Hash Code

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Request date + Request time + Bank code + Authentication Key |

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Description** | **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) | ● | “Success” |
| bankCd | Bank code | Three-digit bank code | AN(3) | ● | "004" |
| bankChkYn | Bank maintenance check | Bank maintenance check based on request time | AN(1) | ● | "Y" or "N"  ※ In case of regular/irregular maintenance time of bank, if the bank shares about the fail situation or if delayed transaction can be checked, the response will be bank maintenance. |
| stDtm | Starting time and date of maintenance | yyyyMMddhhmmss | AN(14) | ○ | "20210830000000" |
| edDtm | Ending time and date of maintenance | yyyyMMddhhmmss | AN(14) | ○ | "20210830000000" |

# KFTC Withdrawal Transfer Information Cancellation Inquiry

## API Summary

If a customer applies for account cancellation from a financial institution (bank, etc.) or the KFTC (PAYINFO), the customer account’s withdrawal and transfer will be canceled from the Hecto Financial Easy Payment System one business day after the day of application (before 11 AM)

The API is provided for consistency with the merchant’s customer withdrawal transfer information. From 11 AM onwards, the list of information on withdrawal transfer accounts canceled on the day can be checked.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | <https://tbnpay.settlebank.co.kr/v1/api/acnt/isttunreg/list> |
| Production | <https://npay.settlebank.co.kr/v1/api/acnt/isttunreg/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\_PI0C\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| unregDt | Cancellation date | Date of cancellation of customer account’s withdrawal transfer | AN(8) | ● | “20191230” |
| 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

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Cancellation 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** | **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) | ● | “Processed normally.” |
| unregDt | Cancellation date | yyyyMMdd | AN(14) | ● | "20210830" |
| dataCnt | Number of canceled accounts | Number of accounts with withdrawal transfer canceled through KFTC | N(4) | ● | “10” |
| unregAcntRecords | List of canceled accounts |  | <object> | ● |  |
| --recordMchtCustId | Customer ID | Unique Customer ID or Unique Key from merchant  AES encryption | AN(100) | ● | “honggildong” |
| --recordBankCd | Bank code | Bank code | AN(3) | ● | “004” |
| --recordCustAcntNo | Account number | Masked account number  ex) 234\*\*\*\*\*\*\*\*\*123 | AN(15) | ● | “234\*\*\*\*\*\*\*\*\*123” |
| --recordCustAcntKey | Account number key | Serial number of account registered for withdrawal transfer | AN(50) | ● | “d894kjd93kd9” |
| --recordUnregDtm | Cancellation date and time | yyyyMMddhhmmss | AN(14) | ● | "20210831080000" |
| --recordUnregOcuIstt | Cancellation generating institution | Financial company/integrated management system | N(1) | ● | 1: Financial company  4: Integrated management system |
| --recordUnregDivCd | Cancellation classification | 0/1/2/9/N | AN(1) | ● | 0 : Customer request  1: Financial company arbitrary cancellation (automatic transfer, etc.)  2: Financial company account change  9: Others  N : Absence of consent data |

# Test Call

## API Summary

Request a test call from the merchant server to the Hecto Financial server.

The Alive status of the service is checked with it.

## API URL

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

## 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\_TC00\_1.0“  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| procDiv | Task classification | A0 : Withdrawal registration  XX : ARS Scenario | AN(2) | ○ | “TC” : Test call |
| mchtTrdNo | Transaction number | Merchant transaction number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |

## 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) | ● | “Processed normally.” |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# Payment Password Confirmation

## API Summary

From the Merchant server to Hecto Financial server, payment password confirmation is requested.

Whether the inputted payment password for the customer’s ID matches the registered payment password is checked.

## API URL

|  |  |
| --- | --- |
| **Environment** | **URL** |
| Testbed | https://tbnpay.settlebank.co.kr/v1/api/auth/pwdcnf |
| Production | http://npay.settlebank.co.kr/v1/api/auth/pwdcnf |

## Request (Merchant -> Hecto Financial)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Required** | **Example** |
| hdInfo | Information | Parameter Information code | AN(50) | ● | “SPAY\_PW00\_1.0”  ※ fixed value |
| mchtId | Merchant ID | Unique Merchant ID provided by Hecto Financial | AN(8) | ● | “midtest" |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ● | “OID201902210001” |
| mchtCustId | Customer ID | Unique Customer ID provided by Merchant or Unique Key  AES Encryption | AN(100) | ● | "honggildong" |
| reqDt | Request date | yyyyMMdd | AN(8) | ● | “20191231” |
| reqTm | Request time | HH24MISS | AN(6) | ● | “120000” |
| pmtPwd | Payment password | The encrypted value of the six numbers set by the customer  AES encryption | AN(24) | ● | "314257" |
| custIp | Customer 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

|  |  |
| --- | --- |
| **Parameter name** | **Combination field** |
| pktHash value | Merchant ID + Customer ID (Plain text) + Request date + Request time + Payment password (plain text) + Authentication key |

## Response (Hecto Financial -> Merchant)

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameter** | **Name** | **Description** | **Type (Length)** | **Description** | **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) | ● | ST01 : If the payment password does not exist, this response code is returned |
| outRsltMsg | Result message | When an error occurs, a message on error is sent | AN(300) | ● | “Processed normally.” |
| mchtCustld | Customer ID | Unique Customer ID provided by Merchant or Unique Key  AES Encryption | AN(100) | ● | "honggildong" |
| mchtTrdNo | Order number | Merchant order number  \* Exclude Korean | AN(100) | ○ | "OLD20190221001" |
| trdNo | Transaction number | Hecto Financial transaction number | AN(40) | ● | “SFP\_FIRM12345678901234567890” |

# 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](https://develop.sbsvc.online/22/bbsList.do?tx=R&articleSeq=522).

|  |  |  |  |
| --- | --- | --- | --- |
| **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 Identifier

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 |