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**Overview of CIPS Message Definition Report**

**V1.0.0**

**January 2021**

Important Note: This Article is made out in both English and Chinese versions. We hereby set Chinese version as standard and English version as a reference should any conflicts occurred. If you have any questions, please contact us at bzb@cips.com.cn.

**Revision Record**

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Note: Change statuses are C — created, A — added, M — modified, and D — deleted.

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1. **Introduction to Message Exchange Standard**
	1. **Background**

The smooth and stable operation of CIPS (Phase I) since its launch has enabled continuous growth in relevant business. For the sake of better adaptation to the development needs of cross-border RMB businesses, relevant departments and operating institutions of the People’s Bank of China have raised a new set of more comprehensive and more specific requirements for CIPS. Compared with Phase I, Phase II will adopt a more economical and more liquid way to realize mixed settlement, further extend the operation time, cover a wider range of time zones and achieve connection with security settlement system, central counterparty and other financial market infrastructures so as to provide full support for various cross-border businesses.

* 1. **Purpose**

This document was compiled with reference to business requirements, business standards and relevant design documents for the purpose of assisting CIPS developers and CIPS participants’ developers to develop CIPS-related interfaces in accordance with a series of documents about CIPS standard.

* 1. **Scope**

This document is intended for staff of business management department, business and technology management staff of CIPS operation center, technical scheme providers, software designers, testers and implementers, business operation maintenance technicians of CIPS operation center, technicians and business management personnel in payment systems, and project management personnel, etc. This document is also intended for CIPS participants’ system analysts, programmers, testers, business supervisors and other related personnel.

* 1. **Terminology Notes**

(1) Business elements

Business elements are the abstract names of business data items, and are the basic units of a business, e.g. bank account number.

(2) Messages

Messages are the basic units for exchange of business data between system nodes. Each message is composed of a message header and a message body, among which the message body is composed of multiple message blocks.

(3) Message blocks

Message blocks are the basic units of a message, and are defined by XML tags. Each message block is composed of multiple message elements.

(4) Message elements

Message elements are the basic units of a message block, and are defined by XML tags. Each message element encapsulates one or more business element(s), and multiple message elements compose a message block. For complex business element(s), a message element may contain multiple message sub-elements.

(5) Root message elements

XML Document Standard is adopted for all messages. The root nodes of XML documents are called root message elements, whose tags are fixed as <Document/>.

(6) Message sub-elements

For hierarchical message elements, lower-level message elements are called message sub-elements, defined by XML tags, and located in XML tags of higher-level message elements.

* 1. **Business Standards**
		1. **Character Set and Encoding**

Messages adopt Unicode character set and UTF-8 encoding.

For text fields in which no Chinese characters are allowed, only special characters within the range of SWIFT Basic Latin character set such as English letters and numbers can appear:

. , - \_ ( ) / = + ? ! \* ; @ # : % [ ]‘ \ $ { } ^ |~ \n \r \t (space)

For text fields in which Chinese characters are allowed, no special checks need to be performed by CIPS, and all characters within the range of Unicode character set can pass CIPS checks.

Chinese characters or English or Chinese commercial codes can be filled in name fields and other business elements with a note indicating that Chinese characters are allowed, but provided that Chinese commercial codes must conform to the latest version released by SWIFT. Before filling any Chinese characters or Chinese commercial code in such a field, the sending agent should confirm by itself that the receiving agent can process the Chinese characters or Chinese commercial code in this field, for which CIPS holds no responsibility. Chinese characters are not allowed in other fields.

* + 1. **ParticipantIdentification**

CIPS uses the BICs specified by SWIFT or the codes provided by CIPS as the identification of CIPS participants. If a CIPS participant does not have a BIC, the participant should apply to SWIFT for a non-connected BIC or apply for a CIPS code. CIPS has incorporated relevant technical support for LEI so that it is easy to switch from BIC to LEI in the future.

* + 1. **ParticipantAccountNumber**

Each CIPS direct participant opens an account at CIPS. CIPS takes ParticipantIdentification as ParticipantAccountNumber.

* + 1. **Participant Joining Method**

CIPS initially only supports domestic participants registered in mainland China to become its direct participants. CIPS adopts the mode of one-point access and one-point clearing. Domestic branches of domestic direct participants are not allowed to join CIPS as indirect participants. One indirect participant can correspond to multiple direct participants, and one direct participant can also correspond to multiple indirect participants.

* + 1. **MessageIdentification**

In CIPS, MessageIdentification is a unique set of alphanumerical code used to identify a message sent by a direct participant, and is not allowed to be duplicated during the retention period of CIPS businesses (the retention period of CIPS businesses is a system parameter of CIPS). A MessageIdentification is a 16-bit alphanumerical code which can be composed of uppercase and lowercase alphabetical letters as well as numbers (it is not required that uppercase and lowercase alphabetical letters as well as numbers must appear at the same time); if the length is insufficient, zeros will be put in front.

* + 1. **EndToEndIdentification**

EndToEndIdentification is the unique identification of a transaction at the business level within the transaction initiating party and remains unchanged throughout the whole business chain.

* + 1. **Account Number**

The account number of a customer is composed of at most 34-bit characters within the range of SWIFT Basic Latin character set. Moreover, it should be unique among participants.

* + 1. **Intermediary Agent(s)**

The usage of intermediary agent(s) is shown in the figure below. If one intermediary bank is present between beneficiary institution and creditor agent, Intermediary Agent 1 should be used; if two intermediary banks are present between them, Intermediary Agent 1 and Intermediary Agent 2 should be used.



Beneficiary Institution

Creditor Agent

Debtor Agent

Creditor

Ordering Institution

Initiating party

Debtor

Ultimate creditor

Intermediary Agent 1

Intermediary Agent 2

Clearing institution

Sending agent

Ultimate debtor

* + 1. **Double Accounting Check Rule for Messages at the Business Level**

CIPS takes {Initiating Direct Participant + MessageIdentification} as the double accounting check rule for messages at the business level.

* + 1. **ChangeNumber**

Each ChangeNumber is 8 digits. If a ChangeNumber is less than 8 digits, the front should be complemented by zero(s). At the early stage of CIPS’ establishment, all ChangeNumbers are “00000000”.

* + 1. **Operation Sequence**

CIPS operates on national legal working days by default, and its working days are determined according to the Gregorian calendar. Please refer to SystemStatusChangeNotice message for the specific working days. The operation of CIPS on each working day is divided into seven phases (statuses): CLSD, ACTV, SUSP, CLSG, NTAC, NTSP and NTCS. CIPS operates for 5\*24+4 hours, that is to say, Monday to Friday is the normal working days of the system. Business processing is divided into daytime session and nighttime session. Daytime session runs from 9:00 to 17:00 on T day (calendar day), and nighttime session runs from 17:00 on T day to 8:00 on T+1 day. Seamless connection is realized between daytime session and nighttime session. CIPS does not operate on weekends and holidays. On the first working days after weekends and holidays (hereinafter referred to as special working days), the running time of daytime session will start 4 hours in advance, and the starting time is 5:00.

CIPS direct participants conduct initial prefunding through HVPS in daytime session, and obtain liquidity through reserved prefunding and initial prefunding in daytime session. Reserved prefunding is adopted for the nighttime session so as to guarantee that CIPS businesses will not be interrupted during the period when HVPS is not available (17:30-20:30). CIPS direct participants can increase their frozen funds from 16:00 to 17:00 (SUSP time point of CIPS) to reach the minimum initial prefunding requirement for nighttime session. After CIPS enters the nighttime session, participants can reduce their frozen funds. CIPS supports participants to increase or reduce their reserved prefunding values at any time so as to meet the liquidity requirement for the system operation.

1. CLSD phase:

8:30-9:00 is CLSD phase of CIPS. After the NTCS phase on the previous working day, CIPS switches the system working day, enters the CLSD status for next working day, and then archives and initializes the accounts successively; CIPS participant information becomes effective; CIPS public parameters become effective; expiration reminder notice is sent for digital certificates that are about to expire; business statistics is made for the previous day, and billing statement is issued if participants’ billing is conducted on the first working day at the beginning of a month. Then the system stops in this status, at which time system maintenance, data archiving and cleaning-related action can be carried out.

CIPS automatically opens the capital injection window to accept the capital injection transactions of participants until CIPS enters the ACTV phase.

On special working days, 4:30-5:00 is the CLSD phase of CIPS.

2. ACTV phase:

9:00-17:00 is the ACTV phase of CIPS. After entering the daytime session at 9:00 every day, CIPS closes the initial prefunding window (as described for the CLSD phase), updates the initial prefunding status of the participants whose amounts are no less than the sum of minimum initial prefunding requirement plus netting position to FDRC. At this time, CIPS concentrates on the processing of cross-border payment transactions, information services and fund adjustment services. After entering the daytime session, the participants whose initial prefunding has not been completed can continue their prefunding until it is completed. Half an hour before entering the SUSP phase, a SystemStatusChangeNotice message containing the business cut-off warning will be sent to all participants to prepare them for business cut-off.

On special working days, 5:00-17:00 is the day session processing phase of CIPS.

3. SUSP phase:

CIPS enters the SUSP phase at 17:00 every day, and automatically enters the CLSG phase after the switching.

4. CLSG phase:

After the CLSG phase, CIPS automatically returns the payments pending for settlement; after the completion of return, CIPS closes out accounts; after that, CIPS waits for HVPS end-of-day processing and reconciliation; after the completion of reconciliation with HVPS, CIPS checks whether closing out is completed; then, CIPS conducts trial balancing for accounts kept in the system; after confirmation, CIPS conducts reconciliation with participants; after that, CIPS automatically enters the NTAC phase.

5. NTAC phase:

17:00-8:00 (next working day) is NTAC phase of CIPS. Direct participants can increase their frozen funds from 16:00 to 17:00 (the time at which CIPS enters the SUSP phase) to reach the minimum initial prefunding requirement for the nighttime session. CIPS updates the initial prefunding status of the participants whose amounts are no less than the sum of minimum initial prefunding requirement plus netting position to FDRC. At this time, CIPS concentrates on the processing of cross-border payment transactions, information services and fund adjustment services.

17:00-20:30 is available for business processing with the frozen funds. The participants whose initial prefunding has not been completed can continue to increase their reserved prefunding before HVPS enters the daytime session of next working day until their prefunding is completed. Once HVPS enters the daytime of next working day, the reserved prefunding of CIPS direct participants will be automatically transferred into the account of CIPS at HVPS. 20:30-8:00 (next working day) is available for business processing with the available funds.

Half an hour before entering the NTSP phase, a SystemStatusChangeNotice message containing the business cut-off warning will be sent to all participants to prepare them for business cut-off.

6. NTSP phase:

CIPS enters the NTSP phase at 8:00 every day, and automatically enters the NTCS phase after the switching.

7. NTCS phase:

After entering the NTCS phase, CIPS automatically returns the payments pending for settlement; after the completion of return, CIPS closes out accounts; after that, CIPS conducts pre-reconciliation with HVPS; after that, CIPS checks whether closing out is completed; then, CIPS conducts trial balancing for accounts kept in the system; after confirmation, CIPS conducts reconciliation with participants; after that, CIPS automatically enters the CLSD phase of next working day.



(Reserved prefunding)

(Initial prefunding)

(Initial prefunding)

T+1 working day

ACTV

CLSD

ACTV

NTAC

Use the available fund

(Change of frozen fund to available fund)

(CLSG)

Use the frozen fund

ACTV

CLSD

Use the available fund

T working day

In order to meet the processing needs of RMB cross-border payment transactions, the operation time and working day time interval schedule of CIPS should be adjusted flexibly so as to effectively meet the fund clearing requirements of overseas participating institutions in different time zones.

Please refer to “Appendix Mapping Table of Messages Sent by Participants and System Statuses” for messages that can be sent by participants in each system status.

* + 1. **PaymentTypeCodes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Number** | **Payment TypeNameInChinese** | **PaymentTypeCode** | **PaymentTypeNameInEnglish** |
| 1 | 货物贸易 | GODX | Cross-border Goods Trade |
| 2 | 服务贸易 | STRX | Cross-border Service Trade |
| 3 | 资本项下 | CTFX | Cross-border Capital Transfer |
| 4 | 个人汇款 | RMTX | Cross-border Individual Remittance |
| 5 | 金融机构头寸调拨 | FTFX | Financial Institution Transfer |
| 6 | 其他 | OTFX | Other Transfer |
| 7 | 债券市场交易现券买卖 | SBTB | Spot Bond Trading of Bond Markets |
| 8 | 债券市场交易质押式回购首期 | IPRB | Initial Pledge-style Repo of Bond Markets |
| 9 | 债券市场交易质押式回购到期 | PREB | Pledge-style Repo Expiration of Bond Markets |
| 10 | 债券市场交易买断式回购首期 | IBRB | Initial Buyout Repo of Bond Markets |
| 11 | 债券市场交易买断式回购到期 | BREB | Buyout Repo Expiration of Bond Markets |
| 12 | 分销DVP | DDVP | Distribution DVP |
| 13 | 远期交割 | FORD | Forward Delivery |
| 14 | 债券借贷（双边）到期 | BOLM | Bond Lending (bilateral) Maturity |
| 15 | 投资人定向转让 | DITI | Directional Transfer of Investors |
| 16 | 商业银行定期存款首期 | ITDB | Initial Term Deposit of Commercial Banks |
| 17 | 商业银行定期存款到期 | TDEB | Term Deposit Expirationof Commercial Banks |
| 18 | 债券发行缴款 | BISP | Bond Issue Payment |
| 19 | 债券还本付息 | BDES | Bond Debt Service |
| 20 | 债券还本金 | BPRR | Bond Principal Redeeming  |
| 21 | 债券付息 | BINP | Bond Interest Payment |
| 22 | 债券发行手续费 | BISF | Bond Issuance Fee |
| 23 | 债券兑付手续费 | BCAF | Bond Cashed Fee |
| 24 | 附息式债券兑付手续费 | CBCF | Coupon-bearing Bond Cashed Fee |
| 25 | 债券净额 | BOCC | Bond CCP Clearing |
| 26 | 利率衍生品 | INRD | Interest Rate Derivatives |
| 27 | 汇率衍生品 | EXRD | Exchange Rate Derivatives |
| 28 | 信用衍生品 | CRED | Credit Derivatives |
| 29 | 大宗商品衍生品 | COMD | Commodity Derivatives |
| 30 | 清算手续费 | CLEF | Clearing Fee |
| 31 | 机构间支付业务结算净额 | NSPI | Netting Settlement of Payment Institution |

Note: When Phase I messages (cips.111.01.01 and cips112.001.01) use the PaymentTypeCodes of Item 1-6, the last bit X should be removed to adopt tri-bit encoding. For example, the PaymentTypeCode of Cross-border Goods Trade should be changed to GOD from GODX.

* + 1. **Messages and PaymentTypes Mapping Table**

|  |  |
| --- | --- |
| **MessageDefinition** | **PaymentType** |
| CustomerCreditTransferBatchCustomerPayment | 1. Cross-border Goods Trade
2. Cross-border Service Trade
3. Cross-border Capital Transfer
4. Cross-border Individual Remittance
5. Other Transfer
 |
| FinancialInstitutionTransfer | 1. Cross-border Goods Trade
2. Cross-border Service Trade
3. Cross-border Capital Transfer
4. Cross-border Individual Remittance
5. Financial Institution Transfer
6. Bond Debt Service
7. Bond Principal Redeeming
8. Bond Interest Payment
9. Bond Issuance Fee
10. Bond Cashed Fee
11. Coupon-bearing Bond Cashed Fee
12. Other Transfer
 |
| RequestforCCPSettlement | 1. Bond CCP Clearing
2. Interest Rate Derivatives
3. Exchange Rate Derivatives
4. Credit Derivatives
5. Commodity Derivatives
6. Clearing Fee
7. Other Transfer
 |
| SecuritiesSettlementSystembyBankSecuritiesSettlementSystembyFMI | 1. Spot Bond Trading of Bond Markets
2. Initial Pledge-style Repo of Bond Markets
3. Pledge-style Repo Expiration of Bond Markets
4. Initial Buyout Repo of Bond Markets
5. Buyout Repo Expiration of Bond Markets
6. Distribution DVP
7. Forward Delivery
8. Bond Lending (bilateral) Maturity
9. Directional Transfer of Investors
10. Initial Term Deposit of Commercial Banks
11. Term Deposit Expiration of Commercial Banks
12. Bond Issue Payment
13. Other Transfer
 |
| MultiDebitCreditTransferByClearingInstitution | 1. Netting Settlement of Payment Institution |

1. **Introduction to Message Format**
	1. **Message Structure**

CIPS uses XML messages to transmit business data. A XML message only carries business data, and does not contain message movement, exchange, routing or other related information, which must be attached to one additional data block for transmission. For easy processing, CIPS attaches such an additional data block to the head of each business message. This additional data block is called “message header”, and the business message itself is called “message body”. A digital signature put between message header and message body is called “digital signature field”, which is optional. The “digital signature field” is mandatory if a message requires digital signature. Message header, digital signature field and message body jointly constitute a complete message, without any character spacing between any two of them. CIPS message format is as follows:

|  |  |  |
| --- | --- | --- |
| MsgHeader (Message header) | Digital signature field | Document (Message body) |

* 1. **Message Header Format**
		1. **Message Header Format Specification**

A header between nodes transmits communication-level data. It is mainly composed of version identification, initiator, receiver and message description, and adopts the fixed-length data format, with a total length of 174 bytes. The format is as follows:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Element Type** | **Element Name** | **Meaning** | **Location** | **Length** | **Type** | **Attribute** | **Description** |
|  | BeginFlag | Beginning flag | 0 | 3 | x | M | To identify the beginning of a message header block, fixed as {H: |
| Version | VersionID | Version number | 3 | 2 | n | M | Fixed as 02; |
| Initiator | OrigSender | Message sender | 5 | 14 | x | M | To identify the original business initiator of the message; |
| OrigSenderSID | Sender system ID | 19 | 4 | x | M | Refer to “3. Data Type” — SystemCode |
| Receiver | OrigReceiver | Message receiver | 23 | 14 | x | M | To identify the ultimate business receiver of the message; |
| OrigReceiverSID | Receiver system ID | 37 | 4 | x | M | Refer to “3. Data Type” — SystemCode |
| Message Description | OrigSendDate | Message sending date | 41 | 8 | d | M | To identify the machine’s date on which OrigSender sends this message; |
| OrigSendTime | Message sending time | 49 | 6 | t | M | To identify the machine’s time at which **Orig**Sender sends this message; |
| StructType | Format type | 55 | 3 | x | M | PKG format: PKGCMT format: CMTXML format: XML |
| MesgType | Message type code | 58 | 20 | x | M | Message type code; |
| MesgID | Message ID at the communication level | 78 | 20 | x | M | To identify a message at the communication level. It is compiled in the order of OrigSender and must be unique on OrigSendDate.Receiver confirms a message based on OrigSender+OrigSendDate+MesgID. Messages with the same OrigSender+OrigSendDate+MesgID are regarded as duplicated messages at the communication level.  |
| MesgRefID | Message reference ID at the communication level | 98 | 20 | x | O | To identify the related messages of this message. It is set by OrigSender. The subsequent nodes should keep this element unchanged and the value should be answered back in a CommunicationResponse message so that OrigSender can match it to the original message. |
| MesgPriority | Message priority | 118 | 1 | n | M | If the message priority is at Communication Level 1, PMTS-MBFE transmits the messages according to the priority. For example, the messages set as URGT will be transmitted by PMTS-MBFE to the business system in priority.1: URGT;2: HIGH;3: NORM; |
| MesgDirection | Message transmission direction | 119 | 1 | x | M | Sent by Inner-Bank System: USent by NPC: D |
| Reserve | (Reserved element) | 120 | 9 | x | O | Reserve. |
|  | EndFlag | Ending flag | 129 | 3 | x | M | To identify the ending of a message header block, fixed as }\r\n\r = 0x0d\n = 0x0a |

Note:

* 1. The value range of x-type identification characters is a-z, A-Z, 0-9, . (full stop), －(hyphens), \_ (underline); the value range of n-type identification numbers is 0-9; d-type identification character is date and the format is yyyymmdd; t-type identification character is time, and the format is hhmmss;
	2. All message elements are fixed-length, and should be complemented when their values are less than the fixed length: x-type elements should be complemented with spaces (0x20) at the back; n-type elements should be complemented with zeros (0x30) in the front;
	3. Mandatory elements must be filled. x-type elements cannot be all spaces (0x20); n-type, d-type and t-type elements cannot be all-zero (0x30); optional items can be filled with placeholder characters. x-type elements should be filled with spaces (0x20), and n-type, d-type and t-type elements should be filled with zeros (0x30);
	4. The letters in all elements of a message header block are not case-sensitive, and it is recommended that all use uppercase letters.
		1. **Message Header Filling Example**
			1. Sent by Inner-bank System to PMTS-CAE

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Element****Type** | **Element Name** | **Meaning** | **Location** | **Length** | **Type** | **Attribute** | **Description** |
|  | BeginFlag | Beginning flag | 0 | 3 | x | M | {H: |
| Version | VersionID | Version number | 3 | 2 | n | M | 03 |
| Initiator | OrigSender | Message sender | 5 | 35 | x | M | TEST0000240(Note to complement with spaces at the end) |
| OrigSenderSID | Sender system ID | 40 | 4 | x | M | CIPS |
| Receiver | OrigReceiver | Message receiver | 44 | 35 | x | M | CIPSCNSHXXX(Note to complement with spaces at the end) |
| OrigReceiverSID | Receiver system ID | 79 | 4 | x | M | CIPS |
| Message Description | OrigSendDate | Message sending date | 83 | 8 | d | M | 20100501 |
| OrigSendTime | Message sending time | 91 | 6 | t | M | 094508 |
| StructType | Format type | 97 | 3 | x | M | XML |
| MesgType | Message type code | 100 | 20 | x | M | cips.111.001.01(Note to complement with spaces at the end) |
| MesgID | Message ID at the communication level | 120 | 20 | x | M | A1234B1234C1234D1234 |
| MesgRefID | Message reference ID at the communication level | 140 | 20 | x | O | 00000000000000000000 |
| MesgPriority | Message priority | 160 | 1 | n | M | 3 |
| MesgDirection | Message transmission direction | 161 | 1 | X | M | U |
| Reserve | (Reserved element) | 162 | 9 | x | O | (Filled with spaces) |
|  | EndFlag | Ending flag | 171 | 3 | x | M | }\r\n |

* + - 1. Sent by PMTS-CAE to Inner-bank System

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Element****Type** | **Element Name** | **Meaning** | **Location** | **Length** | **Type** | **Attribute** | **Description** |
|  | BeginFlag | Beginning flag | 0 | 3 | x | M | {H: |
| Version | VersionID | Version number | 3 | 2 | n | M | 03 |
| Initiator | OrigSender | Message sender | 5 | 35 | x | M | TEST0000240(Note to complement with spaces at the end) |
| OrigSenderSID | Sender system ID | 40 | 4 | x | M | CIPS |
| Receiver | OrigReceiver | Message receiver | 44 | 35 | x | M | ABCD0000009 (Note to complement with spaces at the end) |
| OrigReceiverSID | Receiver system ID | 79 | 4 | x | M | CIPS |
| Message Description | OrigSendDate | Message sending date | 83 | 8 | d | M | 20100501 |
| OrigSendTime | Message sending time | 91 | 6 | t | M | 094508 |
| StructType | Format type | 97 | 3 | x | M | XML |
| MesgType | Message type code | 100 | 20 | x | M | cips.111.001.01 (Note to complement with spaces at the end) |
| MesgID | Message ID at the communication level | 120 | 20 | x | M | A1234B1234C1234D1234 |
| MesgRefID | Message reference ID at the communication level | 140 | 20 | x | O | 00000000000000000000 |
| MesgPriority | Message priority | 160 | 1 | n | M | 3 |
| MesgDirection | Message transmission direction | 161 | 1 | X | M | D |
| Reserve | (Reserved element) | 162 | 9 | x | O |  (Filled with spaces) |
|  | EndFlag | Ending flag | 171 | 3 | x | M | }\r\n |

* 1. **Digital Signature Field**
		1. **Format of Digital Signature Field**

Digital signature field adopts variable-length data format, which is as follows:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Element****Type** | **Element Name** | **Meaning** | **Location** | **Length** | **Type** | **Attribute** | **Description** |
|  | BeginFlag | Beginning flag | 0 | 3 | x | M | {S: |
|  | DigitalSignature | Digital signature content | 4 | Signature length | Signature data | M |  |
|  | EndFlag | Ending flag | Immediately after signature | 3 | x | M | }\r\n |

* + 1. **Signed Elements and Compilation of Digital Signature**

CIPS uses digital signature to ensure the reliability and non-repudiation of business data. Digital signature is compiled by business initiator, and is verified by CIPS and business receiver.

The method for CIPS to compile digital signature for a transaction is as follows:

(1) According to the order in which the business elements appear in the message, all signed business element values are attached with “| (vertical bar)” and then are concatenated into a signature element string, for example, “102100033452|CNY1234.56|cips.111.001.01|”. The last business element value is also followed by “| (vertical bar)”; when the amount field is taken as a signed element, the currency symbol corresponding to the amount should be included, for example, “CNY1234.56”.

(2) The digital certificate (private key) of the current bank is used to sign the signature element string; SM2 algorithm is taken as the signature verification algorithm; hardware encryption is adopted (The signing server used should have been certified by State Cryptography Administration and supports the SM2 digital certificate issued by CFCA. At the same time, considering the need of overseas promotion in the future, it is required to be equipped with a signing server that simultaneously supports RSA algorithm and SM2 algorithm.);

(3) A signature value is transcoded with BASE64 and is then filled in the digital signature field of the message.

All characters in the signed business element (corresponding XML message element) except XML tag don’t have to make up the digits, however, the blank characters at both ends must be truncated. Blank characters refer to space (0x20), tabulation (0x09), carriage return (0x0d), and line feed (0x0a).

If a signed business element does not appear in a message, or its value is blank (that is, the length is 0 after truncating the blank characters at both ends), the signed business element should be ignored during concatenation into a signed element string.

* + 1. **Digital Signature Verification Criteria for a DigitalCertificateBindingNotice Message**

A DigitalCertificateBindingNotice massage of CIPS uses a digital signature (PKCS#7) attached with the signer’s certificate (public key). The requirements for verification of the digital signature are as follows:

(1) The digital signature should be verified successfully, and the signer’s certificate (public key) should be obtained.

(2) Inspection of signer’s certificate: the certificate should be signed by CFCA, and should be legal and valid; Certificate Revocation List (CRL) should be used to inspect whether the certificate has been revoked.

(3) Inspection of the DN element of the signer’s certificate: the DN element should contain ou=CIPS (ignore case), and the CN element should contain the identification of the signer;

After the verification succeeds, CIPS and receiving participating institutions should store the public key data of the signer’s certificate as a certificate to verify the digital signature of the non-DigitalCertificateBindingNotice messages sent subsequently by participating institutions.

* + 1. **Digital Signature Verification Criteria for a Non-DigitalCertificateBindingNotice Message**

A Non-DigitalCertificateBindingNotice message of CIPS uses a digital signature (PKCS#7, naked signature) without the signer’s certificate (public key). The requirements for verification of the digital signature are as follows:

(1) A signature element string should be organized according to the signed elements in the message format standard;

(2) The certificate (public key) bound by initiating participants should be obtained;

(3) The public key, signature element string and digital signature should be used to verify the validity of the digital signature, and Certificate Revocation List (CRL) should be used to check whether the certificate has been revoked.

After the verification succeeds, CIPS and receive participants should store business and signature information for future reference.

* + 1. **Description of Special Characters**

After BASE64 transcoding, a digital signature is placed into the digital signature field of its corresponding message. Since the value after BASE64 transcoding can contain “<”, carriage return and other special characters, when the digital signature is added to the message, it is required to avoid escaping of special characters when assembling the message, which would otherwise cause the receiver’s failure to verify the signature. For example, Dom API of Xerces library will convert “<” to “&lt;”.

In XML, some characters have special meanings. For example, the direct use of the three characters “<”, “>” and “&” will lead to the failure of XML resolving. Therefore, only the characters “<”, “>” and “&” are allowed to use their entity references in the message body, and the remaining characters are not allowed to use entity references for escaping; the entity references “&lt;”, “&lg;” and “&amp;” should be used for replacement when assembling the message. When resolving and assembling the signed elements, it is required to use the symbols “<”, “>” and “&”.

* + 1. **Message Body Format**

Message body adopts XML format. <Document/> tag is used to identify the root of a XML message.

|  |
| --- |
| <? xml version="1.0" encoding="UTF-8"? ><Documentxmlns="namespace\_string"> ... ...</Document> |

**Note:** The value of namespace\_string should be the namespace value defined in the schema file corresponding to the message.

* + 1. **Format Check**

Each message has a corresponding schema file for message format check. The schema file name is the same as the message code, and the schema file published by ISO 20022 standard is used for the message adopting ISO 20022 standard.

When a participating institution sends a message to CIPS, the participating institution should use corresponding XML Schema to check the format of the body of the nostro account message to be sent; only after passing the check can the message be submitted to CAE.

If the XML Schema of the message stipulates that a node in the message is mandatory but all its child nodes are optional, at least one of the child nodes should be filled; if none of the child nodes is filled, XML Schema format check will not report an error, but CIPS will regard the message as an invalid message.

After receiving a message from CAE, the participating institution should use corresponding XML Schema to check the format of the vostro account message; only after passing the check can the massage be submitted to Inner-bank System for business transaction. If the vostro account message fails to pass the check, warning should be given or the message should be abandoned, and request should be made to CIPS Operation Center again for resending the vostro account message or it should be left to be settled by end-of-day reconciliation.

The value of a mandatory field in a message cannot be all blanks (that is, the length is 0 after truncating the blank characters at both ends).

* 1. **Other Constraints**
		1. **Single Message Length**

The length of a single message should conform to the following provisions. A message exceeding the specified length will be rejected by CAE.

|  |  |  |
| --- | --- | --- |
| **Serial Number** | **Message Name** | **Message Size****(Calculated as per 1M=1,024\*1,024 bytes)****(Calculated as per 1K=1,024 bytes)** |
|  | Payment messages and Information messages | 10K |
|  | All other messages | <2M |

* + 1. **BOM of UTF-8**

UTF-8 encoding is adopted for all messages. When transmitting a message, it should be noted that the message should not contain UTF-8 encoded BOM header (corresponding binary system is EF BB BF). CIPS will reject a message with BOM header.

* + 1. **ISO 20022 Message Specification**

Some messages are defined directly by ISO 20022 standard and customized according to the characteristics of CIPS. The main notes are as follows:

(1) If ISO 20022 message fields are mandatory but CIPS has no corresponding business elements, these mandatory fields will be reserved. Please refer to the message specification for the filling requirements.

(2) Due to the restrictions on the arrangement of message field elements in ISO 20022 standard, there are some differences between the arrangement of business elements in ISO 20022 messages and the business practices in China. Please follow the message provisions.

(3) The format of the “attribute” field in the message table is [x..y], where x and y represent the minimum and maximum presence of this field; for example, [1..10] means that the field appears at least 1 time and at most 10 times.

(4) In the messages adopting ISO 20022 standard, for fields involved in CIPS, the application generally performs strict format check; for fields not involved in CIPS, participants can negotiate with each other and fill out the fields according to the actual situations; as long as these fields meet the constraints of ISO 20022 standard and can pass Schema check, CIPS will forward them as they are. For some fields with common or universal requirements, in the future, suggestions for filling will be added to the documents such as message standard or business processing standard according to the feedback from participants.

* + 1. **Description of Fixed Fields in Message Standard**

In order to meet the filling requirements in ISO 20022 standard, CIPS message standard includes some fixed fields. Participants should fill the values in these fields as required when sending nostro account messages, and should ignore these fields when receiving nostro account messages, and should not check the value validity of these fields.

* + 1. **Indirect Participant Field and Direct Participant Field in Messages**

In some messages, direct participant field is mandatory, and indirect participant field is optional, for example, DebtorDirectParticipantIdentification and DebtorIndirectParticipantIdentification in CustomerCreditTransfer messages and FinancialInstitutionTransfer messages. In a message, if indirect participant field is unfilled or direct participant field is filled, it represents that the message was sent or received by the direct participant in its own name.

1. **List and Summary of Messages**
	1. **List of Messages**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Serial Number** | **Message Code** | **Message Name** | **Message Direction** | **Singed or not** | **Reconciliation or not** | **Message Length** |
| 1 | cips.111.001.02 | CustomerCreditTransfer | Participants -> CIPS -> Participants | √ | Reconciliation | 40K |
| 2 | cips.112.001.02 | FinancialInstitutionTransfer | Participants -> CIPS -> Participants | √ | Reconciliation | 40K |
| 3 | cips.113.001.01 | BatchCustomerPayment | Participants -> CIPS -> Participants | √ | Reconciliation | 2M |
| 4 | cips.131.001.01 | RequestforCCPSettlement | Participants -> CIPS | √ | Reconciliation | 2M |
| 5 | cips.132.001.01 | CCPSettlementNotice | CIPS -> Participants | √ | Reconciliation | 10K |
| 6 | cips.133.001.01 | SecuritiesSettlementSystembyBank | Participants -> CIPS -> Participants | √ | Reconciliation | 10K |
| 7 | cips.134.001.01 | AnswerforSSSbyBank | Participants -> CIPS | √ |  | 10K |
| 8 | cips.135.001.01 | SecuritiesSettlementSystembyFMI | Participants -> CIPS -> Participants | √ | Reconciliation | 10K |
| 9 | cips.136.001.01 | AnswerforSSSbyFMI | Participants -> CIPS | √ |  | 10K |
| 10 | cips.151.001.01 | MultiDebitCreditTransferByClearingInstitution | Participants -> CIPS | √ |  | 2M |
| 11 | cips.153.001.01 | NoticeOfMultiDebitCreditTransferByClearingInstitution | CIPS -> Participants | √ | Reconciliation | 10K |
| 12 | cips.154.001.01 | ReceiptOfMultiDebitCreditTransferByClearingInstitution | Participants -> CIPS | √ |  | 10K |
| 13 | cips.301.001.02 | Query | Participants -> CIPS -> Participants | √ |  | 10K |
| 14 | cips.302.001.02 | Answer | Participants -> CIPS -> Participants | √ |  | 10K |
| 15 | cips.303.001.02 | PaymentCancellation | Participants -> CIPS | √ |  | 10K |
| 16 | cips.304.001.02 | AnswerForPayment Cancellation | CIPS -> Participants | √ |  | 10K |
| 17 | cips.305.001.03 | PaymentStatusQuery | Participants -> CIPS |  |  | 10K |
| 18 | cips.306.001.03 | AnswerForPaymentStatus Query | CIPS -> Participants | √ |  | 10K |
| 19 | cips.307.001.01 | EncryptedMessage | Participants -> CIPS -> Participants | √ |  | 2M |
| 20 | cips.308.001.01 | AnswerForEncrypted Message | Participants -> CIPS -> Participants | √ |  | 10K |
| 21 | cips.309.001.01 | FreeFormat | Participants -> CIPS -> ParticipantsCIPS -> ParticipantsParticipants -> CIPS |  |  | 10K |
| 22 | cips.313.001.01 | QueryOfQueuingPayments | Participants -> CIPS | √ |  | 10K |
| 23 | cips.314.001.01 | AnswerForQueryOfQueuingPayments | CIPS -> Participants | √ |  | 10K |
| 24 | cips.350.001.01 | RequestForFundWithdrawal | Participants -> CIPS | √ |  | 10K |
| 25 | cips.351.001.01 | RequestForReservedPrefundWithdrawal | Participants -> CIPS | √ |  | 10K |
| 26 | cips.352.001.02 | FundAdjustment | CIPS -> Participants | √ |  | 10K |
| 27 | cips.353.001.02 | QueueAdjustment | Participants -> CIPS | √ |  | 10K |
| 28 | cips.354.001.01 | RequestForPrewarningValueSetting | Participants -> CIPS | √ |  | 10K |
| 29 | cips.355.001.01 | BalancePrewarningNotice | CIPS -> Participants |  |  | 10K |
| 30 | cips.356.001.02 | QueryOfClearingAccount | Participants -> CIPS |  |  | 10K |
| 31 | cips.357.001.02 | AnswerForQueryOfClearingAccount | CIPS -> Participants | √ |  | 10K |
| 32 | cips.358.001.02 | AccountManagement | CIPS -> Participants | √ |  | 10K |
| 33 | cips.371.001.01 | BilateralSenderLimit Management | Participants -> CIPS | √ |  | 2M |
| 34 | cips.372.001.01 | BilateralSenderLimitNotice | CIPS -> Participants | √ |  | 2M |
| 35 | cips.373.001.01 | NetSettlementMarginManagement  | Participants -> CIPS | √ |  | 10K |
| 36 | cips.374.001.01 | PrefundingWhiteList | CIPS -> Participants | √ |  | 10K |
| 37 | cips.375.001.01 | NoticeOfFundShortage | CIPS -> Participants | √ |  | 10K |
| 38 | cips.376.001.01 | Participants’MutualAid AgreementRequest | Participants -> CIPS -> Participants | √ |  | 10K |
| 39 | cips.377.001.01 | Participants’MutualAid AgreementResponse | Participants -> CIPS -> Participants | √ |  | 10K |
| 40 | cips.601.001.02 | SettlementConfirmation | CIPS -> Participants | √ |  | 10K |
| 41 | cips.611.001.01 | ChargeStatement | CIPS -> Participants | √ |  | 10K |
| 42 | cips.621.001.01 | NetSettlementNotice | CIPS -> Participants | √ |  | 10K |
| 43 | cips.622.001.01 | CCPSettlementNotice | CIPS -> Participants | √ |  | 10K |
| 44 | cips.701.001.02 | FundAdjustmentStatement | CIPS -> Participants | √ |  | 2M |
| 45 | cips.710.001.02 | RequestForReconciliation | Participants -> CIPS | √ |  | 10K |
| 46 | cips.711.001.02 | ReconciliationSummary | CIPS -> Participants | √ |  | 2M |
| 47 | cips.712.001.02 | RequestForReconciliation Details | Participants -> CIPS | √ |  | 10K |
| 48 | cips.713.001.02 | AnswerForReconciliation Details | CIPS -> Participants | √ |  | 2M |
| 49 | cips.714.001.02 | RequestForOriginalMessageDownload | Participants -> CIPS | √ |  | 10K |
| 50 | cips.715.001.02 | AnswerForOriginalMessageDownload | CIPS -> Participants | √ |  | 2M |
| 51 | cips.716.001.01 | FMIReconciliationStatement | CIPS -> Participants | √ |  | 2M |
| 52 | cips.801.001.01 | SystemStatusChangeNotice | CIPS -> Participants |  |  | 10K |
| 53 | cips.803.001.01 | ParticipantStatusChange Notice | CIPS -> Participants |  |  | 10K |
| 54 | cips.805.001.01 | RequestForLogin/Logoff | Participants -> CIPS | √ |  | 10K |
| 55 | cips.806.001.01 | AnswerForLogin/Logoff | CIPS -> Participants |  |  | 10K |
| 56 | cips.807.001.01 | ForcedOfflineNotice | CIPS -> Participants |  |  | 10K |
| 57 | cips.900.001.01 | CommonConfirmation | CIPS -> ParticipantsParticipants -> CIPS | √ |  | 10K |
| 58 | cips.901.001.01 | ParticipantInformation ChangeNotice | CIPS -> Participants |  |  | 2M |
| 59 | cips.902.001.01 | BusinessAuthority ModificationNotice | CIPS -> Participants |  |  | 2M |
| 60 | cips.903.001.01 | DigitalCertificateBinding Notice | CIPS -> ParticipantsParticipants -> CIPS | √ |  | 10K |
| 61 | cips.904.001.01 | SystemParametersChange Notice | CIPS -> Participants |  |  | 2M |
| 62 | cips.906.001.01 | IndirectParticipant’sDirect ParticipantChangeNotice | CIPS -> Participants |  |  | 2M |
| 63 | cips.912.001.01 | MessageAbandonNotice | CIPS -> Participants |  |  | 10K |
| 64 | cips.914.001.01 | RequestToDownloadDigitalCertificate | Participants -> CIPS | √ |  | 10K |
| 65 | cips.922.001.01 | AutomaticVerification | CIPS -> Participants |  |  | 10K |
| 66 | ccms.990.002.01 | CommunicationLevel Confirmation | Participants<->PMTS |  |  | 10K |
| 67 | ccms.991.002.01 | CheckRequest | Participants->PMTS |  |  | 10K |
| 68 | ccms.992.002.01 | CheckResponse | Participants<-PMTS |  |  | 10K |
| 69 | hvps.112.001.01 | FinancialInstitutionTransferViaHVPS | Participants -> HVPS -> CIPS | √ |  |  |
| 70 | hvps.115.001.01 | ReservedPrefunding | Participants -> HVPS -> CIPS | √ |  |  |
| 71 | hvps.118.001.01 | ReservedPrefundingFund Withdrawal | CIPS -> HVPS -> Participants | √ |  |  |

* 1. **Data Type**

|  |  |  |  |
| --- | --- | --- | --- |
| **Serial Number** | **Type Name** | **Type Definition** | **Additional Explanation** |
|  | Max**N**Text | Represents a string text of at least 1 bit and at most N bits, including numbers, letters, Chinese characters, and other types of characters. | Note: Each Chinese character occupies 1 bit. |
|  | Max**N**NumericText | Represents a numeric string of at least 1 bit and at most N bits. |  |
|  | Exact**N**Text | Represents a string with a fixed length of N bits. |  |
|  | Exact**N**NumericText | Represents a numeric string with a fixed length of N bits. |  |
|  | ISODate | Represents a date in the format of yyyy-mm-dd | Example: 2010-05-01 |
|  | ISODateTime | Represents date and time in format of yyyy-mm-ddTHH:MM:SS | Example: 2010-05-01T15:09:05, among which “T” is a necessary decollator between date and time. |
|  | ActiveCurrencyAnd Amount | Represents currency symbol and amount, in which the integral part of amount has 16 digits at most, and the decimal part is fixed to 2 digits.Note: There is no plus or minus sign (namely +/-). | Example: <Amt Ccy="CNY">2784245.00</Amt>For example, unitary ones can only be 1.00, not 1 or 1.0, and no zeros are allowed before the first non-zero digit of amount (for example, unitary ones can only be 1.00, not 01.00 or no more zeros added before 1).Note: ISO-4217 Codes for the representation of currencies and funds is adopted for all currency symbols, and the currency symbol of RMB is “CNY”, generally CNY in this standard. |
|  | ActiveOrHistoricCurrencyAndAmount | Represents currency symbol and amount, in which the integral part of amount is 16 digits at most, and the decimal part is fixed to 2 digits.Note: There is no plus or minus sign (namely +/-). | Example: <Amt Ccy="CNY">2784245.00</Amt>For example, unitary ones can only be 1.00, not 1 or 1.0, and no zeros are allowed before the first non-zero digit of amount (for example, unitary ones can only be 1.00, not 01.00 or no more zeros added before 1).Note: ISO-4217 Codes for the representation of currencies and funds is adopted for all currency symbols, and the currency symbol of RMB is “CNY”. |
|  | DecimalNumber | Represents quantity, in which the integral part has 16 digits at most, and the decimal part is fixed to 2 digits.Note: There is no plus or minus sign (namely +/-). | For example, unitary ones can only be 1.00, not 1 or 1.0, and no zeros are allowed before the first non-zero digit of amount (for example, unitary ones can only be 1.00, not 01.00 or no more zeros added before 1). |
|  | PercentageRate | Represents interest rate, at most 11 digits, and its decimal part is 10 digits at most. |  |
|  | BICIdentifier | A BIC is used to identify a banking institution. | The regular expression of a BIC is “[A-Z]{6,6}[A-Z2-9][A-NP-Z0-9]([A-Z0-9]{3,3}){0,1}”Note: ISO 9362 “Banking - Banking telecommunication messages - Bank identifier codes” is adopted for all BICs. |
|  | Any | Used to represent a piece of text of arbitrary length and data type. |  |
|  | ProcessCode（Max4Text） | Represents payment status | FRWD: forwardedACSC: account settlement closedSUCD: succeededRSVL: resolvedCAND: cancelledRJCT: rejectedPDNG: pending for settlementEDRN: end-of-day returned |
|  | ChangeCode（Max4Text） | Represents data change type | ADDD: addedMODI: modifiedDELE: deleted |
|  | EffectiveCode（Max4Text） | Represents data effective type | EFIM: effective immediatelyEFSD: effective from the specified date |
|  | CommonDataCode（Max4Text） | Used to represent common data type | DATE: dateSTRG: stringAMNT: amountNMBR: numberTIME: time |
|  | SystemStatus（Max4Text） | Used to represent system status | CLSD: closedACTV: activatedSUSP: suspendedCLSG: closingNTAC: nighttime activatedNTSP: nighttime suspendedNTCS: nighttime closed |
|  | CreditDebitCode（Max4Text） | Used to represent credit/debit indicator | CRDT: creditDBIT: debit |
|  | Priority3Code（Max4Text） | Used to represent settlement priority | NORM: normalHIGH: highURGT: urgent |
|  | OperationTypeCode（Max4Text） | Used to represent adjustment type | FDRD: fund reductionPRFD: prefundingTRBH: closing out |
|  | [Queue](http://www.iciba.com/queue/)ChangeTypeCode（Max4Text） | Used to represent queue change type | FRST: changed to the first one in the queueFNAL: changed to final one in the queue |
|  | AccountStatusCode（Max4Text） | Used to represent account status | ENAB: enabledDISA: disabled |
|  | LoginOperationTypeCode（Max4Text） | Used to represent login/logoff | LOGN: loginLOGF: logoff |
|  | CapitalInjectionTypeCode（Max4Text） | Capital injection status | FDRC: funding resoundingly completedFDWT: funding waiting |
|  | YesNoIndicator | Last page indicator | true: the last pagefalse: not the last page |
|  | NationCode（Max4Text） | Nation Code | ISO 3166-1 alpha-2 is adopted for all nation codes, and the code of China is CN. |
|  | RunStatCode（Max4Text） | Running status of participant | ENBL: enabledDSBL: disabled |
|  | DomesticFlag（Max4Text） | Domestic/overseas flag | DMPT: domestic participantOSPT: overseas participant |
|  | EffectiveIdentification（Max4Text） | Validity flag | VLID: validINVD: invalid |
|  | WebFlag（Max4Text） | Access network type | PMTS: PMTSSWFT: SWIFT |
|  | BankCategory（Max4Text） | Participant qualification identifier | DRPT: direct participantIDPT: indirect participant |
|  | BusinessFlag（Max4Text） | Sending/receiving flag | SEND: sendingRECV: receiving |
|  | RtnBIZSTATCode（Max4Text） | Return status | ACPT: acceptedRJCT: rejected |
|  | IDTypeCode（Max2Text） | Certificate type | 01: first-generation resident ID card02: second-generation resident ID card03: temporary ID card04: Chinese passport05: household register06: certification by villagers’ committee07: student ID card08: military officer ID card09: retired cadres honorary certificate10: retired military officer’s certificate11: retired civilian cadres certificate12: Student card Military academy13: armed policeman ID card14: soldier ID card15: Mainland travel permit for Hong Kong and Macao residents16: Mainland travel permit for Taiwan residents17: foreigner’s permanent residence card18: exit-entry permit for border residents19: foreign passport20: other21: residence permit for Hong Kong, Macao and Taiwan residents |
|  | CountryCode（Max2Text） | Country/region code | ISO 3166 alpha-2 is adopted for all country/region codes, and the code of China is CN. |
|  | RtnBIZSTATCode（Max4Text） | Return status | ACPT: acceptedRJCT: rejected |
|  | BizPhaseTypeCode (Max4Text) | Daytime/nighttime flag | DAYT: daytimeNITT: nighttime |
|  | RequireIdentification（Max4Text） | Identification for being required or not | RQUR: requiredRQUN: not required |

* 1. **List of No Longer Supported Messages**

The current version of CIPS Message Exchange standard is intended for CIPS Phase II participants, so the old-version message contents whose version numbers have been updated are no longer reserved in the document. The list below contains all messages that have been no longer supported since the first version of CIPS Message Exchange Standard was released and messages that will be no longer supported soon.

|  |  |  |  |
| --- | --- | --- | --- |
| **Serial number** | **Message code** | **Message name** | **The time point at which participants stopped or will stop using the message** |
|  | cips.111.001.01 | CustomerCreditTransferV01 | Since May 2018 |
|  | cips.112.001.01 | FinancialInstitutionTransferV01 | Since May 2018 |
|  | cips.301.001.01 | QueryV01 | Since May 2018 |
|  | cips.302.001.01 | AnswerV01 | Since May 2018 |
|  | cips.305.001.01 | PaymentStatusQueryV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.306.001.01 | AnswerForPaymentStatusQueryV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.352.001.01 | FundAdjustment V01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.356.001.01 | QueryOfClearingAccountV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.357.001.01 | AnswerForQueryOfClearingAccountV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.358.001.01 | AccountManagementV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.601.001.01 | SettlementConfirmationV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.701.001.01 | FundAdjustmentStatementV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.710.001.01 | RequestForReconciliationV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.711.001.01 | ReconciliationSummaryV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.712.001.01 | RequestForReconciliationDetailsV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.713.001.01 | AnswerForReconciliationDetailsV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.714.001.01 | RequestForOriginalMessageDownloadV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.715.001.01 | AnswerForOriginalMessageDownloadV01 | After Participants’ Inner-Bank System CIPS Phase II goes into operation |
|  | cips.303.001.01 | PaymentCancellationV01 | After Participants’ Inner-Bank System is upgraded for V2.1.0 |
|  | cips.304.001.01 | AnswerForPaymentCancellationV01 | After Participants’ Inner-Bank System is upgraded for V2.1.0 |
|  | cips.305.001.02 | PaymentStatusQueryV02 | After Participants’ Inner-Bank System is upgraded for V2.1.0 |
|  | cips.306.001.02 | AnswerForPaymentStatusQueryV02 | After Participants’ Inner-Bank System is upgraded for V2.1.0 |
|  | cips.353.001.01 | QueueAdjustmentV01 | After Participants’ Inner-Bank System is upgraded for V2.1.0 |

* 1. **Mapping Table of SWIFT Envelope Messages Adopting International Standard and Schema Files**

Standard Format for Envelope Messages released by SWIFT is adopted for some CIPS messages to meet the extension needs of CIPS fields. Different from general messages adopting international standard, these messages’ schema files for validation are named as their CIPS message names. The detailed list is as follows:

| **Serial number** | **Message type** | **Message name** | **Code of message adopting international standard** | **Corresponding schema file name** |
| --- | --- | --- | --- | --- |
| 1. | cips.132.001.01 | CCPSettlementNotice | camt.998.001.02 | cips.132.001.01.xsd |
| 2. | cips.307.001.01 | EncryptedMessage | camt.998.001.02 | cips.307.001.01.xsd |
| 3. | cips.308.001.01 | AnswerForEncryptedMessage | camt.998.001.02 | cips.308.001.01.xsd |
| 4. | cips.309.001.01 | FreeFormat | camt.998.001.02 | cips.309.001.01.xsd |
| 5. | cips.352.001.02 | FundAdjustment | camt.998.001.02 | cips.352.001.02.xsd |
| 6. | cips.801.001.01 | SystemStatusChangeNotice | admi.998.001.02 | cips.801.001.01.xsd |
| 7. | cips.803.001.01 | ParticipantStatusChangeNotice | admi.998.001.02 | cips.803.001.01.xsd |
| 8. | cips.805.001.01 | RequestForLogin/Logoff | admi.998.001.02 | cips.805.001.01.xsd |
| 9. | cips.806.001.01 | AnswerForLogin/Logoff | admi.998.001.02 | cips.806.001.01.xsd |
| 10. | cips.807.001.01 | ForcedOfflineNotice | admi.998.001.02 | cips.807.001.01.xsd |
| 11. | cips.901.001.01 | ParticipantInformationChangeNotice | admi.998.001.02 | cips.901.001.01.xsd |
| 12. | cips.902.001.01 | BusinessAuthorityModificationNotice | admi.998.001.02 | cips.902.001.01.xsd |
| 13. | cips.903.001.01 | DigitalCertificateBindingNotice | admi.998.001.02 | cips.903.001.01.xsd |
| 14 | cips.904.001.01 | SystemParametersChangeNotice | admi.998.001.02 | cips.904.001.01.xsd |
| 15. | cips.906.001.01 | IndirectParticipant’sDirectParticipant ChangeNotice | admi.998.001.02 | cips.906.001.01.xsd |
| 16. | cips.912.001.01 | MessageAbandonNotice | camt.998.001.02 | cips.912.001.01.xsd |
| 17. | cips.914.001.01 | RequestToDownloadDigitalCertificate | admi.998.001.02 | cips.914.001.01.xsd |
| 18. | cips.922.001.01 | AutomaticVerification | admi.998.001.02 | cips.922.001.01.xsd |

1. **Appendix**
	1. **Mapping Table of Messages Sent by Participants and System Statuses**

| **Serial number** | **Message code** | **Message name** | **System status** |
| --- | --- | --- | --- |
| **CLSD** | **ACTV** | **SUSP** | **CLSG** | **NTAC** | **NTSP** | **NTCS** |
|  | cips.111.001.02 | CustomerCreditTransfer |  | √ |  |  | √ |  |  |
|  | cips.112.001.02 | FinancialInstitutionTransfer |  | √ |  |  | √ |  |  |
|  | cips.113.001.01 | BatchCustomerPayment |  | √ |  |  | √ |  |  |
|  | cips.131.001.01 | RequestForCCPSettlement |  | √ |  |  | √ |  |  |
|  | cips.133.001.01 | SecuritiesSettlementSystembyBank |  | √ |  |  | √ |  |  |
|  | cips.134.001.01 | AnswerforSSSbyBank |  | √ |  |  | √ |  |  |
|  | cips.135.001.01 | SecuritiesSettlementSystembyFMI |  | √ |  |  | √ |  |  |
|  | cips.136.001.01 | AnswerforSSSbyFMI |  | √ |  |  | √ |  |  |
|  | cips.151.001.01 | MultiDebitCreditTransferByClearingInstitution |  | √ |  |  | √ |  |  |
|  | cips.154.001.01 | ReceiptOfMultiDebitCreditTransferByClearingInstitution |  | √ |  |  | √ |  |  |
|  | cips.301.001.02 | Query | √ | √ |  |  | √ |  |  |
|  | cips.302.001.02 | Answer | √ | √ |  |  | √ |  |  |
|  | cips.303.001.01 | PaymentCancellation |  | √ |  |  | √ |  |  |
|  | cips.303.001.02 | PaymentCancellation |  | √ |  |  | √ |  |  |
|  | cips.305.001.02 | PaymentStatusQuery | √ | √ |  | √ | √ |  | √ |
|  | cips.305.001.03 | PaymentStatusQuery | √ | √ |  | √ | √ |  | √ |
|  | cips.307.001.01 | EncryptedMessage | √ | √ |  |  | √ |  |  |
|  | cips.308.001.01 | AnswerForEncryptedMessage | √ | √ |  |  | √ |  |  |
|  | cips.309.001.01 | FreeFormat | √ | √ |  | √ | √ |  | √ |
|  | cips.313.001.01 | QueryOfQueuingPayments |  | √ |  |  | √ |  |  |
|  | cips.350.001.01 | RequestForFundWithdrawal |  | √ |  |  | √ |  |  |
|  | cips.351.001.01 | RequestForReservedPrefundWithdrawal |  |  |  |  | √ |  |  |
|  | cips.353.001.01 | QueueAdjustment |  | √ |  |  | √ |  |  |
|  | cips.353.001.02 | QueueAdjustment |  | √ |  |  | √ |  |  |
|  | cips.354.001.01 | RequestForPrewarningValueSetting | √ | √ |  |  | √ |  |  |
|  | cips.356.001.01 | QueryOfClearingAccount | √ | √ |  | √ | √ |  | √ |
|  | cips.371.001.01 | BilateralSenderLimitManagement | √ | √ | √ | √ | √ | √ | √ |
|  | cips.373.001.01 | NetSettlementMarginManagement | √ | √ | √ | √ | √ | √ | √ |
|  | cips.376.001.01 | Participants’MutualAidAgreementRequest | √ | √ | √ | √ | √ | √ | √ |
|  | cips.377.001.01 | Participants’MutualAidAgreementResponse | √ | √ | √ | √ | √ | √ | √ |
|  | cips.710.001.02 | RequestForReconciliationOfCrossBorderBusiness | √ | √ | √ | √ | √ | √ | √ |
|  | cips.712.001.02 | RequestForReconciliationDetails | √ | √ | √ | √ | √ | √ | √ |
|  | cips.714.001.02 | RequestForOriginalMessageDownload | √ | √ | √ | √ | √ | √ | √ |
|  | cips.805.001.01 | RequestForLogin/Logoff | √ | √ | √ | √ | √ | √ | √ |
|  | cips.900.001.01 | CommonConfirmation | √ | √ | √ | √ | √ | √ | √ |
|  | cips.903.001.01 | DigitalCertificateBindingNotice | √ | √ | √ | √ | √ | √ | √ |
|  | cips.914.001.01 | RequestToDownloadDigitalCertificate | √ | √ | √ | √ | √ | √ | √ |
|  | ccms.990.002.01 | CommunicationLevelConfirmation | √ | √ | √ | √ | √ | √ | √ |
|  | ccms.991.002.01 | CheckRequest | √ | √ | √ | √ | √ | √ | √ |
|  | ccms.992.002.01 | CheckResponse | √ | √ | √ | √ | √ | √ | √ |

Note: All messages not in the above table are sent by CIPS on its own initiative and are not subject to the above system status restrictions.

* 1. **Processing Code and Processing Description**
		1. **Encoding Rule for Processing Code**

**General encoding rule for processing code is “xx n x nn nn”**

****

Represents system type, two capital letters

Represents node type, one digit or one letter

Represents message type, one capital letter

Represents message sub-type, two digits

Represents message code, two digits

The specific correspondence of system types are as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Serial number**  | **System number** | **System abbreviation** | **System name** | **System type** |
| 1 | 42 | CIPS | Cross-border Interbank Payment System | CI |
| 2 | 41 | PMTS | Payment Message Transmission System | PM |
| 3 | 00 | - | Basic Function Library | CU |
| 4 | 30 | - | Common Component Library for Payment System | PU |

Node types: 0 represents common, 1 represents NPC, and Z represents mainframe program.

|  |  |  |
| --- | --- | --- |
| **Serial number** | **Code** | **Node type** |
| 1 | 0 | Common module |
| 2 | 1 | CIPS open system |
| 3 | Z | CIPS mainframe system |
| 4 | 2 | PMTSCCPC |
| 5 | 3 | PMTSCAE |

The correspondence rules of the remaining processing codes are as follows:

|  |  |  |
| --- | --- | --- |
| **Message type** | **Message sub-type** | **Message code** |
| I: represents notice | 0n: Succeed | 　 |
| 10~99: reserve | 　 |
| W: represents warning | 0n: warning | 　 |
| 10~99: reserve | 　 |
| O: represents business error | 0n: duplicate business or message | 　 |
| 1n: message data error | 　 |
| 2n: identification or status error | 　 |
| 3n: system status error | 　 |
| 4n: certificate or signature error | 　 |
| 5n: permission error | 　 |
| 6n: business error | 　 |
| 7n: reserve | 　 |
| 8n: reserve | 　 |
| 9n: other error | 　 |
| S: represents system error | 0n: reserve | 　 |
| 1n: file error | 　 |
| 2n: message error | 　 |
| 3n: MQ error | 　 |
| 4n: CICS error | 　 |
| 5n: database error | 　 |
| 6n: signing server | 　 |
| 7n: reserve | 　 |
| 8n: reserve | 　 |
| 9n: other error | 　 |

* + 1. **List of Processing Codes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Number** | **Last five bits of processing code** | **Description of processing code in Chinese** | **Description of processing code in English** |
|  | I0 | （成功） | (Succeed) |
|  | I0000 | 处理成功 | Succeed |
|  | I0001 | 证书信息已重置 | Certificate information has been reset |
|  |  |  |  |
|  | W0 | （警告） | (Warning) |
|  | W0001 | 重复登录 | Repeated login attempts |
|  | W0002 | 在未登录的情况下做退出登录 | Log out attempt in the state of not login |
|  | W0003 | 清零完成：HVPS系统状态或时间超过CIPS且不存在除待退汇以外的非终态业务 | Closing out task complete: The date/status of HVPS is later than CIPS' and no transactions exist except waiting-refund transaction. |
|  | W0004 | 证书有效期即将结束，请及时更换证书 | Certificate will expire soon. Please replace it. |
|  |  |  |  |
|  | O00 | （重复业务、错误业务） | (Duplicate transaction & invalid transaction ) |
|  | O0001 | 重复的业务 | Duplicate transactions |
|  | O0002 | 行号非CIPS支付系统行号 | Not CIPS code |
|  | O0003 | 重复绑定或解绑证书 | Duplicate binding or reset certificate. |
|  | O0004 | HVPS对账日期与下个大额对账日不相等 | The HVPS reconciliation date is not equal to the expected date |
|  | O0005 | HVPS对账完成状态非法 | Invalid HVPS reconciliation status |
|  |  |  |  |
|  | O01 | （错误报文） | (Wrong message) |
|  | O0101 | 报文无法解析 | The message is unable to be resolved |
|  | O0102 | 报文块缺少前缀 | Cannot find the prefix of message block |
|  | O0103 | 报文块缺少后缀 | Cannot find the suffix of message block |
|  | O0104 | 缺少报文块 | Cannot find the message block |
|  | O0105 | 报文块或报文域重复 | Duplicate message blocks or message elements |
|  | O0106 | 报文块类型错误 | Invalid type of message block |
|  | O0107 | 报文块格式错误  | Invalid format of message block |
|  | O0108 | 报文域缺少前缀 | Cannot find the prefix of business element |
|  | O0109 | 报文域缺少后缀 | Cannot find the suffix of business element |
|  | O0110 | 缺少报文域或报文域无数据 | Cannot find the business element of cannot find data in it |
|  | O0111 | 报文域号非法 | Invalid business element number |
|  | O0112 | 报文域号格式错 | Wrong format of the business element number |
|  | O0113 | 报文域值长度非法 | Invalid length of business element |
|  | O0114 | 报文域值格式非法 | Invalid type of business element |
|  | O0115 | 报文域值非法 | Invalid value of business element |
|  | O0116 | 报文域值不能为空 | The value of message element cannot be NULL |
|  | O0117 | 报文域值不能全部为空 | The value of message element cannot be full NULL |
|  | O0118 | 报文域值必须为空 | The value of message element must be NULL |
|  | O0119 | 报头域值格式非法 | The data format of message header is invalid |
|  | O0120 | 报头域值非法 | The value of message header is invalid |
|  | O0121 | 报文长度超长 | The message is over-length |
|  |  |  |  |
|  | O1 | （报文错） | (Invalid message) |
|  | O10 | （报文数据错） | (Invalid message data) |
|  | O1001 | 报文标识号非法 | Invalid message id |
|  | O1002 | 金额非法 | Invalid amount |
|  | O1003 | 金额低于规定的金额下限 | The amount is less than controlled minimum amount |
|  | O1004 | 字段值非BASE64编码串 | The value of the field is not a BASE 64 encoding string |
|  |  |  |  |
|  | O11 | （编码值非法） | (Invalid value) |
|  | O1101 | 报文类型非法 | Illegal message type |
|  | O1102 | 业务种类非法 | Illegal business type |
|  | O1103 | 报文类型与业务种类不匹配 | The message type and business type are mismatched |
|  | O1104 | 货币符号非法 | Invalid currency symbol |
|  | O1105 | 报文域值不在指定的枚举范围内 | The value is not in the range of enumeration |
|  | O1106 | 汇总金额与明细业务金额之和不一致 | Total amount and sum of transactions amount matching failed |
|  | O1107 | 明细业务总笔数与实际明细笔数不一致 | The number of transactions and the sum of all transactions do not match |
|  | O1108 | 明细业务总金额与累计发生额之和超过双边限额 | The sum amt + accumulated amt is more than the Bilateral quota |
|  | O1109 | 明细业务金额超过批量业务单笔金额上限 | The amount of transaction has exceeded the limit |
|  | O1110 | 排队业务优先级检查失败 | The priority check of pending business has failed |
|  | O1111 | 当前业务金额超过付款直接参与者账户可用余额 | The amount of this business is more than the balance of the participant |
|  | O1112 | 调减金额大于预注资额度 | The reduction amount is more than freeze fund |
|  | O1115 | 间参行号记录不存在 | The indirect participant bank code record does not exist |
|  | O1116 | 检查间接参与机构有效标志未通过 | The indirect participant valid flag check has failed |
|  | O1117 | 支付系统行号记录不存在 | No record of payment system code |
|  | O1118 | 明细报文标识号重复 | The detailed text id is repetitive |
|  | O1199 | 其他编码值非法 | Other type of invalid value |
|  |  |  |  |
|  | O20 | （行号错） | (Invalid identification code) |
|  | O2001 | 直参与间参隶属关系错误 | Invalid relation of direct participant and indirect participant |
|  | O2002 | 托管行与被托管行隶属关系错误 | Invalid relation of direct participant and indirect participant |
|  | O2003 | 报头发起人非正文发起参与机构 | Message sender is different from the initiating party |
|  | O2004 | 报头接收人非正文接收参与机构 | Message receiver is different from the receiving party |
|  | O2005 | 行号格式非法 | Invalid identification code  |
|  | O2999 | 其他行号错 | Other type of Invalid identification code |
|  |  |  |  |
|  | O30 | （系统状态、行号状态、账户状态错） | (system error & identification code error& account errors) |
|  | O3001 | 检查CIPS系统状态未通过 | The CIPS' system status check has failed |
|  | O3002 | 检查HVPS系统状态未通过 | The HVPS' system status check has failed |
|  | O3003 | 检查HVPS支付系统健康状态未通过 | The HVPS' system status check has failed |
|  | O3004 | 检查参与机构有效标志未通过 | The valid flag check of participant has failed |
|  | O3005 | 检查直接参与机构办理业务状态未通过 | The business state check of direct participant has failed |
|  | O3006 | 检查账户状态未通过 | The business state check of direct participant has failed |
|  | O3007 | 检查账户注资状态未通过 | The capital injection status check of participant has failed |
|  | O3008 | 当前系统状态不允许受理此类报文 | The current system status does not accept specified message |
|  | O3009 | 直参登录或退出状态错误 | Wrong login/exit status of direct Participant |
|  | O3010 | 公共数据值检查未通过 | The check of public data value has failed |
|  | O3999 | 其他运行状态错误 | Other type of Invalid state |
|  |  |  |  |
|  | O40 | （证书与签名错） | (Error of certificate and signature) |
|  | O4001 | 签名失败：签名无效 | Failed to verify signature: Invalid signature |
|  | O4002 | 签名失败：证书无效 | Failed to verify signature: Invalid |
|  | O4003 | 证书未绑定 | The certificate is not bound |
|  | O4004 | 证书不存在 | The certificate does not exist |
|  | O4999 | 其他编签核签错 | Failed to verify signature: Other errors |
|  |  |  |  |
|  | O50 | （权限错） | (Permission error) |
|  | O5001 | 无权发起本类报文 | The check of sending authority has failed |
|  | O5002 | 无权接收本类报文 | The check of receiving authority has failed |
|  | O5003 | 无足够权限执行报文中的请求 | No sufficient privilege! |
|  | O5999 | 其他权限错误 | Other Permission error |
|  |  |  |  |
|  | O6 | 业务错 | (Business error) |
|  | O6001 | 业务记录不存在 | The business record does not exist |
|  | O6002 | 报文记录不存在 | The message does not exist |
|  | O6003 | 行号记录不存在 | The identification code does not exist |
|  | O6004 | 账户记录不存在 | The account does not exist |
|  | O6005 | 其他记录不存在 | Other records do not exist |
|  | O6006 | 业务状态非法 | Invalid business state |
|  | O6007 | 比较两个要素间逻辑关系不符 | The check of logic relation of two elements has failed |
|  | O6008 | 系统状态变更错误 | Wrong change of system status |
|  | O6009 | 系统日期变更错误 | Wrong change of system date |
|  | O6010 | 批处理任务组未完成 | Batch task group is unfinished |
|  | O6011 | 当前任务号已经完成 | The specified task has completed successfully |
|  | O6012 | 当前任务号正在运行中 | The specified task is processing |
|  | O6013 | 参与者禁止登录 | Participant are banned to login |
|  | O6014 | 参与者登录退出操作与当前登录退出状态相同 | Participant's login/exit action is same as its current login status |
|  | O6015 | 账户类型错误 | Invalid account type |
|  | O6016 | CIPS参与机构数字证书新增/撤销操作与证书绑定标识不匹配 | The add/revocation action and the binding flag do not match |
|  | O6017 | 大额来账业务CIPS处理状态非法 | The processing status of vostro account business is invalid |
|  | O6018 | 大额往账业务清算状态非法 | The processing status of nostro account business is invalid |
|  | O6019 | 报文日期和CIPS当前工作日期不一致 | The date of message and CIPS current date do not match |
|  | O6020 | 输入日期和CIPS当前工作日期不一致 | The input date and CIPS current date do not match |
|  | O6021 | CIPS登录支付系统状态非法 | Invalid CIPS login status of HVPS |
|  | O6022 | 补发报文类型与原报文类型关系不匹配 | The re-sending message and the original message do not match |
|  | O6023 | 接收参与机构与原业务发起参与机构不一致 | The receiver of re-sending message is not the sender of original message |
|  | O6024 | 接收参与机构与原业务接收参与机构不一致 | The receiver of re-sending message is not the receiver of original message |
|  | O6025 | CIPS对账完成状态非法 | Invalid CIPS reconciliation status |
|  | O6026 | HVPS对账完成状态非法 | Invalid HVPS reconciliation status |
|  | O6027 | 输入状态和CIPS当前状态的关系不成立 | The input status and CIPS current status do not match |
|  | O6028 | 输入状态和HVPS当前状态的关系不成立 | The input status and CIPS current status do not match |
|  | O6029 | 报文日期小于CIPS历史保存日期 | The message date is less than CIPS history store date |
|  | O6030 | CIPS支付系统数字证书绑定/解绑操作与证书绑定标识不匹配 | The binding/unbinding action and the binding flag do not match |
|  | O6031 | 跨境支付业务处理状态非法 | The processing status of cross-border business is invalid |
|  | O6032 | 清零失败：HVPS系统工作日期小于CIPS系统工作日期 | Reset task failed: The system date of HVPS is prior to the system date of CIPS |
|  | O6033 | 清零失败：HVPS系统工作日期等于CIPS系统工作日期且HVPS当前系统状态为“营业准备” | Reset task failed: The system date of HVPS and CIPS are equal and the system status of HVPS is Closed |
|  | O6034 | 清零失败：大额来往帐表中存在待退汇业务 | Reset task failed: The date/status of HVPS is later than CIPS' and waiting-refund transactions exist |
|  | O6035 | 清零失败：HVPS系统状态或时间超过CIPS且存在除待退汇以外的非终态业务 | Reset task failed: The date/status of HVPS is later than CIPS' and intermediate transactions exist |
|  | O6036 | 清零检查失败 | Failed to do Reset checking |
|  | O6037 | 试算平衡处理失败 | Failed to do trial balancing |
|  | O6038 | 数据清理状态为已完成 | Failed to do trial balancing |
|  | O6039 | 日终自动退回 | Returning automatically at end of the day |
|  | O6040 | 汇总对账失败：当前系统对账状态不允许进行汇总对账处理 | Failed to do Summary-Reconciliation: The Summary-Reconciliation is forbidden under current Reconciliation Status |
|  | O6041 | 汇总对账失败：明细核对不符，请人工处理 | Failed to do Summary-Reconciliation: There are discrepancies in subsidiary ledger |
|  | O6042 | 汇总对账失败：汇总对账不符，已申请hvps.712.001.01明细核对报文 | Failed to do Summary-Reconciliation: There are discrepancies in Summary-Reconciliation.CIPS has applied hvps.712.001.01 |
|  | O6043 | 汇总对账失败 | Failed to do Summary-Reconciliation |
|  | O6044 | 参数错误 | Wrong parameter |
|  | O6045 | 原业务处理状态不在指定枚举范围内! | The processing status of Original business is not in the range |
|  | O6046 | 回执状态不在指定枚举范围内 | The status of return business is not in the range |
|  | O6047 | 参与机构版本号检查未通过 | The check of bank version has failed |
|  | O6048 | 原报文通知状态不在枚举范围[%s]内 | The response flag of Original business is not in the range |
|  | O6049 | 直接参与者非FMI，不可发起报文，检查未通过 | Direct participant is not a FMI. Not allowed to send message |
|  | O6050 | 发起直参与业务付款直参和收款直参均不匹配 | The initiating direct participants is not Debtor or Creditor in this Transaction |
|  | O6051 | 指定的对账报文不存在 | The specified reconciliation message does not exist |
|  | O6052 | 参与者与检查类型不匹配 | The direct participant and the expected result do not match |
|  | O6053 | 检查轧差场次正确性失败 | The check of netting number has failed |
|  | O6054 | 检查报文类型与借贷标识匹配性失败 | The message type and the Credit Debit Indicator do not match |
|  | O6055 | 业务类型与修改类型关系检查失败 | The business type and modify type do not match |
|  | O6056 | 业务不在指定枚举范围内 | The transaction is not in the range |
|  | O6057 | 报头发起行和该笔排队业务账号不一致 | The sending participant of message header and the account number of the pending business are different |
|  | O6058 | 借贷标识和补发接收直参不匹配 | The message type of re-sending message and Credit Debit Indicator and receive bank of re-sending message do not match |
|  | O6999 | 其他业务错 | Other business error |
|  |  |  |  |
|  | S10 | 文件失败 | (Error about file) |
|  | S1001 | 打开（或创建）文件失败 | Failed to open(create) file |
|  | S1002 | 读文件失败 | Failed to read the file |
|  | S1003 | 写文件失败 | Failed to write the file |
|  | S1004 | 文件加锁失败 | Failed to lock the file |
|  | S1005 | 关闭文件失败 | Failed to close the file |
|  | S1006 | 文件不存在 | The file does not exist |
|  | S1007 | 文件格式错 | Wrong type of the file |
|  | S1008 | 没有指定文件名 | Need specified file name |
|  | S1009 | 删除文件失败 | Failed to delete the file |
|  | S1010 | 创建目录失败 | Failed to create directory |
|  | S1999 | 其他文件错 | Other type of file error |
|  |  |  |  |
|  | S20 | 报文处理失败 | Failed to process message |
|  | S2001 | 报文类型非法 | Illegal message type |
|  | S2002 | 报文格式非法 | Illegal message format |
|  | S2003 | 报文长度超长 | The length of message is too long |
|  | S2004 | 解析报文失败 | Failed to resolve the message |
|  | S2005 | 构造报文失败 | Failed to construct message |
|  | S2006 | 金额型报文域必须映射两个项 | The field of amount-type message must map to two elements |
|  | S2007 | 修改报文域值失败 | Failed to modify the business element value of the message |
|  | S2008 | 大报文的文件体不可读 | Failed to read the message body of the big message |
|  | S2009 | 没有指定报文类型 | Need the specified message type |
|  | S2010 | 非本模块处理的报文 | Wrong type of message for this application. |
|  | S2011 | 缺少报文域值 | Cannot find the business element value |
|  | S2012 | 构建报文环境失败 | Failed to construct the environment for creating message |
|  | S2013 | 获取报文数据失败 | Failed to retrieve the message data |
|  | S2014 | 需建立报文域映射关系 | Need to build the mapping relation of business elements |
|  | S2015 | 循环域的域名必须包含索引值 | The field name of cyclic field must contain index value |
|  | S2016 | 没有设置报头结构! | Need to set the message header structure |
|  | S2017 | 没有设置正文结构! | Need to set the document structure |
|  | S2018 | 设置报头结构错 | Invalid message header structure |
|  | S2019 | 设置正文结构错 | Invalid document structure |
|  | S2020 | 报文结构错 | Invalid message structure |
|  | S2999 | 报文其他系统错 | Other system error about message |
|  |  |  |  |
|  | S3 | MQ失败 | MQ error |
|  | S3001 | 连接队列管理器失败 | Failed to connect to queue manager |
|  | S3002 | 打开队列失败 | Failed to open queue |
|  | S3003 | 从队列读取消息失败 | Failed to retrieve the message from queue |
|  | S3004 | 放置消息到队列失败 | Failed to put message to the queue |
|  | S3005 | 消息非法 | Invalid message |
|  | S3006 | 获取接收者队列名失败 | Failed to retrieve the queue name of receiver |
|  | S3007 | 路由错误 | Route error |
|  | S3999 | 其他MQ错误 | Other type of MQ error |
|  |  |  |  |
|  | S4 | CICS失败 | CICS error |
|  | S4001 | 获取共享区(CWA)地址失败 | Failed to retrieve CWA address |
|  | S4002 | 锁定共享区(CWA)失败 | Failed to retrieve CWA address |
|  | S4003 | 分配或释放共享区(CWA)失败 | Failed to allocate or release shared data area |
|  | S4004 | 共享区(CWA)没有初始化 | CWA need to be initialized |
|  | S4005 | 读取共享区(CWA)失败 | Failed to read the shared data area |
|  | S4006 | 提交CICS事务失败 | Failed to commit CICS transaction  |
|  | S4007 | 回滚CICS事务失败 | Failed to rollback CICS transaction  |
|  | S4008 | CICS同步调用失败 | Failed to make CICS synchronous call |
|  | S4009 | CICS异步调用失败 | Failed to make CICS asynchronous call |
|  | S4010 | 通讯交换区没有数据 | No data in the communication exchange area |
|  | S4011 | 通讯交换区数据非法 | Illegal data in the communication exchange area |
|  | S4012 | 通讯交换区大小不合适 | The communication exchange area has an improper size |
|  | S4013 | 设置通讯交换区失败 | Failed to set the communication exchange area |
|  | S4014 | CICS服务模块没有定义 | Cannot find the definition of CICS service module |
|  | S4015 | 主机程序ABEND | mainframe program abend |
|  | S4999 | CICS其他错误 | Other type of CICS error |
|  |  |  |  |
|  | S50 | 数据库操作失败 | Database operation error |
|  | S5001 | 连接数据库服务器失败 | Failed to connect to database |
|  | S5002 | 读取数据库记录失败 | Failed to select record from specified table |
|  | S5003 | 插入数据库记录失败 | Failed to insert record from specified table |
|  | S5004 | 更新数据库记录失败 | Failed to update record from specified table |
|  | S5005 | 删除数据库记录失败 | Failed to update record from specified table |
|  | S5006 | 创建数据库游标失败 | Failed to create database cursor |
|  | S5007 | 移动数据库游标失败 | Failed to move database cursor |
|  | S5008 | 关闭数据库游标失败 | Failed to close database cursor |
|  | S5009 | 提交数据库事务失败 | Failed to commit database transaction |
|  | S5010 | 回滚数据库事务失败 | Failed to rollback database transaction |
|  | S5011 | 操作数据库LOB字段失败 | Database operation of LOB field has failed |
|  | S5012 | 没有操作数据库的权限 | Database permission denied |
|  |  |  |  |
|  | S51 | 数据库数据错 | Database data error |
|  | S5101 | 数据库没有相应的数据表 | Cannot find the specified table from database |
|  | S5102 | 数据表没有相应的记录 | Cannot find the specified record from database |
|  | S5103 | 数据表关键字重复 | Duplicate key word |
|  | S5104 | 数据库数据非法 | Invalid data |
|  | S5105 | 数据表缺少重要的系统数据 | Missing critical system data of table |
|  | S5999 | 其他数据库错 | Other type of database error |
|  |  |  |  |
|  | S60 | 签名服务器 | Signing server |
|  | S6001 | 加载签名服务器模块失败 | Failed to load the signing server module |
|  | S6002 | 签名服务器模块方法没定义 | Cannot find the method definition of signing server module  |
|  | S6003 | 连接签名服务器失败 | Failed to connect signing server |
|  | S6004 | 编制签名失败 | Failed to compile rawsign |
|  | S6005 | 核验签名失败 | Failed to compile rawsign |
|  | S6006 | 获取证书信息失败 | Failed to retrieve the certificate information |
|  | S6007 | 上传证书失败 | Failed to upload certificate |
|  | S6008 | 下载证书失败 | Failed to download certificate |
|  | S6009 | 删除证书失败 | Failed to download certificate |
|  | S6010 | 配置数据无效 | Invalid configuration data |
|  | S6011 | 无可用的签名服务器 | Cannot find available signing server |
|  |  |  |  |
|  | S61 | 密押服务器 | Mac server |
|  | S6101 | 密钥设备错 | Mac device error |
|  | S6102 | 通存通兑密钥转换错 | Failed to convert the key of inter-bank deposit and withdrawal |
|  | S6103 | 没有设置本地密钥 | Need to set up the local key |
|  | S6104 | 没有设置全国密钥 | Need to set up the national key |
|  |  |  |  |
|  | S62 | PMTS | PMTS |
|  | S6201 | 报文加密失败 | Failed to encrypt the message |
|  | S6202 | 报文解密失败 | Failed to decrypt the message |
|  | S6203 | 计算报文校验值系统错 | System error of calculating cksum value for message |
|  |  |  |  |
|  | S70 | CIPS保留系统错 | Reserved CIPS system error |
|  | S7001 | 重复解救同一笔业务 | The chosen transaction has been saved before |
|  | S7002 | 清算回执应答状态非法 | Invalid responsive status of the former transaction |
|  | S7003 | 资金调整类型非法 | Illegal type of fund adjustment |
|  | S7004 | 系统状态非法 | Illegal system status |
|  | S7005 | 业务方向非法 | Illegal system status |
|  | S7006 | 数据清理失败 | The data cleaning is failed |
|  | S7007 | 大额节假日标识非法 | The HVPS holiday flag is invalid |
|  | S7008 | 结算失败 | Settlement failed |
|  |  |  |  |
|  | S9 | 其他系统失败 | Other system failure |
|  | S9001 | 系统缺少重要的配置参数 | Missing critical configuration parameters |
|  | S9002 | 系统配置参数错误 | Wrong configuration parameter |
|  | S9003 | 系统设备故障或环境异常 | System equipment failure or system environmental anomaly |
|  | S9004 | 业务处理超时 | Business processing is timeout |
|  | S9005 | 系统当前状态拒绝进行此操作 | System rejected the operation under current status |
|  | S9006 | 系统缺少相应的模块 | Missing relevant module |
|  | S9007 | 系统调用失败 | System call is failed |
|  | S9008 | 系统调用参数错误 | Wrong system call argument |
|  | S9009 | 编签核签发生系统错 | System error happened during compiling or checking signature |
|  | S9010 | 撮合失败 | Failed to make the match |
|  | S9011 | 系统存储区不足 | The storage area is insufficient |
|  | S9012 | 字符集转换失败 | Failed to convert the character set |
|  | S9999 | 其他系统错 | Other system error |