Rest API-v1.2.0 Introduction

Revision History

Revision	Description	Date
1.0.0	Initial Release	2018-03-01-
1.1.0	Add Order Interface (for exchanging different tokens)	2018-05-08
1.1.1	Change the number of activated SDAs to 0.6	2018-05-15
1.2.0	Add interface of acquiring all order, add parameters of acquiring order list, and add interface of acquiring all transaction based on accounts	2018-05-18

1.AccountInterface

1.1 Make a request for a new wallet

Parameters	Type	Description
success	Boolean	Request results
wallet	Object	Wallet
address	String	Wallet address of SDChain(public key)
secret	String	Private key

Note: The newly acquired wallet is inactive. Activation method: Use <u>Payment interface</u> to transfer 20 SDA from activated account to the new one.

1.2 Get account balance

Result return parameter:

Interface: /V1/accounts/balances/{:address}, GetMethod

Interface parameters:

Parameters	Type	Description
Address	String	User address of SDChain

Example:

https://rest-beta.sdchain.io/v1/accounts/balances/6 fa LUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5

Results:

Returned result information:

Parameters	Type	Description
success	Boolean	Request results
ledger	String	Block height
balances	Array	Balances, array of objects
value	String	Number
currency	String	Sign of token
counterparty	String	Issuer, empty when the pass is SDA

2.Payment Interfaces

2.1 Payment request

Interface: /v1/accounts/payments/{:source address}?submit=true, POST method

Interface parameters:

Parameters	Type	Description
source_address	String	Payer's SDChain address

Details of Submit parameter:

Parameters	Type	Description
secret	String	Payer's private key of wallet
payment	Object	Payment object
source_account	String	Initiate account
destination_account	String	Target account
amount	String	Amount paid
memos	Array	Payment memo; Array of objects; Option
МетоТуре	String	Memo type, English plus number
MemoData	String	Content of memo

Example:

"success": true

https://rest-beta.sdchain.io/v1/accounts/payments/6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5?submit=true

```
Submitted data:
 "secret": "saNYbpu A3Hhg8kRu"
 "payment": {
   "source account": "6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5",
   "destination account": "6PrXdWVoXzmGCmi56wTFTC3e6xezLWh2dc",
   "amount":"20",
   "memos": [
             "MemoType": "memos",
             "MemoData": "First deal"
      ]
Results:
   "hash":
"12C323E8DEAF789B790E4837438E5E59E95CA888979B4BE1311CA4BEDAF7C05E"
   "status url":
bWH5/12C323E8DEAF789B790E4837438E5E59E95CA888979B4BE1311CA4BEDAF7
C05E",
```

}

Result return parameter:

Parameters	Type	Description
success	Boolean	Request results
hash	String	Hash of payment transaction
status_url	String	View address of transaction status

2.2 Get payment information (Compact version)

Interface: /V1/accounts/payments/{:address}/{:Hash}, GetMethod

Interface parameters:

Parameters	Type	Description
address	String	SDChain address of payment user
hash	String	Hash of payment transaction

Example:

https://rest-beta.sdchain.io/v1/accounts/payments/6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5/12C323E8DEAF789B790E4837438E5E59E95CA888979B4BE1311CA4BEDAF7C05E

```
"parsed_memo_type": "memos"
}

],

"success": true
}
```

Returned result information:

Parameters	Type	Description
success	Boolean	Request results
hash	String	Hash of payment
ledger	String	Block height
state	String	State (Validated : Completed; Pending: Trading)
source_account	String	Payment party
destination_account	String	Payee
direction	String	Type of transaction
amount	String	Transaction amount
timestamp	String	Trading time
fee	String	Fee
memos	Array	Payment memo; Array of object; Option
MemoType	String	Memo type; English plus number
MemoData	String	Content of memo

2.3 Get payment information (Full version)

Interface: /v1/transactions/{:hash}, GetMethod

Interface:

Parameters	Туре	Description
hash	String	Hash of payment transaction

Example:

 $https://rest-beta.sdchain.io/v1/transactions/12C323E8DEAF789B790E4837438E5E59E95\\CA888979B4BE1311CA4BEDAF7C05E$

Result:

```
{
   "transaction": {
       "TransactionType": "Payment",
       "Flags": 2147483648,
       "Sequence": 5,
       "LastLedgerSequence": 86521,
       "Amount": "20000000",
       "Fee": "12",
       "SigningPubKey":
85D",
       "TxnSignature":
"3045022100A0C7DA557F7BD8FB7C2E8E67346A9101027D005A67F4FA4D3D61647
C226085C902207948D62EFBDBB845ABA9627144944E04B0D7C5B54FAAA8F5777A
870AE4C57B5B",
       "Account": "6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5",
       "Destination": "6PrXdWVoXzmGCmi56wTFTC3e6xezLWh2dc",
       "Memos": [
           {
               "Memo": {
                   "MemoType": "6D656D6F73",
                   "MemoData": "E7ACACE4B880E7AC94E4BAA4E69893",
                   "parsed memo type": "memos"
               }
           }
       "date": 573639342,
       "hash":
"12C323E8DEAF789B790E4837438E5E59E95CA888979B4BE1311CA4BEDAF7C05E"
       "inLedger": 86520,
       "ledger index": 86520,
       "meta": {
           "TransactionIndex": 0,
           "AffectedNodes": [
               {
                   "ModifiedNode": {
                       "LedgerEntryType": "AccountRoot",
                       "PreviousTxnLgrSeq": 86517,
                       "PreviousTxnID":
"BB3D605366CBDD5F199D2DAD609EE72ABBD2270C85BAD7C76CAF718088430D
73",
                       "LedgerIndex":
"35C97BB2890349B177A9DAF1DA5B5631C0F07B6F25059BB0E5136C38606A6395",
```

```
"PreviousFields": {
                              "Balance": "60000000"
                          },
                          "FinalFields": {
                              "Flags": 0,
                              "Sequence": 1,
                              "OwnerCount": 0,
                              "Balance": "80000000",
                              "Account":
"6PrXdWVoXzmGCmi56wTFTC3e6xezLWh2dc"
                      }
                 },
                     "ModifiedNode": {
                          "LedgerEntryType": "AccountRoot",
                          "PreviousTxnLgrSeq": 86517,
                          "PreviousTxnID":
"BB3D605366CBDD5F199D2DAD609EE72ABBD2270C85BAD7C76CAF718088430D
73",
                          "LedgerIndex":
"C5D69B9AD27CDD3257A4E7F65F386CF44315AFD28B116F1D5EA31F596A8887A1
                          "PreviousFields": {
                              "Sequence": 5,
                              "Balance": "197999952"
                          "FinalFields": {
                              "Flags": 0,
                              "Sequence": 6,
                              "OwnerCount": 0,
                              "Balance": "1959999940",
                              "Account":
"6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5"
                      }
                 }
             ],
             "TransactionResult": "tesSUCCESS",
             "delivered amount": "20000000"
        "validated": true
    },
    "success": true
```

Returned result information:

Parameters	Type	Description
success	Boolean	Request results
transaction	Object	Transaction information
TransactionType	String	Transaction type
Flags	Integer	Flag
Sequence	Integer	Transaction count
LastLedgerSequence	Integer	Block count once completed
Integer	String	Quantity
Fee	String	Fee
SigningPubKey	String	Signature
TxnSignature	String	Transaction Signature
Account	String	SDChain address of sender
Destination	String	SDChain address of receiver
date	Integer	Date (sec, since AD 2000)
hash	String	Hash of payment transaction
inLedger	String	Ledger of transaction
ledger_index	String	ID of ledger
meta	Object	Change of node
validated	Boolean	Status of validation
client_resource_id	String	Transaction ID

2.4 Get payment history

 $Interface: \ /V1/accounts/payments/\{: address\} \text{, } GetMethod$

Interface parameters:

Parameters	Type	Description	
address	String	Payment-related SDChain address	

Submit parameter Details:

	TE.	
Parameters	Type	Description
		1

Parameters	Type	Description	
source_account	String	SDChain address of Payer, optional	
destination_account	String	SDChain address of Payee, optional	
direction	String	Type of transaction,optional value Incoming: Paid Outgoing:Pay, optional	
start_ledger	Integer	Starting block height, optional	
end_ledger	Integer	End block height, optional	
per_page	Integer	Page quantity, optional	
page	Integer	Page number, optional	

Example:

https://rest-beta.sdchain.io/v1/accounts/payments/6 fa LUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5

```
Results:
    "payments": [
            "hash":
"D11971630D8038BFFA69A5538C5C1DCF906E95008C1612CF597C5DAA19A30938",
            "ledger": "86224",
            "source account": "6Hb9CJAWyB46j91VRWn9rDkukG4bwdtyTh",
            "destination_account": "6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5",
            "amount": "2000",
            "direction": "incoming",
            "timestamp": "2018-03-06T08:01:00.000Z",
            "fee": "0.000012",
            "memos": [
                {
                    "MemoType": "6D656D6F73",
                    "MemoData": "E7ACACE4B880E7AC94E4BAA4E69893",
                     "parsed memo type": "memos"
                }
            ]
        },
            "hash":
"96DFC38DE2841A9AD5E83016D462E45F0D88164E923B30D881FA7A2EEB3395B6"
```

```
"ledger": "86459",
            "source account": "6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5",
            "destination account": "6PrXdWVoXzmGCmi56wTFTC3e6xezLWh2dc",
            "amount": "2000",
            "direction": "outgoing",
            "timestamp": "2018-03-06T08:12:41.000Z",
            "fee": "0.000012",
            "memos": [
                 {
                     "MemoType": "6D656D6F73",
                     "MemoData": "E7ACACE4B880E7AC94E4BAA4E69893",
                     "parsed memo type": "memos"
                 }
            1
        },
            "hash":
"BB3D605366CBDD5F199D2DAD609EE72ABBD2270C85BAD7C76CAF718088430D
73",
"ledger": "86517",
            "source account": "6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5",
            "destination account": "6PrXdWVoXzmGCmi56wTFTC3e6xezLWh2dc",
            "amount": "20",
            "direction": "outgoing",
            "timestamp": "2018-03-06T08:15:33.000Z",
            "fee": "0.000012",
            "Memos": [
                 {
                     "MemoType": "6D656D6F73",
                     "MemoData": "E7ACACE4B880E7AC94E4BAA4E69893",
                     "Parsed memo type": "memos"
                 }
            ]
        },
            "hash":
"12C323E8DEAF789B790E4837438E5E59E95CA888979B4BE1311CA4BEDAF7C05E"
            "ledger": "86520",
            "source account": "6faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5",
            "destination account": "6PrXdWVoXzmGCmi56wTFTC3e6xezLWh2dc",
            "amount": "20",
            "direction": "outgoing",
            "timestamp": "2018-03-06T08:15:42.000Z",
```

The result returned is the data for the next page, and the result information returned:

Parameters	Type	Description		
success	Boolean	Request results		
payments	Array	Payment history, information in the same transaction record		

3. Server Information Interface

3.1 Get default transaction fee

```
Interface: /v1/transaction-fee, GetMethod
```

Example:

https://rest-beta.sdchain.io/v1/transaction-fee

```
Result: {
     "fee": "0.000001",
     "success": true
}
```

Result return parameter:

Parameters	Type	Description		
success	Boolean	Request results		
fee	String	Current default transaction fee		

3.2 Get server information

```
Interface: /v1/server, GetMethod
Example:
https://rest-beta.sdchain.io/v1/server

Result:
{
    "sdchaind_server_status": {
        "complete_ledgers": "1-1471300",
        "server_state": "proposing",
        "reserve_base_sda": 6
    },
    "success": true
}
```

Result return parameter:

Parameters	Type	Description	
success	Boolean	Request results	
sdchaind_server_statu	Object	Current status of SDChain server	
complete_ledgers	String	Completed block	
server_state	String	Server status	
reserve_base_sda	Integer	Least SDA quantity for activation	

3.3 Check connection with server

```
Interface: /v1/server/connected, GetMethod

Example:

https://rest-beta.sdchain.io/v1/server/connected

Result:
{
    "connected": true,
    "success": true
```

Result return parameter:

}

Parameters	Type	Description
success	Boolean	Request results
connected	Boolean	Status of connection with server

4. Get Order Interface

4.1 Get order list

Interface: /v1/accounts/orders/{:address}, GetMethod

Parameter Interface:

Parameters	Type	Description	
address	String	Payment-related SDChain addresses	

Details of submitted parameter:

Parameters	Type	Description
marker	String	Start position in the response page.
limit	String	(Default is 200) The maximum result of each response. Can't be less than 10. Can't be more than 400
ledger	String	Block height (taken from the previous page's return result)

Example:

 $https://rest-beta.sdchain.io/v1/accounts/orders/6GiohV7XVhabbtV1DfKjWEyikeyimiDSN\\x$

```
"counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU"
              },
              "taker pays": {
                  "currency": "DDD",
                  "value": "1",
                  "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU"
              },
             "sequence": 54,
             "passive": false
         },
         {
             "type": "sell",
             "taker gets": {
                  "currency": "DDD",
                  "value": "3",
                  "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU"
             },
             "taker_pays": {
                  "currency": "SDA",
                  "value": "12",
                  "counterparty": ""
              },
             "sequence": 59,
              "passive": false
         }
    ],
    "success": true
}
```

Result return parameter:

Parameters	Type	Description
success	Boolean	Request results
validated	Boolean	Hash of payment
ledger	Integer	Block height
order	Object	Order information
type	String	Type:sell, buy
taker_pays	Object	The amount the other party should spend
currency	String	Token name
counterparty	String	Publisher
value	String	Value
taker_gets	Object	The amount the other party should get

Parameters	Type	Description
currency	String	Token name
counterparty	String	Publisher
value	String	Value

4.2 Submit order

Interface: /v1/accounts/orders/{:address}, POSTMethod

Interface parameter:

Parameters	Type	Description
address	String	SDChain address

Details of submitted parameter:

Parameters	Type	Description
secret	String	Private Key
orders	Object	Order Information
type	String	sell; buy
taker_pays	Object	The amount the other party should spend
currency	String	Token Name
counterparty	String	Publisher
value	String	Value
taker_gets	Object	The amount the other party should get
currency	String	Token Name
counterparty	String	Publisher
value	String	Value

Example:

https://rest-beta.sdchain.io/v1/accounts/orders/6GiohV7XVhabbtV1DfKjWEyikeyimiDSNx

Submitted data:

```
{
        "secret": "spoWzgEy9****1stWp2vsC",
        "order": {
                 "type": "buy",
                 "taker pays": {
                          "currency": "DDD",
                          "counterparty":
"6UPd52jHtu1d88nc3S3WeroACFQpKfybhU",
                          "value": "1"
                 },
                 "taker gets": {
                          "currency": "SDA",
                          "counterparty": "",
                          "value": "4"
                 }
        }
Result:
    "order": {
         "account": "6PKbrbSLKRmgb5nqqGP3hxWBj6o2ufZrTt",
         "taker_gets": {
             "currency": "SDA",
             "value": "4",
             "counterparty": ""
         },
         "taker_pays": {
             "currency": "DDD",
             "value": "1",
             "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU"
         "fee": "0.0001",
         "type": "buy",
         "sequence": 7
    },
    "hash":
"C6C62BE6921D97857382DF956D2C227E9CD1022D1DB08EEB9193D6F1A8DB48CF
    "ledger": "49947",
    "state": "pending",
    "success": true
}
```

Details of submitted parameter:

Parameters	Type	Description		
success	Boolean	Request results		
hash	String	Hash of payment		
ledger	Integer	Block height		
state	String	Transaction State		
order	Object	Order Information		
Fee	String	Fee		
sequence	Integer	Order Sequence (for cancelling order)		

4.3 Cancel order

Interface: /v1/accounts/orders/{:address}/{: sequence}, DELETE Method

Example:

https://rest-beta.sdchain.io/v1/accounts/orders/6GiohV7XVhabbtV1DfKjWEyikeyimiDSNx/59

Interface parameter:

Parameters	Type	Description
address	String	SDChain address
sequence	Integer	Order Sequence

Details of submitted parameter:

Parameters	Type	Description
secret	String	Private Key

Submitted data:

Returned result information:

Parameters	Type	Description
success	Boolean	Request results
hash	String	Transaction Hash
ledger	Integer	Block Height
state	String	Transaction State
order	Object	Order Information
account	String	SDChainAddress
fee	String	Fee
offer_sequence	Integer	Sequence of Cancelled Transaction
sequence	Integer	Sequence of Current Transaction

4.4 Check details oforder

Interface: /v1/accounts/orders/{:address}/{:hash}, GetMethod

Interface parameter:

Parameters	Type	Description
address	String	SDChain Address
hash	String	Transaction Hash

Example:

 $https://rest-beta.sdchain.io/v1/accounts/orders/6GiohV7XVhabbtV1DfKjWEyikeyimiDSNx/3ABE9B68EB3988E8E39CA5E11849FBBBDD1B8897984FA6936043AEA1873A4C7\\1$

Submitted data:

```
Result:
{
    "hash":
"3ABE9B68EB3988E8E39CA5E11849FBBBDD1B8897984FA6936043AEA1873A4C71
    "ledger": 50254,
    "validated": true,
    "timestamp": "2018-05-08T07:25:40.000Z",
    "fee": "0.0001",
    "action": "order create",
    "type": "buy",
    "direction": "outgoing",
    "order": {
         "account": "6GiohV7XVhabbtV1DfKjWEyikeyimiDSNx",
         "taker pays": {
              "currency": "DDD",
              "value": "1",
              "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU"
         },
         "taker_gets": {
              "currency": "SDA",
              "value": "4",
              "counterparty": ""
         },
         "passive": false,
         "immediate or cancel": false,
         "fill or kill": false,
         "type": "sell",
         "sequence": 61
    },
    "balance_changes": [
              "counterparty": "",
              "currency": "SDA",
              "value": "-0.0001"
         }
    ],
    "order changes": [
              "taker pays": {
                  "currency": "SDA",
                  "counterparty": "",
```

```
"value": "0"
         },
         "taker_gets": {
              "currency": "DDD",
              "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU",
              "value": "0"
         },
         "sequence": 59,
         "status": "canceled"
    },
         "taker_pays": {
              "currency": "DDD",
              "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU",
              "value": "1"
         },
         "taker_gets": {
              "currency": "SDA",
              "counterparty": "",
              "value": "4"
         },
         "sequence": 61,
         "status": "created"
     }
],
"success": true
```

Result return parameter:

Parameters	Type	Description
success	Boolean	Request result
hash	String	Transaction Hash
ledger	String	Block Height
state	String	Transaction State
orders	Object	Order Information
Account	String	SDChain Address
sequence	Integer	Order Sequence
type	String	sell; buy
taker_pays	Object	The amount the other party should spend
currency	String	Token Name
counterparty	String	Publisher

Parameters	Type	Description
value	String	Value
taker_gets	Object	The amount the other party should get
currency	String	Token Name
counterparty	String	Publisher
balance_changes	Array	Balance Change
order_changes	Array	Order Change

4.5 Acquire current list of order

Interface: /v1/order_book/{:base}/{:counter}, GetMethod

Interface parameter:

Parameters	Type	Description	
address	String	Payment-related SDChain addresses	
base	String	Base Token(currency + counterparty 或 SDA)	
counter	String	Counter Token(currency + counterparty 或 SDA)	

Details of submitted parameter:

Parameters	Type	Description
limit	String	(Default is 200) The maximum result of each response. Can't be less than 10. Can't be more than 400

Example:

 $https://rest-beta.sdchain.io/v1/order_book/SDA/CNY+6UPd52jHtu1d88nc3S3WeroACFQpKfybhU?limit=2$

```
Result:
{
    "ledger": 50047,
    "validated": true,
    "orders": [
        {
          "type": "buy",
```

```
"taker_gets": {
                  "currency": "CNY",
                  "value": "5",
                  "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU"
              },
              "taker pays": {
                  "currency": "DDD",
                  "value": "1",
                  "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU"
              },
              "sequence": 54,
              "passive": false
         },
              "type": "sell",
              "taker_gets": {
                  "currency": "DDD",
                  "value": "3",
                  "counterparty": "6UPd52jHtu1d88nc3S3WeroACFQpKfybhU"
              },
              "taker_pays": {
                  "currency": "SDA",
                  "value": "12",
                  "counterparty": ""
              },
              "sequence": 59,
              "passive": false
         }
    ],
    "success": true
}
```

Result return parameter:

Parameters	Type	Description
success	Boolean	Request Results
order_book	Boolean	Transaction hash
ledger	Integer	Block height
validated	Boolean	Validated or not
bids	Array	Bid information
price	Object	Price (amount type)
taker_gets_total	Object	The amount the other party should get (amount type)

Parameters	Type	Description
taker_pays_total	Object	The amount the other party should spend (amount type)
order_maker	String	Address of Order Maker

5. Interface of Transaction History

5.1 Get transaction history

Interface: /v1/accounts/transactions/{:address}, GetMethod

Interface Parameter:

Parameters	Type	Description	
address	String	Payment-related SDChain addresses	

Details of submitted parameter:

Parameters	Type	Description
type	String	Transaction Type : payment,offercreate,offercancel,trustset, Multiple can be provided separated by ","
start_ledger	Integer	Starting block height, optional
end_ledger	Integer	End block height, optional
per_page	Integer	Per page quantity, optional
page	Integer	Page number, optional

Example:

 $https://rest-beta.sdchain.io/v1/accounts/transactions/6 faLUhmp9gNgS9jXS3rAWbg8hFfi9PbWH5?type=payment, offercreate\&per_page=2\&page=1$

```
Result:
```

"ledger": "1125346", "state": "validated",

```
"date": 577364330,
             "type": "out",
             "fee": "0.0001",
             "result": "tesSUCCESS",
             "counterparty": "6JmTAjeQpXUMZACgGRNwvUG9EMSZmcBXU6",
             "amount": {
                  "currency": "SDA",
                  "value": "0.02",
                  "issuer": ""
             },
             "effects": [],
             "memos": [
                  {
                      "MemoData": "546869732069732061206D656D6F21",
                      "MemoType": "6D656D6F"
                  }
             ]
         },
             "hash":
"81F36B67F23DF5E4D651EBA39537239E02A1F78534A48F05C010C4CF852F1768",
             "ledger": "1125346",
             "state": "validated",
             "date": 577364330,
             "type": "out",
             "fee": "0.0001",
             "result": "tesSUCCESS",
             "counterparty": "6JmTAjeQpXUMZACgGRNwvUG9EMSZmcBXU6",
             "amount": {
                  "currency": "SDA",
                  "value": "0.02",
                 "issuer": ""
             },
             "effects": []
         }
    ],
    "success": true
}
```

Information of returned results:

Parameters	Type	Description
success	Boolean	Request results
transactions	Array	Transaction object array

Parameters	Type	Description
hash	String	Transaction hash
ledger	String	Block height
date	String	Payment amount
type	String	Туре
fee	String	Fee
result	String	Result
price	String	Price (type=offercreate)
pair	String	Pair (type=offercreate)
seq	Integer	Order number (type=offercreate)
counterparty	String	Address of the other party (type=payment)
amount	Object	Quantity object
currency	String	Currency
value	String	Value
counterparty	String	Counterparty
effects	Array	Effect
effect	String	Effect type
seq	String	Remarks
price	String	Price
pair	String	Pair
amount	Object	Quantity object
memos	Array	Memo