

# API develop a document

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## Function in

1. Create an account
2. Check the balance
3. Check the balance in bulk
4. Query the trade list
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6. Transaction details
7. Query token list
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12. Query the list of transactions contained within the block by block number
13. Query token mining revenue list
14. Query token mining proceeds available
15. Token mining earnings claim
16. Query token mining yield details

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## api url

<http://n1.ctk.bz>

The server address will be represented by **server** in the following content

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General return parameter description

Parameter	specification
Status	Status identifier: 0 failed; 1 success; 2 failure
info	Interface returns a description of information, such as error messages
data	Interface return data

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Message body signature description:

All signed messages need to first get the transaction ID (txnId) through interface 11 to get the transaction ID (txid), random number (nonce).

The body of the message is a concatenated string of parameters

Transfer message body (6. Create transfer transaction) : txid + cc + from + to + amount  
Transaction tx, transfer currency English, transfer person, payee, transfer amount of string.

Signature step:

1. the body of the message is converted to a byte array, then to a hexadecimal string, and then to lowercase, which is the body of the message that needs to be signed.
2. perform Keccak 256 hash of sha3 in the message body to get the hash message.
3. use private key to sign with ECDSA algorithm.

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## 1.Create account:

**interface path:** server/acc

**Request method:** get

Parameter	must specify whether	is required
psw	required	password

Return data description

Field	description
info	Wallet address or error information
data	Wallet keystore content
data->address	The wallet address
data->crypto->ciphertext	Encrypted account private key

**Return to the sample**

success

```
{"status": "1", "info": "0xF1D0dFbC41F3FD3aeD603bef2A80e6d2c6CB8Ec7", "data":  
{"address": "f1d0dfbc41f3fd3aed603bef2a80e6d2c6cb8ec7", "crypto": {"cipher": "aes-128-  
ctr", "ciphertext": "51ea5e39c1faccca12f172e25c8446bcb772e86768c5b4b0c9135b2257a4a30  
0", "cipherparams": {"iv": "e3873fb38fb0724d2c9d985af229fbaa"}, "kdf": "scrypt", "kdfparams":
```

```
{"dklen":32,"n":262144,"p":1,"r":8,"salt":"34f455a5464bf53a85562a17a24919f4f980a8c3f63265096d06c251f1e43a06"},"mac":"0a59135abf7322ab53be6305b95b4fa0e5babb2affba09a2793d0e050040dd66"},"id":"c32f0c2a-5744-463d-812f-66bf7aaafb9f","version":3}}
```

When the failure

```
{"status":0,"info":"args psw is null","data":""}
```

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## 2.Check the balance :

**interface path:** server/qry

**Request method:** get

Parameter	is required	explain
cmd	required	Fixed to fill out qryBal
args	required	wallet address
cc	required	token name

Return data description

Field	description
info	error message
data	wallet balance

**Return to the sample**

success

```
{"status":"1","info":"","data":999922179}
```

When the failure

```
{"status":"0","info":"error info","data":""}
```

---

## 3.Check the balance in bulk :

**interface path:** server/bal

**Request method:** get

<b>P ar a m et er</b>	<b>is re q ui re d</b>	<b>description</b>
ar g	re q ui re d	Wallet address and token English name corresponding to the Jso n string
		format demo: {"cclist":[{"cc":"dmc","addr":"0x5fe071ffc42eeb053 5af2b7dd96cdf8a89b8265d"}, {"cc":"dm","addr":"0x5fe071ffc42ee b0535af2b7dd96cdf8a89b8265d"}]}
--	--	json string Fielddescription:
cc lis t	re q ui re d	The corresponding json string array
cc	re q ui re d	Token English name
a d dr	re q ui re d	Enquiry of account address

return Parameter data description:

The returned data is a json format string, where the key is spliced by cc+ underscore  
"\_"+addr in the Parameter string.Value is the wallet balance of the current query address

## Return to the sample

success

```
{"status":"1","info":"","data":  
{"dm_0x5fe071ffc42eeb0535af2b7dd96cdf8a89b8265d":"996421.270000000000"}  
{"token1_0x5fe071ffc42eeb0535af2b7dd96cdf8a89b8265d":"57500"}}}
```

When the failure

```
{"status":"0","info":"Parameter not is null","data":""}
```

## 4.Query the trade list :

**interface path:** server/trade

**Request method:** get

Param eter	is requ ired	description
metho d	require d	Fixed history
cc	option al	token name
acc	require d	wallet address
page	require d	pagination
numbe r	require d	Number of records per page (Max. 100)
status	option al	Record type (all 0, roll out 1, roll in 2, fail 3;Not all queri es are filled by default.

Return data description

Field	description
info	error info
data	json array
data[n]->out	out account

Field	description
data[n]->in	in account
data[n]->txId	txid
data[n]->token	token name
data[n]->flag	Trade type 1 roll-out and roll-in
data[n]->sum	Total quantity (including commission)
data[n]->fee	service charge
data[n]->amount	Transaction quantity (excluding commission)
data[n]->time	Time (string)
data[n]->authority_sign	Forensic identification number
data[n]->type	Transaction type 1 represents token release deduction fee, 0 represents normal transfer
data[n]->blockNum	block number
data[n]->remark	Transfer note
data[n]->error	error log
data[n]->statuses	In state 0 processing,1 succeeds and 2 fails

## Return to the sample

### success

```
{ "status": "1", "info": "", "data": [{ "out": "0x5fe071ffc42eeb0535af2b7dd96cdf8a89b8265d",
"in": "0x468a2acc04a9d01f462eae7e155d7a8bdf2694d4",
"txId": "caab97fe743f0cc159187cdec48da0b77f32ee6803c52d3703b779781c63d9db",
"token": "dm", "blockNum": "3319", "fee": "0", "amount": "100", "remark": "Transfer note",
"time": "2018-04-30 19:26:59", "status": "1", "error": "error log" }] }
```

### When the failure

```
{ "status": "0", "info": "err info", "data": "" }
```

---

## 5.Create a transfer transaction:

**interface path:** server/ivk

**Request method:** post

Parameter	is required	description
cc	required	token name
from	required	out account
to	required	in account
amo	required	transfer number
sign	required	signature
remark	optional	Transfer note
txid	required	txid
nonce	required	nonce

Return data description

Field	description
info	err info
data	

---

### Return to the sample

success

```
{"status": "1", "info": "success", "data": "b31a2f170c7626d4a2405934fdad375688547a6cbaf3e66862f3ef2126730384"}
```

When the failure

```
{"status": "0", "info": "err info", "data": ""}
```

---

## 6.Transaction details :

**interface path:** server/trade

**Request method:** get

Parameter	is required	description
method	required	Fixed fill TXRST
tx	required	Trading txid

Return data description

Field	description
info	Trade txid error message, and show invalidTxid if tx cannot find it
data	json
data->out	out account
data->in	in account
data->txId	Transaction ID
data->token	token abbreviation
data->sum	Total quantity (including commission)
data->fee	service charge
data->amount	Transaction quantity (excluding commission)
data->time	Time (string)
data->authority_sign	Forensic identification number (possibly empty)
data>type	Transaction type 1 represents token release deduction fee, 0 represents normal transfer
data->blockNum	Belongs to block number
data->remark	Transfer note
data->error	error message
data->status	0processing 1success 2fail

**Return to the sample**

success



```
{"status": "1", "info": "success", "data": {"out": "out account", "in": "in account", "txId": "Transaction ID", "token": "xxx", "fee": "1", "amount": "1", "time": "time", "blockNum": "11", "remark": "Transfer note", "error": "err info", "status": "1"}}
```

When the failure

```
{"status": "0", "info": "Parametertx not is null", "data": ""}
```

## 7. Query token list:

**interface path:** server/tklist

**Request method:** get

Para meter	is req uired	description
arg	optio nal	optionalParameter, If not, query all token list, fill in, fuzz y matching to find token list
page	optio nal	optionalParameter, If not, query the first page by default (100 records per page)
status	optio nal	Query all status token not filled, 0 not completed, 1 completed, 2 error

Return data description

Field	description
status	1: successful 0: failure
info	error message
data	json array
data[n]->name	token Chinese name
data[n]->cc	token abbreviation
data[n]->creator	token creator
data[n]->total	Monetary Aggregate
data[n]->mineral	Annualized automatic mining ratio
data[n]->decimal	Exact decimal number
data[n]->award	Dig number in advance
data[n]->logo	token logo(http url)

Field	description
data[n]->desc	tokendescription
data[n]->url	official website
data[n]->status	token status, 0unfinished, 1succeed, 2fail
data[n]->error	error info

### Return to the sample

success

```
{
  "status": "1",
  "info": "success",
  "data": [
    {
      "id": "3",
      "name": "hu",
      "chaincode": "hu",
      "creator": "0x4B75542331E2B5Bc1d6804Ce639A6bD712EB16F9",
      "desc": "xxx",
      "total": "1000000",
      "url": "dsfdf",
      "decimal": "6",
      "logo": "./chaincode/token_logo/0x4B75542331E2B5Bc1d6804Ce639A6bD712EB16F9_hu.jpg",
      "award": "500000",
      "mine": "5",
      "status": "1",
      "error": ""
    }
  ]
}
```

When the failure

```
{
  "status": "0",
  "info": "err info",
  "data": ""
}
```

## 8. Query token details :

**interface path:** server/tkinfo

**Request method:** get

Parameter	is required	description
cc	required	token abbreviation

Return data description

Field	description
status	1: successful 0: failure
info	error message
data	json
data->name	token Chinese name
data->cc	token abbreviation
data->creator	tokencreator

Field	description
data->total	Monetary aggregates
data->mineral	Annualized automatic mining percentage
data->decimal	Exact decimal number
data->award	Dig number in advance
data->logo	token的logo(http url)
data->desc	tokendescription
data->url	official website

### Return to the sample

success

```
{
  "status": "1",
  "info": "success",
  "data": {
    "name": "token Chinese name",
    "chaincode": "token abbreviation",
    "creator": "0xbd0f20927c86ee910961d0e98db20d8760464461",
    "desc": "",
    "total": "10000000",
    "url": "http://daima.mobi",
    "decimal": "10",
    "logo": "/img?id=0xbd0f20927c86ee910961d0e98db20d8760464461_token_001.jpg",
    "mineral": "5",
    "award": "50000",
    "email": "xxx@163.com"
  }
}
```

When the failure

```
{
  "status": "0",
  "info": "err info",
  "data": ""
}
```

## 9.Query individual block information according to block number :

**interface path:** server/qry

**Request method:** get

Parameter	is required	description
cmd	required	Fill in qryblo regularly
args	required	Block number

Return data description

Field	description
status	1: successful 0: failure
info	error message

Field	description
data	json
data->Number	Block number
data->PreviousHash	The previous block hash
data->DataHash	hash
data->Creator	creator
data->Transactions	Number of transactions included
data->MinerList	Miners list
data->Timestamp	A piece of time
data->Ledgers	Books data
data->Ledgers[n]->token	token abbreviation
data->Ledgers[n]->key	data Key
data->Ledgers[n]->readValue	Value before update
data->Ledgers[n]->writeValue	Updated value

## Return to the sample

success

```
{ "status": "1", "info": "", "data": { "Number": "199",
"MinerList": "0x4a8a0b617187c3b5355705af3e48107705b40c01,0xd56f93963ebe0811837c23
48ee8aac26213f8928", "PreviousHash": "AQwjoC_k7vaEnpRNCMF9N6o93C-fCEeu6_YloL9Fh-
Y", "DataHash": "Ktsa6TpR_HYm-siBcKwXvqhUH3zfr--fh_P1qCrsAQQ",
"Creator": "CgpPcmRlcmVyTVNQEusFLS0tLS1CRUdJTtAtLS0tLQpNSUIDQ3pDQ0FiR2dBd0lCQ
WdJUKFLamI4SmFiMzdoMndDUeTlcmdIZ05jd0NnWUllb1pJemowRUF3SXdaekVMck1Ba0dB
MVVFQmhNQ1ZWtXhFekFSQmdOVkBJZ1RDa05oYkdsbWl3SnVhV0V4RmpBVUJnTlZCQWN
URFZOaGJpQkcKY21GdVkybHpZMjh4RXpBUklnTlZCQW9UQ21SaGFxMWhMbTF2WW1reEZ
qQVVCZ05WQkFNVERXTmhMbVJoYVcxaApMbTF2WW1rd0hoY05NVGd3TkRFNE1EazFNekV
4V2hjTk1qZ3dOREUxTURrMU16RXhXakJZTVFzd0NRWURWUUVFHckV3SIZVekVUTUJFR0ExV
UVDQk1LUTJGc2FXWnZjbTVwWVRfV01CUUdBMVVFQnhNTlUyRnVJRvp5WVc1amFYTmoKY
npFY01Cb0dBMMVVFQXhNVGlzSmtaWEpsY2pFdVpHRnBiV0V1Ylc5aWFUQlplNQk1HQnlxR1N
NNDIBZ0VHQ0NnRwpTTTQ5QXdFSEwSUFCQVlveTE1VdTNjQ01SR3kwT3kwSm1KT2FPV2Faa
WtvbnQyNIRZZmxyNEFueEZWZ1VyL2M3CIVYUWhKUVU1cVdqbkNRT0hsNUhKY0lroGt0cFF
pM0kxYmJHalRUQkxNQTRHQTfVZER3RUIvd1FFQXdJSGdEQU0KQmdOVkhSTUJBZjhFQWpB
QU1Dc0dBMMVVKsXsRa01DS0FJR1hGcnFJaXZvOGVJbXR0ZmlbHR5M1o5bIJRa3NUMwpWU
HJMUWhYbC85OERNQW9HQ0NnR1NNNDICQU1DQTBnQU1FVUNJUUN5ZVFleVo4UUUxe
W9jcWFLUTM0N0w2bTJTCIh3empWY0ZvM0gyUTd0N0tBd0lnR09vaHVwS283N2VidVlZjltED
RRbTNIQXhjZUdDbzZQYWJsK2luYXVaWT0KLS0tLS1FTkQgLS0tLS0K", "Transactions": "1",
"Timestamp": "2018-05-29 09:47:52", "Ledgers": [ { "token": "", "key": "", "readValue": "",
```

```
"writeValue":"","Timestamp":"" }, { "token":"","key":"","readValue":"","writeValue":"","Timestamp":"" }, { "token":"","key":"","readValue":"","writeValue":"","Timestamp":"" }, { "token":"","key":"","readValue":"","writeValue":"","Timestamp":"" }, { "token":"","key":"","readValue":"","writeValue":"","Timestamp":"" }, { "token":"","key":"","readValue":"","writeValue":"","Timestamp":"" }, { "token":"","key":"","readValue":"","writeValue":"","Timestamp":"" } ] }
```

When the failure

```
{ "status": "0", "info": "err info", "data": "" }
```

## 10. Query individual block information by block hash:

**interface path:** server/qry

**Request method:** get

Parameter	is required	description
cmd	required	Fixed fill qryhash
args	required	Block the hash

Return data description

Field	description
status	1: successful 0: failure
info	error message
data	json
data->Number	Block number
data->PreviousHash	The previous block hash
data->DataHash	hash
data->Creator	creator
data->Transactions	Number of transactions included
data->MinerList	Miners list
data->Timestamp	A piece of time
data->Ledgers	Books data
data->Ledgers[n]->token	token abbreviation
data->Ledgers[n]->key	data Key

Field	description
data->Ledgers[n]->readValue	Value before update
data->Ledgers[n]->writeValue	Updated value

## Return to the sample

success

```
{ "status": "1", "info": "", "data": { "Number": "199",
"MinerList": "0x4a8a0b617187c3b5355705af3e48107705b40c01,0xd56f93963ebe0811837c23
48ee8aac26213f8928", "PreviousHash": "AQwjoC_k7vaEnpRNCMF9N6o93C-fCEeu6_YloL9Fh-
Y", "DataHash": "Ktsa6TpR_HYm-siBcKwXvqhUH3zfr--fh_P1qCrSAQQ",
"Creator": "CgpPcmRlcmVyTVNQEusFLS0tLS1CRUdJTjAtLS0tLQpNSUIDQ3pDQ0FiR2dBd0lCQ
WdJUkFLaml4SmFiMzdoMndDUeTlcmdlZ05jd0NnWUllb1pJemowRUF3SXdaekVMck1Ba0dB
MVVFQmhNQ1ZWtXhFekFSQmdOVkJBZ1RDa05oYkdsbWlzMnVhV0V4RmpBVUJnTlZCQWN
URFZOaGJpQkcKY21GdVkybHpZMjh4RXpBUklnTlZCQW9UQ21SaGFxMWhMbTF2WW1reEZ
qQVVCZ05WQkFNVERXTmhMbVJoYVcxaApMbTF2WW1rd0hoY05NVGd3TkRfNE1EazFNekV
4V2hjTk1qZ3dOREUxTURrMU16RXhXakJZTVFzd0NRWURWUWFHCKv3SIZVekVUTUJFR0ExV
UVDQk1LUTJGc2FXWnZjbTVwWVRfV01CUUdBMVVFQnhNTlUyRnVJRvp5WVc1amFYTmoKY
npFY01Cb0dBMMVVFQXhNVGlzSmtaWEpsY2pFdVpHRnBiV0V1Ylc5aWVUQlPnQk1HQnlxR1N
NNDIBZ0VHQ0NxrWpTTTQ5QXdfSEEWsUFCQVlVTE1VdTNjQ01SR3kwT3kwSm1KT2FPV2Faa
WtvbnQyNIRZZmxyNEFueEZWZ1VyL2M3CIVYUWhKUVU1cVdqbkNRT0hsNUhKY0lrOGt0cFF
pM0kxYmJHaIRUQkxNQTRHQTfVZER3RUIvd1FFQXJdJSGdEQU0KQmdOVkhSTUJBZjhFQWpB
QU1Dc0dBMMVVKsXDRa01DS0FJR1hGcnFJaXZvOGVJbXR0ZmlibHR5M1o5bIJRa3NUMwpWU
HJMUWhYbC85OERNQW9HQ0Nxr1NNNDICQU1DQTBnQU1FVUNJUUN5ZVFleVo4UUUxe
W9jcWFLUTM0N0w2bTJTCih3empWY0ZvM0gyUTd0N0tBd0lnR09vaHVwS283N2VidVlIzJltd
RRbTNIQXhjZUdTbzZQYWJsK2luYXVhWT0KLS0tLS1FTkQgLS0tLS0K", "Transactions": "1",
"Timestamp": "2018-05-29 09:47:52", "Ledgers": [ { "token": "", "key": "", "readValue": "",
"writeValue": "", "Timestamp": "" }, { "token": "", "key": "", "readValue": "", "writeValue": "",
"Timestamp": "" }, { "token": "", "key": "", "readValue": "", "writeValue": "", "Timestamp": "" }, {
"token": "", "key": "", "readValue": "", "writeValue": "", "Timestamp": "" }, { "token": "", "key": "",
"readValue": "", "writeValue": "", "Timestamp": "" }, { "token": "", "key": "", "readValue": "",
"writeValue": "", "Timestamp": "" } ] } }
```

When the failure

```
{ "status": "0", "info": "err info", "data": "" }
```

## 11. Get transaction ID (txnId):

**interface path:** server/crtTx

**Request method:** get

Parameter	is required	description
cnt	optional	Quantity acquired

Return data description

Field	description
status	1: successful 0: failure
info	error message
data	
data[n]->txId	Transaction ID
data[n]->nonce	random number

**Return to the sample**

success

```
{
  "status": "0",
  "info": "success",
  "data": [
    {
      "txId": "f0c54cdab34fc366b2e959335b88a4d49dc8e0282ed56fcf2dadd717b8be911e",
      "Nonce": "DlaPpcvyD4HzXPRDGxuAyD9ma8rsX/Sp",
    },
    {
      "txId": "1bec40a2a1cb87641b3e73e7c67783bbe4a36c8c4f676fbdaec236ef11e75dd4",
      "Nonce": "bfpxru/vgWw3Rg4/L9r9HA57hqpdsXn"
    }
  ]
}
```

When the failure

```
{
  "status": "0",
  "info": "Parameter cnt Not Numbers",
  "data": ""
}
```

## 12. Query the list of transactions contained within the block by block number:

**interface path:** server/trade

**Request method:** get

Parameter	is required	description
method	required	Fixed fillQtyTxByBlk
blk	required	block number

Return data description

Field	description
info	error message
data	json
data[n]->black	Cost of a black hole
data[n]->blockNum	block number
data[n]->chaincode	token abbreviation
data[n]->facc	out account
data[n]->tacc	in account
data[n]->minerNormal	normal miner
data[n]->minerSuper	super miner
data[n]->amount	Transaction quantity (excluding commission)
data[n]->time	Time (string)
data[n]->authority_sign	Forensic identification number (possibly empty)
data[n]>type	Transaction type 1 represents token release deduction fee, 0 represents normal transfer
data[n]->sMinerFee	Super miner's fee
data[n]->nMinerFee	Ordinary miner's fee
data[n]->remark	Transfer note
data[n]->error	error message
data[n]->statuses	0,3processing 1success 2fail

**Return to the sample**

success



```
{ "status": "0", "info": "", "data": [ { "authority_sign": "16b2eaad72090ecfdf03cc38bb44bc07",
"black": "0.1000000000", "blockNum": "191", "chaincode": "dm",
"error": "MVCC_READ_CONFLICT",
"facc": "0xbd0f20927c86ee910961d0e98db20d8760464461", "invokeTime": "2018-05-29
09:02:08", "minerNormal": "0xd56f93963ebe0811837c2348ee8aac26213f8928",
"minerSuper": "0x468a2acc04a9d01f462eae7e155d7a8bdf2694d4",
"nMinerFee": "0.4500000000", "remark": "lui9rOi0pil=", "sMinerFee": "0.4500000000",
"status": "2", "tacc": "0x8fc2e72e0532d50addd67ca3bf120f645d9f9239",
"transAmou": "0.9900000000",
"txId": "3a0e45ea6f70f03ef383f4baa9b02001f374bbf422cb14189cdc19d6a2ae7303" }, {
"authority_sign": "102d7aeac4b3e48cb80579ccc17cc8e8", "black": "0.1000000000",
"blockNum": "191", "chaincode": "dm", "error": "MVCC_READ_CONFLICT",
"facc": "0xbd0f20927c86ee910961d0e98db20d8760464461", "invokeTime": "2018-05-29
09:02:08", "minerNormal": "0xcef4031161eb96e911551352e1008d0739c1cb17",
"minerSuper": "0x4a8a0b617187c3b5355705af3e48107705b40c01",
"nMinerFee": "0.4500000000", "remark": "lui9rOi0pil=", "sMinerFee": "0.4500000000",
"status": "2", "tacc": "0x8fc2e72e0532d50addd67ca3bf120f645d9f9239",
"transAmou": "0.9900000000",
"txId": "762055edc9844b9ba1186570217c05d68fc7e321cf18c5079360959b5c6f869d" }, {
"authority_sign": "8f4c4dbf86ba51cddfd179ecf716579f", "black": "0.1000000000",
"blockNum": "191", "chaincode": "dm", "error": "VALID",
"facc": "0xbd0f20927c86ee910961d0e98db20d8760464461", "invokeTime": "2018-05-29
09:02:08", "minerNormal": "0xad846479c9db19d1dc42e6decd9b38a6ab3967c9",
"minerSuper": "0x22dcf8e4113af996c7bd5c91ff0162f4b0c85f54",
"nMinerFee": "0.4500000000", "remark": "lui9rOi0pil=", "sMinerFee": "0.4500000000",
"status": "1", "tacc": "0x8fc2e72e0532d50addd67ca3bf120f645d9f9239",
"transAmou": "0.9900000000",
"txId": "b22113767271af8bf1f956bc95fd2607d3b3832fca48855d9885c67ae1bd16cc" } ] }
```

When the failure

```
{ "status": "0", "info": "Parameter blk Do not empty", "data": "" }
```

### 13.Query token mining revenue list:

**interface path:** server/tokenawdlist

**Request method:** get

Parameter	is required	description
token	required	token abbreviation
acc	required	account

Return data description

Field	description
status	1: successful 0: failure
info	error message
data	
data[n]->draw_earnings	Mining earnings
data[n]->draw_time	Mining time

### Return to the sample

success

```
{
  "status": "1",
  "info": "",
  "data": [
    {
      "draw_earnings": "44378.0817480000",
      "draw_time": "2018-06-16"
    },
    {
      "draw_earnings": "0",
      "draw_time": "2018-05-25"
    },
    {
      "draw_earnings": "19711.5374178424",
      "draw_time": "2018-06-16"
    }
  ]
}
```

When the failure

```
{
  "status": "0",
  "info": "signatureCheck failure! ",
  "data": ""
}
```

## 14. Query token mining proceeds available:

**interface path:** server/awardpreview

**Request method:** get

Parameter	is required	description
token	required	token abbreviation
acc	required	account

Return data description

Field	description
status	1: successful 0: failure
info	error message
data	Earnings numerical

### Return to the sample

success

```
{"status":"1","info":"","data":"100"}
```

When the failure

```
{"status":"0","info":"","data":""}
```

---

## 15.Token mining earnings claim:

**interface path:** server/award

**Request method:** get

Parameter	is required	description
txid	required	Transaction ID
nonce	required	random number
acc	required	account
cc	required	token abbreviation
sign	required	signature

Return data description

Field	description
status	1: successful 0: failure
info	error message
data	

**Return to the sample**

success

```
{"status":"1","info":"","data":""}
```

When the failure

```
{"status":"0","info":"signature Check failure! ","data":""}
```

---

## 16.Query token mining yield details:

**interface path:** server/tokenawddetail

**Request method:** get

Parameter	is required	description
txid	required	Transaction ID
nonce	required	random number
acc	required	account
cc	required	token abbreviation
sign	required	signature

Return data description

Field	description
status	1: successful 0: failure
info	error message
data	
undraw_earnings	Uncollected income
draw_earnings	Received income
mineral	Annualized automatic mining percentage
period	Mortgage cycle (month, no mortgage)
period_end	End of mortgage (empty if unsecured)
awardlist	Reward list

**Return to the sample**

success

```
{"status": "1", "info": "", "data":  
{"undraw_earnings": "0", "draw_earnings": "0.0000000000", "mineral": "10", "awardlist": []}}
```

When the failure

```
{"status": "0", "info": "signatureCheck failure! ", "data": ""}
```

---