
APO built-in http interface description

Version number : beta V0.5

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Interface URL:

<https://beta.apochain.io>

SolidityNode interface description

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/walletsolidity/getaccount

Role: query information about an account

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getaccount -d '{"address": "41E552F6487585C2B58BC2C9BB4492BC1F17132CD0"}'

Parameter description: address needs to be converted to hexString

Return value: Account object

/walletsolidity/listwitnesses

Role: query super representative list

Demo: curl -X POST http://beta.apochain.io/walletsolidity/listwitnesses

Parameter Description:

Return value: list of all super delegates

/walletsolidity/getassetissuelist

Role: Query all Token lists

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getassetissuelist

Parameter Description:

Return value: all Token list

/walletsolidity/getpaginatedassetissuelist

Role: paged query Token list



Demo: curl -X POST http://beta.apochain.io/walletsolidity/getpaginatedassetissuelist -d '{"offset": 0, "limit": 10}'

Parameter description: offset is the index of the starting Token, and limit is the number of Tokens expected to be returned.

Return value: Token list

/walletsolidity/getassetissuebyname

Role: Query tokens by name.

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getassetissuebyname -d '{"value": "44756354616E"}'

Parameter description: The name of the certificate, the format is hexString.

Return value: token.

/walletsolidity/getassetissuelistbyname

Role: Query token list by name.

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getassetissuelistbyname -d '{"value": "44756354616E"}'

Parameter description: The name of the certificate, the format is hexString.

Return value: list of tokens.

/walletsolidity/getassetissuebyid

Role: Query the token according to the id.

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getassetissuebyid -d '{"value": "1000001"}'

Parameter description: Pass id, the format is String.

Return value: token.

/walletsolidity/getnowblock

Role: query the latest block

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getnowblock

Parameter Description:

Return value: the latest block on solidityNode

/walletsolidity/getblockbynum

Role: query block by height

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getblockbynum -d '{"num": 100}'

Parameter description: num is the height of the block

Return value: the block of the specified height

/walletsolidity/gettransactionbyid

Role: query transaction based on id

Demo: curl -X POST http://beta.apochain.io/walletsolidity/gettransactionbyid -d '{"value": "309b6fa3d01353e46f57dd8a8f27611f98e392b50d035cef213f2c55225a8bd2"}'

Parameter description: value is the transaction id, need to be hexString

Return value: Transaction specifying the ID

/walletsolidity/gettransactioncountbyblocknum

Role: query the number of transactions on a specific block

Demo: curl -X POST http://beta.apochain.io/walletsolidity/gettransactioncountbyblocknum -d '{"num": 100}'

Parameter description: num is the height of the block.

The return value is e: the number of transactions.



/walletsolidity/gettransactioninfobyid

Role: According to the id query transaction, the block where the transaction is located

Demo: curl -X POST http://beta.apochain.io/walletsolidity/gettransactioninfobyid -d '{"value" : "309b6fa3d01353e46f57dd8a8f27611f98e392b50d035cef213f2c55225a8bd2"}'

Parameter description: value is the transaction id, need to be hexString

Return value: Transaction's transaction fee, the height of the block, the creation time

/walletsolidity/getdelegatedresource

Role: View the resources of one account agent to another account

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getdelegatedresource -d '{

{
"fromAddress": "419844f7600e018fd0d710e2145351d607b3316ce9",
"toAddress": "41c6600433381c731f22fc2b9f864b14fe518b322f"
}'

Parameter Description:

fromAddress: is the account address to be queried, hexString format

toAddress: the account address of the proxy object, hexString format

Return value: A list of the resource agents of the account. The elements of the list are DelegatedResource.

/walletsolidity/getdelegatedresourceaccountindex

Role: View the resource agent status of an account

Demo: curl -X POST http://beta.apochain.io/walletsolidity/getdelegatedresourceaccountindex -d '{

{
"value": "419844f7600e018fd0d710e2145351d607b3316ce9",
}'

Parameter Description:

Value: is the account address to be queried, hexString format

Return value: DelegatedResourceAccountIndex of the account

/wallet/getnodeinfo

Role: Get the current node information

Demo: curl -X GET http://beta.apochain.io/wallet/getnodeinfo

Parameter description: none

Return value: information of the current node NodeInfo

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FullNode interface description

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Wallet/createtransaction

Role: Create a transfer of the Transaction, if the transfer is to address does not exist, create the account on the block chain

demo: curl -X POST http://beta.apochain.io/wallet/createtransaction -d '{"to_address":



```
"41e9d79cc47518930bc322d9bf7cddd260a0260a8d", "owner_address":  
"41D1E7A6BC354106CB410E65FF8B181C600FF14292", "amount": 1000}'
```

Parameter description: to_address is the transfer transfer address, need to be converted to hexString; owner_address is the transfer transfer address, need to be converted to hexString; amount is the transfer amount

Return value: transfer contract

/wallet/gettransactionsign

Role: transaction signature, the api there is a risk of leaks private key, make sure to call the api in a safe environment

demo: curl -X POST http://beta.apochain.io/wallet/gettransactionsign -d '{

```
"Transaction": { "txID":  
"454f156bf1256587ff6ccdbc56e64ad0c51e4f8efea5490dcbc720ee606bc7b8", "raw_data":  
{ "contract": [{ "parameter": { "value": { "amount": 1000, "owner_address":  
"41e552f6487585c2b58bc2c9bb4492bc1f17132cd0", "to_address  
": "41d1e7a6bc354106cb410e65ff8b181c600ff14292"}, "type_url": "type.googleapis.com/  
protocol.TransferContract"}, "type": "TransferContract"}], "ref_block_bytes": "267e", "ref_block_ha  
sh": "9a447d222e8de9f2", "expiration": 1530893064000, "timestamp": 1530893006233}},  
"privateKey": "your private key"  
}'
```

Parameters: contract transaction is created via http api, privateKey user private key

Return value: transaction after signature

Wallet/broadcasttransaction

Role: broadcast the signed transaction

```
demo: curl -X POST http://beta.apochain.io/wallet/broadcasttransaction -d '{ "signature":  
[ "97c825b41c77de2a8bd65b3df55cd4c0df59c307c0187e42321dcc1cc455ddba583dd9502e17cfec  
5945b34cad0511985a6165999092a6dec84c2bdd97e649fc01"], "txID":  
"454f156bf1256587ff6ccdbc56e64ad0c51e4f8efea5490dcbc720ee606bc7b8", "raw_data":  
{ "contract": [{ "parameter": { "value": { "amount":  
1000, "owner_address": "41e552f6487585c2b58bc2c9bb4492bc1f17132cd0", "to_address": "41d1e7  
a6bc354106cb410e65ff8b181c600ff14292"}, "type_url": "type.googleapis.com/  
protocol.TransferContract"}, "type": "TransferContract"}], "ref_block_bytes": "267e",  
"ref_block_hash": "9a447d222e8de9f2", "expiration": 1530893064000, "timestamp":  
1530893006233}}'
```

Parameter description: Transaction after signature

Return value: Whether the broadcast is successful

Wallet/updateaccount

Role: modify the account name

```
demo: curl -X POST http://beta.apochain.io/wallet/updateaccount -d '{ "account_name":  
"0x7570646174654e616d6531353330383933343635353139", "owner_address":  
"41d1e7a6bc354106cb410e65ff8b181c600ff14292"}'
```

Parameter description: account_name is the account name, which needs to be in hexString format; owner_address is the account address of the name to be modified, which needs to be hexString format.

Return value: Transaction of the modified name

Wallet/votewitnessaccount

Role: vote for the super representative

```
Demo: curl -X POST http://beta.apochain.io/wallet/votewitnessaccount -d '{  
"owner_address": "41d1e7a6bc354106cb410e65ff8b181c600ff14292",
```



```
"votes": [{"vote_address": "41e552f6487585c2b58bc2c9bb4492bc1f17132cd0", "vote_count": 5}]
}'
```

Parameter description: owner_address is the voter address, which needs to be in hexString format; votes.vote_address is the address of the super delegate being voted, it needs to be in hexString format; vote_count is the number of votes

Wallet/createassetissue

Role: Issue Token

```
Demo:curl -X POST http://beta.apochain.io/wallet/createassetissue -d '{
"owner_address": "41e552f6487585c2b58bc2c9bb4492bc1f17132cd0",
"name": "0x6173736574497373756531353330383934333132313538",
"abbr": "0x6162627231353330383934333132313538",
"total_supply" : 4321,
"apo_num": 1,
"num": 1,
"start_time" : 1530894315158,
"end_time": 1533894312158,
"description": "007570646174654e616d653135333036303838373334363",
"url": "007570646174654e616d6531353330363038383733343633",
"free_asset_net_limit": 10000,
"public_free_asset_net_limit": 10000,
"frozen_supply":{"frozen_amount":1, "frozen_days":2}
}'
```

Parameter Description:

Owner_address Issuer address; name is the token name; abbr is the token abbreviation; total_supply is the total amount of the issue; apo_num and num are the exchange values of the token and apo; start_time and end_time are the start and end times of the token issue; description is the token description, which needs to be the hexString format ;url is the official website of the token issuer, which needs to be in hexString format; free_asset_net_limit is the total free bandwidth of Token; public_free_asset_net_limit is the free bandwidth that each token proponent can use this token; frozen_supply is the token issuer can specify freeze at the time of issue Token

Return value: Transaction of the issued Token

Wallet/updatewitness

Role: modify the url of the witness

```
Demo:curl -X POST http://beta.apochain.io/wallet/updatewitness -d '{
"owner_address": "41d1e7a6bc354106cb410e65ff8b181c600ff14292",
"update_url": "007570646174654e616d6531353330363038383733343633"
}'
```

Parameter description: owner_address is the creator address, which needs to be in hexString format; update_url is the url of the updated official website, which needs to be in hexString format;

Wallet/createaccount

Role: create an account, an activated account to create a new account, it costs 0.1apo

```
demo: curl -X POST http://beta.apochain.io/wallet/createaccount -d '{ "owner_address":
"41d1e7a6bc354106cb410e65ff8b181c600ff14292", "account_address":
"41e552f6487585c2b58bc2c9bb4492bc1f17132cd0"}'
```

Parameter description: owner_address is an activated account, which needs to be in hexString format; account_address is the address of the new account, which needs to be in hexString format. This address needs to be created in advance.



Return value: Create Transaction of the account

Wallet/createwitness

Role: Apply to become a super representative

demo: curl -X POST http://beta.apochain.io/wallet/createwitness -d '{ "owner_address":
"41d1e7a6bc354106cb410e65ff8b181c600ff14292", "url":
"007570646174654e616d6531353330363038383733343633"}'

Parameter description: owner_address is the account address of the application to become the super representative, it needs to be hexString format; url is the official website address, need to be hexString format

Return value: Transaction requesting the super representative

Wallet/transferasset

Role: Transfer Token

demo: curl -X POST http://beta.apochain.io/wallet/transferasset -d '{ "owner_address":
"41d1e7a6bc354106cb410e65ff8b181c600ff14292", "to_address":
"41e552f6487585c2b58bc2c9bb4492bc1f17132cd0", "asset_name":
"0x6173736574497373756531353330383934333132313538", "amount" : 100}'

Parameter description: owner_address is the token forwarding address, which needs to be in hexString format; to_address is the token forwarding address, which needs to be hexString format; asset_name is the token name, which needs to be hexString format; amount is the token transfer amount.

Return value: Transaction transfer token

【note】

The current asset_name is the token name. When the committee passes the AllowSameTokenName proposal, the asset_name is changed to the String type of the token ID.

Wallet/participateassetissue

Role: participate in the token release

Demo: curl -X POST http://beta.apochain.io/wallet/participateassetissue -d '{
"to_address": "41e552f6487585c2b58bc2c9bb4492bc1f17132cd0",
"owner_address": "41e472f387585c2b58bc2c9bb4492bc1f17342cd1",
"amount": 100,
"asset_name": "3230313271756265696a696e67"
}'

Parameter Description:

To_address is the address of the Token issuer and needs to be in hexString format.

Owner_address is the address of the participating token, and needs to be in hexString format.

Amount is the number of participating tokens

Asset_name is the name of the token and needs to be in hexString format.

Return value: participation in the transaction issued by the token

【note】

The current asset_name is the token name. When the committee passes the AllowSameTokenName proposal, the asset_name is changed to the String type of the token ID.

Wallet/freezebalance

Role: freeze apo, get bandwidth, get voting rights

Demo: curl -X POST http://beta.apochain.io/wallet/freezebalance -d '{
"owner_address": "41e472f387585c2b58bc2c9bb4492bc1f17342cd1",
"frozen_balance": 10000,



```
"frozen_duration": 3,  
"resource" : "BANDWIDTH",  
"receiveraddress": "414332f387585c2b58bc2c9bb4492bc1f17342cd1"  
}'
```

Parameter Description:

Owner_address is the address of the frozen apo account, which needs to be in hexString format.

Frozen_balance is the number of frozen apo

Frozen_duration is the number of freeze days, at least 3 days

Resource: Freezes the type of apo resource (may be BANDWIDTH or ENERGY, BANDWIDTH is the bandwidth, ENERGY is the virtual machine consumes resources)

receiverAddress indicates the address of the delegated account

Return value: freeze apo's transaction

[Note] The resource delegation function needs to be opened by the committee.

Wallet/unfreezebalance

Role: Unfreezing the apo that has ended the freeze period will also lose the bandwidth and voting rights brought by this part of the apo

```
Demo: curl -X POST http://beta.apochain.io/wallet/unfreezebalance -d '{  
  "owner_address": "41e472f387585c2b58bc2c9bb4492bc1f17342cd1",  
  "resource": "BANDWIDTH",  
  "receiveraddress": "414332f387585c2b58bc2c9bb4492bc1f17342cd1"  
}'
```

Parameter Description:

Owner_address is the address of the unfreezed apo account, which needs to be in hexString format.

Resource can be BANDWIDTH or ENERGY

receiverAddress indicates the address of the delegated account

Return value: Thaw the apo's transaction

[Note] The resource delegation function needs to be opened by the committee.

Wallet/unfreezeasset

Role: Thaw the Token that has ended the freeze period

```
Demo: curl -X POST http://beta.apochain.io/wallet/unfreezeasset -d '{  
  "owner_address": "41e472f387585c2b58bc2c9bb4492bc1f17342cd1",  
}'
```

Parameter Description:

Owner_address is the address of the defrosted token account, which needs to be in hexString format.

Return value: Thaw the transaction of the token

Wallet/withdrawbalance

Role: Super representative withdraws bonus to balance, can be reclaimed every 24 hours

```
Demo: curl -X POST http://beta.apochain.io/wallet/withdrawbalance -d '{  
  "owner_address": "41e472f387585c2b58bc2c9bb4492bc1f17342cd1",  
}'
```

Parameter Description:

Owner_address is the address of the withdrawal account, which needs to be in hexString format.

Return value: withdrawal of apo's transaction

Wallet/updateasset

Role: modify the token information

```
Demo: curl -X POST http://beta.apochain.io/wallet/updateasset -d '{
```



```
"owner_address": "41e472f387585c2b58bc2c9bb4492bc1f17342cd1",  
"description": "",  
"url": "",  
"new_limit": 1000000,  
"new_public_limit": 100  
}'
```

Parameter Description:

Owner_address is the address of the token issuer and needs to be in hexString format.

Description is a description of the token, which needs to be in hexString format.

Url is the official website address of the token issuer, which needs to be in hexString format.

New_limit is the free bandwidth that token can use for each holder.

New_public_limit is the free bandwidth of the token

Return value: modify the transaction of Token information

Wallet/listnodes

Role: Query the node to which the api is connected.

Demo: curl -X POST http://beta.apochain.io/wallet/listnodes

Parameter description: none

Return value: List of nodes.

Wallet/getassetissuebyaccount

Role: Query the token issued by the account.

Demo: curl -X POST http://beta.apochain.io/wallet/getassetissuebyaccount -d '{"address":
"41F9395ED64A6E1D4ED37CD17C75A1D247223CAF2D"}'

Parameter description: Issuer account address, the format is hexString.

Return value: The token issued by the user (a user can only issue one token).

Wallet/getaccountnet

Role: Query bandwidth information.

Demo: curl -X POST http://beta.apochain.io/wallet/getaccountnet -d '{"address":
"4112E621D5577311998708F4D7B9F71F86DAE138B5"}'

Parameter description: Account address, the format is hexString.

Return value: Bandwidth information.

Wallet/getassetissuebyname

Role: Query tokens by name.

Demo: curl -X POST http://beta.apochain.io/wallet/getassetissuebyname -d '{"value":
"44756354616E"}'

Parameter description: The name of the certificate, the format is hexString.

Return value: token.

Wallet/getdelegatedresource

Role: View the resources of one account agent to another account

Demo: curl -X POST http://beta.apochain.io/wallet/getdelegatedresource -d '
{
"fromAddress": "419844f7600e018fd0d710e2145351d607b3316ce9",
"toAddress": "41c6600433381c731f22fc2b9f864b14fe518b322f"
}'

Parameter Description:

fromAddress: is the account address to be queried, hexString format

toAddress: the account address of the proxy object, hexString format



Return value: A list of the resource agents of the account. The elements of the list are DelegatedResource.

Wallet/getdelegatedresourceaccountindex

Role: View which accounts are responsible for resources for an account

Demo: curl -X POST http://beta.apochain.io/wallet/getdelegatedresourceaccountindex -d '

```
{  
  "value": "419844f7600e018fd0d710e2145351d607b3316ce9",  
}
```

Parameter Description:

Value: is the account address to be queried, hexString format

Return value: The resource agent profile of the account, structured as DelegatedResourceAccountIndex

Wallet/getnodeinfo

Role: View node information

Demo: curl http://beta.apochain.io/wallet/getnodeinfo

Return value: information about the current state of the node (omitted)

...

Wallet related Interface

GET http://47.244.193.154:9999/access/trx_list

Role: get transaction history of a given address.

Parameter Description:

address: hex format of the address

limit: number of records needs to be returned

start: start index

type: type of transaction: ALL, RECEIVABLES, TRANSFER, TRANSACTION, INTERNAL_TRANSACTIONS, RESOURCE,

Demo: curl http://47.244.193.154:9999/access/trx_list?

address=175c092330b80692eec814db7d0f99ef92ab4f5b13&limit=20&start=0

GET http://47.244.193.154:9999/access/trc20_balances

Role: get APT20 balance of a given address.

Parameter Description:

address: hex format of the address

Demo: curl http://47.244.193.154:9999/access/trc20_balances?

address=175c092330b80692eec814db7d0f99ef92ab4f5b13