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# **sphinxcontrib-httpdomain Documentation**

*Release 0.10.0*

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Misc provide access to elastos network. Our easy to use API and developer tools provide secure, reliable, and scalable access to elastos ledger data.

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**Note:** you can also construct your own network using [Node](#)

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**Warning:** Since software is written by humans, it can have bugs. Thus, if you have questions you are always welcome to issue your problem.



# CHAPTER 1

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useful links

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## 1.1 General

- [Elastos](#)
- [Source Code](#)





Keyword Index, Search Page

## 2.1 Set up client

### 2.1.1 Walk Through

The code is written in go . make sure you install go , and version has to be 1.10 or above.

#### Code

download the code:

```
git clone https://github.com/elastos/Elastos.ORG.API.Misc.git
```

#### Config

modify config.json:

```
{
  // Misc Server Port Config
  "ServerPort": "8080",
  // Misc Database Mysql Db Config
  "Db": {
    "DbDriverName": "mysql",
    "DbDriverSource": "root:87654321@tcp(127.0.0.1:3306)/chain"
  },
  // Local Node config , can be main chain or side chain
  "Ela": {
    "Host": "localhost:21334"
  },
}
```

```
//CoinMarketCap API Key config
"Cmc":{
  "ApiKey":["d72b4bf0-00f3-4bab-8dca-45df2b0fb14c","cfa976fc-7642-4946-a0b2-
↪858619fb2802"],
  "Interval":"30m",
  "NumOfCoin":200
},
//Btc Node Config , Can be omit if you don't need it .
"Btc":{
  "Host":"127.0.0.1:18332",
  "Rpcuser":"clark",
  "Rpcpasswd":"DrGhlxKuqP02m47TnDRAeZqir6Gt5V0secCHajUKW-0=",
  "MinConfirm":1,
  "Net":"testnet3"
},
//Visit Key of Cmc Api.
"VisitKey":"729E2BB0AEEC048FF9DC7996D394889687BF76AFA832F07E011AA5A3BE272310"
}
```

## Install

install project:

```
glide update & glide install
go build -o misc
```

## Deploy

start your project:

```
./misc
```

## 2.2 Getting started with the MISC API

### 2.2.1 Introduction

MISC has a Restful API with URL endpoints corresponding to actions that users can perform with their channels. The endpoints accept and return JSON encoded objects. The API URL path always contains the API version in order to differentiate queries to different API versions. All queries start with: `/api/<version>/` where `<version>` is an integer representing the current API version.

### 2.2.2 Elastos

using the following api ,we can get dpos vote statistic.

#### Get dpos producer vote statistics

producer's vote statistics of specific height

**GET** /api/1/dpos/producer/(string:`producer\_public\_key`)/(int:`height`)  
**Example request:**

```
GET /api/1/dpos/producer/
↳ 03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800/9999999 HTTP/
↳ 1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": [
    {
      "Producer_public_key":
↳ 03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
      "Vote_type": "Delegate",
      "Txid":
↳ 2638f858000dd118015daa7b1ee23c86e1c0738b5e641265d52f6612c527c672",
      "N": 0,
      "Value": "4999",
      "Outputlock": 0,
      "Address": "EbeD11dua88L9VQtNmJuEez8aVYX294CML",
      "Block_time": 1551800055,
      "Height": 233745
    },
    {
      "Producer_public_key":
↳ 03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
      "Vote_type": "Delegate",
      "Txid":
↳ 82fce02fb0e835102eb37633e513e78c825a534d46146962391866e25bf8005c",
      "N": 0,
      "Value": "9999",
      "Outputlock": 0,
      "Address": "EKmp4dqTSMVW2f2H3x5H2A6vQf7FJV8Frj",
      "Block_time": 1551838308,
      "Height": 234056
    },
    {
      "Producer_public_key":
↳ 03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
      "Vote_type": "Delegate",
      "Txid":
↳ 74f2beb77f15fcc6f36e43533aec254fc17b84edbb7e2b3a625c9ac2867a7435",
      "N": 0,
      "Value": "123",
      "Outputlock": 0,
      "Address": "EWHEoukFBK6AyMjuS9ucxhQ2twS7BKQEv8",
      "Block_time": 1551838618,
      "Height": 234058
    },
    {
      "Producer_public_key":
↳ 03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
      "Vote_type": "Delegate",
      "Txid":
↳ 1a71b89c5e6c1b9baf31884f075f5e3ea159d8edfe5d665a2f5182d0c715ff91",
```

```
        "N":0,
        "Value":"9999",
        "Outputlock":0,
        "Address":"EYZt2Xk76NNFEHiihqkyBhyzuwlabcheXF",
        "Block_time":1551850832,
        "Height":234161
    },
    {
        "Producer_public_key":
        ↪ "03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
        "Vote_type":"Delegate",
        "Txid":
        ↪ "71083736e824c73e4b327a8b958dbbd00aec879768a96963cbdfc5008e1bd393",
        "N":0,
        "Value":"0.01111111",
        "Outputlock":0,
        "Address":"ELbKQrj8DTYn2gU7KBejcNWb4ix4EAGDmy",
        "Block_time":1551851053,
        "Height":234163
    },
    {
        "Producer_public_key":
        ↪ "03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
        "Vote_type":"Delegate",
        "Txid":
        ↪ "fbc81da6db6db5cb09c76fe405cf238353a8e837dda5acacd137ba43a9da1d02",
        "N":0,
        "Value":"9999",
        "Outputlock":0,
        "Address":"ENaaqePNBtrZsNbs9uc35CPqTbvn8oaYL9",
        "Block_time":1551853616,
        "Height":234180
    },
    {
        "Producer_public_key":
        ↪ "03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
        "Vote_type":"Delegate",
        "Txid":
        ↪ "82529a764fd1bbdd4ae39e9bb791d029ecb3010b7db48a7b5d1edfe8be71f36e",
        "N":0,
        "Value":"9999",
        "Outputlock":0,
        "Address":"Ea3XHVqFiAjYA4sSCTQSmrWQafGkbaYxe",
        "Block_time":1551853616,
        "Height":234180
    }
],
"status":200
}
```

### Status Codes

- 200 OK – no error
- 400 Bad Request – bad request
- 404 Not Found – not found request
- 500 Internal Server Error – internal error

- **10001** – process error

## Get dpos voter's statistics

voter's statistics

**GET** /api/1/dpos/address/(string:`address`)

Example request:

```
GET /api/1/dpos/address/ENaaqePNBtrZsNbs9uc35CPqTbvn8oaYL9 HTTP/1.1
Host: localhost
```

Example response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": [
    {
      "Vote_Header": {
        "Value": "192.99891960",
        "Node_num": 3,
        "Txid":
        ↪ "9e840a28faedf6a3d1500bbb2a872fe2f7459d5bc831cdcda2e949437f4a33c5",
        "Height": 268392,
        "Nodes": [
          ↪ "0337e6eaabfab6321d109d48e135190560898d42a1d871bfe8fecc67f4c3992250",
          ↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
          ↪ "03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800"
        ],
        "Block_time": 1555847840,
        "Is_valid": "YES"
      },
      "Vote_Body": [
        {
          "Producer_public_key":
          ↪ "0337e6eaabfab6321d109d48e135190560898d42a1d871bfe8fecc67f4c3992250",
          "Value": "310196.0425229799",
          "Address": "EdhP91WcY2WhyV8N6dCnBxbjAnGd2izrzY",
          "Rank": 3,
          "Ownerpublickey":
          ↪ "0337e6eaabfab6321d109d48e135190560898d42a1d871bfe8fecc67f4c3992250",
          "Nodepublickey": "ff",
          "Nickname": "",
          "Url": "www.helloworld.com",
          "Location": 44,
          "Active": false,
          "Votes": "309844",
          "Netaddress": "1.2.3.4",
          "State": "Activate",
          "Registerheight": 234800,
          "Cancelheight": 0,
          "Inactiveheight": 0,
          "Illegalheight": 0,
        }
      ]
    }
  ]
}
```

```

        "Index":2,
        "Reward":"0",
        "EstRewardPerYear":"46718.30201048"
    },
    {
        "Producer_public_key":
        ↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
        "Value":"311559.3568213799",
        "Address":"Eb8UHkQ2bJ4Ljux4yBePFdxB5Yp77VYHyt",
        "Rank":2,
        "Ownerpublickey":
        ↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
        "Nodepublickey":
        ↪ "03c18abb98f6679064bd44121f3b0a3f25dea1a8b8cb0e1b51dc9c26729f07ddc9",
        "Nickname":"",
        "Url":"www.douniwan.com",
        "Location":263,
        "Active":false,
        "Votes":"311315.30210000",
        "Netaddress":"8.8.8.8",
        "State":"Activate",
        "Registerheight":232288,
        "Cancelheight":0,
        "Inactiveheight":0,
        "Illegalheight":0,
        "Index":1,
        "Reward":"0",
        "EstRewardPerYear":"46909.52589293"
    },
    {
        "Producer_public_key":
        ↪ "03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
        "Value":"357371.9983466",
        "Address":"EX4eQnSSBG2CuhkSvaJHxrwtxS12Lxwy3M",
        "Rank":1,
        "Ownerpublickey":
        ↪ "03330ee8520088b7f578a9afabaef0c034fa31fe1354cb3a14410894f974132800",
        "Nodepublickey":"16fffcff2affd4c7ffdfcfcfecffffff4ff",
        "Nickname":"",
        "Url":"www.elastos.org",
        "Location":86,
        "Active":false,
        "Votes":"357029.00210000",
        "Netaddress":
        ↪ "5JdHqndX1NyyTJnnRnAAKNsoJ9qBwcMYtvRduxHyGGdhzHwxPZo",
        "State":"Activate",
        "Registerheight":233734,
        "Cancelheight":0,
        "Inactiveheight":0,
        "Illegalheight":0,
        "Index":0,
        "Reward":"0",
        "EstRewardPerYear":"53335.38909126"
    }
]
},
{
    "Vote_Header":{

```

```

        "Value": "199.99935700",
        "Node_num": 1,
        "Txid":
↪ "5a0d7958ff9677eef0fa7194db788add8722cf91fdaedc28c12acb677a58f8b3",
        "Height": 266138,
        "Nodes": [
↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd"
        ],
        "Block_time": 1555574076,
        "Is_valid": "NO"
    },
    "Vote_Body": [
        {
            "Producer_public_key":
↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
            "Value": "313289.9935201299",
            "Address": "Eb8UHKQ2bJ4Ljux4yBePFdxB5Yp77VYHyt",
            "Rank": 2,
            "Ownerpublickey":
↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
            "Nodepublickey":
↪ "03c18abb98f6679064bd44121f3b0a3f25dea1a8b8cb0e1b51dc9c26729f07ddc9",
            "Nickname": "",
            "Url": "www.douniwan.com",
            "Location": 263,
            "Active": false,
            "Votes": "311315.30210000",
            "Netaddress": "8.8.8.8",
            "State": "Activate",
            "Registerheight": 232288,
            "Cancelheight": 0,
            "Inactiveheight": 0,
            "Illegalheight": 0,
            "Index": 1,
            "Reward": "0",
            "EstRewardPerYear": "47013.01092436"
        }
    ]
},
    "status": 200
}

```

GET /api/1/dpos/address/(string: `address`) ?pageSize=(int: `pageSize`) &pageNum=(int: `pageNum`)

Example request:

```

GET /api/1/dpos/address/ENaaqePNBtrZsNbs9uc35CPqTbvn8oaYL9?pageSize=1&pageNum=1
↪ HTTP/1.1
Host: localhost

```

Example response:

```

HTTP/1.1 200 OK
Content-Type: application/json

{
    "result": [

```

```
{
  "Vote_Header": {
    "Value": "199.99935700",
    "Node_num": 1,
    "Txid":
    ↪ "5a0d7958ff9677eef0fa7194db788add8722cf91fdaedc28c12acb677a58f8b3",
    "Height": 266138,
    "Nodes": [
    ↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd"
    ],
    "Block_time": 1555574076,
    "Is_valid": "NO"
  },
  "Vote_Body": [
    {
      "Producer_public_key":
      ↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
      "Value": "313289.9935201299",
      "Address": "Eb8UHKQ2bJ4Ljux4yBePFdxB5Yp77VYHyt",
      "Rank": 2,
      "Ownerpublickey":
      ↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
      "Nodepublickey":
      ↪ "03c18abb98f6679064bd44121f3b0a3f25dea1a8b8cb0e1b51dc9c26729f07ddc9",
      "Nickname": "",
      "Url": "www.douniwan.com",
      "Location": 263,
      "Active": false,
      "Votes": "311315.30210000",
      "Netaddress": "8.8.8.8",
      "State": "Activate",
      "Registerheight": 232288,
      "Cancelheight": 0,
      "Inactiveheight": 0,
      "Illegalheight": 0,
      "Index": 1,
      "Reward": "0",
      "EstRewardPerYear": "47013.01092436"
    }
  ]
},
"status": 200
}
```

### Status Codes

- 200 OK – no error
- 400 Bad Request – bad request
- 404 Not Found – not found request
- 500 Internal Server Error – internal error
- **10001** – process error



## Get producers of specific transactions

**POST /api/1/dpos/transaction/producer**

**Example request:**

```
POST /api/1/dpos/transaction/producer HTTP/1.1
Host: localhost

{
  "txid": [
    "59b6b468f75856b7980525ad7a1278e4998959211f57d81755e4248982fd18b8"
  ]
}
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": [
    {
      "Producer": [
        {
          "Ownerpublickey":
↪ "02b28266ff709f4764374c0452e379671e47d66713efb4cce7812b3c9f4a12b2bc",
          "Nodepublickey":
↪ "02b28266ff709f4764374c0452e379671e47d66713efb4cce7812b3c9f4a12b2bc",
          "Nickname": "DHG()",
          "Url": "www.eladhg.com",
          "Location": 86,
          "Active": false,
          "Votes": "263036.79130980",
          "Netaddress": "",
          "State": "Activate",
          "Registerheight": 361360,
          "Cancelheight": 0,
          "Inactiveheight": 0,
          "Illegalheight": 0,
          "Index": 6
        },
        {
          "Ownerpublickey":
↪ "025220c50d7ba72c8f5a78972b4d157339d5a02d3ed8639f01dbae6c14de5585cb",
          "Nodepublickey":
↪ "02c29d33e3caf772f153c5d866ee799d5d4ad38d5efe402d3d5fa980ae5fb5f9a1",
          "Nickname": "greengang",
          "Url": "www.ptcent.com",
          "Location": 86,
          "Active": false,
          "Votes": "239143.67333523",
          "Netaddress": "",
          "State": "Activate",
          "Registerheight": 360878,
          "Cancelheight": 0,
          "Inactiveheight": 0,
          "Illegalheight": 0,
          "Index": 14
        }
      ]
    }
  ]
}
```

```

    },
    {
        "Ownerpublickey":
        ↪ "02f2101d918e95b9df92e58322f7b7d70a134dd0bf441c25758fe8a9a64e712ebd",
        "Nodepublickey":
        ↪ "02f2101d918e95b9df92e58322f7b7d70a134dd0bf441c25758fe8a9a64e712ebd",
        "Nickname": "ZDJ",
        "Url": "www.zhidianjia.com",
        "Location": 86,
        "Active": false,
        "Votes": "103658.61704950",
        "Netaddress": "",
        "State": "Activate",
        "Registerheight": 360618,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 42
    },
    {
        "Ownerpublickey":
        ↪ "0279d982cda37fa7edc1906ec2f4b3d8da5af2c15723e14f368f3684bb4a1e0889",
        "Nodepublickey":
        ↪ "0279d982cda37fa7edc1906ec2f4b3d8da5af2c15723e14f368f3684bb4a1e0889",
        "Nickname": "ELA.SYDNEY",
        "Url": "www.ela.sydney",
        "Location": 61,
        "Active": false,
        "Votes": "46492.26739977",
        "Netaddress": "",
        "State": "Activate",
        "Registerheight": 372790,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 53
    }
],
    "Txid":
    ↪ "59b6b468f75856b7980525ad7a1278e4998959211f57d81755e4248982fd18b8"
}
],
    "status": 200
}

```

## Get dpos super node rank list

rank list of producer

**GET /api/1/dpos/rank/height/(int:`height`)**

**Example request:**

```
GET /api/1/dpos/rank/height/241762 HTTP/1.1
Host: localhost
```

**Example response:**

```

HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": [
    {
      "Producer_public_key":
↪ "03330ee8520088b7f578a9afabae0c034fa31fe1354cb3a14410894f974132800",
      "Value": "357051",
      "Address": "EX4eQnSSBG2CuhkSvaJHxrtxS12Lxwy3M",
      "Rank": 1,
      "Ownerpublickey":
↪ "03330ee8520088b7f578a9afabae0c034fa31fe1354cb3a14410894f974132800",
      "Nodepublickey": "16fffcff2affd4c7fffdcfecffff4ff",
      "Nickname": "",
      "Url": "www.elastos.org",
      "Location": 86,
      "Active": false,
      "Votes": "357029",
      "Netaddress":
↪ "5JdHqndXlNyyTJnnRnAAKNsoJ9qBwcMYtvRduxHyGGdhzHwxPZo",
      "State": "Activate",
      "Registerheight": 233734,
      "Cancelheight": 0,
      "Inactiveheight": 0,
      "Illegalheight": 0,
      "Index": 0,
      "Reward": "",
      "EstRewardPerYear": "66741.53520809"
    },
    {
      "Producer_public_key":
↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
      "Value": "311337.3",
      "Address": "Eb8UHkQ2bJ4Ljux4yBePFdxB5Yp77VYHyt",
      "Rank": 2,
      "Ownerpublickey":
↪ "033c495238ca2b6bb8b7f5ae172363caea9a55cf245ffb3272d078126b1fe3e7cd",
      "Nodepublickey":
↪ "03c18abb98f6679064bd44121f3b0a3f25dea1a8b8cb0e1b51dc9c26729f07ddc9",
      "Nickname": "",
      "Url": "www.douniwan.com",
      "Location": 263,
      "Active": false,
      "Votes": "311315.30000000",
      "Netaddress": "8.8.8.8",
      "State": "Activate",
      "Registerheight": 232288,
      "Cancelheight": 0,
      "Inactiveheight": 0,
      "Illegalheight": 0,
      "Index": 1,
      "Reward": "",
      "EstRewardPerYear": "58196.53038233"
    },
    {
      "Producer_public_key":
↪ "0337e6eaabfab6321d109d48e135190560898d42a1d871bfe8fecc67f4c3992250",

```

```
        "Value": "309866",
        "Address": "EdhP9lWcY2WhyV8N6dCnBxbjAnGd2izrzY",
        "Rank": 3,
        "Ownerpublickey":
↪ "0337e6eaabfab6321d109d48e135190560898d42a1d871bfe8fecc67f4c3992250",
        "Nodepublickey": "ff",
        "Nickname": "",
        "Url": "www.helloworld.com",
        "Location": 44,
        "Active": false,
        "Votes": "309844",
        "Netaddress": "1.2.3.4",
        "State": "Activate",
        "Registerheight": 234800,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 2,
        "Reward": "",
        "EstRewardPerYear": "57921.50854861"
    },
    {
        "Producer_public_key":
↪ "03c78467b91805c95ada2530513069bef1f1f1e7b756861381ab534efa6d94e40a",
        "Value": "218140.55555",
        "Address": "EdfJA92nN9X4T9cKqkvyrUnVuBWfF1Mumm",
        "Rank": 4,
        "Ownerpublickey":
↪ "03c78467b91805c95ada2530513069bef1f1f1e7b756861381ab534efa6d94e40a",
        "Nodepublickey": "ffffff3fffffffffffffffffbff1affffffec",
        "Nickname": "2",
        "Url": "1.4.7.9",
        "Location": 672,
        "Active": false,
        "Votes": "218115.55555000",
        "Netaddress": "1.12.3.4",
        "State": "Activate",
        "Registerheight": 233035,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 3,
        "Reward": "",
        "EstRewardPerYear": "40775.78712439"
    },
    {
        "Producer_public_key":
↪ "021d59a84d2243111e39e8c2af0a5089127d142d52b18c3e4bf744e0c6f8af44e0",
        "Value": "147232",
        "Address": "ESpTiKXgLCYkzxdD7MuCmL9y9fbWrnH591",
        "Rank": 5,
        "Ownerpublickey":
↪ "021d59a84d2243111e39e8c2af0a5089127d142d52b18c3e4bf744e0c6f8af44e0",
        "Nodepublickey": "ffff1230ffff",
        "Nickname": "www.12306.cn",
        "Url": "www.12306.cn",
        "Location": 244,
        "Active": false,
```

```

        "Votes": "147210",
        "Netaddress": "www.12306.cn",
        "State": "Activate",
        "Registerheight": 232899,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 4,
        "Reward": "",
        "EstRewardPerYear": "27521.24965833"
    },
    {
        "Producer_public_key":
↪ "036417ab256114a32bcff38f3e10f0384cfa9238afa41a163017687b3ce1fa17f2",
        "Value": "139881",
        "Address": "ETKVMhhQCjttNAjrbqmkAAYuYshLdaDnjm",
        "Rank": 6,
        "Ownerpublickey":
↪ "036417ab256114a32bcff38f3e10f0384cfa9238afa41a163017687b3ce1fa17f2",
        "Nodepublickey":
↪ "03e5b45b44bb1e2406c55b7dd84b727fad608ba7b7c11a9c5ffbfefee60e427bd1da",
        "Nickname": "3",
        "Url": "225.7.3",
        "Location": 672,
        "Active": false,
        "Votes": "139850",
        "Netaddress": "1.1.1.8",
        "State": "Activate",
        "Registerheight": 233537,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 5,
        "Reward": "",
        "EstRewardPerYear": "26147.16857380"
    },
    {
        "Producer_public_key":
↪ "02e578a6f4295765ad3be4cdac9be15de5aedaf1ae76e86539bb54c397e467cd5e",
        "Value": "125906",
        "Address": "EHdSBUH3nxkcAk9evU4HrENzEm8MHirkkN",
        "Rank": 7,
        "Ownerpublickey":
↪ "02e578a6f4295765ad3be4cdac9be15de5aedaf1ae76e86539bb54c397e467cd5e",
        "Nodepublickey": "ffffeffddffffffffff2ffffffffffbffffffffff",
        "Nickname": "",
        "Url": "www.yilaiyun.com",
        "Location": 244,
        "Active": false,
        "Votes": "125884",
        "Netaddress": "www.yilaiyun.com",
        "State": "Activate",
        "Registerheight": 233680,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 6,
        "Reward": "",

```

```
        "EstRewardPerYear": "23534.90042574"
    },
    {
        "Producer_public_key":
↪ "02ddd829f3495a2ce76d908c3e6e7d4505e12c4718c5af4b4cbff309cfd3aeab88",
        "Value": "108968",
        "Address": "EevRwpP5GYz5s8fuMboUnhsAQVVKbyJSph",
        "Rank": 8,
        "Ownerpublickey":
↪ "02ddd829f3495a2ce76d908c3e6e7d4505e12c4718c5af4b4cbff309cfd3aeab88",
        "Nodepublickey": "ffffffffffffffffffffffffffffffffffffffff",
        "Nickname": "",
        "Url": "www.bightbc.com",
        "Location": 86,
        "Active": false,
        "Votes": "108946",
        "Netaddress": "EfSkh3e9uaVN5iMdU7oUPYPmyMxrMsrDut",
        "State": "Activate",
        "Registerheight": 234283,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 7,
        "Reward": "",
        "EstRewardPerYear": "20368.77535297"
    },
    {
        "Producer_public_key":
↪ "03c7b1f234d5d16472fcdd24d121e4cd224e1074f558a3eb1a6a146aa91dcf9c0d",
        "Value": "108186",
        "Address": "EQR8f9y2Sd5gFG3LWEeC57qXc2yEnDhgm2",
        "Rank": 9,
        "Ownerpublickey":
↪ "03c7b1f234d5d16472fcdd24d121e4cd224e1074f558a3eb1a6a146aa91dcf9c0d",
        "Nodepublickey": "350181ff",
        "Nickname": "",
        "Url": "1.8.5.8",
        "Location": 86,
        "Active": false,
        "Votes": "108164",
        "Netaddress": "HTTP//HUANGBINGBING.COM",
        "State": "Activate",
        "Registerheight": 233676,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 8,
        "Reward": "",
        "EstRewardPerYear": "20222.60049131"
    },
    {
        "Producer_public_key":
↪ "03b688e0124580de452c400e01c628a690527e8742b6fa4645026dbc70155d7c8b",
        "Value": "107863",
        "Address": "EQHz2jPpgW8trYD4ejYgfi4sE4JSTf7m9N",
        "Rank": 10,
        "Ownerpublickey":
↪ "03b688e0124580de452c400e01c628a690527e8742b6fa4645026dbc70155d7c8b",
```

```

        "Nodepublickey": "ffffffffffffff",
        "Nickname": "",
        "Url": "1.4.7.9",
        "Location": 672,
        "Active": false,
        "Votes": "107841",
        "Netaddress": "www.vogue.com",
        "State": "Activate",
        "Registerheight": 233684,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 9,
        "Reward": "",
        "EstRewardPerYear": "20162.22391801"
    },
    {
        "Producer_public_key":
↪ "03bc2c2b75009a3a551e98bf206730501ecdf46e71b0405840ff1d5750094bd4ff",
        "Value": "105047",
        "Address": "ENxPtTR7Jn1kxhdTXedF28s3iz6djYfRaS",
        "Rank": 11,
        "Ownerpublickey":
↪ "03bc2c2b75009a3a551e98bf206730501ecdf46e71b0405840ff1d5750094bd4ff",
        "Nodepublickey": "ffffffffd29fffffffffa8fa8ffffdffa",
        "Nickname": "",
        "Url": "www.baidu.com",
        "Location": 376,
        "Active": false,
        "Votes": "105025",
        "Netaddress": "",
        "State": "Activate",
        "Registerheight": 232892,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 10,
        "Reward": "",
        "EstRewardPerYear": "19635.84487651"
    },
    {
        "Producer_public_key":
↪ "0230d383546d154d67cfafc6091c0736c0b26a8c7c16e879ef8011d91df976f1fb",
        "Value": "104256",
        "Address": "EMyStHAvvy1VLsLyow8uMRW4kUYLeGXF17",
        "Rank": 12,
        "Ownerpublickey":
↪ "0230d383546d154d67cfafc6091c0736c0b26a8c7c16e879ef8011d91df976f1fb",
        "Nodepublickey": "fffffffffffffffffffbfcffffff",
        "Nickname": "",
        "Url": "www.ela.com",
        "Location": 86,
        "Active": false,
        "Votes": "104234",
        "Netaddress": "www.ela.com",
        "State": "Activate",
        "Registerheight": 233612,
        "Cancelheight": 0,

```

```
        "Inactiveheight":0,
        "Illegalheight":0,
        "Index":11,
        "Reward":"","
        "EstRewardPerYear":"19487.98769547"
    },
    {
        "Producer_public_key":
↪ "028fb1a85f6a30a516b9e3516d03267403a3af0c96d73b0284ca0c1165318531ff",
        "Value":"104066",
        "Address":"ESqyiCizgyNNLKdVQhhtxtR5v5eCnkk3Qh",
        "Rank":13,
        "Ownerpublickey":
↪ "028fb1a85f6a30a516b9e3516d03267403a3af0c96d73b0284ca0c1165318531ff",
        "Nodepublickey":"ffff9262",
        "Nickname":"","
        "Url":"www.7234.cn",
        "Location":86,
        "Active":false,
        "Votes":"101045",
        "Netaddress":"www.7234.cn",
        "State":"Activate",
        "Registerheight":235373,
        "Cancelheight":0,
        "Inactiveheight":0,
        "Illegalheight":0,
        "Index":12,
        "Reward":"","
        "EstRewardPerYear":"19452.47206412"
    },
    {
        "Producer_public_key":
↪ "02db921cfb4bf504c83038212aafe52cc1d0a07eb71a399a0d2162fe0cd4d47720",
        "Value":"99051",
        "Address":"ERbFZNj5bukyRQe5G4gdXnbDqVyxcTNeFT",
        "Rank":14,
        "Ownerpublickey":
↪ "02db921cfb4bf504c83038212aafe52cc1d0a07eb71a399a0d2162fe0cd4d47720",
        "Nodepublickey":"1234567890ffdfcccccccccccccccccccc",
        "Nickname":"ios_us01",
        "Url":"www.ios_us01.com",
        "Location":684,
        "Active":false,
        "Votes":"99029",
        "Netaddress":"192.168.1.22:25339",
        "State":"Activate",
        "Registerheight":233672,
        "Cancelheight":0,
        "Inactiveheight":0,
        "Illegalheight":0,
        "Index":13,
        "Reward":"","
        "EstRewardPerYear":"18515.04632082"
    },
    {
        "Producer_public_key":
↪ "033fb33f39276b93d3474cf7999887bed16c3211ee7f904399eeead4c480d7d592",
        "Value":"98859",
```



```

        "Address": "EXQZMbKMcmVmwv25AYbrzWPhFRSfqKcfKM",
        "Rank": 15,
        "Ownerpublickey":
↪ "033fb33f39276b93d3474cf7999887bed16c3211ee7f904399eeead4c480d7d592",
        "Nodepublickey": "19fffffe9dffffafffffffffffffbcaffffffffff",
        "Nickname": "-",
        "Url": "www.pingcj.com",
        "Location": 86,
        "Active": false,
        "Votes": "98837",
        "Netaddress": "Ed846C7M9Ax8x1qaftjSR53RZmfSvp8CpN",
        "State": "Activate",
        "Registerheight": 235077,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 14,
        "Reward": "",
        "EstRewardPerYear": "18479.15684072"
    },
    {
        "Producer_public_key":
↪ "030e4b487daf8e14dbd7023e3f6f475d00145a1f1cc87be4b8d58a4291ab0a3b1a",
        "Value": "25974",
        "Address": "EVFSvWoxiyvGLka4V6Wt394LEoUu8mDhk4",
        "Rank": 16,
        "Ownerpublickey":
↪ "030e4b487daf8e14dbd7023e3f6f475d00145a1f1cc87be4b8d58a4291ab0a3b1a",
        "Nodepublickey":
↪ "0241db65a4da2cdcb648a881ced2a5ed64646ecc3a2cc9a75cec2853de61dbed1",
        "Nickname": "ELASuperNode",
        "Url": "www.ELASuperNode.com",
        "Location": 86,
        "Active": false,
        "Votes": "25952",
        "Netaddress": "54.64.220.165",
        "State": "Activate",
        "Registerheight": 237877,
        "Cancelheight": 0,
        "Inactiveheight": 0,
        "Illegalheight": 0,
        "Index": 15,
        "Reward": "",
        "EstRewardPerYear": "4855.17373007"
    },
    {
        "Producer_public_key":
↪ "0210694f4ab518037bc2dcc3f5e1a1030e8a36821ab019c10f29d4a894b8034498",
        "Value": "55",
        "Address": "ESwKtu2aYSHHfdWUPdg4b3PtibfaEcJEvT",
        "Rank": 17,
        "Ownerpublickey":
↪ "0210694f4ab518037bc2dcc3f5e1a1030e8a36821ab019c10f29d4a894b8034498",
        "Nodepublickey":
↪ "024babfecea0300971a6f0ad13b27519faff0ef595faf9490dc1f5f4d6e6d7f3fb",
        "Nickname": "adr_us01",
        "Url": "www.adr_us01_9.com",
        "Location": 93,

```

```
        "Active":false,
        "Votes":"33",
        "Netaddress":"node-regtest-509.eadd.co:26339",
        "State":"Activate",
        "Registerheight":238437,
        "Cancelheight":0,
        "Inactiveheight":0,
        "Illegalheight":0,
        "Index":16,
        "Reward":"","
        "EstRewardPerYear":"10.28084065"
    },
    {
        "Producer_public_key":
↪ "0210cd8407f70b26dbb77039cdce61a526168d04b83885844294038759f57c525c",
        "Value":"20",
        "Address":"EdUn345wvDWj3knsYsquEkZsqhRRXYSdnK",
        "Rank":18,
        "Ownerpublickey":
↪ "0210cd8407f70b26dbb77039cdce61a526168d04b83885844294038759f57c525c",
        "Nodepublickey":
↪ "0210cd8407f70b26dbb77039cdce61a526168d04b83885844294038759f57c525c",
        "Nickname":"ios_us05",
        "Url":"www.ios_us05.com",
        "Location":244,
        "Active":false,
        "Votes":"20",
        "Netaddress":"172.31.40.70:25339",
        "State":"Activate",
        "Registerheight":244762,
        "Cancelheight":0,
        "Inactiveheight":0,
        "Illegalheight":0,
        "Index":17,
        "Reward":"","
        "EstRewardPerYear":"3.73848751"
    },
    {
        "Producer_public_key":
↪ "03325ce52add7a799a61a305973b3d84aa4f622358ab3eb9f010f1175e2dab6b13",
        "Value":"20",
        "Address":"Eb9mkpHC787UGqeqNvXs7j4Thh6fX6rF9D",
        "Rank":19,
        "Ownerpublickey":
↪ "03325ce52add7a799a61a305973b3d84aa4f622358ab3eb9f010f1175e2dab6b13",
        "Nodepublickey":
↪ "03325ce52add7a799a61a305973b3d84aa4f622358ab3eb9f010f1175e2dab6b13",
        "Nickname":"ios_us06",
        "Url":"www.ios_us06.com",
        "Location":54,
        "Active":false,
        "Votes":"20",
        "Netaddress":"172.31.45.130:25339",
        "State":"Activate",
        "Registerheight":244768,
        "Cancelheight":0,
        "Inactiveheight":0,
        "Illegalheight":0,
```

```

        "Index":18,
        "Reward":"","
        "EstRewardPerYear":"3.73848751"
    }
],
    "status":200
}

```

rank list of producer according to node state

**GET** /api/1/dpos/rank/height/(int:`height`)?state=(string:`state`)

**Example request:**

```

GET /api/1/dpos/rank/height/241762?state=illegal HTTP/1.1
Host: localhost

```

**Example response:**

```

HTTP/1.1 200 OK
Content-Type: application/json

{
    "result": [
        {
            "Producer_public_key":
↪ "02f59c9e337d4102d49082fe641b2e8aac5b229583bfa27cfba87790ac0113518b",
            "Value": "1239723.59908182",
            "Address": "ESq8nLmYuYaNYqJh5HeDy4ywx1jCRfeKe1",
            "Rank": 1,
            "Ownerpublickey":
↪ "02f59c9e337d4102d49082fe641b2e8aac5b229583bfa27cfba87790ac0113518b",
            "Nodepublickey":
↪ "03a31e03e7b0e38fdf002a3d8954f1df357b638c63040f84955ee28345ce57e886",
            "Nickname": "The Houston Supernode",
            "Url": "https://twitter.com/elastos_houston/",
            "Location": 1001,
            "Active": 0,
            "Votes": "506625.45634569",
            "Netaddress": "",
            "State": "Illegal",
            "Registerheight": 360805,
            "Cancelheight": 0,
            "Inactiveheight": 408476,
            "Illegalheight": 409882,
            "Index": 81,
            "Reward": "213.93704808",
            "EstRewardPerYear": "8043.77456689"
        }
    ],
    "status": 200
}

```

## Get dpos total vote of specific height

total vote of specific height

**GET** /api/1/dpos/vote/height/(int:`height`)

Example request:

```
GET /api/1/dpos/vote/height/241762 HTTP/1.1
Host: localhost
```

Example response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": 2468878.85555,
  "status": 200
}
```

## Get did information

check did key's value

**GET** /api/1/did/(string:`did`)/(string:`key`)

Example request:

```
GET /api/1/did/iYnguKQcpeVyrpN6edamSkky1brvQvCW6/clark HTTP/1.1
Host: localhost
```

Example response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": {
    "Did": "iYnguKQcpeVyrpN6edamSkky1brvQvCW6",
    "Did_status": 1,
    "Public_key":
    ↪ "0354E3AE040052CD61A38DF72E189EDCBBB8BA81599DED25019E286F2E013A3726",
    "Property_key": "clark",
    "Property_value": "hello, world",
    "Txid": "c39dd1463678146467ea1b43d8905e75ac34e727a4c36824410089a6682b43c8
    ↪ ",
    "Block_time": 1543902641,
    "Height": 66480
  },
  "status": 200
}
```

## Get address transaction history

check history of Address

**GET** /api/1/history/(string:`addr`)

Example request:

```
GET /api/1/history/EQoascGFzdQ1rLKfNEavJKTm3hMRhBaXBT HTTP/1.1
Host: localhost
```

**Example response:**

```

HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": {
    "History": [
      {
        "Txid":
↪ "71eedccf5a45acc17036294b7a1e70c5756dd4c72032cc76d5089c522509096b",
        "Type": "income",
        "Value": 24,
        "CreateTime": 1544101570,
        "Height": 175548,
        "Fee": 100,
        "Inputs": [
          "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ],
        "Outputs": [
          "EQoascGFzdQ1rLKfNEavJKTm3hMRhBaXBT",
          "EQoascGFzdQ1rLKfNEavJKTm3hMRhBaXBT",
          "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ]
      }
    ],
    "TotalNum": 1
  },
  "status": 200
}

```

**GET /api/1/history/(string: `addr`) ?pageSize=(int: `pageSize`) &pageNum=(int: `pageNum`)**  
**Example request:**

```

GET /api/1/history/EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA?pageSize=4&pageNum=1 HTTP/1.
↪ 1
Host: localhost

```

**Example response:**

```

HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": {
    "History": [
      {
        "Txid":
↪ "58e11ffffafad7456835dc3eff8b28ec0d0b2aa39855d79bfb3e5c52b4cc308f",
        "Type": "income",
        "Value": 8990000,
        "CreateTime": 1538114443,
        "Height": 38666,
        "Fee": 10000,
        "Inputs": [
          "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ],
        "Outputs": [
          "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ]
      }
    ]
  }
}

```

```
    ],
    {
        "Txid":
        ↪ "b04714ff7076e18efeb9963f99af2f10bd870d39a1774e0821b71640d6b14e52",
        "Type": "spend",
        "Value": 100,
        "CreateTime": 1538115578,
        "Height": 38667,
        "Fee": 100,
        "Inputs": [
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ],
        "Outputs": [
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA",
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ]
    },
    {
        "Txid":
        ↪ "49eb7f1335d89a9c43446613850d1b763a5f84cad0d1d039ab5726125d2eab47",
        "Type": "spend",
        "Value": 100,
        "CreateTime": 1538203592,
        "Height": 39046,
        "Fee": 100,
        "Inputs": [
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA",
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ],
        "Outputs": [
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA",
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ]
    },
    {
        "Txid":
        ↪ "d7d8b34944790cf2e1fa47851612ddb4eb7e3f5bd75a4af2227d3786b6f4c122",
        "Type": "spend",
        "Value": 100,
        "CreateTime": 1539238227,
        "Height": 44755,
        "Fee": 100,
        "Inputs": [
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA",
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ],
        "Outputs": [
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA",
            "EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA"
        ]
    }
    ],
    "TotalNum": 55295
},
"status": 200
}
```

Only show the history count of specific address

**GET** /api/1/history/(string:`addr`)?showCount=true

**Example request:**

```
GET /api/1/history/EQoascGFzdQ1rLKfNEavJKTm3hMRhBaXBT HTTP/1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": {
    "History": [
    ],
    "TotalNum": 1
  },
  "status": 200
}
```

get transaction history with your desired order

**GET** /api/1/history/(string:`addr`)?order=desc

**Example request:**

```
GET /api/1/history/EM2wjL3jgNHDZtR1e266V269n5WH6sYbCf HTTP/1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": {
    "History": [
      {
        "Address": "EM2wjL3jgNHDZtR1e266V269n5WH6sYbCf",
        "Txid":
        ↪ "a962022bc4a295ab4683ab4079f03d1e5bdb9bdfd5dac9c4eea003d18af16fbd",
        "Type": "spend",
        "Value": 50000000000,
        "CreateTime": 1561557063,
        "Height": 409201,
        "Fee": 10000,
        "Inputs": [
          "EM2wjL3jgNHDZtR1e266V269n5WH6sYbCf"
        ],
        "Outputs": [
          "EUX2LMtHBV1Ni7nAXPhBdnudrUvddU2Ecv"
        ],
        "TxType": "TransferAsset",
        "Memo": ""
      },
      {
        "Address": "EM2wjL3jgNHDZtR1e266V269n5WH6sYbCf",
        "Txid":
        ↪ "920954e00bd1e1d3f674703c9e31988940c4c326382e13a22323d6e5ea3c4c6c",
```

```
        "Type": "income",
        "Value": 50000000000,
        "CreateTime": 1533090125,
        "Height": 159257,
        "Fee": 0,
        "Inputs": [
            "8cTn9JAGXfqGgu8kVUaPBJXrhSjoJR9ymG"
        ],
        "Outputs": [
            "EM2wjL3jgNHDZtR1e266V269n5WH6sYbCf"
        ],
        "TxType": "TransferAsset",
        "Memo": ""
    },
    ],
    "TotalNum": 2
},
"status": 200
}
```

### Get spending address public key

**GET** /api/1/pubkey/(string:`addr`)

If we can get the public key of this address. Example request:

```
GET /api/1/pubkey/ELbKQrj8DTYn2gU7KBejcNWb4ix4EAGDmy HTTP/1.1
Host: localhost
```

Example response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
    "result": "02eda087df202cfc8904ec8f933bf20920251b3964b117c984a576c6fd9047073c
↪",
    "status": 200
}
```

If we can not get the public key of this address. Example request:

```
GET /api/1/pubkey/EbxU18T3M9ufnrkRY7NLt6sKyckDW4VAsA HTTP/1.1
Host: localhost
```

Example response:

```
HTTP/1.1 200 OK
Content-Type: application/json

{
    "result": "Can not find pubkey of this address, please using this address_
↪send a transaction first",
    "status": 200
}
```



## checking syncing status

**GET /api/1/history/checking/sync**

Current Synced height

**Example request:**

```
GET /api/1/history/checking/sync HTTP/1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": 100000,
  "status": 200
}
```

## Get cmc price

**GET /api/1/cmc?limit=3**

Current Synced height

**Example request:**

```
GET /api/1/history/checking/sync HTTP/1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": [
    {
      "24h_volume_btc": "1329678.25368338",
      "24h_volume_cny": "107234082168.77766418",
      "24h_volume_usd": "15185091926.81439972",
      "available_supply": "17871650.00000000",
      "id": "1",
      "last_updated": "2019-08-12T03:58:32.000Z",
      "market_cap_btc": "17871650.00000000",
      "market_cap_cny": "1441288506661.53393555",
      "market_cap_usd": "204096477762.26141357",
      "max_supply": "21000000.00000000",
      "name": "Bitcoin",
      "num_market_pairs": "7803",
      "percent_change_1h": "-0.11178000",
      "percent_change_24h": "0.26175900",
      "percent_change_7d": "0.04060490",
      "platform_symbol": "",
      "platform_token_address": "",
      "price_btc": "1.00000000",
    }
  ]
}
```

```
    "price_cny": "80646.63904349",
    "price_usd": "11420.12504510",
    "rank": "1",
    "symbol": "BTC",
    "total_supply": "17871650.00000000"
  },
  {
    "24h_volume_btc": "542188.65987348",
    "24h_volume_cny": "43725693146.28816223",
    "24h_volume_usd": "6191862293.79028988",
    "available_supply": "107284875.62400000",
    "id": "1027",
    "last_updated": "2019-08-12T03:59:22.000Z",
    "market_cap_btc": "2007866.35769792",
    "market_cap_cny": "161927673396.82467651",
    "market_cap_usd": "22930084878.75967789",
    "max_supply": "0.00000000",
    "name": "Ethereum",
    "num_market_pairs": "5529",
    "percent_change_1h": "0.06530480",
    "percent_change_24h": "1.50229000",
    "percent_change_7d": "-6.14715000",
    "platform_symbol": "",
    "platform_token_address": "",
    "price_btc": "0.01871528",
    "price_cny": "1509.32433351",
    "price_usd": "213.73082408",
    "rank": "2",
    "symbol": "ETH",
    "total_supply": "107284875.62400000"
  },
  {
    "24h_volume_btc": "73729.05660548",
    "24h_volume_cny": "5946000615.07916451",
    "24h_volume_usd": "841995045.89186597",
    "available_supply": "42872646068.00000000",
    "id": "52",
    "last_updated": "2019-08-12T03:59:05.000Z",
    "market_cap_btc": "1133452.08639632",
    "market_cap_cny": "91409101284.69120789",
    "market_cap_usd": "12944164559.27545929",
    "max_supply": "10000000000.00000000",
    "name": "XRP",
    "num_market_pairs": "439",
    "percent_change_1h": "-0.00627041",
    "percent_change_24h": "0.90267900",
    "percent_change_7d": "-6.21009000",
    "platform_symbol": "",
    "platform_token_address": "",
    "price_btc": "0.00002644",
    "price_cny": "2.13210776",
    "price_usd": "0.30192129",
    "rank": "3",
    "symbol": "XRP",
    "total_supply": "99991387607.00000000"
  }
],
"status": 200
```

```
}
```

## 2.2.3 Ethereum

using the following api ,we can get eth statistic.

### Get transaction history

transaction history of specific address

**POST /api/1/eth/history**

**Example request:**

```
POST /api/1/eth/history HTTP/1.1
Host: localhost

{
    "id": "19",
    "account": "0x4ce978642500aa7b056A0329bfA8622f468211e6"
}
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
    "message": "OK",
    "result": [
        {
            "blockHash":
↪ "0x6be299e7ad6a8c2f2e958e30f3804f9732c744ce5563fe26917b621de78c9d2c",
            "blockNumber": "7000510",
            "from": "0x3f5ce5fbfe3e9af3971dd833d26ba9b5c936f0be",
            "gas": "21000",
            "to": "0xd68c7a32cdb5b1f8a9c540e7781fa370145af27c",
            "gasPrice": "40000000000",
            "hash":
↪ "0x6b3ba1970bb2e5148866868f30b522aa0d64940a6f10f95a9a99f5e2c885fc2f",
            "input": "0x",
            "nonce": "2858612",
            "transactionIndex": "18",
            "value": "4851391800000000000",
            "gasUsed": "21000",
            "cumulativeGasUsed": "537088",
            "isError": "0",
            "contractAddress": "0x0000000000000000000000000000000000000000",
            "timeStamp": "1546474873",
            "confirmations": "11"
        },
        {
            "blockHash":
↪ "0xba0afb0c3cd2049026b9b75216fc4ac16672d8bcce67954e75e536ebffa6a901",
            "blockNumber": "7000517",
            "from": "0xd68c7a32cdb5b1f8a9c540e7781fa370145af27c",
```

```
        "gas": "50000",
        "to": "0xf7793d27a1b76cdf14db7c83e82c772cf7c92910",
        "gasPrice": "2000000000",
        "hash":
↪ "0x59865d793c58704ea09e23f351b6ee1e327c8c52ecda3f91dcc06b4a003e32d4",
        "input": "0x",
        "nonce": "0",
        "transactionIndex": "136",
        "value": "485039180000000000",
        "gasUsed": "21000",
        "cumulativeGasUsed": "7878416",
        "isError": "0",
        "contractAddress": "0x0000000000000000000000000000000000000000",
        "timeStamp": "1546474993",
        "confirmations": "4"
    }
],
    "status": 1
}
```

**GET /api/1/eth/history?address=(string:`addr`)**

get eth transaction history

**Example request:**

```
GET /api/1/eth/history?address=0x4ce978642500aa7b056A0329bfA8622f468211e6_
↪ HTTP/1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
    "message": "OK",
    "result": [
        {
            "blockHash":
↪ "0x6be299e7ad6a8c2f2e958e30f3804f9732c744ce5563fe26917b621de78c9d2c",
            "blockNumber": "7000510",
            "from": "0x3f5ce5fbfe3e9af3971dd833d26ba9b5c936f0be",
            "gas": "21000",
            "to": "0xd68c7a32cdb5b1f8a9c540e7781fa370145af27c",
            "gasPrice": "4000000000",
            "hash":
↪ "0x6b3ba1970bb2e5148866868f30b522aa0d64940a6f10f95a9a99f5e2c885fc2f",
            "input": "0x",
            "nonce": "2858612",
            "transactionIndex": "18",
            "value": "485139180000000000",
            "gasUsed": "21000",
            "cumulativeGasUsed": "537088",
            "isError": "0",
            "contractAddress": "0x0000000000000000000000000000000000000000",
            "timeStamp": "1546474873",
            "confirmations": "11"
        },
    ],
}
```

```

{
  "blockHash":
  ↪ "0xba0afb0c3cd2049026b9b75216fc4ac16672d8bcce67954e75e536ebffa6a901",
  "blockNumber": "7000517",
  "from": "0xd68c7a32cdb5b1f8a9c540e7781fa370145af27c",
  "gas": "50000",
  "to": "0xf7793d27a1b76cdf14db7c83e82c772cf7c92910",
  "gasPrice": "2000000000",
  "hash":
  ↪ "0x59865d793c58704ea09e23f351b6ee1e327c8c52ecda3f91dcc06b4a003e32d4",
  "input": "0x",
  "nonce": "0",
  "transactionIndex": "136",
  "value": "4850391800000000000",
  "gasUsed": "21000",
  "cumulativeGasUsed": "7878416",
  "isError": "0",
  "contractAddress": "0x0000000000000000000000000000000000000000",
  "timeStamp": "1546474993",
  "confirmations": "4"
}
],
"status": 1
}

```

## Wrap ethereum rpc

you can throw request to this api as long as it compatible with ethereum rpc request param

**POST /api/1/eth/wrap**

**Example request:**

```

POST /api/1/eth/wrap HTTP/1.1
Host: localhost

{
  "jsonrpc": "2.0",
  "method": "eth_getBalance",
  "params": [
    "0xD109D62aD5bfAcC8869e35B4c0261dE5976d3b69",
    "latest"
  ],
  "id": 5
}

```

**Example response:**

```

HTTP/1.1 200 OK
Content-Type: application/json

{
  "id": 1,
  "jsonrpc": "2.0",
  "result": "0x0234c8a3397aab58" // 158972490234375000
}

```

**Example request:**

```
POST /api/1/eth/wrap HTTP/1.1
Host: localhost

{
  "jsonrpc": "2.0",
  "method": "eth_sendRawTransaction",
  "params": [
    ↪ "0xd46e8dd67c5d32be8d46e8dd67c5d32be8058bb8eb970870f072445675058bb8eb970870f072445675.",
    ↪ .."
  ],
  "id": 1
}
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "id": 1,
  "jsonrpc": "2.0",
  "result": "0xe670ec64341771606e55d6b4ca35a1a6b75ee3d5145a99d05921026d1527331"
}
```

## Get token balance

**GET /api/1/eth/token/balance**

get token balance

**Example request:**

```
GET /api/1/eth/token/balance?
↪ address=0x289B44672d8499A51130d65d2087A151c4e45966&
↪ contractaddress=0xa8cac329f783edac931815c5466e283d48c9d7f7 HTTP/1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "result": "0",
  "status": "1",
  "message": "OK"
}
```

## Get supported erc20 Currencies

**GET /api/1/eth/currencies**

**Example request:**

```
GET /api/1/eth/currencies HTTP/1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

[
  {
    "code": "1ST",
    "colors": [
      "#f15a22",
      "#f15a22"
    ],
    "contract_address": "0xAf30D2a7E90d7DC361c8C4585e9BB7D2F6f15bc7",
    "contract_info": {
    },
    "currency_id": "ethereum-
↪mainnet:0xAf30D2a7E90d7DC361c8C4585e9BB7D2F6f15bc7",
    "is_supported": true,
    "name": "FirstBlood",
    "sale_address": "",
    "scale": 18,
    "type": "erc20"
  }
]
```

## Get erc20 transaction logs

**GET /api/1/eth/getLogs**

get erc20 transaction history

**Example request:**

```
GET /api/1/eth/getLogs?fromBlock=0&toBlock=latest&
↪topic0=0x89d24a6b4ccb1b6faa2625fe562bdd9a23260359&
↪topic1=0x000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1&
↪topic1_2_opr=or&
↪topic2=0x0000000000000000000000000829bd824b016326a401d083b33d092293333a830_
↪HTTP/1.1
Host: localhost
```

**Example response:**

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "message": "OK",
  "result": [
    {
      "address": "0xc5bbae50781be1669306b9e001eff57a2957b09d",
      "blockNumber": "0x86ad07",
      "data":
↪"0x0000000000000000000000000000000000000000000000000000000000000005bfff0e0",
```

```
        "logIndex": "0x1e",
        "topics": [
↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
↪ "0x00000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1",
↪ "0x0000000000000000000000000000000006cc5f688a315f3dc28a7781717a9a798a59fda7b"
        ],
        "transactionHash":
↪ "0xb45dff89f9a59fa0e6f91faff6c20fc57e0520706a4bb966c42e9466074f77db",
        "transactionIndex": "0x23",
        "gasUsed": "0x920b",
        "gasPrice": "0x826299e00",
        "timeStamp": "0x5db684cd"
    },
    {
        "address": "0xc5bbae50781be1669306b9e001eff57a2957b09d",
        "blockNumber": "0x86b872",
        "data":
↪ "0x0000000000000000000000000000000000000000000000000000000000000005b3b1a40",
        "logIndex": "0x3c",
        "topics": [
↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
↪ "0x00000000000000000000000000000000000505387014d6518d5daff534a14d91650f32c9fd6",
↪ "0x00000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1"
        ],
        "transactionHash":
↪ "0xc822deb160b99471d8aa140409a1961cbc57750b50c14da6dd646b805689c714",
        "transactionIndex": "0x51",
        "gasUsed": "0x920b",
        "gasPrice": "0x2cb417800",
        "timeStamp": "0x5db71f7d"
    },
    {
        "address": "0xbf2179859fc6d5bee9bf9158632dc51678a4100e",
        "blockNumber": "0x86c3e1",
        "data":
↪ "0x000000000000000000000000000000000000000000000000000000000000b8bf8037a463400000",
        "logIndex": "0x25",
        "topics": [
↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
↪ "0x00000000000000000000000000000000000505387014d6518d5daff534a14d91650f32c9fd6",
↪ "0x00000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1"
        ],
        "transactionHash":
↪ "0x108bcde5305d647340a9f909640b1933bfd7abcf3e9bc6699bd0fd7fb91f8a17",
        "transactionIndex": "0x33",
        "gasUsed": "0x92c8",
        "gasPrice": "0x306dc4200",
        "timeStamp": "0x5db7c0a2"
    },
}
```





```
        "transactionIndex": "0x82",
        "gasUsed": "0x9308",
        "gasPrice": "0x2cb417800",
        "timeStamp": "0x5dbb093b"
    },
    {
        "address": "0xc5bbae50781be1669306b9e001eff57a2957b09d",
        "blockNumber": "0x870172",
        "data":
↪ "0x0000000000000000000000000000000000000000000000000000000000000004a109240",
        "logIndex": "0x13",
        "topics": [
↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
↪ "0x00000000000000000000000000000000000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1",
↪ "0x000000000000000000000000000000000000000000000000000000000000006cc5f688a315f3dc28a7781717a9a798a59fda7b"
        ],
        "transactionHash":
↪ "0xb589a8efel16d419d925ee5f3a9a20576582700bac36a634d0959f70ee50107f",
        "transactionIndex": "0x16",
        "gasUsed": "0x920b",
        "gasPrice": "0x826299e00",
        "timeStamp": "0x5dbb17fa"
    },
    {
        "address": "0xbf2179859fc6d5bee9bf9158632dc51678a4100e",
        "blockNumber": "0x870172",
        "data":
↪ "0x0000000000000000000000000000000000000000000000000000000000000020545d9ec5139580000",
        "logIndex": "0x14",
        "topics": [
↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
↪ "0x00000000000000000000000000000000000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1",
↪ "0x000000000000000000000000000000000000000000000000000000000000006cc5f688a315f3dc28a7781717a9a798a59fda7b"
        ],
        "transactionHash":
↪ "0x3640df4f46f2182e0df53dc7f23406114cd5bbb105a6d66c6c84a24240da53eb",
        "transactionIndex": "0x17",
        "gasUsed": "0x9308",
        "gasPrice": "0x826299e00",
        "timeStamp": "0x5dbb17fa"
    },
    {
        "address": "0xb98d4c97425d9908e66e53a6fdf673acca0be986",
        "blockNumber": "0x8720c0",
        "data":
↪ "0x0000000000000000000000000000000000000000000000000000000000000019a35386850d4dc0000",
        "logIndex": "0x44",
        "topics": [
↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
↪ "0x00000000000000000000000000000000000000000000000000000000000000505387014d6518d5daff534a14d91650f32c9fd6",
```



```
        "topics": [
            ↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
            ↪ "0x00000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1",
            ↪ "0x0000000000000000000000000000000006cc5f688a315f3dc28a7781717a9a798a59fda7b"
        ],
        "transactionHash":
            ↪ "0x96ad9a34a0b6fd4eebe6e01754390306f3dad73fb844552b176fb20dcedb7867",
        "transactionIndex": "0x2f",
        "gasUsed": "0x923d",
        "gasPrice": "0x826299e00",
        "timeStamp": "0x5dbdd52a"
    },
    {
        "address": "0xbf2179859fc6d5bee9bf9158632dc51678a4100e",
        "blockNumber": "0x87398f",
        "data":
            ↪ "0x00000000000000000000000000000000000000000000000000000000250addaa67bc1b40000",
        "logIndex": "0x11",
        "topics": [
            ↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
            ↪ "0x000000000000000000000000000000000505387014d6518d5daff534a14d91650f32c9fd6",
            ↪ "0x00000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1"
        ],
        "transactionHash":
            ↪ "0x345306d82d306ff45508c7cfff9d4eaf112220cc3d3279a85be828d1ccb656aa",
        "transactionIndex": "0x15",
        "gasUsed": "0x9308",
        "gasPrice": "0x28fa6ae00",
        "timeStamp": "0x5dbe2237"
    },
    {
        "address": "0xbf2179859fc6d5bee9bf9158632dc51678a4100e",
        "blockNumber": "0x8739fb",
        "data":
            ↪ "0x00000000000000000000000000000000000000000000000000000000250addaa67bc1b40000",
        "logIndex": "0x3a",
        "topics": [
            ↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
            ↪ "0x00000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1",
            ↪ "0x0000000000000000000000000000000006cc5f688a315f3dc28a7781717a9a798a59fda7b"
        ],
        "transactionHash":
            ↪ "0xdfe5442da981a755231bcb5472cbe93987b94c8feb0995d96385c54d3d0a0539",
        "transactionIndex": "0x59",
        "gasUsed": "0x9308",
        "gasPrice": "0x826299e00",
        "timeStamp": "0x5dbe28f5"
    },
    {

```

```

        "address": "0xbf2179859fc6d5bee9bf9158632dc51678a4100e",
        "blockNumber": "0x876ea2",
        "data":
↪ "0x0000000000000000000000000000000000000000000000000000000000000000c5a66a12aa02380000",
        "logIndex": "0x58",
        "topics": [
↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
↪ "0x0000000000000000000000000000000000000000000000000000000000000000505387014d6518d5daff534a14d91650f32c9fd6",
↪ "0x0000000000000000000000000000000000000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1"
        ],
        "transactionHash":
↪ "0xc7eb63cbc2d7d9c0217f46ecf4dd2b35dd23fa83b39c20297ad4fa39457c3fc9",
        "transactionIndex": "0x71",
        "gasUsed": "0x92c8",
        "gasPrice": "0x28fa6ae00",
        "timeStamp": "0x5dc104e9"
    },
    {
        "address": "0xbf2179859fc6d5bee9bf9158632dc51678a4100e",
        "blockNumber": "0x876fff",
        "data":
↪ "0x0000000000000000000000000000000000000000000000000000000000000000c5a66a12aa02380000",
        "logIndex": "0x23",
        "topics": [
↪ "0xddf252ad1be2c89b69c2b068fc378daa952ba7f163c4a11628f55a4df523b3ef",
↪ "0x0000000000000000000000000000000000000000000000000000000000000000e418a0e203f36cb843079f6ebf0b367e48774ac1",
↪ "0x00000000000000000000000000000000000000000000000000000000000000006cc5f688a315f3dc28a7781717a9a798a59fda7b"
        ],
        "transactionHash":
↪ "0x4bde2fb7087c9ec6e683dae80693986462efbfb34781418ba44784558a003eb9",
        "transactionIndex": "0x2b",
        "gasUsed": "0x92c8",
        "gasPrice": "0x826299e00",
        "timeStamp": "0x5dc1175c"
    }
],
"status": "1"
}

```



---

## HTTP Routing Table

---

### /api

```
GET /api/1/cmc?limit=3,29
GET /api/1/did/(string:'did')/(string:'key'),
    24
GET /api/1/dpos/address/(string:'address'),
    9
GET /api/1/dpos/address/(string:'address')?pageSize=(int:'pageSize')&pageNum=(int:'pageNum'),
    11
GET /api/1/dpos/producer/(string:'producer_public_key')/(int:'height'),
    6
GET /api/1/dpos/rank/height/(int:'height'),
    14
GET /api/1/dpos/rank/height/(int:'height')?state=(string:'state'),
    23
GET /api/1/dpos/vote/height/(int:'height'),
    23
GET /api/1/eth/currencies,34
GET /api/1/eth/getLogs,35
GET /api/1/eth/history?address=(string:'addr'),
    32
GET /api/1/eth/token/balance,34
GET /api/1/history/(string:'addr'),24
GET /api/1/history/(string:'addr')?order=desc,
    27
GET /api/1/history/(string:'addr')?pageSize=(int:'pageSize')&pageNum=(int:'pageNum'),
    25
GET /api/1/history/(string:'addr')?showCount=true,
    27
GET /api/1/history/checking/sync,29
GET /api/1/pubkey/(string:'addr'),28
POST /api/1/dpos/transaction/producer,
    13
POST /api/1/eth/history,31
POST /api/1/eth/wrap,33
```