

00A0 2203 \exists 2200 \forall 2286 \subseteq 2713x 27FA \iff 221A \surd 221B \surd 2295 \oplus 2297 \otimes

WeBASE Documentation

Release v1.0.0

WeBankFinTech

Jul 05, 2019

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-

CHAPTER 1

WeBASE

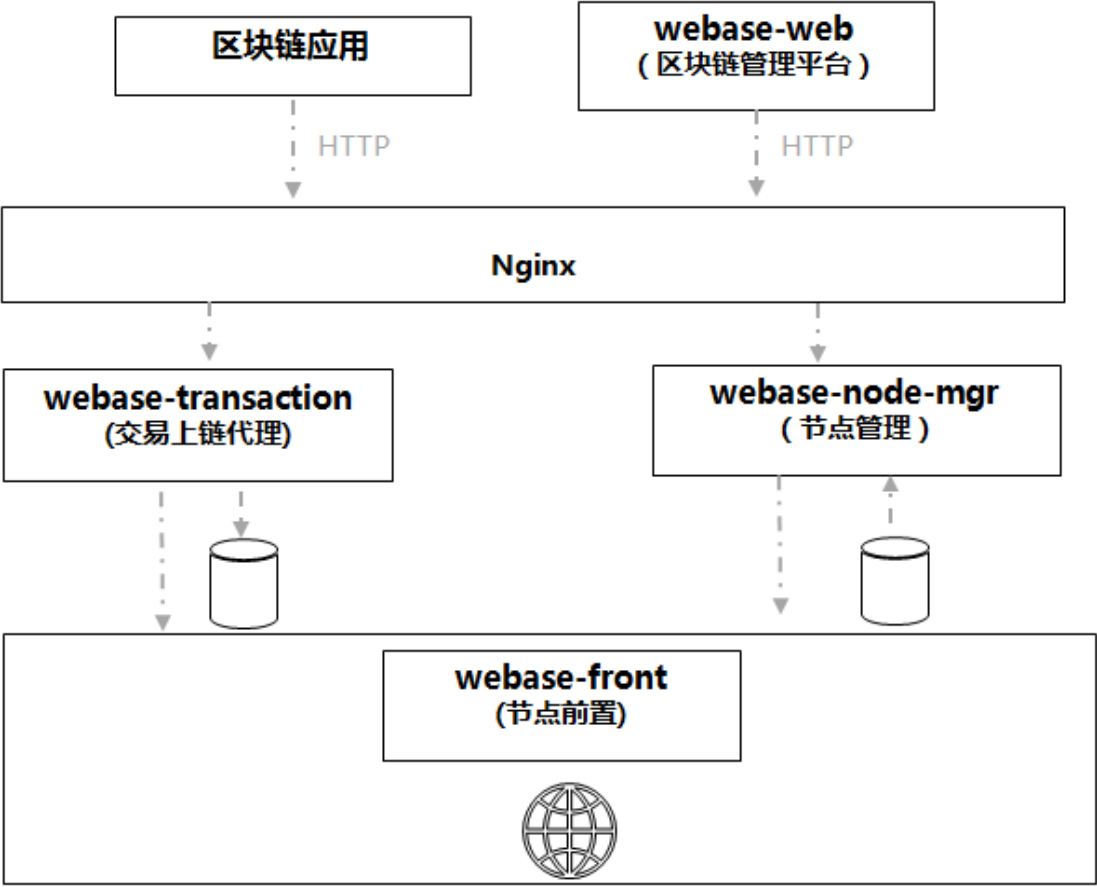
WeBASE WeBank Blockchain Application Software Extension
WeBASE WeBASE

WeBASE

1.1

WeBASE
WeBASE spring-boot Restful
WeBASE
WeBASE

1.2



1.3

1.4

1 WeBASE 2 WeBASE 3 4 api 5

[TOC]

WeBASE fisco-bcos webase-front webase-node-mgr webase-web

2.1 1

7

2.2 2

```
wget https://github.com/mingzhenliu/sss/releases/download/111/webase-deploy.zip
```

```
unzip webase-deploy.zip
```

```
cd webase-deploy
```

2.3 3

vi common.properties

7.4

1024

```
ip sed -i "s%127.0.0.1%${your_db_ip}%g" common.properties
sed -i "s%3306%${your_db_port}%g" common.properties
sed -i "s%dbUsername%${your_db_account}%g" common.properties
sed -i "s%dbPassword%${your_db_password}%g" common.properties
sed -i "s%db_mgr%${your_db_name}%g" common.properties

web sed -i "s%8080%${your_web_port}%g" common.properties
mgr sed -i "s%8081%${your_mgr_port}%g" common.properties
front sed -i "s%8082%${your_front_port}%g" common.properties

fisco sed -i "s%2.0.0-rc2%${your_fisco_version}%g" common.properties
sed -i "s%nodeCounts%${your_node_counts}%g" common.properties
p2p sed -i "s%30300%${your_p2p_port}%g" common.properties
channel sed -i "s%20200%${your_channel_port}%g" common.properties
rpc sed -i "s%8545%${your_rpc_port}%g" common.properties
h2 sed -i "s%/db_front%${your_dist_dir}%g" common.properties
sed -i "s%/data%${your_dist_dir}%g" common.properties

/data /home sed -i "s%/data%/home%g" common.properties
```

2.4 4

```
python deploy.py startAll
```

```
python deploy.py stopAll
```

```
python deploy.py help
```

8

2.5 5

```
http://{deployIP}:{webPort}
```

```
http://{deployIP}:{frontPort}/webase-front
```

```
** ** IP
```

2.6 6

```
log/
nodes/127.0.0.1/node*/log/
web webase-web/log/
mgr webase-node-mgr/logs/
front webase-front/log/
```

2.7 7

2.7.1 7.1 Java

1 java

```
mkdir /software
tar -zxvf jdkXXX.tar.gz /software/
```

2

```
export JAVA_HOME=/software/jdk1.8.0_121
export PATH=$JAVA_HOME/bin:$PATH
export CLASSPATH=.:$JAVA_HOME/lib/dt.jar:$JAVA_HOME/lib/tools.jar
```

2.7.2 7.2 Python

```
pip install requests    sudo yum install -y requests
```

2.7.3 7.3 MySQL-python

- CentOS

```
sudo yum install -y MySQL-python
```

- Ubuntu

```
sudo apt-get install -y python-pip
sudo pip install MySQL-python
```

2.7.4 7.4

Centos/Fedora

1 root

```
sudo -s
```

2 mysql

```
yum install mysql*
# linux mariadb mariadb mysql
yum install mariadb*
```

3 mysql

```
service mysqld start
# mariadb
systemctl start mariadb.service
```

4

```
mysql -u root
```

root

```
mysql > SET PASSWORD FOR 'root'@'localhost' = PASSWORD('123456');  
mysql > GRANT ALL PRIVILEGES ON *.* TO 'root'@'%' IDENTIFIED BY '123456' WITH GRANT OPTION;
```

1. 123456

2.

test

```
mysql > create user 'test'@'localhost' identified by '123456';
```

5

ssh test

```
mysql -utest -p123456 -h 127.0.0.1 -P 3306
```

sql

```
mysql > show databases;  
mysql > use test;
```

6

```
mysql -utest -p123456 -h 127.0.0.1 -P 3306
```

```
mysql > create database db_browser;
```

2.8 8

2.8.1 8.1

centos mysql Access denied for user 'root'@'localhost'

/etc/my.cnf [mysqld]

```
skip-grant-tables
```

mysql

```
service mysqld restart
```

mysql

```
mysql -uroot -p mysql
```

2.8.2 8.2 MySQLdb

```
Traceback (most recent call last):
...
ImportError: No module named MySQLdb
```

MySQL-python 7.3

2.8.3 8.3

```
...
Connecting to github-production-release-asset-2e65be.s3.amazonaws.com (github-production-
↪release-asset-2e65be.s3.amazonaws.com)|52.216.112.19|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 22793550 (22M) [application/octet-stream]
Saving to: 'webase-front.zip'

0% [
↪                               ] 77,974      37.8KB/s
```

deploy [webase-web](#) [webase-node-mgr](#) [webase-front](#) [webase-](#)

2.8.4 8.4

```
...
checking database connection
Traceback (most recent call last):
  File "/data/temp/webase-deploy/comm/mysql.py", line 21, in dbConnect
    conn = mdb.connect(host=mysql_ip, port=mysql_port, user=mysql_user, passwd=mysql_password,↪
↪charset='utf8')
  File "/usr/lib64/python2.7/site-packages/MySQLdb/__init__.py", line 81, in Connect
    return Connection(*args, **kwargs)
  File "/usr/lib64/python2.7/site-packages/MySQLdb/connections.py", line 193, in __init__
    super(Connection, self).__init__(*args, **kwargs2)
OperationalError: (1045, "Access denied for user 'root'@'localhost' (using password: YES)")
```

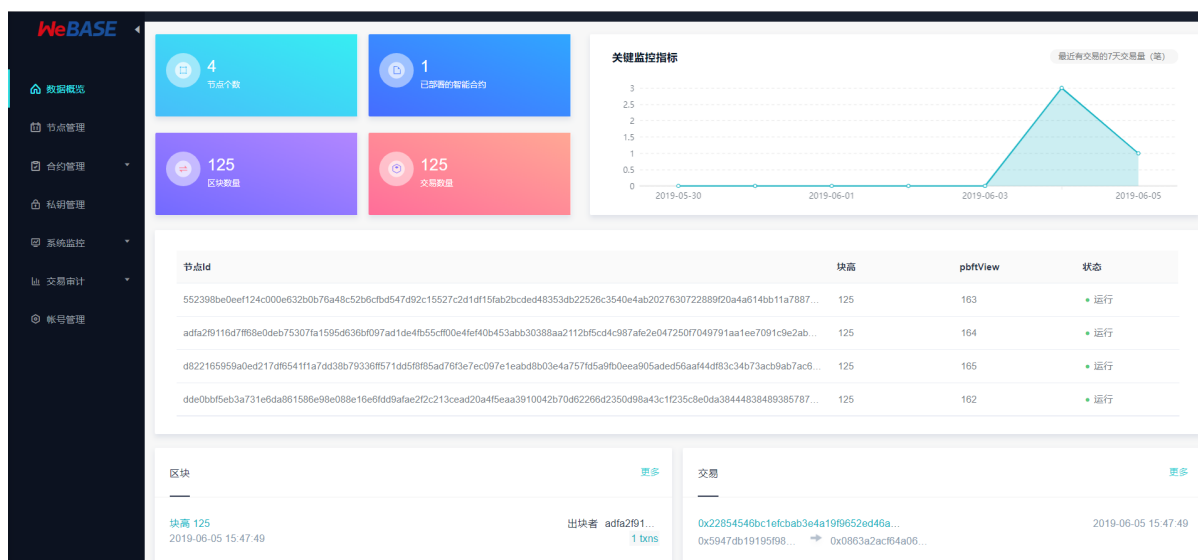

3.1 1

3.1.1 1.1

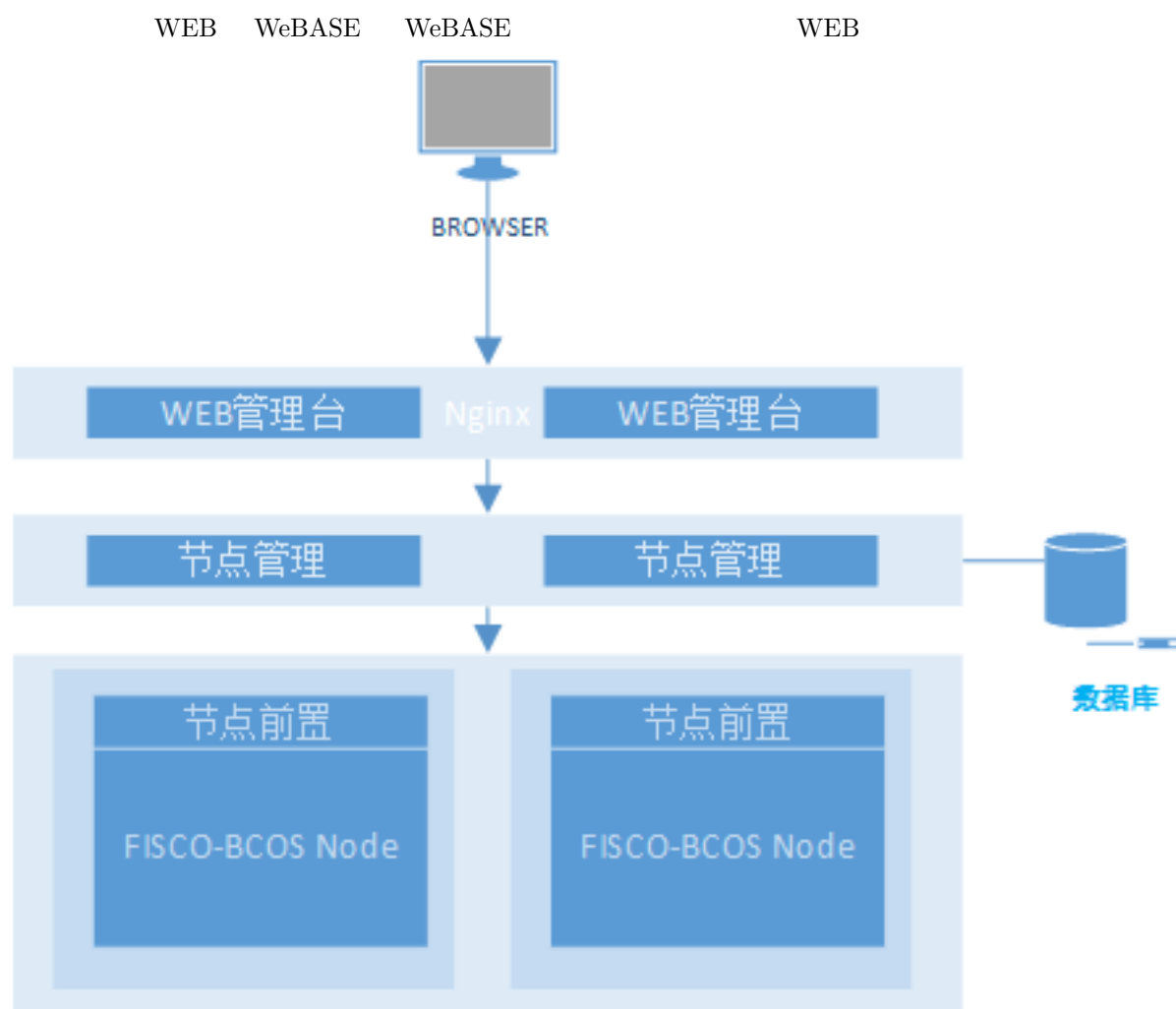
WeBASE WeBASE FISCO-BCOS

3.1.2 1.2

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.



3.1.3 1.3



3.2 2

3.2.1 2.1

FISCO-BCOS 2.0

1. `build_chain`
2. `FISCO-BCOS generator`
`build_chain`

3.2.2 2.2 WeBASE

WeBASE WEB

2.2.1

2.2.2

2.2.2.1

Spring Boot JAVA

2.2.2.2

Spring Boot JAVA

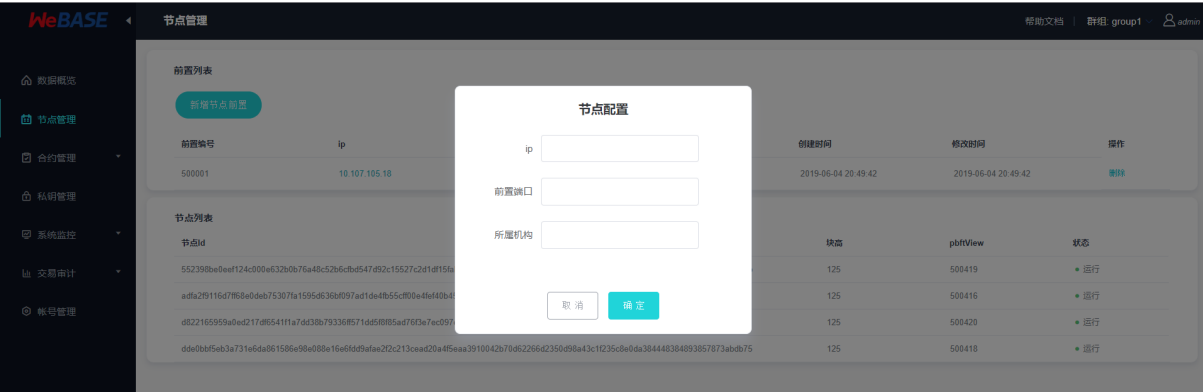
2.2.2.3 WEB

WEB `vue-cli` WeBASE

3.3 3

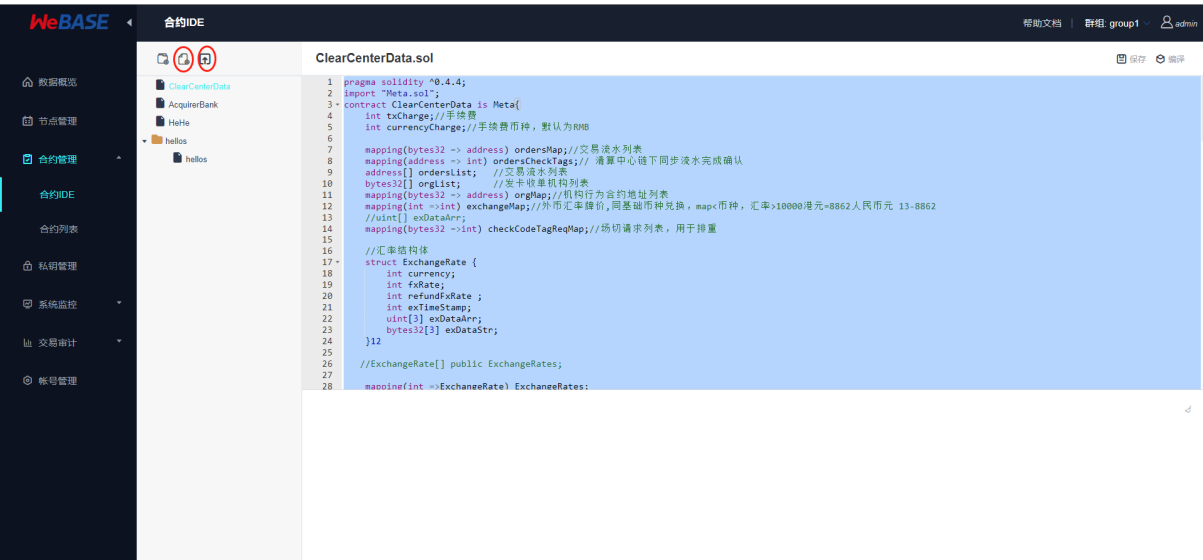
`nginx` WEB IP (`XXX.XXX.XXX.XXX:XXXX`) `admin` `Abcd1234`

3.3.1 3.1

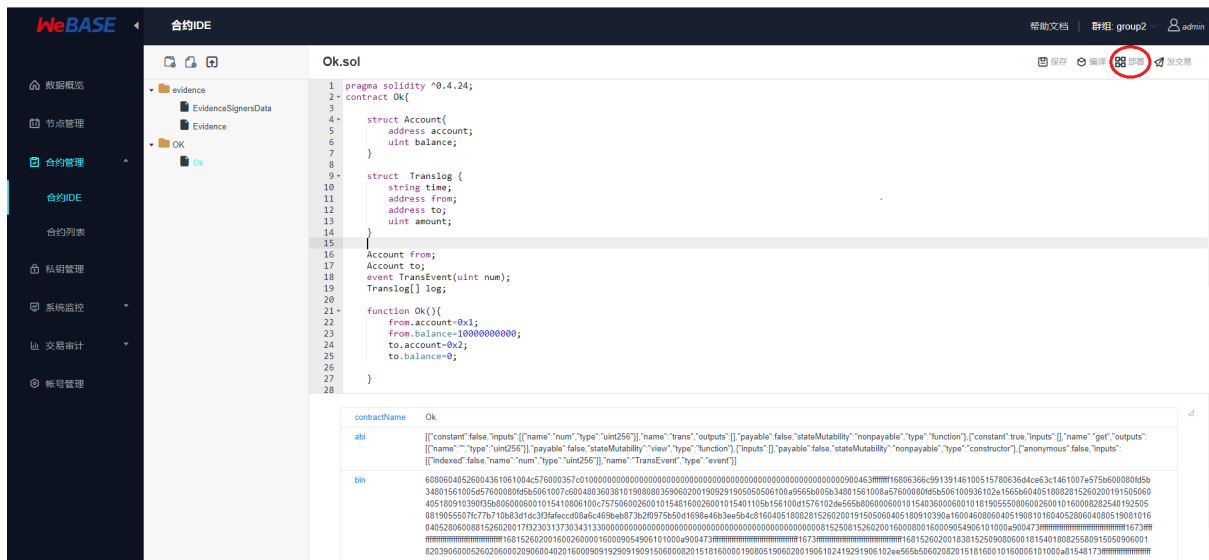


3.3.2 3.2

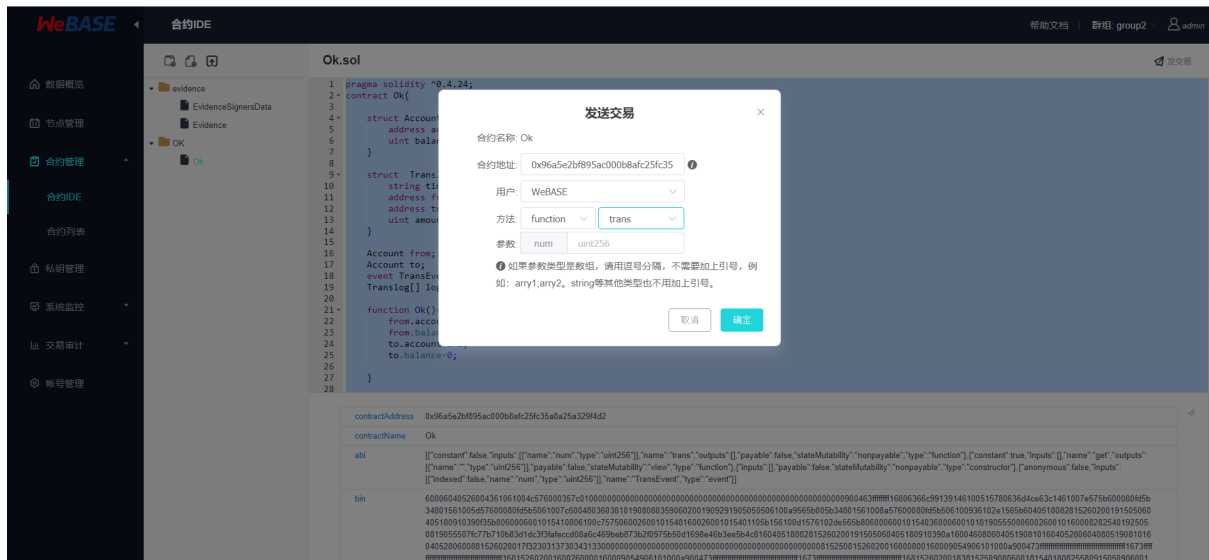
3.2.1



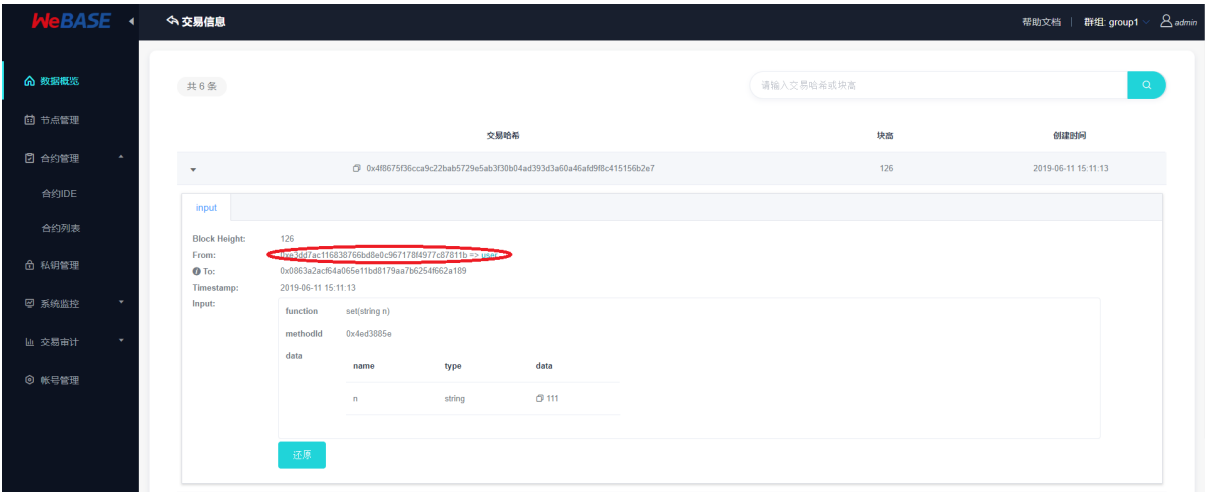
3.2.2



3.2.3



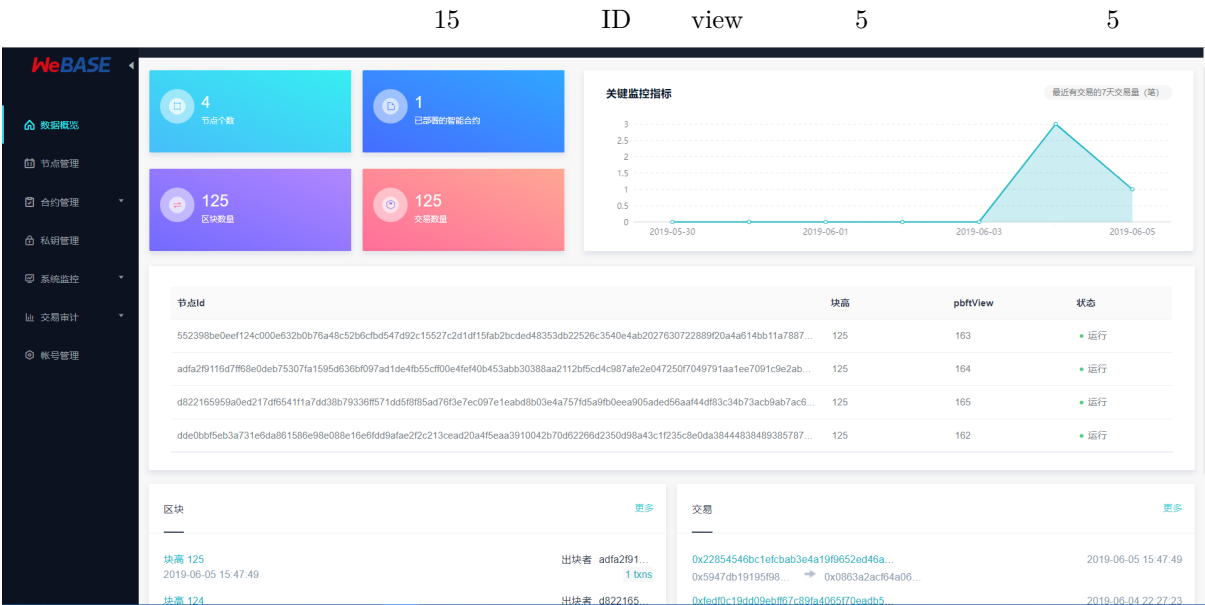
3.3.3 3.3



3.4 4

WeBASE

3.4.1 4.1



3.4.2 4.2

WeBASE

节点管理

帮助文档 | 群组: group2 | admin

数据概览

节点管理

合约管理

私钥管理

系统监控

交易审计

帐号管理

前置列表

新建节点前置

前置编号	ip	前置端口	所属机构	创建时间	修改时间	操作
500001	10.107.105.18	8881	aa	2019-06-04 20:49:42	2019-06-04 20:49:42	删除

节点列表

节点id	块高	pbftView	状态
56edfa160bcb09b9814ad31dcdf959eb3880314445db3deb92cedde97cdece210f713591a15f3a7168ba023290cbe78656b57c37157e6ec74a85182630bd61	18	1104770	运行
adfa20116d7068e0deb75307fa1595db30b097ad1de4b55cd00e48ef40b453abb30388aa2112b5cd4c907afe2e047250f7049791aa1ee7991c9e2ab7bb	18	1104767	运行
d022165959a0ed217d05411fa7d539b793368571dd59895ad76f3e7ecd97e1eabdb03e4a757d5a9b0ee905aded56aaf44d83c34b73ac9ab7ac65010	18	1104771	运行
e28f3d7f5bb2e21910a15639eac342cd46f78ebb0efe7c55c76514b0ba6b28ace8e47b4a25c9b39f763b79db047a250a19827b132f23298980f3ca9779c2564	18	1104769	运行

3.4.3 4.3

IDE IDE

WeBASE

合约IDE

帮助文档 | 群组: group2 | admin

数据概览

节点管理

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合约IDE

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帐号管理

EvidenceSignersData.sol

保存 | 编译

```
1 pragma solidity ^0.4.4;
2 import "Evidence.sol";
3
4 contract EvidenceSignersData{
5     address[] signers;
6     event newEvidenceEvent(address addr);
7     function newEvidence(string evi, string info,string id,uint8 v, bytes32 r,bytes32 s)public returns(address)
8     {
9         Evidence evidence = new Evidence(evi, info, id, v, r, s, this, msg.sender);
10        newEvidenceEvent(evidence);
11        return evidence;
12    }
13
14    function EvidenceSignersData(address[] evidenceSigners)public{
15        for(uint i=0; i<evidenceSigners.length; ++i) {
16            signers.push(evidenceSigners[i]);
17        }
18    }
19
20    function verify(address addr)public constant returns(bool){
21        for(uint i=0; i<signers.length; ++i) {
22            if (addr == signers[i])
23            {
24                return true;
25            }
26        }
27        return false;
28    }
29 }
```

3.4.4 4.4

The screenshot shows the '用户查看' (User View) page in the WeBASE system. The left sidebar contains navigation links: 数据概览, 节点管理, 合约管理, 合约IDE, 合约列表, 私钥管理, 系统监控, 交易审计, and 帐号管理. The main content area has a '新增用户' (Add User) button and a search bar. Below is a table with columns: 用户名称 (Username), 用户ID (User ID), 用户描述 (User Description), 用户公钥地址信息 (User Public Key Address Information), 用户状态 (User Status), and 操作 (Action). The table contains one entry for 'admin' with ID '700004' and status '正常' (Normal). A pagination bar at the bottom indicates '共 1 条' (Total 1 item) and '10条/页' (10 items per page).

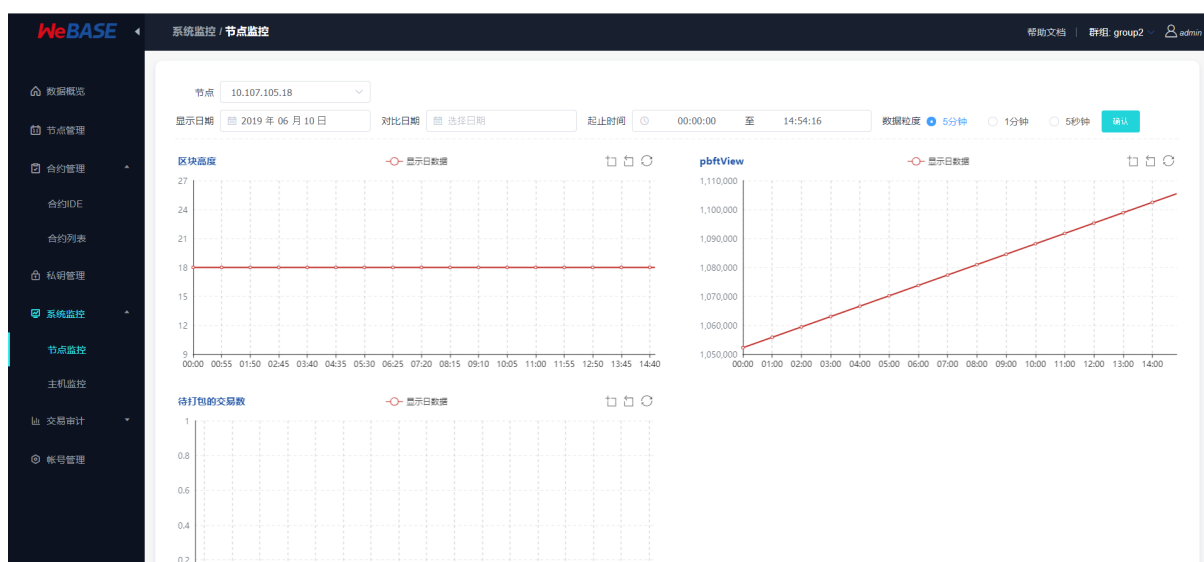
用户名称	用户ID	用户描述	用户公钥地址信息	用户状态	操作
admin	700004		6c9d407ba778cc5fe37787c7879...	正常	修改

3.4.5 4.5

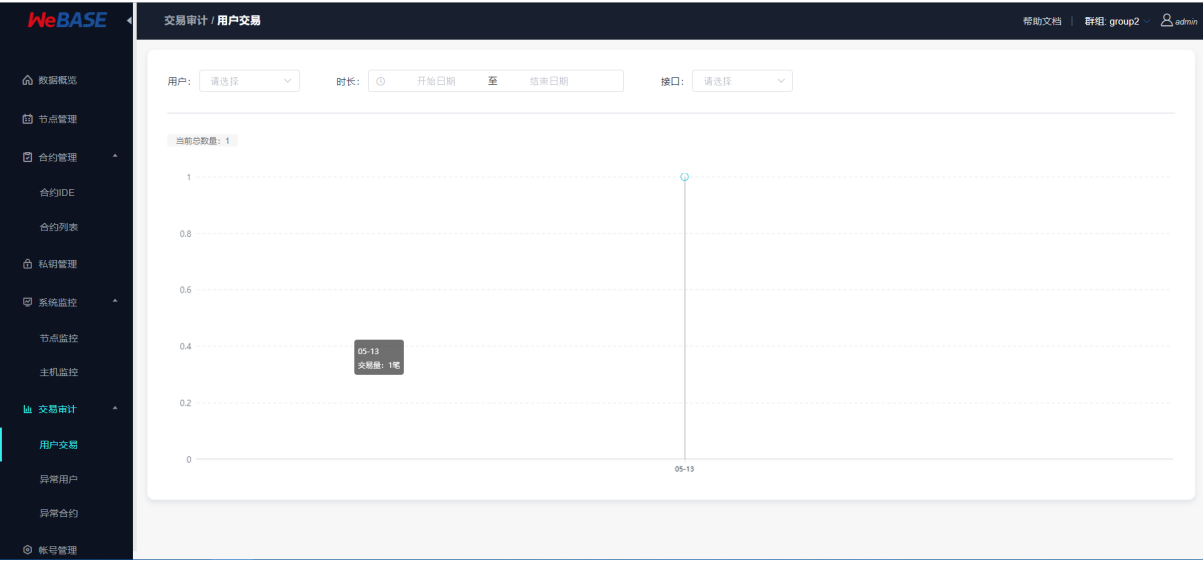
pbftview

CPU

IO



3.4.6 4.6



3.4.7 4.7

WeBASE 账户管理 帮助文档 | 群组: group2 | admin

新增帐号

帐号	角色	操作
admin	管理员	删除 修改

共 1 条 10条/页 < 1 > 前往 1 页

4.1

4.1.1

1.

webase-front fisco-bcos fisco-bcos 2.0 HTTP web3jsdk
: (1) front , http://{nodeIP}:8081/webase-front (2) webase-node-mgr webase-
web
webase-front front

4.1.2

1.

2.

2.1

```
git clone https://github.com/WeBankFinTech/webase-front.git
```

2.2

```
sdk    ca.crt node.crt node.key      src/main/resources  
cp ~/nodes/127.0.0.1/sdk/*    ~/webase-front/src/main/resources
```

2.3

application.yml

```
spring:
  datasource:
    url: jdbc:h2:file:~/.h2/front_db;DB_CLOSE_ON_EXIT=FALSE // H2 ~/.h2/front_db,

constant:
  transMaxWait: 30 //
  monitorDisk: /home //
  keyServer: 127.0.0.1:8082 // ( node-mgr ) IP front
```

application.yml sdk

```
sdk:
  ip: 127.0.0.1 // ip ip ip
  channelPort: 20200 //
```

2.4

webase-front

```
chmod +x ./gradlew
./gradlew build -x test
```

webase-front dist

2.5

```
cd dist
```

```
: sh start.sh
: sh stop.sh
: sh status.sh
```

:

```
chmod + *.sh
dos2unix *.sh
```

2.6

```
cd dist
```

```
tail -f log/webase-front.log
web3 tail -f log/web3sdk.log
```

2.7

http://{nodeIP}:8081/webase-front

4.1.3

1.

1.1. abi

abi abi

URL

<http://localhost:8081/webase-front/contract/abiInfo>

HTTP POST

1

2

```
{
  "groupId": 1,
  "contractName": "HelloWorld",
  "address": "0x31b26e43651e9371c88af3d36c14cfd938baf4fd",
  "contractBin": "608060405234801561001057600080fd5b5060405161031d38038061031d8339810180",
  "abiInfo": [
    {"inputs": [{"type": "string", "name": "n"}], "constant": false, "name": "set",
    "outputs": [], "payable": false, "type": "function"},
    {"inputs": [], "constant": true, "name": "get", "outputs": [{"type": "string",
    "name": ""}], "payable": false, "type": "function"},
    {"inputs": [], "constant": false, "name": "HelloWorld", "outputs": [],
    "payable": false, "type": "function"}
  ]
}
```

2

1.2.

URL

`http://localhost:8081/webase-front/contract/deploy`

HTTP POST

1

2

```
{
  "user":700001,
  "contractName":"HelloWorld",
  "abiInfo": [],
  "bytecodeBin": "",
  "funcParam": []
}
```

1

```
{
  "0x60aac015d5d41adc74217419ea77815ecb9a2192"
}
```

1.3. `cns`

URL

`http://localhost:8081/webase-front/contract/cns?groupId={groupId}&name={name}&version={version}`

HTTP POST

1.

2 `http://localhost:8081/webase-front/contract/cns?groupId=1&name=HelloWorld&version=2`

1

```
{  
  "0x31b26e43651e9371c88af3d36c14cfd938baf4fd"  
}
```

1.4. java

abi java

URL

`http://localhost:8081/webase-front/contract/compile-java`

HTTP POST

1

1.

```
{ "contractName": "HeHe", "abiInfo": [], "contractBin": "60806040526004361061004c576000357c0100000000000000000000"  
  "packageName": "com.webank" }
```

1 java

2

1.5.

URL

`http://localhost:8081/webase-front/contract/save`

HTTP POST

1

2

```
{
  "groupId": "1",
  "contractName": "HeHe",
  "contractPath": "/",
  "contractSource": "cHJhZ21hIHNvbGlkaXR5IF4wLjQuMjsn0=",
  "contractAbi": "[]"
  "contractBin": "60806040526004361061004c576000357c0100000000000000000000000029",
  "bytecodeBin": "6080604052348015610010572269b80029",
  "contractId": 1
}
```

1

2

```
{
  "id": 1,
  "contractPath": "/",
  "contractName": "HeHe",
  "contractStatus": 1,
  "groupId": 1,
  "contractSource": "cHJhZ21hIHNvbGlkaXR5IF4wLjQuMjsKcmICB9Cn0=",
  "contractAbi": "[{\\"payable\\":false,\\"stateMutability\\":\\"nonpayable\\",\\"type\\":\\"
↪constructor\\"}]",
  "contractBin": "60806040526004361061004c5760003569b80029",
  "bytecodeBin": "608060405234801561001057600080fd5b506029",
  "contractAddress": null,
  "deployTime": null,
  "description": null,
  "createTime": "2019-06-10 11:48:51",
  "modifyTime": "2019-06-10 15:31:29"
}
```

1.6.

URL

`http://localhost:8081/webase-front/contract/{groupId}/{contractId}`

HTTP DELETE

1

2 `http://localhost:8081/webase-front/contract/1/1`

1

2

```
{  
  "code": 0,  
  "message": "success",  
  "data": null  
}
```

1.7.

URL

`http://localhost:8081/webase-front/contract/contractList`

HTTP POST

1

2

```
{  
  "groupId": "1",  
  "pageNumber": 0,  
  "pageSize": 10,  
  "contractName": "",  
  "contractAddress": "",  
  "contractStatus": 2  
}
```

1

2


```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "id": 2,
      "contractPath": "/",
      "contractName": "HeHe",
      "contractStatus": 1,
      "groupId": 1,
      "contractSource": "cHJhZ21hIHNvbGlkaXR5IICB9Cn0=",
      "contractAbi": "",
      "contractBin": "",
      "bytecodeBin": null,
      "contractAddress": null,
      "deployTime": null,
      "description": null,
      "createTime": "2019-06-10 16:42:50",
      "modifyTime": "2019-06-10 16:42:52"
    }
  ],
  "totalCount": 1
}
```

2.

2.1.

URL

`http://localhost:8081/webase-front/privateKey?useAes={useAes}&userName={userName}`

HTTP GET

1

2 `http://localhost:8081/webase-front/privateKey?useAes=false&userName=test`

1

```
{
  "publicKey":
  ↪ "1c7073dc185af0644464b178da932846666a858bc492450e9e94c77203428ed54e2ce45679dbb36bfed714dbe055a215dc1aaf4a75fa
  ↪ ",
  "privateKey": "008cf98bd0f37fb0984ab43ed6fc2dcd58811522af7e4a3bedbe84636a79a501c",
}
```

```
"address": "0x2e8ff65fb1b2ce5b0c9476b8f8beb221445f42ee"
}
```

2.2.

URL

`http://localhost:8081/webase-front/privateKey/import?privateKey={privateKey}&useAes={useAes}`

HTTP GET

1

2 `http://localhost:8081/webase-front/privateKey/import?privateKey=008cf98bd0f37fb0984ab43ed6fc2dcd`

1

```
{
  "publicKey":
  ↪ "1c7073dc185af0644464b178da932846666a858bc492450e9e94c77203428ed54e2ce45679dbb36bfed714dbe055a215dc1aaf4a75fa",
  ↪ ",
  "privateKey": "008cf98bd0f37fb0984ab43ed6fc2dcd58811522af7e4a3bedbe84636a79a501c",
  "address": "0x2e8ff65fb1b2ce5b0c9476b8f8beb221445f42ee"
}
```

3. web3

3.1.

URL

`http://localhost:8081/webase-front/{groupId}/web3/blockNumber`

HTTP GET

1

2 <http://localhost:8081/webase-front/1/web3/blockNumber>

1

3.2.

URL

http://localhost:8081/webase-front/1/web3/blockByNumber/{blockNumber}

HTTP GET

1.

2

<http://localhost:8081/webase-front/1/web3/blockByNumber/100>

1

```
{  
  "code": 0,  
  "message": "success",  
  "data": {  
    "number": 100,  
    "hash": "0xf27ff42d4be65329a1e7b11365e190086d92f9836168d0379e92642786db7ade",  
    "parentHash": "0xc784a2af86e6726fcddc63b57ed1b91a40efcd7d8b1b7285154d399ea78bd18754",  
    "nonce": 0,  
    "sha3Uncles": "0x1dcc4de8dec75d7aab85b567b6ccd41ad312451b948a7413f0a142fd40d49347",  
    "logsBloom":  
      ↪ "0x00000000000000000000000000000000000000000000000000000000000000000000000000000000"  
      ↪ ,  
    "transactionsRoot": "0x27055bac669a67e8aaa1455ad9fd70b75dd86dc905c6bd0d111ed67ab182d1dc  
      ↪ ",
```


- 1.
- 2**
- <http://localhost:8081/webbase-front/1/web3/blockTransCnt/100>

```
{
  1
}
```

```
}
```

3.5. PbftView

PbftView

URL

`http://localhost:8081/webase-front/{groupId}/web3/pbftView`

HTTP GET

1. | | | | | | | | | | ——— | ——— | ——— | ——— | ——— | ——— | | 1 |
| groupId | int | | | |

2

`http://localhost:8081/webase-front/1/web3/pbftView`

1

```
{
  160565
}
```

3.6.

hash

URL

`http://localhost:8081/webase-front/{groupId}/web3/transactionReceipt/{transHash}`

HTTP GET

URL

`http://localhost:8081/webase-front/{groupId}/web3/transaction/{transHash}`

HTTP GET

1

2

http://localhost:8081/webase-front/1/web3/transaction/0xa6750b812b1a7e36313879b09f0c41fc583b463c15e57608416f3a3

1

[illegible]

3.8. web3j

web3j

URL

`http://localhost:8081/webase-front/{groupId}/web3/clientVersion`

HTTP GET

1

1. `http://localhost:8081/webase-front/1/web3/clientVersion`

1

2

```
{
  "Build Time": "20190318 10:56:37",
  "Build Type": "Linux/g++/RelWithDebInfo",
  "FISCO-BCOS Version": "2.0.0-rc1",
  "Git Branch": "master",
  "Git Commit Hash": "2467ddf73b091bc8e0ee611ccee85db7989ad389"
}
```

3.9.

URL

`http://localhost:8081/webase-front/{groupId}/web3/code/{address}/{blockNumber}`

HTTP GET

1

- 1.

`http://localhost:8081/webase-front/1/web3/code/0x00/1`

2

```
{  
  0x  
}
```

3.10.

URL

`http://localhost:8081/webase-front/{groupId}/transaction-total`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/transCnt/0x00/1`

1

2

```
{  
  "txSum": 125,  
  "blockNumber": 125,  
  "blockNumberRaw": "0x7d",  
  "txSumRaw": "0x7d"  
}
```

3.11. hash index

URL

`http://localhost:8081/webase-front/{groupId}/web3/transByBlockHashAndIndex/{blockHash}/{transa`

HTTP GET

1

2

<http://localhost:8081/webase-front/1/web3/transByBlockNumberAndIndex/100/0>

1

[illegible]

3.13.

URL

http://localhost:8081/webase-front/{groupId}/web3/consensusStatus

HTTP GET

1

2

http://localhost:8081/webase-front/1/web3/consensusStatus

1

```
[
  {
    "accountType": 1,
    "allowFutureBlocks": true,
    "cfgErr": false,
    "connectedNodes": 3,
    "consensusedBlockNumber": 126,
    "currentView": 499824,
    "groupId": 1,
    "highestblockHash": "0x563d4ec57b597d5d81f0c1b0045c04e57ffebe3a02ff3fef402be56742dc8fd1",
    ↪,
    "highestblockNumber": 125,
    "leaderFailed": false,
    "max_faulty_leader": 1,
    "node index": 2,
    "nodeId":
    ↪ "d822165959a0ed217df6541f1a7dd38b79336ff571dd5f8f85ad76f3e7ec097e1eabd8b03e4a757fd5a9fb0eea905aded56aaf44df83",
    ↪,
    "nodeNum": 4,
    "omitEmptyBlock": true,
    "protocolId": 264,
    "sealer.0":
    ↪ "552398be0eef124c000e632b0b76a48c52b6cfbd547d92c15527c2d1df15fab2bcded48353db22526c3540e4ab2027630722889f20a4",
    ↪,
    "sealer.1":
    ↪ "adfa2f9116d7ff68e0deb75307fa1595d636bf097ad1de4fb55cff00e4fef40b453abb30388aa2112bf5cd4c987afe2e047250f70497",
    ↪,
    "sealer.2":
    ↪ "d822165959a0ed217df6541f1a7dd38b79336ff571dd5f8f85ad76f3e7ec097e1eabd8b03e4a757fd5a9fb0eea905aded56aaf44df83",
    ↪,
    "sealer.3":
    ↪ "dde0bbf5eb3a731e6da861586e98e088e16e6fdd9afae2f2c213cead20a4f5eaa3910042b70d62266d2350d98a43c1f235c8e0da3844",
    ↪,
    "toView": 499824
  },
  [
    {
      "nodeId":
      ↪ "552398be0eef124c000e632b0b76a48c52b6cfbd547d92c15527c2d1df15fab2bcded48353db22526c3540e4ab2027630722889f20a4",
      ↪,
      "view": 499823
    },
    {
      "nodeId":
      ↪ "adfa2f9116d7ff68e0deb75307fa1595d636bf097ad1de4fb55cff00e4fef40b453abb30388aa2112bf5cd4c987afe2e047250f70497",
      ↪,
    }
  ]
]
```

```
        "view": 499820
      },
      {
        "nodeId":
↪ "d822165959a0ed217df6541f1a7dd38b79336ff571dd5f8f85ad76f3e7ec097e1eabd8b03e4a757fd5a9fb0eea905aded56aaf44df83",
↪ ",
        "view": 499824
      },
      {
        "nodeId":
↪ "dde0bbf5eb3a731e6da861586e98e088e16e6dd9afae2f2c213cead20a4f5eaa3910042b70d62266d2350d98a43cf235c8e0da3844",
↪ ",
        "view": 499822
      }
    ],
    {
      "prepareCache_blockHash":
↪ "0x0000000000000000000000000000000000000000000000000000000000000000",
      "prepareCache_height": -1,
      "prepareCache_idx": "65535",
      "prepareCache_view": "9223372036854775807"
    },
    {
      "rawPrepareCache_blockHash":
↪ "0x0000000000000000000000000000000000000000000000000000000000000000",
      "rawPrepareCache_height": -1,
      "rawPrepareCache_idx": "65535",
      "rawPrepareCache_view": "9223372036854775807"
    },
    {
      "committedPrepareCache_blockHash":
↪ "0x15cf36c1f15572c448f7d4295958972e6b876deef319c532b8f7d79fcbde072f",
      "committedPrepareCache_height": 125,
      "committedPrepareCache_idx": "1",
      "committedPrepareCache_view": "62209"
    },
    {
      "signCache_cachedSize": "0"
    },
    {
      "commitCache_cachedSize": "0"
    },
    {
      "viewChangeCache_cachedSize": "0"
    }
  ]
}
```

3.14.

pbftview

URL

<http://localhost:8081/webase-front/{groupId}/web3/nodeHeartBeat>

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/getNodeStatusList`

1

```
{  
  "blockNumber": 1,  
  "pbftView": 1232  
}
```

3.15.

URL

`http://localhost:8081/webase-front/{groupId}/web3/groupList`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/groupList`

1

3.16.

URL

http://localhost:8081/webase-front/{groupId}/web3/groupPeers

HTTP GET

1

2

http://localhost:8081/webase-front/1/web3/groupPeers

1

```
[
  ↪ "d822165959a0ed217df6541f1a7dd38b79336ff571dd5f8f85ad76f3e7ec097e1eabd8b03e4a757fd5a9fb0eea905
  ↪ ",
  ↪ "adfa2f9116d7ff68e0deb75307fa1595d636bf097ad1de4fb55cff00e4fef40b453abb30388aa2112bf5cd4c987af
  ↪ ",
  ↪ "552398be0eef124c000e632b0b76a48c52b6cfbd547d92c15527c2d1df15fab2bcded48353db22526c3540e4ab202
  ↪ ",
  ↪ "dde0bbf5eb3a731e6da861586e98e088e16e6fdd9afae2f2c213cead20a4f5eaa3910042b70d62266d2350d98a43c
  ↪ "
]
```

3.17.

URL

`http://localhost:8081/webase-front/{groupId}/web3/observerList`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/observerList`

1

```
[
  ↪ "d822165959a0ed217df6541f1a7dd38b79336ff571dd5f8f85ad76f3e7ec097e1eabd8b03e4a757fd5a9fb0eea905aded56aaf44df83
  ↪ "
]
```

3.18. pbftview

top

pbftview

URL

`http://localhost:8081/webase-front/{groupId}/web3/pbftView`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/pbftView`

1

859

3.19. P2P

P2P

URL

`http://localhost:8081/webase-front/{groupId}/web3/peers`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/peers`

1

```
[
  {
    "ipandPort": "127.0.0.1:30301",
    "IPAndPort": "127.0.0.1:30301",
    "NodeID":
    ↪ "adfa2f9116d7ff68e0deb75307fa1595d636bf097ad1de4fb55cff00e4fef40b453abb30388aa2112bf5cd4c987afe2e047250f70497",
    ↪ ",
    "Topic": []
  },
  {
    "ipandPort": "127.0.0.1:57678",
    "IPAndPort": "127.0.0.1:57678",
    "NodeID":
    ↪ "e28f3d7f5b82e21918a15639eac342dcf678ebb0efe7c65c76514b0ba6b28ace8e47b4a25c9b3f9763b79db847e250a19f827b132f23",
    ↪ ",
    "Topic": []
  },
  {
    "ipandPort": "127.0.0.1:57608",
    "IPAndPort": "127.0.0.1:57608",
    "NodeID":
    ↪ "dde0bbf5eb3a731e6da861586e98e088e16e6fdd9afae2f2c213cead20a4f5eaa3910042b70d62266d2350d98a43c1f235c8e0da3844",
    ↪ ",

```

```

    "Topic": [],
  },
  {
    "ipandPort": "127.0.0.1:57616",
    "IPAndPort": "127.0.0.1:57616",
    "NodeID":
    ↪ "552398be0eef124c000e632b0b76a48c52b6cfbd547d92c15527c2d1df15fab2bcded48353db22526c3540e4ab2027630722889f20a4",
    ↪ ",
    "Topic": [],
  },
  {
    "ipandPort": "127.0.0.1:57670",
    "IPAndPort": "127.0.0.1:57670",
    "NodeID":
    ↪ "56edfaf60bcb09b9814ad31dcd959eb388f0314445db3deb92cedde97c0ecec210f713591a15f3a7168ba023290cfbe78656b57c3715",
    ↪ ",
    "Topic": []
  }
]

```

3.20.

URL

`http://localhost:8081/webase-front/{groupId}/web3/pending-transactions-count`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/pending-transactions-count`

1

0

3.21.

URL

`http://localhost:8081/webase-front/{groupId}/web3/sealerList`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/sealerList`

1

```
[
  ↪ "d822165959a0ed217df6541f1a7dd38b79336ff571dd5f8f85ad76f3e7ec097e1eabd8b03e4a757fd5a9fb0eea905aded56aaf44df83",
  ↪ ",
  ↪ "adfa2f9116d7ff68e0deb75307fa1595d636bf097ad1de4fb55cff00e4fef40b453abb30388aa2112bf5cd4c987afe2e047250f70497",
  ↪ ",
  ↪ "552398be0eef124c000e632b0b76a48c52b6cfbd547d92c15527c2d1df15fab2bcded48353db22526c3540e4ab2027630722889f20a4",
  ↪ ",
  ↪ "dde0bbf5eb3a731e6da861586e98e088e16e6fdd9afae2f2c213cead20a4f5eaa3910042b70d62266d2350d98a43c1f235c8e0da3844",
  ↪ "
]
```

3.22. /

hash

URL

`http://localhost:8081/webase-front/{groupId}/web3/search?input={input Value}`

HTTP GET

2

[illegible]

```
],
  "uncles": null,
  "sealFields": null,
  "nonceRaw": null,
  "numberRaw": "0x1",
  "difficultyRaw": null,
  "totalDifficultyRaw": null,
  "sizeRaw": null,
  "gasLimitRaw": "0x0",
  "gasUsedRaw": "0x0",
  "timestampRaw": "0x16a969296df"
}
```

3.23.

URL

`http://localhost:8081/webase-front/{groupId}/web3/syncStatus`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/syncStatus`

1

```
{
  "blockNumber": 126,
  "genesisHash": "0xed3350d191d23cbc609c98e920baa583403b9a02fa934df868e7f425cd72f5c3",
  "isSyncing": false,
  "latestHash": "0x49ca6eb004f372c71ed900ec6992582cd107e4f3ea36aaa5a0a78829ebef1f14",
  "nodeId":
  ↪ "d822165959a0ed217df6541f1a7dd38b79336ff571dd5f8f85ad76f3e7ec097e1eabd8b03e4a757fd5a9fb0eea905aded56aaf44df83",
  ↪ ",
  "peers": [
    {
      "blockNumber": 126,
      "genesisHash": "0xed3350d191d23cbc609c98e920baa583403b9a02fa934df868e7f425cd72f5c3
      ↪ ",
      "latestHash": "0x49ca6eb004f372c71ed900ec6992582cd107e4f3ea36aaa5a0a78829ebef1f14",
      "nodeId":
      ↪ "552398be0eef124c000e632b0b76a48c52b6cfbd547d92c15527c2d1df15fab2bcded48353db22526c3540e4ab2027630722889f20a4",
      ↪ "
    }
  ]
}
```

```

    },
    {
      "blockNumber": 126,
      "genesisHash": "0xed3350d191d23cbc609c98e920baa583403b9a02fa934df868e7f425cd72f5c3
↪",
      "latestHash": "0x49ca6eb004f372c71ed900ec6992582cd107e4f3ea36aaa5a0a78829ebef1f14",
      "nodeId":
↪"adfa2f9116d7ff68e0deb75307fa1595d636bf097ad1de4fb55cff00e4fef40b453abb30388aa2112bf5cd4c987afe2e047250f70497
↪"
    },
    {
      "blockNumber": 126,
      "genesisHash": "0xed3350d191d23cbc609c98e920baa583403b9a02fa934df868e7f425cd72f5c3
↪",
      "latestHash": "0x49ca6eb004f372c71ed900ec6992582cd107e4f3ea36aaa5a0a78829ebef1f14",
      "nodeId":
↪"dde0bbf5eb3a731e6da861586e98e088e16e6fdd9afae2f2c213cead20a4f5eaa3910042b70d62266d2350d98a43cf235c8e0da3844
↪"
    }
  ],
  "protocolId": 265,
  "txPoolSize": "0"
}

```

3.24.

hash

URL

`http://localhost:8081/webase-front/{groupId}/web3/transaction/{transHash}`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/transaction/0x4145b921309fcaa92b05b782e0181d671b8e68fc6d61d939358ed5`

1

```

{
  "hash": "0x4145b921309fcaa92b05b782e0181d671b8e68fc6d61d939358ed558fa3489c9",
  "nonce": 1.47418536037145E+75,
  "blockHash": "0x3875dbec6e0ad0790dc0a0e8535b7c286ef7cee4149e5b1494f5c65631a9e321",
  "blockNumber": 1,

```



```
"transactionIndex": 0,
"from": "0x33a41878e78fb26735bf425f9328990e3a1a89df",
"to": "0x0000000000000000000000000000000000000000",
"value": 0,
"gasPrice": 1,
"gas": 100000000,
"input":
↪ "0x6080604052348015600f57600080fd5b5060868061001e6000396000f300608060405260043610603f576000357c01000000000000
↪ ",
"creates": null,
"publicKey": null,
"raw": null,
"r": null,
"s": null,
"v": 0,
"transactionIndexRaw": "0x0",
"valueRaw": "0x0",
"gasPriceRaw": "0x1",
"blockNumberRaw": "0x1",
"gasRaw": "0x5f5e100",
"nonceRaw": "0x3425bfe0f36e343686ccbe34a4fe8b05e0e0257ea7ee87417a6d898f0eb43ec"
}
```

3.25.

hash

URL

`http://localhost:8081/webase-front/{groupId}/web3/transactionReceipt/{transHash}`

HTTP GET

1

2

`http://localhost:8081/webase-front/1/web3/transactionReceipt/0x4145b921309fcaa92b05b782e0181d671b8e68fc6d61d93`

1

```
{
  "transactionHash": "0x4145b921309fcaa92b05b782e0181d671b8e68fc6d61d939358ed558fa3489c9",
  "transactionIndex": 0,
  "blockHash": "0x3875dbec6e0ad0790dc0a0e8535b7c286ef7cee4149e5b1494f5c65631a9e321",
  "blockNumber": 1,
  "cumulativeGasUsed": 0,
```


HTTP GET

1

1

```
{
  [{"metricType": "cpu", "data": {"lineDataList": {"timestampList": [], "valueList": []},
    ↪ "contrastDataList": {"timestampList": [], "valueList": []}}}, {"metricType": "memory", "data": {
    ↪ "lineDataList": {"timestampList": null, "valueList": []}, "contrastDataList": {"timestampList
    ↪ ": null, "valueList": []}}}, {"metricType": "disk", "data": {"lineDataList": {"timestampList": null,
    ↪ "valueList": []}, "contrastDataList": {"timestampList": null, "valueList": []}}}, {"metricType":
    ↪ "txbps", "data": {"lineDataList": {"timestampList": null, "valueList": []}, "contrastDataList": {
    ↪ "timestampList": null, "valueList": []}}}, {"metricType": "rxbps", "data": {"lineDataList": {
    ↪ "timestampList": null, "valueList": []}, "contrastDataList": {"timestampList": null, "valueList": []}
    ↪ }}}}]
}
```

5.

5.1.

“constant” “constant” “constant” hash hash

URL

<http://localhost:8081/webase-front/trans/handle>

HTTP POST

1

2

```
{
  "useAes ": false,
  "user ": 700001,
  "contractName": "HelloWorld",
  "contractAddress": "dasdfav23rf213vbcdvadf3bcd2fc23rqde",
  "funcName": "set",
  "funcParam": ["Hi, Welcome!"],
}
```

```
"groupId" : "1"
}
```

```
curl -l -H "Content-type: application/json" -X POST -d '{"contractName": "HelloWorld",
"funcName": "set", "funcParam": ["Hi,Welcome!"], "userId": 700001, "useAes": false, "contractAddress": "dasdfav23rf213vbcdvadf3bcdf2fc23rqde", "groupId": 1}' http://10.0.0.1:8081/webase-front/trans/handle
```

1.

a

```
{"Hi,Welcome!"}
```

b ()

```
{
"code": 0,
"message": "success",
"data": {
"blockHash":
"0x1d8d8275aa116d65893291c140849be272dac1d4ca0a722f44404b2f2356c3",
"gasUsed": 32798,
"transactionIndexRaw": "0",
"blockNumberRaw": "33",
"blockNumber": 33,
"contractAddress": "0x0000000000000000000000000000000000000000",
"cumulativeGasUsed": 32798,
"transactionIndex": 0,
"gasUsedRaw": "0x801e",
"logs": [],
"cumulativeGasUsedRaw": "0x801e",
"transactionHash": "0x0653a8e959771955330461456dd094a96d9071bfa31e6f43b68b30f10a85689c"
}
}
```

6.

1.

4.1.4

1.

1.1 Java

1 java

```
mkdir /software
tar -zxvf jdkXXX.tar.gz /software/
```

2

```
export JAVA_HOME=/software/jdk1.8.0_121
export PATH=$JAVA_HOME/bin:$PATH
export CLASSPATH=.:$JAVA_HOME/lib/dt.jar:$JAVA_HOME/lib/tools.jar
```

1.2 gradle

1 gradle

```
mkdir /software/
unzip -d /software/ gradleXXX.zip
```

2

```
export GRADLE_HOME=/software/gradle-4.9
export PATH=$GRADLE_HOME/bin:$PATH
```

2.

- 1 shell permission denied
chmod +x
- 2: eclipse

```
...
/data/temp/webase-front/src/main/java/com/webank/webase/front/performance/PerformanceService.
↪java:167: error: cannot find symbol
    log.info("begin sync performance");
    ^
symbol:   variable log
location: class PerformanceService
Note: /data/temp/webase-front/src/main/java/com/webank/webase/front/contract/CommonContract.
↪java uses or overrides a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
100 errors

> Task :compileJava FAILED

FAILURE: Build failed with an exception.
...
```

Lombok build.gradle

```
//annotationProcessor 'org.projectlombok:lombok:1.18.6'
```

- 3: front
http://{ip}:{port}/webase-front/8081/1/web3/refresh

4.2

4.2.1

1.

```
webase-node-manager      web
```

2.

4.2.2

1.1

-
-

1.2

```
git clone https://github.com/WeBankFinTech/WeBASE-Node-Manager.git
```

1.3

```
cd WeBASE-Node-Manager
```

WeBASE-Node-Manager

```
gradle build -x test
gradle      ./gradlew build -x test
```

WeBASE-Node-Manager dist

1.4

1.4.1

```
# mysql:
mysql -u ${your_db_account} -p${your_db_password} mysql -u root -p123456
#
CREATE DATABASE IF NOT EXISTS {your_db_name} DEFAULT CHARSET utf8 COLLATE utf8_general_ci;
```

1.4.2

```
cd dist/script
```

```
sed -i "s/fisco-bcos-data/${your_db_name}/g" webase.sh
sed -i "s/defaultAccount/${your_db_account}/g" webase.sh
sed -i "s/defaultPassword/${your_db_password}/g" webase.sh
```

root

```
sed -i "s/defaultAccount/root/g" webase.sh
```

1.4.3

```
bash webase.sh ${dbIP} ${dbPort}
```

```
bash webase.sh 127.0.0.1 3306
```

1.5

1.5.1

```
cd dist/conf
```

```
WeBASE-Node-Manager sed -i "s/8080/${your_server_port}/g" application.yml
IP sed -i "s/127.0.0.1/${your_db_ip}/g" application.yml
sed -i "s/3306/${your_db_port}/g" application.yml
sed -i "s/fisco-bcos-data/${your_db_name}/g" application.yml
sed -i "s/defaultAccount/${your_db_account}/g" application.yml
sed -i "s/defaultPassword/${your_db_password}/g" application.yml
```

1.5.2

```
cd dist
```

```
bash start.sh
```

```
bash stop.sh
```

```
bash serverStatus.sh
```

1.5.3

```
cd dist/logs
```

```
tail -f node-mgr.log    tail -f node-mgr-error.log
```

4.2.3

- 1.
 - 1.1.
 - 1.2.
 - 1.3.
- 2.
 - 2.1.
 - 2.2.
 - 2.3. *hash*
- 3.
 - 3.1.
 - 3.2.
 - 3.3.
 - 3.4.
 - 3.5.
- 4.
 - 4.1.
 - 4.2.
- 5.
 - 5.1.
 - 5.2.
 - 5.3.
 - 5.4.
 - 5.5. *bytecodeBin*
- 6.
 - 6.1.
 - 6.2.
- 7.
 - 7.1.
 - 7.2.
 - 7.3. *hash*
 - 7.4.
 - 7.5.
- 8.
 - 8.1.
 - 8.2.
 - 8.3.

- 9.
 - 9.1.
 - 9.2.
- 10.
 - 10.1.
- 11.
 - 11.1.
 - 11.2.
 - 11.3.
 - 11.4.
 - 11.5.
- 12.
 - 12.1.
 - 12.2.

1 top

1.1 top

1.1.1

- HTTP
- /front/new
- POST
- Content-type: application/json
- JSON

1.1.2

1.1.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/front/new`

```
{
  "frontIp": "127.0.0.1",
  "frontPort": "8081",
  "agency": "abc"
}
```

1.1.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "frontId": 500001,
    "frontIp": "127.0.0.1",
    "frontPort": 8181,
    "createTime": "2019-02-14 17:47:00",
    "modifyTime": "2019-03-15 11:14:29"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

1.2 top

1.2.1

- HTTP
- /front/find?frontId={frontId}
- GET
- JSON

1.2.2

1.2.3

<http://127.0.0.1:8080/WeBASE-Node-Manager/front/find>

1.2.4

-

```
{
  "code": 0,
  "message": "success",
  "totalCount": 1,
  "data": [
    {
      "frontId": 500001,
      "frontIp": "127.0.0.1",
      "frontPort": 8181,
      "createTime": "2019-02-14 17:47:00",
      "modifyTime": "2019-03-15 11:14:29"
    }
  ]
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

1.3 top

1.3.1

- HTTP
- /front/{frontId}
- DELETE
- Content-type: application/json
- JSON

1.3.2

1.3.3

http://127.0.0.1:8080/WeBASE-Node-Manager/front/{frontId}

1.3.4

-

```
{
  "code": 0,
  "data": {},
  "message": "Success"
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

2 top

2.1 top

2.1.1

- HTTP
- /transaction/transList/{groupId}/{pageNumber}/{pageSize}?
transactionHash={transactionHash}&blockNumber={blockNumber}
- GET

- JSON

2.1.2

2.1.3

```
http://127.0.0.1:8080/WeBASE-Node-Manager/transaction/transList/300001/1/10?
↳transactionHash=0x303daa78ebe9e6f5a6d9761a8eab4bf5a0ed0b06c28764488e4716de42e1df01
```

2.1.4

-

```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "transHash": "0x303daa78ebe9e6f5a6d9761a8eab4bf5a0ed0b06c28764488e4716de42e1df01",
      "groupId": 300001,
      "blockNumber": 133,
      "statisticsFlag": 1,
      "createTime": "2019-03-15 09:36:17",
      "modifyTime": "2019-03-15 09:36:17"
    }
  ],
  "totalCount": 1
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

2.2 top

2.2.1

- HTTP
- /transaction/transactionReceipt/{groupId}/{transHash}
- GET
- JSON

2.2.2

2.2.3

```
http://127.0.0.1:8080/WeBASE-Node-Manager/transaction/transactionReceipt/1/
↳0xda879949df6b5d75d2d807f036b461e0cebcc1abaccac119c9a282d3941a4818
```

2.2.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "transactionHash": "0xda879949df6b5d75d2d807f036b461e0cebcc1abaccac119c9a282d3941a4818"
    ↩,
    "transactionIndex": 0,
    "blockHash": "0x739853061c6c87ed691c0ee6f938589f7e2e442d42b16f582b353a475359b91d",
    "blockNumber": 4311,
    "cumulativeGasUsed": 0,
    "gasUsed": 32940,
    "contractAddress": "0x0000000000000000000000000000000000",
    "status": "0x0",
    "from": "0xe4bc056009daed8253008e03db6f62d93ccfacea",
    "to": "0x522eda3fbe88c07025f1db3f7dc7d9836af95b3f",
    "output": "0x",
    "logs": [],
    "logsBloom": "0x0000000000000000000000000000000000",
    "blockNumberRaw": "0x10d7",
    "transactionIndexRaw": "0x0",
    "statusOK": true,
    "gasUsedRaw": "0x80ac"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

2.3 hash top

2.3.1

- HTTP
- /transaction/transInfo/{groupId}/{transHash}
- GET
- JSON

2.3.2

2.3.3

```
http://127.0.0.1:8080/WeBASE-Node-Manager/transaction/transInfo/1/
↩0xda879949df6b5d75d2d807f036b461e0cebcc1abaccac119c9a282d3941a4818
```

2.3.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "hash": "0xda879949df6b5d75d2d807f036b461e0cebcc1abaccac119c9a282d3941a4818",
    "nonce": "600264747827990445399299219738839026203774909117379671331964756256186263529",
    "blockHash": "0x739853061c6c87ed691c0ee6f938589f7e2e442d42b16f582b353a475359b91d",
    "blockNumber": 4311,
    "transactionIndex": 0,
    "from": "0xe4bc056009daed8253008e03db6f62d93ccfacea",
    "to": "0x522eda3fbe88c07025f1db3f7dc7d9836af95b3f",
    "value": 0,
    "gasPrice": 100000000,
    "gas": 100000000,
    "input": "0x4ed3885e0000000000000000",
    "v": 0,
    "nonceRaw": "0x153bce0f26461030fe5189385b9c3e84336b007769a3849524ca3f4af7d67e9",
    "blockNumberRaw": "0x10d7",
    "transactionIndexRaw": "0x0",
    "gasPriceRaw": "0x5f5e100",
    "gasRaw": "0x5f5e100"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

3 top

3.1 top

3.1.1

- HTTP
- /account/accountInfo
- post
- Content-type: application/json
- JSON

3.1.2

3.1.3

<http://127.0.0.1:8080/WeBASE-Node-Manager/account/accountInfo>

```
{
  "account": "testAccount",
  "accountPwd": "3f21a8490cef2bfb60a9702e9d2ddb7a805c9bd1a263557dfd51a7d0e9dfa93e",
  "roleId": 100001
}
```

3.1.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "account": "testAccount",
    "roleId": 100001,
    "roleName": "visitor",
    "roleNameZh": " ",
    "loginFailTime": 0,
    "accountStatus": 1,
    "description": null,
    "createTime": "2019-03-04 15:11:44",
    "modifyTime": "2019-03-04 15:11:44"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

3.2 top

3.2.1

- HTTP
- /account/accountInfo
- PUT
- Content-type: application/json
- JSON

3.2.2

3.2.3

http://127.0.0.1:8080/WeBASE-Node-Manager/account/accountInfo

```
{
  "account": "testAccount",
  "accountPwd": "82ca84cf0d2ae423c09a214cee2bd5a7ac65c230c07d1859b9c43b30c3a9fc80",
}
```

```

    "roleId": 100001
  }

```

3.2.4

-

```

{
  "code": 0,
  "message": "success",
  "data": {
    "account": "testAccount",
    "roleId": 100001,
    "roleName": "visitor",
    "roleNameZh": " ",
    "loginFailTime": 0,
    "accountStatus": 1,
    "description": null,
    "createTime": "2019-03-04 15:11:44",
    "modifyTime": "2019-03-04 15:11:44"
  }
}

```

-

```

{
  "code": 102000,
  "message": "system exception",
  "data": {}
}

```

3.3 top

3.3.1

- HTTP
- /account/{account}
- DELETE
- JSON

3.3.2

3.3.3

http://127.0.0.1:8080/WeBASE-Node-Manager/account/testAccount

3.3.4

-

```

{
  "code": 0,
  "data": {},

```



```
}
  "message": "Success"
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

3.4 top

3.4.1

- HTTP
- : /account/accountList/{pageNumber}/{pageSize}?account={account}
- GET
- JSON

3.4.2

3.4.3

<http://127.0.0.1:8080/WeBASE-Node-Manager/account/accountList/1/10?account=>

3.4.4

-

```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "account": "testAccount",
      "roleId": 100001,
      "roleName": "visitor",
      "roleNameZh": " ",
      "loginFailTime": 0,
      "accountStatus": 1,
      "description": null,
      "createTime": "2019-03-04 15:11:44",
      "modifyTime": "2019-03-04 15:18:47"
    },
    {
      "account": "admin",
      "roleId": 100000,
      "roleName": "admin",
      "roleNameZh": " ",
      "loginFailTime": 0,
      "accountStatus": 2,
      "description": null,
      "createTime": "2019-02-14 17:33:50",
      "modifyTime": "2019-02-14 17:45:53"
    }
  ]
}
```

```
    }  
  ],  
  "totalCount": 2  
}
```

-

```
{  
  "code": 102000,  
  "message": "system exception",  
  "data": {}  
}
```

3.5 top

3.5.1

- HTTP
- /account/passwordUpdate
- put
- Content-type: application/json
- JSON

3.5.2

3.5.3

http://127.0.0.1:8080/WeBASE-Node-Manager/account/passwordUpdate

```
{  
  "oldAccountPwd": "dfdfgdg490cef2bfb60a9702erd2ddb7a805c9bd1arrrewefd51a7d0ettffa93e ",  
  "newAccountPwd": "3f21a8490cef2bfb60a9702e9d2ddb7a805c9bd1a263557dfd51a7d0e9dfa93e"  
}
```

3.5.4

-

```
{  
  "code": 0,  
  "message": "success"  
}
```

-

```
{  
  "code": 102000,  
  "message": "system exception",  
  "data": {}  
}
```

4 top

4.1 top

4.1.1

- HTTP
- `:/block/blockList/{groupId}/{pageNumber}/{pageSize}?pkHash={pkHash}&blockNumber={blockNumber}`
- GET
- JSON

4.1.2

4.1.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/block/blockList/300001/1/10?pkHash=`

4.1.4

-

```
{
  "code": 0,
  "message": "success",
  "totalCount": 2,
  "data": [
    {
      "pkHash": "0xe6438646633542e26d053f75931d74a258a607464207e1343344c100da89e661",
      "groupId": 300001,
      "blockNumber": 1442,
      "blockTimestamp": "2019-02-27 19:18:23",
      "transCount": 1,
      "createTime": "2019-03-04 10:29:07",
      "modifyTime": "2019-03-04 10:29:07"
    },
    {
      "pkHash": "0x2e036eba6d1581a280712276e06517987c7be40f0f252fca34303eef157d8c3d",
      "groupId": 300001,
      "blockNumber": 1441,
      "blockTimestamp": "2019-02-27 19:18:22",
      "transCount": 1,
      "createTime": "2019-03-04 10:29:07",
      "modifyTime": "2019-03-04 10:29:07"
    }
  ]
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

4.2 top

4.2.1

- HTTP
- `:/block/blockList/{groupId}/{pageNumber}/{pageSize}?pkHash={pkHash}&blockNumber={blockNumber}`
- GET
- JSON

4.2.2

4.2.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/block/blockByNumber/1/11`

4.2.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "number": 11,
    "hash": "0xeef574a136f1d5031ce7f5d4bbc19fa1a1b5736f38ec5687d43405a572219405",
    "parentHash": "0xca84147e343acb972dc9247727b920b5c081320bbe940f4e2b24363836dca4a1",
    "nonce": "0",
    "sealer": "0x0",
    "logsBloom": "0x00000000000000000000000000000000",
    "transactionsRoot": "0x68510be0e37b993874c6cb59170b87f01fc9672a162b30df7ea96cb026f3ab27
↪",
    "stateRoot": "0xa6e930f100c2f4a13816e57aede9b63f3b7d51d64148f4412d8a6efcb0fa9c79",
    "difficulty": 0,
    "totalDifficulty": 0,
    "extraData": [],
    "size": 0,
    "gasLimit": 0,
    "gasUsed": 0,
    "timestamp": "1551667286153",
    "gasLimitRaw": "0x0",
    "timestampRaw": "0x1694693d089",
    "gasUsedRaw": "0x0",
    "numberRaw": "0xb",
    "transactions": [
      {
        "hash": "0x30ab22a942a6545cfe46fd725e53311fbcfea655f9c0d1e198b83749f5d7bf9b",
        "nonce":
↪ "1224685724047484442779169279180691132123728860283320089873703663086305160417",
        "blockHash":
↪ "0xeef574a136f1d5031ce7f5d4bbc19fa1a1b5736f38ec5687d43405a572219405",
        "blockNumber": 11,
        "transactionIndex": 0,
        "from": "0x148947262ec5e21739fe3a931c29e8b84ee34a0f",
        "to": "0xdfb1684019f7f6ea2c41590ac55d29961de5deba",
        "value": 0,
        "gasPrice": 300000000,
        "gas": 300000000,

```

•

```

        "contractAbi": "[{"constant":false,"inputs":[{"name":"n","type":"string"},
        ↪{"name":"set","outputs":[],"payable":false,"type":"function"},{"constant":\
        ↪"}]",
        "contractBin": "60606040526945a9521ffdc88fe5825c208260d0029",
        "bytecodeBin": "6060604052341561000c57fe5b06103dd83029",
        "contractAddress": null,
        "deployTime": null,
        "contractVersion": "1",
        "description": null,
        "createTime": "2019-02-21 14:47:14",
        "modifyTime": "2019-03-12 11:02:03"
      }
    ],
    "totalCount": 1
  }
}

```

-

```

{
  "code": 102000,
  "message": "system exception",
  "data": {}
}

```

5.2 top

5.2.1

- HTTP
- /contract/{contractId}
- GET
- JSON

5.2.2

5.2.3

<http://127.0.0.1:8080/WeBASE-Node-Manager/contract/200001>

5.2.4

-

```

{
  "code": 0,
  "message": "success",
  "data": {
    "contractId": 200001,
    "contractName": "33",
    "groupId": 300001,
    "contractSource": "efsdfde",
    "contractAbi": "sdfsd",
    "contractAddress": "vcde",
    "deployTime": null,
    "contractVersion": "33",

```

```
    "description": "vcde",
    "createTime": "2018-12-02 16:09:57",
    "modifyTime": "2018-12-02 16:22:25"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

5.3 top

5.3.1

- HTTP
- /contract/deploy
- POST
- Content-type: application/json
- JSON

5.3.2

5.3.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/contract/deploy`

```
{
  "groupId": "300001",
  "contractBin": "60606040526000357c01e08980029",
  "bytecodeBin": null,
  "contractAbi": "[{\n  \"constant\": false,\n  \"inputs\": [\n    {\n      \"name\": \"n\",\n      \"type\": \"bytes\"\n    }\n  ],\n  \"name\": \"set\",\n  \"outputs\": [],\n  \"payable\": false,\n  \"type\": \"function\"\n}]",
  "contractSource": "cHJhZ21hIHudCBYXR1Sk7DQogICAgfQOKfQ==",
  "userId": 700001,
  "contractId": 200033
}
```

5.3.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "contractId": 200001,
    "contractName": "33",
    "groupId": 300001,
    "contractSource": "efsdfde",
    "contractAbi": "sdfsd",
  }
}
```

```

    "contractAddress": "vcde",
    "deployTime": null,
    "contractVersion": "33",
    "description": "vcde",
    "createTime": "2018-12-02 16:09:57",
    "modifyTime": "2018-12-02 16:22:25"
  }
}

```

-

```

{
  "code": 102000,
  "message": "system exception",
  "data": {}
}

```

5.4 top

5.4.1

- HTTP
- /contract/transaction
- POST
- Content-type: application/json
- JSON

5.4.2

5.4.3

<http://127.0.0.1:8080/WeBASE-Node-Manager/contract/transaction>

```

{
  "groupId": "300001",
  "contractBin": "6060604052600f8dee08980029",
  "bytecodeBin": null,
  "contractAbi": "[{"constant":false,"inputs":[{"name":"num","type":"uint256"}],\
↪"name":"trans","outputs":[],"payable":false,"type":"function"}]",
  "contractSource": "cHJhZ21hIHNVbGlkaXR5IF4wLjQuMjQ==",
  "userId": 700001,
  "contractId": 200033
}

```

5.4.4

-

```

{
  "code": 0,
  "message": "success",
  "data": {}
}

```


-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

5.5 bytecodeBin [top](#)

5.2.1

- HTTP
- /contract/findByPartOfBytecodeBin/{groupId}/{partOfBytecodeBin}
- GET
- JSON

5.2.2

5.2.3

http://127.0.0.1:8080/WeBASE-Node-Manager/contract/findByPartOfBytecodeBin/1/
abc123455dev

5.2.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "contractId": 200002,
    "contractName": "Ok",
    "groupId": 2,
    "chainIndex": null,
    "contractType": 0,
    "contractSource": "cHJhZ21hIDQoNCgOKfQ==",
    "contractAbi": "[{"name": "constant", "type": "bool", "inputs": [{"name": "num", "type": "uint256"}], "name": "trans", "outputs": [], "payable": false, "type": "function"}]",
    "contractBin": "60606040526000357c01000000000029",
    "bytecodeBin": "123455",
    "contractAddress": "0x19146d3a2f138aacb97ac52dd45dd7ba7cb3e04a",
    "deployTime": null,
    "contractVersion": "v6.0",
    "description": null,
    "createTime": "2019-04-15 21:14:40",
    "modifyTime": "2019-04-15 21:14:40"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

6 top

6.1 top

6.1.1

- HTTP
- /chain/mointorInfo/{nodeId}?beginDate={beginDate}&endDate={endDate}&contrastBeginDate={contrastBeginDate}
- GET
- JSON

6.1.2

6.1.3

http://127.0.0.1:8080/webcaf-node-mgr/chain/mointorInfo/500001?

gap=60&beginDate=2019-03-13T00:00:00&endDate=2019-03-13T14:34:22&contrastBeginDate=2019-03-13T00:00:00

6.1.4

-

```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "metricType": "blockHeight",
      "data": {
        "lineDataList": {
          "timestampList": [
            1552406401042,
            1552406701001
          ],
          "valueList": [
            747309,
            747309
          ]
        },
        "contrastDataList": {
          "timestampList": [
            1552320005000,
            1552320301001
          ],
          "valueList": [
            null,
            747309
          ]
        }
      }
    }
  ]
}
```

```
    }
  },
  {
    "metricType": "pbftView",
    "data": {
      "lineDataList": {
        "timestampList": null,
        "valueList": [
          118457,
          157604
        ]
      },
      "contrastDataList": {
        "timestampList": null,
        "valueList": [
          null,
          33298
        ]
      }
    }
  }
]
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

6.2 top

6.2.1

- HTTP
- `performance/ratio/{nodeId}?gap={gap}&beginDate={beginDate}&endDate={endDate}&contrastBeginDate={contrastBeginDate}`
- GET
- JSON

6.2.2

6.2.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/performance/ratio/500001?gap=1&beginDate=2019-03-15T00:00:00&endDate=2019-03-15T15:26:55&contrastBeginDate=2019-03-15T00:00:00`

6.2.4

-

```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "metricType": "txbps",
      "data": {
        "lineDataList": {
          "timestampList": [
            1552406401042,
            1552406701001
          ],
          "valueList": [
            12.24,
            54.48
          ]
        },
        "contrastDataList": {
          "timestampList": [
            1552320005000,
            1552320301001
          ],
          "valueList": [
            22.24,
            24.48
          ]
        }
      }
    },
    {
      "metricType": "cpu",
      "data": {
        "lineDataList": {
          "timestampList": null,
          "valueList": [
            118457,
            157604
          ]
        },
        "contrastDataList": {
          "timestampList": null,
          "valueList": [
            null,
            33298
          ]
        }
      }
    }
  ]
}
```

•

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

7 top

7.1 top

7.1.1

- HTTP
- /monitor/userList/{groupId}
- GET
- JSON

10.1.2

7.1.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/monitor/userList/300001`

7.1.4

-

```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "userName": "SYSTEMUSER",
      "userType": 0,
      "groupId": null,
      "contractName": null,
      "contractAddress": null,
      "interfaceName": null,
      "transType": null,
      "transUnusualType": null,
      "transCount": null,
      "transHashs": null,
      "transHashLastest": null,
      "createTime": null,
      "modifyTime": null
    },
    {
      "userName": "asdf",
      "userType": 0,
      "groupId": null,
      "contractName": null,
      "contractAddress": null,
      "interfaceName": null,
      "transType": null,
      "transUnusualType": null,
      "transCount": null,
      "transHashs": null,
      "transHashLastest": null,
      "createTime": null,
      "modifyTime": null
    }
  ]
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

7.2 top

7.2.1

- HTTP
- /monitor/interfaceList/{groupId}?userName={userName}
- GET
- JSON

7.2.2

7.2.3

http://127.0.0.1:8080/WeBASE-Node-Manager/monitor/interfaceList/300001

7.2.4

-

```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "userName": "SYSTEMUSER",
      "userType": 0,
      "groupId": null,
      "contractName": null,
      "contractAddress": null,
      "interfaceName": null,
      "transType": null,
      "transUnusualType": null,
      "transCount": null,
      "transHashs": null,
      "transHashLastest": null,
      "createTime": null,
      "modifyTime": null
    },
    {
      "userName": "asdf",
      "userType": 0,
      "groupId": null,
      "contractName": null,
      "contractAddress": null,
      "interfaceName": null,
      "transType": null,
      "transUnusualType": null,
      "transCount": null,
      "transHashs": null,

```

```
        "transHashLastest": null,
        "createTime": null,
        "modifyTime": null
      }
    ]
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

7.3 hash top

7.3.1

- HTTP
- /monitor/interfaceList/{groupId}
- GET
- JSON

7.3.2

7.3.3

http://127.0.0.1:8080/WeBASE-Node-Manager/monitor/transList/300001?
userName=0x5d97f8d41638a7b1b669b70b307bab6d49df8e2c&interfaceName=0x4ed3885e

7.3.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "groupId": 300001,
    "userName": "0x5d97f8d41638a7b1b669b70b307bab6d49df8e2c",
    "interfaceName": "0x4ed3885e",
    "totalCount": 1,
    "transInfoList": [
      {
        "transCount": 1,
        "time": "2019-03-13 15:41:56"
      }
    ]
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

7.4 top

7.4.1

- HTTP
- /unusualUserList/{groupId}/{pageNumber}/{pageSize}?userName={userName}
- GET
- JSON

7.4.2

7.4.3

http://127.0.0.1:8080/WeBASE-Node-Manager/monitor/unusualUserList/300001/1/10?
userName=

7.4.4

-

```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "userName": "0x08b52f85638a925929cf62a3ac77c67415012c24",
      "transCount": 1,
      "hashs": "0x43b50faa3f007c22cf5dd710c3561c5cde516e01a55b5b4acffd7d94cf61fc57",
      "time": "2019-03-13 22:28:29"
    }
  ],
  "totalCount": 1
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

7.5 top

7.5.1

- HTTP

- /unusualContractList/{groupId}/{pageNumber}/{pageSize}?contractAddress={contractAddress}
- GET
- JSON

7.5.2

7.5.3

http://127.0.0.1:8080/WeBASE-Node-Manager/monitor/unusualContractList/300001/1/10?contractAddress=

7.5.4

-

```
{
  "code": 0,
  "message": "success",
  "totalCount": 1,
  "data": [
    {
      "contractName": "0x00000000",
      "contractAddress": "0x000000000000000000000000000000000000000000000000",
      "transCount": 3,
      "hashs": "0xc87e306db85740895369cc2a849984fe544a6e9b0ecd2d898fc0756a02a4ce",
      "time": "2019-03-13 15:41:56"
    }
  ]
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

8 top

8.1 top

8.1.1

- HTTP
- /group/general/{groupId}
- GET
- JSON

8.1.2

8.1.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/group/300001`

8.1.4

-

```
{
  "code": 0,
  "data": {
    "latestBlock": 7156,
    "contractCount": 0,
    "groupId": "300001",
    "nodeCount": 2,
    "transactionCount": 7131
  },
  "message": "Success"
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

8.2 top

8.2.1

- HTTP
- /group/all
- GET
- JSON

8.2.2

8.2.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/group/all`

8.2.4

-

```
{
  "code": 0,
  "message": "success",
  "totalCount": 1,
}
```

```
"data": [  
  {  
    "groupId": 300001,  
    "groupName": "group1",  
    "latestBlock": 133,  
    "transCount": 133,  
    "createTime": "2019-02-14 17:33:50",  
    "modifyTime": "2019-03-15 09:36:17"  
  }  
]  
}
```

-

```
{  
  "code": 102000,  
  "message": "system exception",  
  "data": {}  
}
```

8.3 top

8.3.1

- HTTP
- /group/transDaily/{groupId}
- GET
- JSON

8.3.2

8.3.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/group/transDaily/300001`

8.3.4

-

```
{  
  "code": 0,  
  "data": [  
    {  
      "day": "2018-11-21",  
      "groupId": "300001",  
      "transCount": 12561  
    },  
    {  
      "day": "2018-11-22",  
      "groupId": "300001",  
      "transCount": 1251  
    }  
  ],  
  "message": "Success"  
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

9 top

9.1 top

9.1.1

- HTTP
- `:/node/nodeList/{groupId}/{pageNumber}/{pageSize}?nodeName={nodeName}`
- GET
- JSON

9.1.2

9.1.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/node/nodeList/300001/1/10?nodeName=`

9.1.4

-

```
{
  "code": 0,
  "message": "success",
  "totalCount": 1,
  "data": [
    {
      "nodeId": 500001,
      "nodeName": "127.0.0.1_10303",
      "groupId": 300001,
      "nodeIp": "127.0.0.1",
      "p2pPort": 10303,
      "description": null,
      "blockNumber": 133,
      "pbftView": 5852,
      "nodeActive": 1,
      "createTime": "2019-02-14 17:47:00",
      "modifyTime": "2019-03-15 11:14:29"
    }
  ]
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
}
```

```
"data": {}  
}
```

9.2 top

9.2.1

- HTTP
- : /node/nodeInfo/{groupId}?nodeType={nodeType}
- GET
- JSON

9.2.2

9.2.3

‘http://127.0.0.1:8080/WeBASE-Node-Manager/node/nodeInfo/{groupId}

9.2.4

-

```
{  
  "code": 0,  
  "message": "success",  
  "data": {  
    "nodeId": 500001,  
    "nodeName": "127.0.0.1_10303",  
    "groupId": 300001,  
    "nodeIp": "127.0.0.1",  
    "p2pPort": 10303,  
    "description": null,  
    "blockNumber": 133,  
    "pbftView": 5852,  
    "nodeActive": 1,  
    "createTime": "2019-02-14 17:47:00",  
    "modifyTime": "2019-03-15 11:14:29"  
  }  
}
```

-

```
{  
  "code": 102000,  
  "message": "system exception",  
  "data": {}  
}
```

10 top

10.1 top

10.1.1

- HTTP
- role/roleList
- GET
- JSON

10.1.2

10.1.3

<http://127.0.0.1:8080/WeBASE-Node-Manager/role/roleList?groupId=300001&pageNumber=&pageSize=&roleId=>

10.1.4

-

```
{
  "code": 0,
  "message": "success",
  "totalCount": 2,
  "data": [
    {
      "roleId": 100000,
      "roleName": "admin",
      "roleNameZh": " ",
      "roleStatus": 1,
      "description": null,
      "createTime": "2019-02-14 17:33:50",
      "modifyTime": "2019-02-14 17:33:50"
    },
    {
      "roleId": 100001,
      "roleName": "visitor",
      "roleNameZh": " ",
      "roleStatus": 1,
      "description": null,
      "createTime": "2019-02-14 17:33:50",
      "modifyTime": "2019-02-14 17:33:50"
    }
  ]
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

11 top

11.1 top

11.1.1

- HTTP
- /user/userInfo
- POST
- Content-type: application/json
- JSON

11.1.2

11.1.3

v/WeBASE-Node-Manager/user/userInfo

```
{
  "groupId": "300001",
  "description": " ",
  "userName": "user1"
}
```

11.1.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "userId": 700007,
    "userName": "asdfvw",
    "groupId": 300001,
    "publicKey":
    ↪"0x4189fdacff55fb99172e015e1adc360777bee6682fcc975238aabb144fbf610a3057fd4b5",
    "userStatus": 1,
    "userType": 1,
    "address": "0x40ec3c20b5178401ae14ad8ce9c9f94fa5ebb86a",
    "hasPk": 1,
    "description": "sda",
    "createTime": "2019-03-15 18:00:27",
    "modifyTime": "2019-03-15 18:00:27"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

11.2 top

11.2.1

- HTTP
- /user/bind
- POST
- Content-type: application/json
- JSON

11.2.2

11.2.3

http://127.0.0.1:8080/WeBASE-Node-Manager/user/userInfo

```
{
  "userName": "sdfasd",
  "publicKey":
  ↪ "0x4189fdacff55fb99172e015e1adb96dc77b0cae1619b1a41cc360777bee6682fcc9752d8aabf144fbf610a3057fd4b5
  ↪",
  "groupId": "300001",
  "description": "sdfa"
}
```

11.2.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "userId": 700007,
    "userName": "asdfvw",
    "groupId": 300001,
    "publicKey":
    ↪ "0x4189fdacff55fb99172e015e1adb96dc77b0cae1619b1a41cc360777bee6682fcc9752d8aabf144fbf610a3057fd4b5
    ↪",
    "userStatus": 1,
    "userType": 1,
    "address": "0x40ec3c20b5178401ae14ad8ce9c9f94fa5ebb86a",
    "hasPk": 1,
    "description": "sda",
    "createTime": "2019-03-15 18:00:27",
    "modifyTime": "2019-03-15 18:00:27"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```


11.3 top

11.3.1

- HTTP
- /user/userInfo
- PUT
- Content-type: application/json
- JSON

11.3.2

11.3.3

http://127.0.0.1:8080/WeBASE-Node-Manager/user/userInfo

```
{
  "userId": "400001",
  "description": "newDescription"
}
```

11.3.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "userId": 400001,
    "userName": "asdfvw",
    "groupId": 300001,
    "publicKey": "0x4189fdacff55fb99172e015e1682fcc9752d8aabf144fbf610a3057fd4b5",
    "userStatus": 1,
    "userType": 1,
    "address": "0x40ec3c20b5178401ae14ad8ce9c9f94fa5ebb86a",
    "hasPk": 1,
    "description": "newDescription",
    "createTime": "2019-03-15 18:00:27",
    "modifyTime": "2019-03-15 18:00:27"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

11.4 top

11.4.1

- HTTP
- /user/privateKey/{userId}
- GET
- json

11.4.2

11.4.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/user/privateKey/4585`

11.4.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "privateKey": 123456,
    "address": "asfsafasfasfasfas"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

11.5 top

11.5.1

- HTTP
- `:/user/userList/{groupId}/{pageNumber}/{pageSize}?userParam={userName}`
- GET
- JSON

11.5.2

11.5.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/user/userList/300001/1/10?userParam=asdfvw`

11.5.4

-

```
{
  "code": 0,
  "message": "success",
  "totalCount": 1,
  "data": [
    {
      "userId": 700007,
      "userName": "asdfvw",
      "groupId": 300001,
      "publicKey":
↪ "0x4189fdacff55fb99172e015e1adb96dc71cc360777bee6682fcc975238aabb144fbf610a3057fd4b5",
      "userStatus": 1,
      "userType": 1,
      "address": "0x40ec3c20b5178401ae14ad8ce9c9f94fa5ebb86a",
      "hasPk": 1,
      "description": "sda",
      "createTime": "2019-03-15 18:00:27",
      "modifyTime": "2019-03-15 18:00:28"
    }
  ]
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

12 [top](#)

12.1 [top](#)

12.1.1

- HTTP
- /method/add
- POST
- Content-type: application/json
- JSON

12.1.2

12.1.3

`http://127.0.0.1:8080/WeBASE-Node-Manager/method/add`

```
{
  "groupId": 2,
  "methodList": [
```

```
{
  "abiInfo": "fsdabiTestfd232222",
  "methodId": "methodIasdfdttttt",
  "methodType": "function"
}
]
```

12.1.4

-

```
{
  "code": 0,
  "message": "success",
  "data": null
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

12.2 top

12.1.1

- HTTP
- /method/findById/{groupId}/{methodId}
- POST
- Content-type: application/json
- JSON

12.1.2

12.1.3

http://127.0.0.1:8080/WeBASE-Node-Manager/method/findById/2/methodIasdfdttttt

12.1.4

-

```
{
  "code": 0,
  "message": "success",
  "data": {
    "methodId": "methodIasdfdttttt",
    "groupId": 2,

```

```
    "abiInfo": "fsdabiTestfd232222",
    "methodType": "function",
    "createTime": "2019-04-16 16:59:27",
    "modifyTime": "2019-04-16 16:59:27"
  }
}
```

-

```
{
  "code": 102000,
  "message": "system exception",
  "data": {}
}
```

4.2.4

- shell

```
[app@VM_96_107_centos deployInputParam]$ bash start.sh
start.sh: line 2: $'\r': command not found
start.sh: line 8: $'\r': command not found
start.sh: line 9: $'\r': command not found
start.sh: line 10: $'\r': command not found
```

```
dos2unix *.sh
```

-

```
[Err] 1055 - Expression #1 of ORDER BY clause is not in GROUP BY clause and contains
↳nonaggregated column 'information_schema.PROFILING.SEQ' which is not functionally dependent
↳on columns in GROUP BY clause; this is incompatible with sql_mode=only_full_group_by
```

```
mysql5.7    only_full_group_by    /etc/my.cnf, [mysqlId]
```

```
sql_mode=STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_AUTO_
↳CREATE_USER,NO_ENGINE_SUBSTITUTION
```

-

```
ERROR 2003 (HY000): Can't connect to MySQL server on '127.0.0.1' (110)
```

```
mysql      mysql      TestUser
```

```
GRANT ALL PRIVILEGES ON *.* TO 'TestUser'@'%' IDENTIFIED BY ' TestUser ' WITH GRANT OPTION;
```

mgr

- gradle build -x test

```
A problem occurred evaluating root project 'WeBASE-Node-Manager'.
Could not find method compileOnly() for arguments [[org.projectlombok:lombok:1.18.2]] on root_
↪project 'WeBASE-Node-Manager'.
```

```
1 gradle gradle 4.10 2 ./gradlew build -x test
```

4.3 WeBASE

4.3.1

```
WeBASE vue-cli
IE9 360 IE9 360 chrome
FISCO-BCOS 2.0
1. input event
2. ip
3. IDE
4.
5.
6. admin
```

4.3.2

1.

nginx

2.

/data

```
git clone https://github.com/WeBankFinTech/webase-web.git
```

```
docs nginx nginx nginx.conf nginx.conf
nginx nginx /usr/local /etc , sudo
```

```
cd /usr/local/nginx/conf
```

1 web

```
sed -i "s/3002/${your_server_port}/g" nginx.conf
```

```
sed -i "s/3002/8080/g" nginx.conf 8080
```

2 ip

```
sed -i "s/10.0.0.1/${your_server_ip}/g" nginx.conf
```

```
sed -i "s/10.0.0.1/192.168.0.1/g" nginx.conf
```

ip 192.168.0.1,

3

```
sed -i "s/\\/data\\/webase-web\\/dist/{your_file_route}/g" nginx.conf
```

4 mgr ip

```
sed -i "s/10.0.0.1:8083/{your_mgrServer_ipPort}/g" nginx.conf
```

nginx nginx server

```
upstream node_mgr_server{
    server 10.0.0.1:8083; #
}
server {
    listen      3002 default_server; #
    server_name 10.0.0.1;           #
    location / {
        root    /data/webase-web/dist; # ( )
        index   index.html index.htm;
        try_files $uri $uri/ /index.html =404;
    }

    # Load configuration files for the default server block.
    include /etc/nginx/default.d/*.conf;

    location /mgr {
        proxy_pass      http://node_mgr_server/;
        proxy_set_header Host                $host;
        proxy_set_header X-Real-IP           $remote_
↪addr;
        proxy_set_header X-Forwarded-For    $proxy_add_
↪x_forwarded_for;
    }
}
```

3. nginx

1 nginx

```
/usr/local/nginx/sbin/nginx      (nginx /usr/local )
```

nginx

```
ps -ef | grep nginx
```

error.log access.log ,nginx

2 url nginx ip : url http://10.0.0.1:3002

3 (admin/Abcd1234)

4.3.3

1 nginx

1.1 nginx

nginx gcc pcre-devel zlib-devel openssl-devel

```
yum -y install gcc pcre-devel zlib-devel openssl openssl-devel
```

sudo

1.2 nginx

nginx <https://nginx.org/download/>

```
wget http://nginx.org/download/nginx-1.9.9.tar.gz ( )
```

/usr/local/

1.3 nginx

1.3.1

```
tar -zxvf nginx-1.9.9.tar.gz
```

1.3.2 nginx

```
cd nginx-1.9.9
```

1.3.3

```
./configure --prefix=/usr/local/nginx
```

1.3.4 make

```
make  
make install
```

1.3.5

```
/usr/local/nginx/sbin/nginx -t
```

```
nginx: the configuration file /usr/local/nginx/conf/nginx.conf syntax is ok  
nginx: configuration file /usr/local/nginx/conf/nginx.conf test is successful
```


1.3.6 nginx

```
/usr/local/nginx/sbin/nginx -s reload      #  
/usr/local/nginx/sbin/nginx -s reopen     #  Nginx  
/usr/local/nginx/sbin/nginx -s stop       #  Nginx  
ps -ef | grep nginx                       #  nginx
```

2

2.1 “ ”

“ ”

1. WeBASE-Node-Manager
2. WeBASE-Node-Manager
3. nginx

2.2

“ ”

2.3

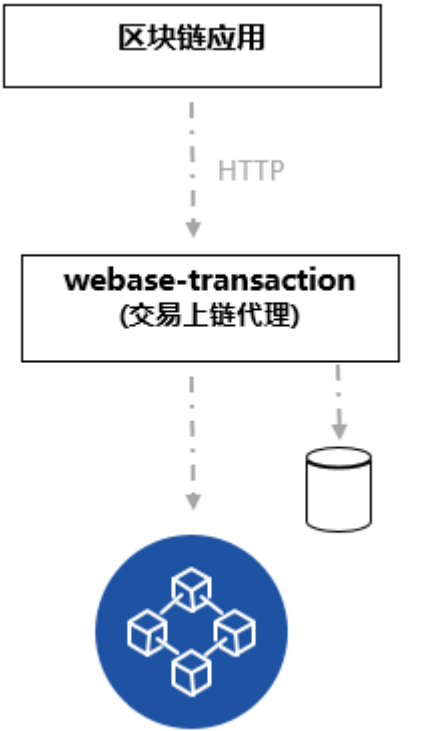
2.4

3.

4.4

4.4.1

tps



- zip “./xxx.sol”
- constant constant
- zookeeper

4.4.2

1.

-1 zookeeper

2.

```
git clone https://github.com/WeBankFinTech/WeBASE-Transaction.git
```

```
cd WeBASE-Transaction
```

3.

-2 gradle gradle-4.10

```
gradle build -x test
```

gradle gradle-4.10 gradlew

```
./gradlew build -x test
```

WeBASE-Transaction dist

4.

1

```
cd dist/conf
```

sdk ca.crt node.crt node.key

2

```
vi application.yml
```

```
server:
  #
  port: 8082
  context-path: /webase-transaction

spring:
  datasource:
    #
    url: jdbc:mysql://127.0.0.1:3306/db_transaction?useUnicode=true&characterEncoding=utf8
    #
    username: dbUsername
    #
    password: dbPassword
    driver-class-name: com.mysql.jdbc.Driver

sdk:
  #
  orgName: webank
  timeout: 10000
  #
  groupConfig:
    allChannelConnections:
      - groupId: 1
        connectionsStr:
          - 127.0.0.1:20200
          - 127.0.0.1:20201
      - groupId: 2
        connectionsStr:
          - 127.0.0.1:20200
          - 127.0.0.1:20201

constant:
  #
  privateKey: edf02a4a69b14ee6b1650a95de71d5f50496ef62ae4213026bd8d6651d030995
  cronTrans: 0/1 * * * * ?
  requestCountMax: 6
  selectCount: 10
  intervalTime: 600
```

```

sleepTime: 50
#      true- false-
ifDistributedTask: false

job:
  regCenter:
    #      zookeeper
    serverLists: 127.0.0.1:2181
    namespace: elasticjob-trans
  dataflow:
    #      3      3
    shardingTotalCount: 3

```

5.

```
cd dist
```

```

sh start.sh
sh stop.sh
sh status.sh

```

```
:
```

```

chmod + *.sh
dos2unix *.sh

```

6.

```
dist
```

```

tail -f log/transcation.log
web3 tail -f log/web3sdk.log

```

4.4.3

1.

1.1.

```
zip "xxx.sol" "/xxx.sol"
```

URL

<http://localhost:8082/webase-transcation/contract/compile>

HTTP POST

1

2

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": [
    {
      "contractName": "HelloWorld",
      "contractBin": "xxx",
      "contractAbi": []
    }
  ]
}
```

b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

1.2.

URL

<http://localhost:8082/webase-transcation/contract/deploy>

HTTP POST

1

2

```
{
  "groupId":1,
  "uuidDeploy":"XXX",
  "signType":0,
  "contractBin":"0xXXXXXX",
  "contractAbi":[],
  "funcName":"set",
  "funcParam":["hello"]
}
```

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": null
}
```

b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

1.3.

URL

`http://localhost:8082/webase-transcation/contract/address/{groupId}/{uuidDeploy}`

HTTP GET

1

2

`http://127.0.0.1:8082/webase-transaction/contract/address/1/10001`

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": "0xXXXXX"
}
```

b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

1.4. event

event

URL

`http://localhost:8082/webase-transcation/contract/event/{groupId}/{uuidDeploy}`

HTTP GET

1

2

`http://127.0.0.1:8082/webase-transaction/contract/event/1/10001`

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": {
    "constructorEvent1": [
```

```
    "hello!"
  ],
  "constructorEvent": [
    "test",
    8
  ]
}
```

b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

2. keystore

2.1.

URL

<http://localhost:8082/webase-transcation/key/address>

HTTP GET

1

2

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": {
    "0xfe12013103cf85f05b0862e5ef49da4fbdbd8f99"
  }
}
```


b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

3.

3.1.

abi

URL

<http://localhost:8082/webase-transcation/trans/send>

HTTP POST

1

2

```
{
  "groupId":1,
  "uuidStateless":"XXX",
  "uuidDeploy":"XXX",
  "signType":0,
  "contractAddress":"0xXXXXX",
  "contractAbi":[],
  "funcName":"set",
  "funcParam":["hello"]
}
```

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": null
}
```

b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

3.2.

abi

URL

<http://localhost:8082/webase-transcation/trans/call>

HTTP POST

1

2

```
{
  "groupId":1,
  "uuidDeploy":"XXX",
  "contractAbi":[],
  "funcName":"get",
  "funcParam":[]
}
```

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": [
    "hello"
  ]
}
```

b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

3.3. event

event

URL

`http://localhost:8082/webase-transcation/trans/event/{groupId}/{uuidStateless}`

HTTP GET

1

2

`http://127.0.0.1:8082/webase-transaction/trans/event/1/20001`

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": {
    "setEvent": [
      "test"
    ],
    "setEvent1": [
      "test"
    ]
  }
}
```

b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

3.4. output

output

URL

`http://localhost:8082/webase-transcation/trans/output/{groupId}/{uuidStateless}`

HTTP GET

1

2

`http://127.0.0.1:8082/webase-transaction/trans/output/1/20001`

1

2

a.

```
{
  "code": 0,
  "message": "success",
  "data": [
    "hello!"
  ]
}
```

b. 1

```
{
  "code": 103001,
  "message": "system error",
  "data": null
}
```

1.

4.4.4

1.

1.1 Java

1 java

```
mkdir /software
tar -zxvf jdkXXX.tar.gz /software/
```

2

```
export JAVA_HOME=/software/jdk1.8.0_121
export PATH=$JAVA_HOME/bin:$PATH
export CLASSPATH=.:$JAVA_HOME/lib/dt.jar:$JAVA_HOME/lib/tools.jar
```

1.2.

Centos/Fedora

1 root

```
sudo -s
```

2 mysql

```
yum install mysql*
#   linux   mariadb mariadb mysql
yum install mariadb*
```

3 mysql

```
service mysqld start
#   mariadb
systemctl start mariadb.service
```

4

```
mysql -u root
```

root

```
mysql > SET PASSWORD FOR 'root'@'localhost' = PASSWORD('123456');
mysql > GRANT ALL PRIVILEGES ON *.* TO 'root'@'%' IDENTIFIED BY '123456' WITH GRANT OPTION;
```

1. 123456

2.

test

```
mysql > create user 'test'@'localhost' identified by 'test1234';
```

5

ssh test

```
mysql -utest -ptest1234 -h 127.0.0.1 -P 3306
```

sql

```
mysql > show databases;
mysql > use test;
```

6

```
mysql -utest -ptest1234 -h 127.0.0.1 -P 3306
```

```
mysql > create database db_transaction;
```

1.3. Zookeeper

1

```
mkdir /software
tar -zxvf zookeeper-XXX.tar.gz /software/
```

2

ZooKeeper

-
-

2.

2.1

shell permission denied

“chmod +x ”

2.2

“gradle build -x test” Lombok

```
...
/data/trans/webase-transcation/src/main/java/com/webank/webase/transaction/trans/TransService.
↪java:175: error: cannot find symbol
        log.warn("save fail. contract is not deployed", contractAddress);
        ^
symbol:   variable log
location: class TransService
/data/trans/webase-transcation/src/main/java/com/webank/webase/transaction/trans/TransService.
↪java:183: error: cannot find symbol
        log.warn("call fail. contractAddress:{} abi is not exists",
↪contractAddress);
        ^
symbol:   variable log
location: class TransService
Note: /data/trans/webase-transcation/src/main/java/com/webank/webase/transaction/util/
↪ContractAbiUtil.java uses unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
100 errors
```

```
FAILURE: Build failed with an exception.  
...
```

```
build.gradle
```

```
//annotationProcessor 'org.projectlombok:lombok:1.18.2'
```

4.5

4.5.1 1.

4.5.2 2.

4.5.3 3.

3.1

```
git clone https://github.com/WeBankFinTech/webase-sign.git
```

```
cd webase-sign
```

3.2

```
gradle gradle-4.10
```

```
gradle build -x test
```

```
gradle gradle-4.10 gradlew
```

```
./gradlew build -x test
```

```
webase-sign dist
```

3.3

1

```
cd dist
```

2

```
vi conf/application.yml
```

```
server:  
  #  
  port: 8085  
  context-path: /webase-sign
```

```
spring:
  datasource:
    #
    url: jdbc:mysql://127.0.0.1:3306/testdb?useUnicode=true&characterEncoding=utf8
    #
    username: dbUsername
    #
    password: dbPassword
    driver-class-name: com.mysql.jdbc.Driver

constant:
  # aes key 16
  aesKey: EfdsW23D23d3df43
```

3.4

```
sh start.sh
sh stop.sh
sh status.sh
```

```
:
```

```
chmod + *.sh
dos2unix *.sh
```

3.5

```
tail -f log/webase-sign.log
```

4.5.4 4.

-

4.5.5 5.

5.1 Java

```
1      java
```

```
mkdir /software
tar -zxvf jdkXXX.tar.gz /software/
```

```
2
```

```
export JAVA_HOME=/software/jdk1.8.0_121
export PATH=$JAVA_HOME/bin:$PATH
export CLASSPATH=.:$JAVA_HOME/lib/dt.jar:$JAVA_HOME/lib/tools.jar
```


5.2

Centos/Fedora

1 root

```
sudo -s
```

2 mysql

```
yum install mysql*  
# linux mariadb mariadb mysql  
yum install mariadb*
```

3 mysql

```
service mysqld start  
# mariadb  
systemctl start mariadb.service
```

4

```
mysql -u root
```

root

```
mysql > SET PASSWORD FOR 'root'@'localhost' = PASSWORD('123456');  
mysql > GRANT ALL PRIVILEGES ON *.* TO 'root'@'%' IDENTIFIED BY '123456' WITH GRANT OPTION;
```

1. 123456

2.

test

```
mysql > create user 'test'@'localhost' identified by 'test1234';
```

5

ssh test

```
mysql -utest -ptest1234 -h 127.0.0.1 -P 3306
```

sql

```
mysql > show databases;  
mysql > use test;
```

6

```
mysql -utest -ptest1234 -h 127.0.0.1 -P 3306
```

```
mysql > create database testdb;
```

4.6

4.6.1 1.

1.1 WeBASE-Collect-Bee

OuterLinkColorWeBASE-Collect-Bee OuterLinkColorFISCO-BCOS

OuterLinkColorWeBASE-Collect-Bee

DB ES MQ Hadoop

OuterLinkColorWeBASE-Collect-Bee

FISCO-BCOS OuterLinkColorWeBASE-Collect-Bee
Bee event

OuterLinkColorWeBASE-Collect-Bee Restful API http

1.2 WeBASE-Codegen-Monkey

OuterLinkColorWeBASE-Collect-Bee
Codegen-Monkey
Collect-Bee

WeBASE-
OuterLinkColorWeBASE-

1.3

-

FISCO-BCOS

-

WeBASE-Codegen-Monkey OuterLinkColorWeBASE-Collect-
Bee db PM

-

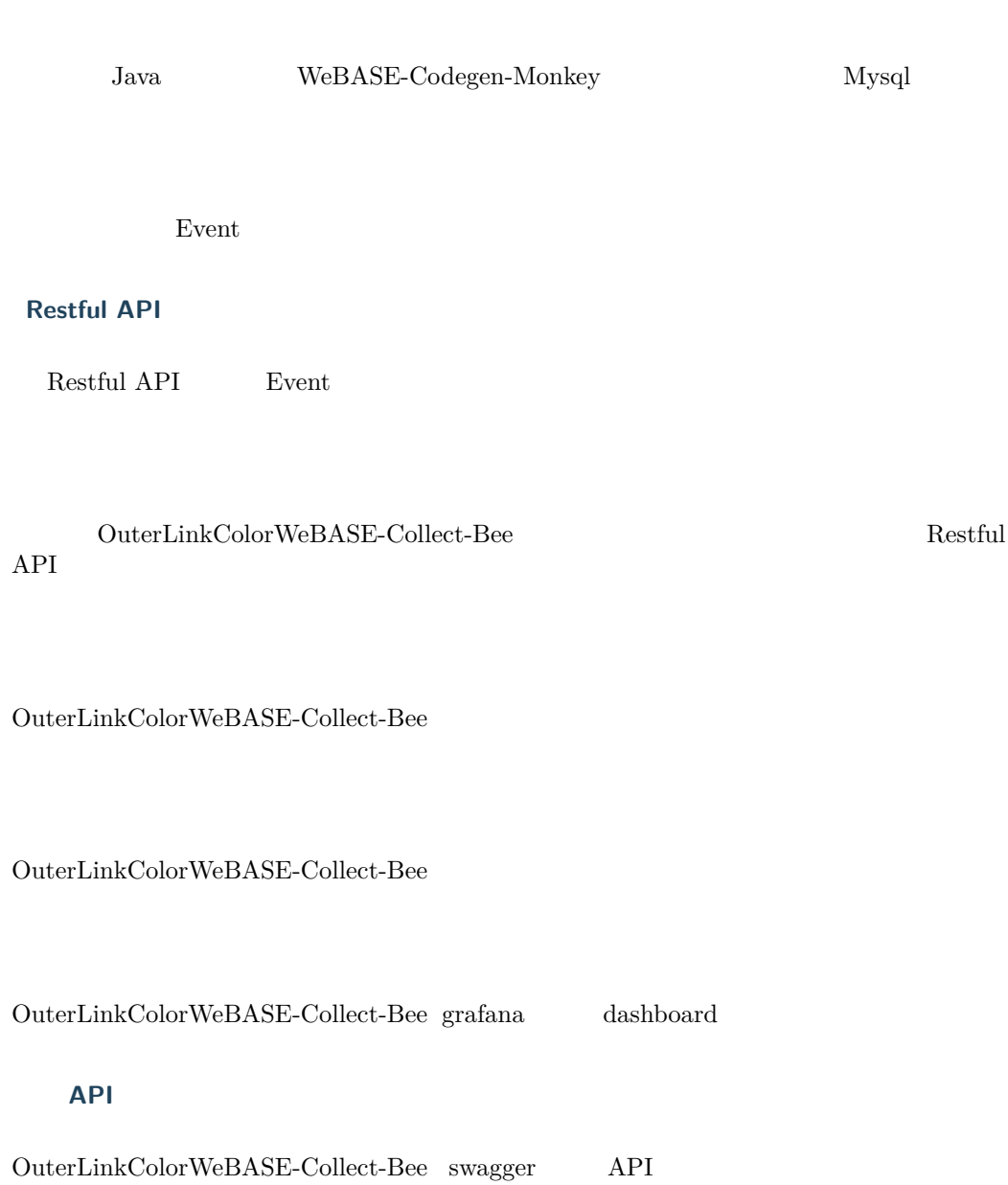
FISCO-BCOS

-

WeBASE-Codegen-Monkey OuterLinkColorWeBASE-Collect-
Bee event

- FISCO-BCOS
- WeBASE-Codegen-Monkey OuterLinkColorWeBASE-Collect-Bee OuterLinkColorWeBASE-Collect-Bee Restful API

1.4



4.6.2 2.

2.1

2.2

2.2.1

2.2.1.1

```
#  
curl -LO https://github.com/WeBankFinTech/WeBASE-Codegen-Monkey/raw/dev_  
↪v0.7.0.2019.06/src/main/install_scripts.tar.gz  
#  
tar -zxf install_scripts.tar.gz  
cd install_scripts
```

2.2.1.2

install_scripts Evidence.java

```
install_scripts  
  config  
    contract  
      Evidence.java  
    resources  
      application.properties  
  generate_bee.sh
```

2.2.2

2.2.2.1

Web3SDK	V1.2.0	OuterLinkColorfisco-solc	
	Java	Java	./config/contract Evidence.java
Java	Solidity	Java	OuterLinkColor java
:	SQL	key	select delete

2.2.2.2

./config/resources

- ca.crt
- node.crt
- node.key

2.2.2.3

application.properties

```
# IP      NODE_NAME
system.nodeStr=[NODE_NAME]@[IP]:[PORT]
system.groupId=[GROUP_ID]
# FISCO-BCOS NODE_NAME
# mysql serverTimezone
system.dbUrl=jdbc:mysql://[IP]:[PORT]/[database]?useSSL=false&
serverTimezone=GMT%2b8&useUnicode=true&characterEncoding=UTF-8
system.dbUser=[user_name]
system.dbPassword=[password]
# Java
monitor.contractPackName=[ Solidity ]
```

1

2.2.3

2.2.3.1

```
chmod +x generate_bee.sh
sh generate_bee.sh
```

OuterLinkColorWeBASE-Collect-Bee

: sudo Gradlew depot

2.2.3.2

```
chmod +x generate_bee.sh
sh generate_bee.sh build
```

OuterLinkColorWeBASE-Collect-Bee ./WeBASE-Collect-Bee/dist

```
chmod +x *.jar
nohup java -jar *.jar >/dev/null 2>&1 &
tail -f *.log
```

2.2.3.3 supervisor

supervisor	supervisor	daemon	-
fork/exec	supervisor	supervisor	
supervisor	supervisord	root user user	2.2.3.2
supervisor	6		

2.2.3

2.2.3.1

```
ps -ef |grep WeBASE-Collect-Bee
```

```
app 21980 24843 0 15:23 pts/3 00:00:44 java -jar WeBASE-Collect-
↳ Bee0.3.0-SNAPSHOT.jar
```

2.2.3.2

```
Hibernate: select blockheigh0_.pk_id as pk_id1_2_, blockheigh0_.block_
↳ height as block_he2_2_, blockheigh0_.event_name as event_na3_2_,
↳ blockheigh0_.depot_updatetime as depot_up4_2_ from block_height_info
↳ blockheigh0_ where blockheigh0_.event_name=?
Hibernate: select blockheigh0_.pk_id as pk_id1_2_, blockheigh0_.block_
↳ height as block_he2_2_, blockheigh0_.event_name as event_na3_2_,
↳ blockheigh0_.depot_updatetime as depot_up4_2_ from block_height_info
↳ blockheigh0_ where blockheigh0_.event_name=?
Hibernate: select blockheigh0_.pk_id as pk_id1_2_, blockheigh0_.block_
↳ height as block_he2_2_, blockheigh0_.event_name as event_na3_2_,
↳ blockheigh0_.depot_updatetime as depot_up4_2_ from block_height_info
↳ blockheigh0_ where blockheigh0_.event_name=?
```

```
tail -f webasebee.log| grep "sync block"
```

```
$ tail -f webasebee.log| grep "sync block"
2019-05-05 14:41:07.348 INFO 60538 --- [main] c.w.w.c.service.
↳ CommonCrawlerService : Try to sync block number 0 to 90 of 90
2019-05-05 14:41:07.358 INFO 60538 --- [main] c.w.w.c.service.
↳ BlockTaskPoolService : Begin to prepare sync blocks from 0 to 90
2019-05-05 14:41:17.142 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 0 of 90 sync block succeed.
2019-05-05 14:41:17.391 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 1 of 90 sync block succeed.
2019-05-05 14:41:17.618 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 2 of 90 sync block succeed.
2019-05-05 14:41:18.072 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 3 of 90 sync block succeed.
2019-05-05 14:41:18.395 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 4 of 90 sync block succeed.
2019-05-05 14:41:18.796 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 5 of 90 sync block succeed.
2019-05-05 14:41:19.008 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 6 of 90 sync block succeed.
2019-05-05 14:41:19.439 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 7 of 90 sync block succeed.
2019-05-05 14:41:20.303 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 8 of 90 sync block succeed.
2019-05-05 14:41:20.512 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 9 of 90 sync block succeed.
2019-05-05 14:41:20.738 INFO 60538 --- [main] c.w.w.crawler.service.
↳ BlockSyncService : Block 10 of 90 sync block succeed.
.....
```

2.2.3.3

DB

```
# mysql -u[ ] -p[ ] -e "use [ ]; select count(*) from block_detail_info"
```

```
+-----+  
| count(*) |  
+-----+  
|      633 |  
+-----+
```

2.2.3.4

```
ps -ef |grep WeBASE-Collect-Bee |grep -v grep|awk '{print $2}' |xargs kill -9
```

2.3

2.3

2.3.1

`docker docker OuterLinkColor docker grafana`

```
docker pull grafana/grafana
```

`sudo docker` permission denied :

```
sudo docker pull grafana/grafana
```

2.3.2 grafana

```
docker run -d -p 3000:3000 --name=grafana -e "GF_INSTALL_  
PLUGINS=grafana-clock-panel,grafana-simple-json-datasource" grafana/  
grafana
```

grafana 3000 Json

2.3.3 grafana

http://your_ip:3000/ IP your_ip admin/admin

2.3.4 MySQL

Password Data Sources MySQL Host Database User

2.3.5 Dashboard

WeBASE-Codegen-Monkey dashboard WeBASE-Collect-Bee/src/main/scripts/grafana/default_dashboard.json + import Upload.json
File , WeBASE-Collect-Bee/src/main/scripts/grafana/default_dashboard.json import

dashboards FISCO-BCOS
Grafana OuterLinkColorGrafana

2.4

OuterLinkColorWeBASE-Collect-Bee swagger

swagger

2.4.1 swagger

http://your_ip:port/swagger-ui.html
OuterLinkColorWeBASE-Collect-Bee 8080
http://localhost:8080/swagger-ui.html
http

2.4.2 swagger

http http “try it out” Json “Excute”

4.6.3 3.

MySQL

3.1

3.1.1

block_task_pool, :

3.1.2

block_detail_info

3.1.3

block_tx_detail_info

3.2

account_info

A new B B

3.3

Event

3.3.1

```
pragma solidity ^0.4.7;
contract UserInfo {
    bytes32 _userName;
    uint8 _sex;

    function UserInfo(bytes32 userName, uint8 sex) public {
        _userName = userName;
        _sex = sex;
    }

    event modifyUserNameEvent(bytes32 userName uint8 sex);

    function modifyUserName(bytes32 userName) public returns(bytes32){
        _userName = userName;
        modifyUserNameEvent(_userName _sex);
        return _userName;
    }
}
```

3.3.1.1

— UserInfo modifyUserNameEvent user_info_modify_user_name_event

3.3.1.2

modifyUserNameEvent userName user_info_modify_user_name_event user_name

3.3.2

3.4

Function

Event

constant

3.4.1

3.3.1

3.4.1.1

— UserInfo modifyUserName user_info_modify_user_name UserInfo

3.4.1.2

3.4.2

3.3.1

4.6.4 4.

1. block_task_pool block_detail_info

A block_task_pool block_detail_info Event Event

2.

A monitor.contractPackName

3. V1.2.0

A: 1.2.0 web3sdk V1.2.0 Java OuterLinkColor java Java ABI
web3sdk Java fisco-solc V1.2.0 Java ABI Java
Java

4.

A Java

4.6.5 5.

4.6.6 6.

LICENSE.md

4.6.7 7.

4.6.8

1.

WeBASE-Codegen-Monkey OuterLinkColorWeBASE-Collect-
Bee WeBASE-Codegen-Monkey application.properties

1.1 Springboot

1.2 FISCO-BCOS

FISCO-BCOS OuterLinkColorWeBASE-Collect-Bee WeBASE-Collect-Bee

1.3

MySQL

sysTableName

1.4 FISCO-WeBASE-Collect-Bee

1.5

system.multiLiving=true

1.6

zookeeper system.multiLiving=false zookeeper

1.7

2. Java

Ubuntu Java

```
#    Java (Java 8 )
sudo apt install -y default-jdk
#    Java
java -version
```

CentOS Java

```
#    centos    Java
$ rpm -qa|grep java
#    Java
$ rpm -e --nodeps java
#    Java
$ java -version
#    Java 8      jdk software
#    openJDK (https://jdk.java.net/java-se-ri/8) Oracle (https://www.
↪oracle.com/technetwork/java/javase/downloads/index.html) Java_
↪8      jdk-8u201-linux-x64.tar.gz
$ mkdir /software
#    jdk
$ tar -zxvf jdk-8u201-linux-x64.tar.gz
#    Java    /etc/profile
$ vim /etc/profile
#
export JAVA_HOME=/software/jdk-8u201-linux-x64.tar.gz
```

```
export PATH=$JAVA_HOME/bin:$PATH
export CLASSPATH=.:$JAVA_HOME/lib/dt.jar:$JAVA_HOME/lib/tools.jar
# profile
$ source /etc/profile
# Java
java -version
```

3. Git

git

centos:

```
sudo yum -y install git
```

ubuntu:

```
sudo apt install git
```

4. Mysql

Centos/Fedora

1 root

```
sudo -s
```

2 mysql

```
yum install mysql*
# linux mariadb mariadb mysql
yum install mariadb*
```

3 mysql

```
service mysqld start
# mariadb
service mariadb start
```

4 root

```
mysql -u root
```

```
/* test */
create user 'test'@'localhost' identified by 'test1234';
```

5 SQL root

```
GRANT ALL PRIVILEGES ON *.* TO 'test'@'%' IDENTIFIED BY 'test1234' WITH
↳ GRANT OPTION;
```

**

** 6

ssh

```
mysql -utest -ptest@2107 -h 127.0.0.1 -P 3306
```

sql

```
show databases;
use test;
select * from tb_txnByDay;
```

5. zookeeper

```
zookeeper          zookeeper      OuterLinkColor    OuterLinkColor
```

6. supervisor

```
sudo yum -y install supervisor      /etc/supervisord.conf  /etc/supervisord.d
```

```
cd /etc/supervisord.d  /etc/supervisord.conf [include]
```

```
[include]
files = supervisord.d/*.ini
[supervisord]
```

```
/etc/supervisord.d      webasebee_config1.ini      webasebee
```

```
[program:supervisor_webasebee]
directory =      /WeBASE-Collect-Bee/dist ;
command = nohup java -jar      WeBASE-Collect-Bee0.3.0-SNAPSHOT.jar & ;␣
↩
autostart = true      ;      supervisord
startsecs = 15      ;      15
autorestart = true      ;
startretries = 3      ;      3
user = app      ;
redirect_stderr = true ;      stderr      stdout      false
stdout_logfile_maxbytes = 150MB ; stdout      50MB
stdout_logfile_backups = 20      ; stdout
stderr_logfile=      /WeBASE-Collect-Bee/dist/log/webase_bee_error.log
stdout_logfile =      /WeBASE-Collect-Bee/dist/log/webase_bee_out.log ;
↩      log
[supervisord]
```

```
supervisor  supervisorctl  supervisord      systemctl      supervisord
```

```
supervisord -c /etc/supervisord.d/webasebee_config1.ini
```

```
ps -ef|grep supervisord|grep webasebee| awk '{print $2}'|xargs kill -9
ps -ef|grep WeBASE-Collect-Bee|grep -v grep| awk '{print $2}'|xargs kill␣
↩-9
```

4.7

—

4.7.1 1.

1.1

WeBASE-Collect-Bee OuterLinkColorFISCO-BCOS

WeBASE-Collect-Bee

Mysql

WeBASE-Collect-Bee
Collect-Bee

FISCO-BCOS

WeBASE-

event

WeBASE-Collect-Bee Restful API http

WeBASE-Collect-Bee Swagger

OuterLinkColorWeBASE-Codegen-Monkey

1.2

-

FISCO-BCOS

-

OuterLinkColorWeBASE-Codegen-Monkey WeBASE-Collect-
Bee

db PM

-

FISCO-BCOS

-

OuterLinkColorWeBASE-Codegen-Monkey WeBASE-Collect-
Bee event

-

FISCO-BCOS

-

OuterLinkColorWeBASE-Codegen-Monkey WeBASE-Collect-
Bee WeBASE-Collect-Bee Restful
API

1.3

OuterLinkColorWeBASE-Codegen-Monkey

sharding-jdbc

elstic-job

Restful API

Restful API

API

swagger API

WeBASE-Collect-Bee grafana dashboard

4.7.2 2.

2.1

2.2

2.2.1

OuterLinkColorWeBASE-Codegen-Monkey

OuterLinkColorWeBASE-Codegen-Monkey
Collect-Bee

WeBASE-

WeBASE-Collect-Bee gradle SpringBoot

```

-build.gradle
-config/contract
-src/main
    -resources
        application-sharding-tables.properties
        application.properties
        ca.crt
        node.crt
        node.key
    -java

```

build.gradle gradle config/contract Java src/main/resources

Java src/main/java/com/webank/webasebee/generated config/contract package src/main/java

2.2.2 ()

OuterLinkColorWeBASE-Codegen-Monkey WeBASE-Collect-Bee WeBASE-Collect-Bee

WeBASE-Collect-Bee WeBASE-Collect-Bee

```
cd WeBASE-Collect-Bee
```

src/main/resources application.properties application-sharding-tables.properties

```
sh gradlew clean bootJar
```

src/main/resources/application.properties

src/main/resources/application.properties

```

#### false
system.multiLiving=false

####
system.maxBlockHeightThreshold=50
####
system.crawlBatchUnit=100

```

src/main/resources/application.properties

```

#### true
system.multiLiving=true

#### zookeeper ip
regcenter.serverList=ip:port
#### zookeeper

```



```

regcenter.namespace=namespace

#### prepareTaskJob
#### cron
prepareTaskJob.cron=0/5 * * * * ?
###
prepareTaskJob.shardingTotalCount=1
####           ,    0
prepareTaskJob.shardingItemParameters=0=A

#### dataflowJob
dataflowJob.cron=0/5 * * * * ?
###
dataflowJob.shardingTotalCount=3
####           ,    0
dataflowJob.shardingItemParameters=0=A,1=B,2=C

```

src/main/resources/application-sharding-tables.properties

1TB

10G

```

####
sharding.jdbc.datasource.names=ds0,ds1

#### ds0
sharding.jdbc.datasource.ds0.type=com.zaxxer.hikari.HikariDataSource
sharding.jdbc.datasource.ds0.driver-class-name=com.mysql.cj.jdbc.Driver
sharding.jdbc.datasource.ds0.url=jdbc:mysql://localhost:3306/ds0
sharding.jdbc.datasource.ds0.username=
sharding.jdbc.datasource.ds0.password=

#### ds1
sharding.jdbc.datasource.ds1.type=com.zaxxer.hikari.HikariDataSource
sharding.jdbc.datasource.ds1.driver-class-name=com.mysql.cj.jdbc.Driver
sharding.jdbc.datasource.ds1.url=jdbc:mysql://localhost:3306/ds1
sharding.jdbc.datasource.ds1.username=
sharding.jdbc.datasource.ds1.password=

####
sharding.jdbc.config.sharding.default-database-strategy.inline.sharding-
↳column=user_id
####
sharding.jdbc.config.sharding.default-database-strategy.inline.algorithm-
↳expression=ds$->{user_id % 2}

#### block_tx_detail_info 5 block_height%5 pk-id
sharding.jdbc.config.sharding.tables.block_tx_detail_info.actual-data-
↳nodes=ds.block_tx_detail_info_$->{0..4}
sharding.jdbc.config.sharding.tables.block_tx_detail_info.table-strategy.
↳inline.sharding-column=block_height
sharding.jdbc.config.sharding.tables.block_tx_detail_info.table-strategy.
↳inline.algorithm-expression=block_tx_detail_info_$->{block_height % 5}
sharding.jdbc.config.sharding.tables.block_tx_detail_info.key-generator-
↳column-name=pk_id

####

```

#####

```
sharding.jdbc.datasource.names=master,slave0,slave1

sharding.jdbc.datasource.master.type=org.apache.commons.dbcp.
↳ BasicDataSource
sharding.jdbc.datasource.master.driver-class-name=com.mysql.jdbc.Driver
sharding.jdbc.datasource.master.url=jdbc:mysql://localhost:3306/master
sharding.jdbc.datasource.master.username=
sharding.jdbc.datasource.master.password=

sharding.jdbc.datasource.slave0.type=org.apache.commons.dbcp.
↳ BasicDataSource
sharding.jdbc.datasource.slave0.driver-class-name=com.mysql.jdbc.Driver
sharding.jdbc.datasource.slave0.url=jdbc:mysql://localhost:3306/slave0
sharding.jdbc.datasource.slave0.username=
sharding.jdbc.datasource.slave0.password=

sharding.jdbc.datasource.slave1.type=org.apache.commons.dbcp.
↳ BasicDataSource
sharding.jdbc.datasource.slave1.driver-class-name=com.mysql.jdbc.Driver
sharding.jdbc.datasource.slave1.url=jdbc:mysql://localhost:3306/slave1
sharding.jdbc.datasource.slave1.username=
sharding.jdbc.datasource.slave1.password=

sharding.jdbc.config.masterslave.name=ms
sharding.jdbc.config.masterslave.master-data-source-name=master
sharding.jdbc.config.masterslave.slave-data-source-names=slave0,slave1

sharding.jdbc.config.props.sql.show=true
```

+

```
sharding.jdbc.datasource.names=master,slave0

sharding.jdbc.datasource.master.type=com.zaxxer.hikari.HikariDataSource
sharding.jdbc.datasource.master.driver-class-name=com.mysql.cj.jdbc.
↳ Driver
sharding.jdbc.datasource.master.jdbc-url=jdbc:mysql://106.12.31.94:3306/
↳ test0?useSSL=false&serverTimezone=GMT%2b8&useUnicode=true&
↳ characterEncoding=UTF-8
sharding.jdbc.datasource.master.username=
sharding.jdbc.datasource.master.password=

sharding.jdbc.datasource.slave0.type=com.zaxxer.hikari.HikariDataSource
sharding.jdbc.datasource.slave0.driver-class-name=com.mysql.cj.jdbc.
↳ Driver
sharding.jdbc.datasource.slave0.jdbc-url=jdbc:mysql://106.12.31.94:3306/
↳ test1?useSSL=false&serverTimezone=GMT%2b8&useUnicode=true&
↳ characterEncoding=UTF-8
sharding.jdbc.datasource.slave0.username=
sharding.jdbc.datasource.slave0.password=

sharding.jdbc.config.sharding.master-slave-rules.ds0.master-data-source-
↳ name=master
```

```
sharding.jdbc.config.sharding.master-slave-rules.ds0.slave-data-source-
↳names=slave0

sharding.jdbc.config.sharding.tables.activity_activity.actual-data-
↳nodes=ds0.block_tx_detail_info$->{0..1}
sharding.jdbc.config.sharding.tables.activity_activity.table-strategy.
↳inline.sharding-column=block_height
sharding.jdbc.config.sharding.tables.activity_activity.table-strategy.
↳inline.algorithm-expression=block_tx_detail_info$->{block_height % 2}

sharding.jdbc.config.props.sql.show=true
```

2.2.3

OuterLinkColorWeBASE-Codegen-Monkey

```
sh gradlew clean bootJar
sh generate_bee.sh build
cd dist
chmod +x *.jar
nohup java -jar *.jar >/dev/null 2>&1 &
tail -f *.log
```

supervisor	supervisor	daemon
fork/exec	supervisor	supervisor

supervisor	supervisord	root user	user
supervisor	OuterLinkColorWeBASE-Codegen-Monkey	6	

2.2.4

2.2.4.1

```
ps -ef |grep WeBASE-Collect-Bee
```

```
app    21980 24843  0 15:23 pts/3    00:00:44 java -jar WeBASE-Collect-
↳Bee0.3.0-SNAPSHOT.jar
```

2.2.4.2

```
Hibernate: select blockheigh0.pk_id as pk_id1_2_, blockheigh0.block_
↳height as block_he2_2_, blockheigh0.event_name as event_na3_2_,
↳blockheigh0.depot_updatetime as depot_up4_2_ from block_height_info
↳blockheigh0 where blockheigh0.event_name=?
Hibernate: select blockheigh0.pk_id as pk_id1_2_, blockheigh0.block_
↳height as block_he2_2_, blockheigh0.event_name as event_na3_2_,
↳blockheigh0.depot_updatetime as depot_up4_2_ from block_height_info
↳blockheigh0 where blockheigh0.event_name=?
Hibernate: select blockheigh0.pk_id as pk_id1_2_, blockheigh0.block_
↳height as block_he2_2_, blockheigh0.event_name as event_na3_2_,
↳blockheigh0.depot_updatetime as depot_up4_2_ from block_height_info
↳blockheigh0 where blockheigh0.event_name=?
```

2.2.4.3

DB

```
# mysql -u[ ] -p[ ] -e "use [ ]; select count(*) from block_detail_info"
```

```
+-----+
| count(*) |
+-----+
|      633 |
+-----+
```

2.2.4.4

```
ps -ef |grep WeBASE-Collect-Bee |grep -v grep|awk '{print $2}' |xargs kill -9
```

2.2.5

WeBASE-Collect-Bee dist monitor.sh .

2.2.5.0

monitor.sh

```
# WeBASE-Collect-Bee IP
ip=127.0.0.1
# WeBASE-Collect-Bee
port=8082
# 20
threshold=20
# 1.
warn_number=1
```

2.2.5.1

monitor.sh .

```
./monitor.sh
block height now is 47
download number is 48
Now have 0 blocks to depot
OK! to do blocks is lesss than 20
OK! done blocks from 48 to 48, and height is from 48 to 48
```

2.2.5.2

```
OK! to do blocks is lesss than $threshold . OK! done
blocks from $prev_done to $b, and height is from $prev_height
to $a . ERROR! $todo_blocks:the block height is far
behind. . ERROR! Depot task stuck in trouble, done block
is $prev_done to $b , but block height is from $prev_height to $a
. ERROR! Get block height error. . ERROR! Get done block
count error.
```

2.2.5.3 crontab

```
monitor.sh crontab ERROR! ,
crontab
```

```
*/1 * * * * /data/app/fisco-bcos/WeBASE-Collect-Bee/dist/monitor.sh >> /
data/app/fisco-bcos/WeBASE-Collect-Bee/dist/monitor.log 2>&1
```

```
monitor.sh monitor.log
```

2.3

2.3.1

```
docker docker OuterLinkColordocker
docker grafana
```

```
docker pull grafana/grafana
```

```
sudo docker permission denied :
```

```
sudo docker pull grafana/grafana
```

2.3.2 grafana

```
docker run -d -p 3000:3000 --name=grafana -e "GF_INSTALL_
PLUGINS=grafana-clock-panel,grafana-simple-json-datasource" grafana/
grafana
```

```
grafana 3000 Json
```

2.3.3 grafana

```
http://your_ip:3000/
```

```
IP your_ip
```

```
admin/admin
```

2.3.4 MySQL

```
Data Sources MySQL
```

Host Database User Password

2.3.5 Dashboard

OuterLinkColorWeBASE-Codegen-Monkey dashboard WeBASE-Collect-Bee/src/main/scripts/grafana/default__dashboard.json

+ import Upload .json File , WeBASE-Collect-Bee/src/main/scripts/grafana/default__dashboard.json

import

dashboards FISCO-BCOS

Grafana OuterLinkColorGrafana

2.4

WeBASE-Collect-Bee swagger

swagger

2.4.1 swagger

http://your_ip:port/swagger-ui.html

WeBASE-Collect-Bee 8080

http://localhost:8080/swagger-ui.html

http

2.4.2 swagger

http http “try it out” Json “Excute”

4.7.3 3.

MySQL

3.1

3.1.1

block_task_pool, :

3.1.2

block_detail_info

3.1.3

block_tx_detail_info

3.2

account_info

A new B B

3.3

Event

3.3.1

```
pragma solidity ^0.4.7;
contract UserInfo {
    bytes32 _userName;
    uint8 _sex;

    function UserInfo(bytes32 userName, uint8 sex) public {
        _userName = userName;
        _sex = sex;
    }

    event modifyUserNameEvent(bytes32 userName uint8 sex);

    function modifyUserName(bytes32 userName) public returns(bytes32){
        _userName = userName;
        modifyUserNameEvent(_userName _sex);
        return _userName;
    }
}
```

3.3.1.1

— UserInfo modifyUserNameEvent user_info_modify_user_name_event

3.3.1.2

modifyUserNameEvent userName user_info_modify_user_name_event user_name

3.3.2

3.4

Function

Event

constant

3.4.1

3.3.1

3.4.1.1

—

UserInfo

modifyUserName

user_info_modify_user_name

UserInfo

3.4.1.2

3.4.2

3.3.1