tinychain

environment

1.docker

卸载旧版本

```
$ sudo yum remove docker \
               docker-common \
               docker-selinux \
               docker-engine
```

安装使用依赖

```
$ sudo yum install -y yum-utils
  device-mapper-persistent-data
  lvm2
$ sudo yum-config-manager \
--add-repo \
https://github.com/jamesob/tinychain.git
$ sudo yum-config-manager --enable docker-ce-edge
```

安装docker-ce

```
$ sudo yum install docker-ce
```

开始安装docker

```
$ dockerd &
```

通过运行hello-world镜像确认docker成功安装

```
$ docker run hello-world
```

2.python3.6

安装python3.6可能使用的依赖

```
$ yum -y install openssl-devel bzip2-devel expat-devel gdbm-devel readline-devel s
qlite-devel`
$ tar -xzvf Python-3.6.1.tgz `
$ cd  Python-3.6.1/`
```

把Python3.6安装到 /usr/local 目录

```
$ ./configure  --prefix=/usr/local/`
$ make
$ make altinstall`
```

python3.6程序的执行文件：/usr/local/bin/python3.6

python3.6应用程序目录：/usr/local/lib/python3.6

pip3的执行文件：/usr/local/bin/pip3.6

pyenv3的执行文件：/usr/local/bin/pyenv-3.6

更改/usr/bin/python链接

```
$ cd/usr/bin
$ mv  python python.backup
$ ln -s /usr/local/bin/python3.6 /usr/bin/python
$ ln -s /usr/local/bin/python3.6 /usr/bin/python3
$ rm -rf /usr/bin/python2
$ ln -s /usr/bin/python2.6 /usr/bin/python2
```

更改yum脚本的python依赖

```
$ cd /usr/bin
$ ls yum*
  yum yum-config-manager yum-debug-restore yum-groups-manager
  yum-builddep yum-debug-dump yumdownloader
```

更改以上文件头为

```
#!/usr/bin/python 改为 #!/usr/bin/python2
```

building tinychain

克隆这个repo:

```
$ git clone https://github.com/jamesob/tinychain.git
```

获取本地python依赖关系:

```
$ pip install -r requirements.txt
```

运行 `docker-compose up` 。这会产生两个tinychain节点。

```
node2_1  | [2018-01-29 05:12:46,577][tinychain:371] INFO block accepted height=463
 txns=1
node2_1  | [2018-01-29 05:12:46,593][tinychain:351] INFO connecting block 00000014
1d5c4cecf9f01cb08ec663c252e395dd093586fc8dd66e67d7a1c440 to chain 0
node2_1  | [2018-01-29 05:12:46,594][tinychain:518] INFO adding tx outpoint OutPoi
nt(txid='888abf119c7ce3c1fafbc25168390be9aa98c62a6020325496dceeafafa02e45', txout_
idx=0) to utxo_set
node2_1  | [2018-01-29 05:12:46,595][tinychain:371] INFO block accepted height=464
 txns=1
node1_1  | [2018-01-29 03:45:21,840][tinychain:351] INFO connecting block 00000024
75c81ffe8fccf5d006f37e91c86c488af4998710973f94aa9e18b806 to chain 0
node1_1  | [2018-01-29 03:45:21,841][tinychain:518] INFO adding tx outpoint OutPoi
nt(txid='fff67d165869e1ff1a1eb0a10c828442f1d42cbca476693c634f6e40ef98db4d', txout_
idx=0) to utxo_set
node1_1  | [2018-01-29 03:45:21,841][tinychain:371] INFO block accepted height=56
txns=1
node1_1  | [2018-01-29 03:45:21,843][tinychain:351] INFO connecting block 000000e5
82d9c1a371d504ecd83ce669480d9ab7b2afba073f8c878c42ad205a to chain 0
node1_1  | [2018-01-29 03:45:21,843][tinychain:518] INFO adding tx outpoint OutPoi
nt(txid='0730c9475bf8172dc8bb44c2f8c0c8acbdebebf07e542195371fc17a40d166e6', txout_
idx=0) to utxo_set
```

在另一个窗口中运行 `./bin/sync_wallets` ,这将来自Docker容器的钱包数据导入您的主机。

```
$ ./bin/sync_wallets
Synced node1's wallet:
[2017-08-05 12:59:34,423][tinychain:1075] INFO your address is 1898KEjkziq9uRCzaVU
UoBwzhURt4nrbP8
0.0 Ƀ

Synced node2's wallet:
[2017-08-05 12:59:35,876][tinychain:1075] INFO your address is 15YxFVo4EuqvDJH8ey2
bY352MVRVpH1yFD
0.0 Ƀ
```

运行 `./client.py balance -w wallet1.dat;` 尝试运行另一个钱包

```
$ ./client.py balance -w wallet2.dat
[2017-08-05 13:00:37,317][tinychain:1075] INFO your address is 15YxFVo4EuqvDJH8ey2
bY352MVRVpH1yFD
0.0 Ƀ
```

尝试在钱包之间进行转账

```
$ ./client.py send -w wallet2.dat 1898KEjkziq9uRCzaVUUoBwzhURt4nrbP8 1337
[2017-08-05 13:08:08,251][tinychain:1077] INFO your address is 1Q2fBbg8XnnPiv1UHe4
4f2x9vf54YKXh7C
[2017-08-05 13:08:08,361][client:105] INFO built txn Transaction(...)
[2017-08-05 13:08:08,362][client:106] INFO broadcasting txn 2aa89204456207384851a4
bbf8bde155eca7fcf30b833495d5b0541f84931919`
```

查看交易状态

```
$ ./client.py status e8f63eeeca32f9df28a3a62a366f63e8595cf70efb94710d43626ff4c0918
a8a
[2017-08-05 13:09:21,489][tinychain:1077] INFO your address is 1898KEjkziq9uRCzaVU
UoBwzhURt4nrbP8
Mined in 0000000726752f82af3d0f271fd61337035256051a9a1e5881e82d93d8e42d66 at heigh
t 5
```