以太坊学习：第九天

目录

一：挖矿

1.0x8cbf968154223254306C41C03F0110FC97B200BA不是管理所中的地址，无法让它发送

```
> eth.sendTransaction({from:"0x8cbf968154223254306C41C03F0110FC97B200BA",to:eth.accounts[0],value:100
WARN [07-12|17:32:05.819] Served eth_sendTransaction                    reqid=12 t=68.288µs err="unknown a
Error: unknown account
    at web3.js:3143:20
    at web3.js:6347:15
    at web3.js:5081:36
    at <anonymous>:1:1
```

2.无法直接转账，要先解锁

```
> eth.sendTransaction({from:eth.accounts[0],to:"0x8cbf968154223254306C41C03F0110FC97B200BA",value:100000})
WARN [07-12|17:33:38.782] Served eth_sendTransaction                    reqid=14 t=763.59µs err="authentication
password or unlock"
Error: authentication needed: password or unlock
    at web3.js:3143:20
    at web3.js:6347:15
    at web3.js:5081:36
    at <anonymous>:1:1
```

3.授权并交易，（我们没钱所以交易失败）

```
> personal.unlockAccount(eth.accounts[0])
Unlock account 0xa95def0f6890f2c79bb2f6ca006c18ef0ad56417
Password:
true
> eth.sendTransaction({from:eth.accounts[0],to:"0x8cbf968154223254306C41C03F0110FC97B200BA",value:100000})
WARN [07-12|17:36:46.098] Served eth_sendTransaction                    reqid=18 t=1.094925ms err="insufficient
r gas * price + value"
Error: insufficient funds for gas * price + value
    at web3.js:3143:20
    at web3.js:6347:15
    at web3.js:5081:36
    at <anonymous>:1:1
```

4.开始挖：miner.start(1)

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```
> miner.start(1)
INFO [07-12|17:43:18.760] Updated mining threads                     threads=1
INFO [07-12|17:43:18.760] Transaction pool price threshold updated price=1000000000
null
> INFO [07-12|17:43:18.761] Commit new mining work              number=1 sealhash=dadab2…3d79c4 uncle
 gas=0 fees=0 elapsed=183.264µs
INFO [07-12|17:43:19.541] Generating DAG in progress              epoch=0 percentage=0 elapsed=369.039ms
INFO [07-12|17:43:19.899] Generating DAG in progress              epoch=0 percentage=1 elapsed=727.073ms
INFO [07-12|17:43:20.249] Generating DAG in progress              epoch=0 percentage=2 elapsed=1.077s
INFO [07-12|17:43:20.620] Generating DAG in progress              epoch=0 percentage=3 elapsed=1.448s
INFO [07-12|17:43:20.995] Generating DAG in progress              epoch=0 percentage=4 elapsed=1.823s
INFO [07-12|17:43:21.399] Generating DAG in progress              epoch=0 percentage=5 elapsed=2.227s
INFO [07-12|17:43:21.987] Generating DAG in progress              epoch=0 percentage=6 elapsed=2.815s
INFO [07-12|17:43:22.345] Generating DAG in progress              epoch=0 percentage=7 elapsed=3.173s
INFO [07-12|17:43:22.727] Generating DAG in progress              epoch=0 percentage=8 elapsed=3.555s
INFO [07-12|17:43:23.099] Generating DAG in progress              epoch=0 percentage=9 elapsed=3.927s
INFO [07-12|17:43:23.481] Generating DAG in progress              epoch=0 percentage=10 elapsed=4.309s
INFO [07-12|17:43:24.099] Generating DAG in progress              epoch=0 percentage=11 elapsed=4.927s
INFO [07-12|17:43:24.457] Generating DAG in progress              epoch=0 percentage=12 elapsed=5.285s
INFO [07-12|17:43:24.839] Generating DAG in progress              epoch=0 percentage=13 elapsed=5.667s
INFO [07-12|17:43:25.220] Generating DAG in progress              epoch=0 percentage=14 elapsed=6.048s
INFO [07-12|17:43:25.575] Generating DAG in progress              epoch=0 percentage=15 elapsed=6.403s
INFO [07-12|17:43:26.261] Generating DAG in progress              epoch=0 percentage=16 elapsed=7.089s
INFO [07-12|17:43:26.622] Generating DAG in progress              epoch=0 percentage=17 elapsed=7.450s
INFO [07-12|17:43:27.011] Generating DAG in progress              epoch=0 percentage=18 elapsed=7.839s
INFO [07-12|17:43:27.370] Generating DAG in progress              epoch=0 percentage=19 elapsed=8.198s
INFO [07-12|17:43:27.726] Generating DAG in progress              epoch=0 percentage=20 elapsed=8.554s
INFO [07-12|17:43:28.099] Generating DAG in progress              epoch=0 percentage=21 elapsed=8.927s
INFO [07-12|17:43:28.702] Generating DAG in progress              epoch=0 percentage=22 elapsed=9.530s
```

miner.stop()来停止挖

5.挖到了！

```
> eth.blockNumber
9
> eth.getBalance([0])
Error: invalid address
    at web3.js:3930:15
    at web3.js:5025:28
    at map (<native code>)
    at web3.js:5024:12
    at web3.js:5050:18
    at web3.js:5075:23
    at <anonymous>:1:1

> eth.getBalance(eth.accounts[0])
45000000000000000000
                                              CSDN @LEVI_104
```

6.情况：一个块5以太

```
> eth.getBalance(eth.accounts[0])
45000000000000000000
> eth.coinbase
"0xa95def0f6890f2c79bb2f6ca006c18ef0ad56417"
> eth.showAccounts
undefined
> eth.accounts
["0xa95def0f6890f2c79bb2f6ca006c18ef0ad56417"]
> web3.fromWei(eth.getBalance(eth.accounts[0]),'ether')
45
> eth.blockNumber
9
                                              CSDN @LEVI_104
```

二:以太坊私链什么处于pending状态的交易 无法被打包 是因为什么?

1管理中的账户给我的以太坊账户转账，但是没成功，因为没有挖矿，账单没有打包进块

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```
> eth.getBalance("0x8cbf968154223254306C41C03F0110F
C97B200BA")
300000000000000
> eth.getBalance(eth.accounts[0])
19500000000000000000
> eth.sendTransaction({from:eth.accounts[0],to:"0x8
cbf968154223254306C41C03F0110FC97B200BA",value:web3
.toWei(10,'ether')})
Error: authentication needed: password or unlock
    at web3.js:3143:20
    at web3.js:6347:15
    at web3.js:5081:36
    at <anonymous>:1:1

> personal.unlockAccount(eth.accounts[0])
Unlock account 0xa95def0f6890f2c79bb2f6ca006c18ef0a
d56417
Password:
true
> eth.sendTransaction({from:eth.accounts[0],to:"0x8
cbf968154223254306C41C03F0110FC97B200BA",value:web3
.toWei(10,'ether')})
"0x021c40e657af729fce4baa51dd00cd20334d9ef2be4b2b0b
f0cb87e553aed3ab"
> eth.getBalance("0x8cbf968154223254306C41C03F0110F
C97B200BA")
300000000000000
```

CSDN @LEVI_104

2原因：是配置文件的问题，把原来的配置文件改成如下就行了（删除原来的链，新建一个）

```
1  {
2    "config": {
3      "chainId": 15,
4      "homesteadBlock": 0,
5      "eip150Block": 0,
6      "eip155Block": 0,
7      "eip158Block": 0,
8      "byzantiumBlock": 0,
9      "constantinopleBlock": 0,
10     "petersburgBlock": 0,
11     "ethash": {}
12   },
13   "difficulty": "1",
14   "gasLimit": "8000000",
15   "alloc": {
16     "7df9a875a174b3bc565e6424a0050ebc1b2d1d82": { "balance": "300000" },
17     "f41c74c9ae680c1aa78f42e5647a62f353b7bdde": { "balance": "400000" }
18   }
19  }
20  //========原来的代码=============
21  {
22    "config": {
23      "chainId": 15
24    },
25    "difficulty": "1",
26    "gasLimit": "8000000",
27    "alloc": {
28      "7df9a875a174b3bc565e6424a0050ebc1b2d1d82": { "balance": "300000" },
29      "f41c74c9ae680c1aa78f42e5647a62f353b7bdde": { "balance": "400000" }
30    }
31  }
```

三：MetaMask无法连接localhost 8545

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四：开发者账户私链

1.输入：geth --datadir . --dev console 2>ouput.log。进入到一个新的私链，里面有一个账户，有很多钱，并且它是默认解锁的。并且这个私链是自z
（即只要发起交易，就自动出块，平时不挖矿）。

文章知识点与官方知识档案匹配，可进一步学习相关知识

CS入门技能树　Linux入门　初识Linux　7660 人正在系统学习中

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