目录

1 旧节点挖矿

1.1 【0701】获取区块信息

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 0.00000000,
    "blocks": 20,
    "timeoffset": 0,
    "connections": 1,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499434061,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

1.2 【0701】挖矿 101

```
# bitcoin-cli -regtest generate 101
```

2 【0630】向【0701】发起交易

2.1 【0701】获取新地址

```
# bitcoin-cli -regtest getnewaddress
mwQDivLEgCYE4Mx7GBdx7uZ1sJsdNMWL3q
```

2.2 【0630】向【0701】转账 10

bitcoin-cli -regtest sendtoaddress mwQDivLEgCYE4Mx7GBdx7uZ1sJsdNMWL3q 10
1f541969239d589baea529cf4cb837d8ac437c9144160eebad36758e0c429636

2.3 【0630】查询交易

bitcoin-cli -regtest gettransaction
1f541969239d589baea529cf4cb837d8ac437c9144160eebad36758e0c429636
```
{
    "amount": -10.00000000,
    "fee": -0.00003840,
    "confirmations": 0,
    "trusted": true,
    "txid": "1f541969239d589baea529cf4cb837d8ac437c9144160eebad36758e0c429636",
    "walletconflicts": [
    ],
    "time": 1499438493,
    "timereceived": 1499438493,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "mwQDivLEgCYE4Mx7GBdx7uZ1sJsdNMWL3q",
            "category": "send",
            "amount": -10.00000000,
            "vout": 0,
            "fee": -0.00003840,
            "abandoned": false
        }
    ],
    "hex":
```
"0200000001cd3d80d69b0ad42649b96edf578642eb5b0276594aafffd6db155f9ca7d5a8de00000
0004847304402210097175b116053716ea17b4a0138ce7dedb33f2779def7d910682bb6a23a1f7e
a5021f32032c1c9a5762b0bf60df3f86ba2f56e77184c39ea4f73b0a6a781ab9278301feffffff0200ca
9a3b000000001976a914ae3bfae562c3254bfb7208c206021aa4b30fc8c188ac00196bee00000000
1976a9143012717d6b1d921d008f71467805a456cd2b89b588ac79000000"
```
}
```

2.4 【0701】查询交易

```
# bitcoin-cli -regtest gettransaction
1f541969239d589baea529cf4cb837d8ac437c9144160eebad36758e0c429636
{
    "amount": 10.00000000,
    "confirmations": 0,
    "trusted": false,
    "txid": "1f541969239d589baea529cf4cb837d8ac437c9144160eebad36758e0c429636",
    "walletconflicts": [
    ],
    "time": 1499438491,
    "timereceived": 1499438491,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "mwQDivLEgCYE4Mx7GBdx7uZ1sJsdNMWL3q",
            "category": "receive",
            "amount": 10.00000000,
            "label": "",
            "vout": 0
        }
    ],
    "hex":
"0200000001cd3d80d69b0ad42649b96edf578642eb5b0276594aafffd6db155f9ca7d5a8de00000
000484730440221009717155b116053716ea17b4a0138ce7dedb33f2779def7d910682bb6a23a1f7e
a5021f32032c1c9a5762b0bf60df3f86ba2f56e77184c39ea4f73b0a6a781ab9278301feffffff0200ca
9a3b000000001976a914ae3bfae562c3254bfb7208c206021aa4b30fc8c188ac00196bee00000000
1976a9143012717d6b1d921d008f71467805a456cd2b89b588ac79000000"
}
```

2.5 【0630】挖矿 101 确认交易

```
# bitcoin-cli -regtest generate 101
```

2.6 【0630】获取区块信息

```
#   bitcoin-cli -regtest getinfo
{
```

```
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 1040.00000000,
    "blocks": 222,
    "timeoffset": 0,
    "connections": 1,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

2.7 【0701】获取区块信息

```
# bitcoin-cli -regtest getblockchaininfo
{
    "chain": "regtest",
    "blocks": 222,
    "headers": 222,
    "bestblockhash":
"37cb4775e91d2cc8c01879be4368095b953ae0b7da97bbb345d588704cfca963",
    "difficulty": 4.656542373906925e-10,
    "mediantime": 1499438595,
    "verificationprogress": 1,
    "chainwork":
"00000000000000000000000000000000000000000000000000000000000001be",
    "pruned": false,
    "softforks": [
        {
            "id": "bip34",
            "version": 2,
            "reject": {
                "status": false
            }
        },
        {
            "id": "bip66",
```

```json
            "version": 3,
            "reject": {
                "status": false
            }
        },
        {
            "id": "bip65",
            "version": 4,
            "reject": {
                "status": false
            }
        }
    ],
    "bip9_softforks": {
        "csv": {
            "status": "started",
            "bit": 0,
            "startTime": 0,
            "timeout": 999999999999,
            "since": 144,
            "statistics": {
                "period": 144,
                "threshold": 108,
                "elapsed": 79,
                "count": 79,
                "possible": true
            }
        },
        "segwit": {
            "status": "started",
            "bit": 1,
            "startTime": 0,
            "timeout": 999999999999,
            "since": 144,
            "statistics": {
                "period": 144,
                "threshold": 108,
                "elapsed": 79,
                "count": 79,
                "possible": true
            }
        }
    }
}
```

3 【0630】向【0701】发起交易

3.1 【0630】获取新地址

bitcoin-cli -regtest getnewaddress
n13aSoi3U1DuG1xmKtzruGPhkGCVr9EVXs

3.2 【0701】向【0630】转账 20

bitcoin-cli -regtest sendtoaddress n13aSoi3U1DuG1xmKtzruGPhkGCVr9EVXs 20
f748967a8b0585428f545e358fcf3d64c63855d5e3b6b3874e64cdf921249daf

3.3 【0630】挖矿 101 确认交易

bitcoin-cli -regtest generate 101

3.4 【0630】查询交易，交易被确认 101 次

bitcoin-cli -regtest gettransaction
f748967a8b0585428f545e358fcf3d64c63855d5e3b6b3874e64cdf921249daf

```
{
    "amount": 20.00000000,
    "confirmations": 101,
    "blockhash": "28ddbf036b291cd6cc4da9a21c1dd48d1fdf5a004df558f5aa4836a8d458f7a7",
    "blockindex": 1,
    "blocktime": 1499438843,
    "txid": "f748967a8b0585428f545e358fcf3d64c63855d5e3b6b3874e64cdf921249daf",
    "walletconflicts": [
    ],
    "time": 1499438804,
    "timereceived": 1499438804,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "n13aSoi3U1DuG1xmKtzruGPhkGCVr9EVXs",
            "category": "receive",
```

```
        "amount": 20.00000000,
        "label": "",
        "vout": 0
      }
  ],
  "hex":
```
"02000000014c0b2d65f85960bb62bc9325620bb73452162b86ed3a75cba4825c41e69ce8c10000
000049483045022100a5a7482f4619a78cb17e695c8d65fdf62ca4106f088659796ab25a57ad4f9f2
202200e6919e9b04cf9372b67d49dc2686685c70a11beab0be4fb797b48260e63c0a301fefffff020
0943577000000001976a914d6350bc65e510c5fa87ff111722b0bcfee99034c88ac004fd0b2000000
001976a9147beec8f53e49aeb28c8a2e2d215105d9ec11a9f388acde000000"
```
}
```

3.5 【0630】获取区块信息

```
#   bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 4260.00003840,
    "blocks": 323,
    "timeoffset": 0,
    "connections": 1,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

3.6 【0701】获取区块信息

```
# bitcoin-cli -regtest getblockchaininfo
{
    "chain": "regtest",
    "blocks": 323,
    "headers": 323,
```

```
    "bestblockhash":
"6051a4def8eb8e4c54e097546fa0196c632605a48de089b919f79ee03c7b4803",
    "difficulty": 4.656542373906925e-10,
    "mediantime": 1499438858,
    "verificationprogress": 1,
    "chainwork":
"0000000000000000000000000000000000000000000000000000000000000288",
    "pruned": false,
    "softforks": [
        {
            "id": "bip34",
            "version": 2,
            "reject": {
                "status": false
            }
        },
        {
            "id": "bip66",
            "version": 3,
            "reject": {
                "status": false
            }
        },
        {
            "id": "bip65",
            "version": 4,
            "reject": {
                "status": false
            }
        }
    ],
    "bip9_softforks": {
        "csv": {
            "status": "locked_in",
            "startTime": 0,
            "timeout": 999999999999,
            "since": 288
        },
        "segwit": {
            "status": "locked_in",
            "startTime": 0,
            "timeout": 999999999999,
            "since": 288
        }
```

```
    }
}
```

4 升级【0701】为 2K 防攻击节点

5 0630 向协会发交易

5.1 【协会】获取区块信息

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 0.00000000,
    "blocks": 323,
    "timeoffset": 0,
    "connections": 2,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

5.2 【协会】创建新地址

```
# bitcoin-cli -regtest getnewaddress
mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr
```

5.3 【0630】向协会转账 50

```
# bitcoin-cli -regtest sendtoaddress mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr 50
```

59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c

5.4 【0630】查询交易

bitcoin-cli -regtest gettransaction
59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c

```
{
    "amount": -50.00000000,
    "fee": -0.00006800,
    "confirmations": 0,
    "trusted": true,
    "txid": "59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c",
    "walletconflicts": [
    ],
    "time": 1499442225,
    "timereceived": 1499442225,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr",
            "category": "send",
            "amount": -50.00000000,
            "vout": 1,
            "fee": -0.00006800,
            "abandoned": false
        }
    ],
    "hex":
"0200000002af9d2421f9cd644e87b3b6e3d55538c6643dcf8f355e548f4285058b7a9648f7000000
006b483045022100a3e5b4ffd3d0f459b06821e8a76645f882c04816fad9a4128f1b705b828d2c54
0220379dcfdd798c4eec336c3450023ce5718bcd22d2c37e67b83f9cdb0b3091eb820121037a414
4bbf84ea3e63610bede72a080bcf05568aa7517f6ff508fa14e9472accdfeffffffffb9b3ffd000f8a834df
17c8f927b62ffc4158b8ac12780c9e551572b1bc59d2200000000494830450221008f3143d1921d4
d4eb4e1fe6ed48c88a1e39e369b8af94b748536c9f705fe21c802203057fa0595b7cc6e2526cdbd0f
1ed9d7a67760315adfaa9b4e3937714b0c4ac701feffffff0270793577000000001976a914d91f2cbd
02f75c09f4970a3d1f7895bd1414fab288ac00f2052a010000001976a9141b21116e632a7ee182e1
3e99be34ad580893d20d88ac43010000"
}
```

5.5 【0701】查询交易，分叉后查不到交易

```
# bitcoin-cli -regtest gettransaction
59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c
error code: -5
error message:
Invalid or non-wallet transaction id
```

5.6 【协会】查询交易，旧节点通讯正常

```
# bitcoin-cli -regtest gettransaction
59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c
{
    "amount": 50.00000000,
    "confirmations": 0,
    "trusted": false,
    "txid": "59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c",
    "walletconflicts": [
    ],
    "time": 1499442221,
    "timereceived": 1499442221,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr",
            "category": "receive",
            "amount": 50.00000000,
            "label": "",
            "vout": 1
        }
    ],
    "hex":
```
"0200000002af9d2421f9cd644e87b3b6e3d55538c6643dcf8f355e548f4285058b7a9648f7000000
006b483045022100a3e5b4ffd3d0f459b06821e8a76645f882c04816fad9a4128f1b705b828d2c54
0220379dcfdd798c4eec336c3450023ce5718bcd22d2c37e67b83f9cdb0b3091eb820121037a414
4bbf84ea3e63610bede72a080bcf05568aa7517f6ff508fa14e9472accdfeffffffffb9b3ffd000f8a834df
17c8f927b62ffc4158b8ac12780c9e551572b1bc59d22000000004948304502210 08f3143d1921d4
d4eb4e1fe6ed48c88a1e39e369b8af94b748536c9f705fe21c802203057fa0595b7cc6e2526cdbd0f
1ed9d7a67760315adfaa9b4e3937714b0c4ac701feffffff0270793577000000001976a914d91f2cbd
02f75c09f4970a3d1f7895bd1414fab288ac00f2052a010000001976a9141b21116e632a7ee182e1
3e99be34ad580893d20d88ac43010000"

}

6 0630 挖矿

6.1 【0630】挖矿确认

bitcoin-cli -regtest generate 1
[
  "6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3"
]

6.2 【0630】查询新生成区块，交易被打包

bitcoin-cli -regtest getblock
6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3
{
  "hash": "6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3",
  "confirmations": 1,
  "strippedsize": 568,
  "size": 568,
  "weight": 2272,
  "height": 324,
  "version": 805306371,
  "versionHex": "30000003",
  "merkleroot": "2c269ef463af3cc6358b7428c92dcc3bf22e2053a6033eef352d4bbad095deb8",
  "tx": [
    "7263bc8b9d0c40ef3e374ff2926b6b945bd883b8b6739d00475d262367416dfc",
    "59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c"
  ],
  "time": 1499442663,
  "mediantime": 1499438859,
  "nonce": 11,
  "bits": "207fffff",
  "difficulty": 4.656542373906925e-10,
  "chainwork":
"000000000000000000000000000000000000000000000000000000000000028a",
  "previousblockhash":
"6051a4def8eb8e4c54e097546fa0196c632605a48de089b919f79ee03c7b4803"
}

6.3 【0630】获取区块信息

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 4234.99997040,
    "blocks": 324,
    "timeoffset": 0,
    "connections": 1,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

6.4 【0701】获取区块信息，拒绝旧区块

```
# bitcoin-cli -regtest getblock
6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3
{
    "hash": "6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3",
    "confirmations": -1,
    "strippedsize": 568,
    "size": 568,
    "weight": 2272,
    "height": 324,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "2c269ef463af3cc6358b7428c92dcc3bf22e2053a6033eef352d4bbad095deb8",
    "tx": [
        "7263bc8b9d0c40ef3e374ff2926b6b945bd883b8b6739d00475d262367416dfc",
        "59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c"
    ],
    "time": 1499442663,
    "mediantime": 1499438859,
```

```
    "nonce": 11,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"0000000000000000000000000000000000000000000000000000000000028a",
    "previousblockhash":
"6051a4def8eb8e4c54e097546fa0196c632605a48de089b919f79ee03c7b4803"
}
```

6.5 【0701】查询区块信息，新旧节点高度不一致，新节点不接受旧区块

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 5039.99996160,
    "blocks": 323,
    "timeoffset": 0,
    "connections": 1,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499434061,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

6.6 【协会】查询区块信息，接受

```
# bitcoin-cli -regtest getblock
6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3
{
    "hash": "6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3",
    "confirmations": 1,
    "strippedsize": 568,
```

```
    "size": 568,
    "weight": 2272,
    "height": 324,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "2c269ef463af3cc6358b7428c92dcc3bf22e2053a6033eef352d4bbad095deb8",
    "tx": [
        "7263bc8b9d0c40ef3e374ff2926b6b945bd883b8b6739d00475d262367416dfc",
        "59b3adb568e8f15784537dd352bf505361fc5d0e8f4dc5d753da4e166f05b13c"
    ],
    "time": 1499442663,
    "mediantime": 1499438859,
    "nonce": 11,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"0000000000000000000000000000000000000000000000000000000000000028a",
    "previousblockhash":
"6051a4def8eb8e4c54e097546fa0196c632605a48de089b919f79ee03c7b4803"
}
```

6.7 【协会】查询区块信息，与 0630 一致

```
#   bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 50.00000000,
    "blocks": 324,
    "timeoffset": 0,
    "connections": 2,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

6.8 【0701】挖矿

bitcoin-cli -regtest generate 1
[
    "0c0707cec798cf8c0c8f222a9925dabda8da952a1f00130201263b19180cca8d"
]

【0701】查询区块信息，无旧节点交易，证明交易被拒绝
bitcoin-cli -regtest getblock
0c0707cec798cf8c0c8f222a9925dabda8da952a1f00130201263b19180cca8d
{
    "hash": "0c0707cec798cf8c0c8f222a9925dabda8da952a1f00130201263b19180cca8d",
    "confirmations": 1,
    "strippedsize": 228,
    "size": 228,
    "weight": 912,
    "height": 324,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "6981fb6230f85c2b1a871e1efb861ee3a3f85cf803dc0742379e359d7540f321",
    "tx": [
        "6981fb6230f85c2b1a871e1efb861ee3a3f85cf803dc0742379e359d7540f321"
    ],
    "time": 1499442892,
    "mediantime": 1499438859,
    "nonce": 4,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"000000000000000000000000000000000000000000000000000000000000028a",
    "previousblockhash":
"6051a4def8eb8e4c54e097546fa0196c632605a48de089b919f79ee03c7b4803"
}

6.9 【0701】查询区块信息，虽然跟旧节点等高，但是最后一块与旧节点不同。

# bitcoin-cli -regtest getblockchaininfo
{
    "chain": "regtest",
    "blocks": 324,

    "headers": 324,
    "bestblockhash":
"0c0707cec798cf8c0c8f222a9925dabda8da952a1f00130201263b19180cca8d",
    "difficulty": 4.656542373906925e-10,
    "mediantime": 1499438859,
    "verificationprogress": 1,
    "chainwork":
"0000000000000000000000000000000000000000000000000000000000000028a",
    "pruned": false,
    "softforks": [
        {
            "id": "bip34",
            "version": 2,
            "reject": {
                "status": false
            }
        },
        {
            "id": "bip66",
            "version": 3,
            "reject": {
                "status": false
            }
        },
        {
            "id": "bip65",
            "version": 4,
            "reject": {
                "status": false
            }
        }
    ],
    "bip9_softforks": {
        "csv": {
            "status": "locked_in",
            "startTime": 0,
            "timeout": 999999999999,
            "since": 288
        },
        "segwit": {
            "status": "locked_in",
            "startTime": 0,
            "timeout": 999999999999,
            "since": 288

```
        }
    }
}
```

7 0701 向协会发交易

7.1 【0701】向【协会】发送交易 30

bitcoin-cli -regtest sendtoaddress mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr 30
a5d8c985973b77bf9cf8c5348bca9b9d3c50b0f5ab88f37d6cb1aa0c863f87c4

7.2 【0701】查询交易，存在

bitcoin-cli -regtest gettransaction
a5d8c985973b77bf9cf8c5348bca9b9d3c50b0f5ab88f37d6cb1aa0c863f87c4
```
{
    "amount": -30.00000000,
    "fee": -0.00007480,
    "confirmations": 0,
    "trusted": true,
    "txid": "a5d8c985973b77bf9cf8c5348bca9b9d3c50b0f5ab88f37d6cb1aa0c863f87c4",
    "walletconflicts": [
    ],
    "time": 1499443047,
    "timereceived": 1499443047,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr",
            "category": "send",
            "amount": -30.00000000,
            "vout": 0,
            "fee": -0.00007480,
            "abandoned": false
        }
    ],
    "hex":
"02000000023696420c8e7536adeb0e1644917c43acd837b84ccf29a5ae9b589d236919541f0000
00006a47304402202777a8d7fae5f211f75991dae7c94b608b948e50bdcfde2bd5dcd1a30468645b
```

02201e8dcba2823e27f6bea41c0c030305188cc19cead190198261a1f506f30a150c012102f828f30
ba47921035110d0b800d25ae67b841d6f6a392704643b3256d5f3ca81feffffffaf9d2421f9cd644e8
7b3b6e3d55538c6643dcf8f355e548f4285058b7a9648f7010000006a47304402207c36f37070474
57568c5dcd472a500af330311c53c70a14649d44aca49bed56f0220728b16577db2909ccea283e83
62ce2a62d900c8452c948e9941b34d73a8489c201210358c8f59108d108152c6d7b8edbbb37f712
29261f215da4a449fd7e587e0e115ffeffffff02005ed0b2000000001976a9141b21116e632a7ee182
e13e99be34ad580893d20d88acc89d9a3b000000001976a914ee2780c22dea48541a551f0bd162d
d9af1c185c188ac44010000"
}

7.3 【协会】查询交易，不存在，新节点交易不被接受

bitcoin-cli -regtest gettransaction
a5d8c985973b77bf9cf8c5348bca9b9d3c50b0f5ab88f37d6cb1aa0c863f87c4
error code: -5
error message:
Invalid or non-wallet transaction id

7.4 【0630】查询交易，不存在，新节点交易不被接受

bitcoin-cli -regtest gettransaction
a5d8c985973b77bf9cf8c5348bca9b9d3c50b0f5ab88f37d6cb1aa0c863f87c4
error code: -5
error message:
Invalid or non-wallet transaction id

7.5 【0701】挖矿确认

bitcoin-cli -regtest generate 1
[
    "2f602520ea549c9c32176af7ad9a2c62971448a3005bc7d0901dd39bb17e9e64"
]

7.6 【0701】获取块信息，交易被打包

bitcoin-cli -regtest getblock
2f602520ea549c9c32176af7ad9a2c62971448a3005bc7d0901dd39bb17e9e64
{

"hash": "2f602520ea549c9c32176af7ad9a2c62971448a3005bc7d0901dd39bb17e9e64",

"confirmations": 1,

"strippedsize": 600,

"size": 600,

"weight": 2400,

"height": 325,

"version": 805306371,

"versionHex": "30000003",

"merkleroot": "25995d824c2d2c149312d26f4fe452e1213eab08eb61d39495f56e944a2c02d6",

"tx": [

   "e719510a3fa346e435a34b7de06ba922fb96398c2e3171c5b64ea9d76d5499c4",

   "a5d8c985973b77bf9cf8c5348bca9b9d3c50b0f5ab88f37d6cb1aa0c863f87c4"

],

"time": 1499443160,

"mediantime": 1499438859,

"nonce": 0,

"bits": "207fffff",

"difficulty": 4.656542373906925e-10,

"chainwork":
"0000000000000000000000000000000000000000000000000000000000000028c",

"previousblockhash":
"0c0707cec798cf8c0c8f222a9925dabda8da952a1f00130201263b19180cca8d"

}

7.7 【0701】获取块信息

# bitcoin-cli -regtest getinfo
{

"version": 149900,

"protocolversion": 70015,

"walletversion": 139900,

"balance": 5009.99988680,

"blocks": 325,

"timeoffset": 0,

"connections": 1,

"proxy": "",

"difficulty": 4.656542373906925e-10,

"testnet": false,

"keypoololdest": 1499434061,

"keypoolsize": 199,

"paytxfee": 0.00000000,

"relayfee": 0.00001000,

"errors": "This is a pre-release test build - use at your own risk - do not use for mining or

merchant applications"

}

7.8 【协会】获取块信息，0701 生成块被拒绝

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 50.00000000,
    "blocks": 324,
    "timeoffset": 0,
    "connections": 2,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

7.9 【0630】获取块信息，0701 生成块被拒绝

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 4234.99997040,
    "blocks": 324,
    "timeoffset": 0,
    "connections": 1,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
```

```
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

7.10 【协会】挖矿

```
# bitcoin-cli -regtest generate 1
[
    "710379b4d342b3d7a678deed13e30a0f3256a2044c4d377c63faabd35a9dc62f"
]
```

7.11 【协会】查询区块，【0701】交易未被打包

```
# bitcoin-cli -regtest getblock
710379b4d342b3d7a678deed13e30a0f3256a2044c4d377c63faabd35a9dc62f
{
    "hash": "710379b4d342b3d7a678deed13e30a0f3256a2044c4d377c63faabd35a9dc62f",
    "confirmations": 1,
    "strippedsize": 228,
    "size": 228,
    "weight": 912,
    "height": 325,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "e5430e8b0a6d49dcc801a915b38191faeb47cce51ecbeaaece84f518d689eef4",
    "tx": [
        "e5430e8b0a6d49dcc801a915b38191faeb47cce51ecbeaaece84f518d689eef4"
    ],
    "time": 1499443291,
    "mediantime": 1499438859,
    "nonce": 1,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"00000000000000000000000000000000000000000000000000000000000000028c",
    "previousblockhash":
"6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3"
}
```

7.12 【0630】查询区块，与【0701】一致

bitcoin-cli -regtest getblock
710379b4d342b3d7a678deed13e30a0f3256a2044c4d377c63faabd35a9dc62f
```
{
    "hash": "710379b4d342b3d7a678deed13e30a0f3256a2044c4d377c63faabd35a9dc62f",
    "confirmations": 1,
    "strippedsize": 228,
    "size": 228,
    "weight": 912,
    "height": 325,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "e5430e8b0a6d49dcc801a915b38191faeb47cce51ecbeaaece84f518d689eef4",
    "tx": [
        "e5430e8b0a6d49dcc801a915b38191faeb47cce51ecbeaaece84f518d689eef4"
    ],
    "time": 1499443291,
    "mediantime": 1499438859,
    "nonce": 1,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"0000000000000000000000000000000000000000000000000000000000000028c",
    "previousblockhash":
"6c463472e8086e0398e12e394ab9bcf4a5ae94003401325d3e7f5e79c3e1c8c3"
}
```

7.13 【协会】与【0630】块信息一致

bitcoin-cli -regtest getinfo
```
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 50.00000000,
    "blocks": 325,
    "timeoffset": 0,
    "connections": 0,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
```

```
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

7.14 【0630】与【协会】块信息一致

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 4259.99997040,
    "blocks": 325,
    "timeoffset": 0,
    "connections":1,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

8 0630 升级为 2K 防重放节点

9 0630 向 0701 发起交易

9.1 【0630】获取区块信息，此时还有链接

```
# ./bitcoin-cli -regtest getinfo
{
    "version": 149900,
```

```
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 4259.99997040,
    "blocks": 325,
    "timeoffset": 0,
    "connections": 1,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

9.2 【0701】生成新地址

./bitcoin-cli -regtest getnewaddress
mmbYpeVLs9n4uEDg8NZRDUgoaym243ZaxR

9.3 【0630】向【0701】发起交易 40

./bitcoin-cli -regtest sendtoaddress mmbYpeVLs9n4uEDg8NZRDUgoaym243ZaxR 40
eb5c2da8c685ae39fbb988f99f5f206ab0dc7abb8354380f77332bbcd34e6b8d

9.4 【0630】获取交易，存在

./bitcoin-cli -regtest gettransaction
eb5c2da8c685ae39fbb988f99f5f206ab0dc7abb8354380f77332bbcd34e6b8d
```
{
    "amount": -40.00000000,
    "fee": -0.00006800,
    "confirmations": 0,
    "trusted": true,
    "txid": "eb5c2da8c685ae39fbb988f99f5f206ab0dc7abb8354380f77332bbcd34e6b8d",
    "walletconflicts": [
    ],
```

```
  "time": 1499444510,
  "timereceived": 1499444510,
  "bip125-replaceable": "no",
  "details": [
    {
      "account": "",
      "address": "mmbYpeVLs9n4uEDg8NZRDUgoaym243ZaxR",
      "category": "send",
      "amount": -40.00000000,
      "vout": 1,
      "fee": -0.00006800,
      "abandoned": false
    }
  ],
  "hex":
```
"02000000023cb1056f164eda53d7c54d8f0e5dfc615350bf52d37d538457f1e868b5adb35900000
0006a47304402201c46db6a1ee9e9907f087616bf32e96bb7e210fdd0ba2f542a7a80ef2709c15b0
2207ee42ee1fdad03d289ed84cb54af9f25f06a6efe493f06d66392d3076f72599a0121027c719d52
e0dcda87495819f5a54c7646c81037e1d315d285c757a5d6242818f3feffffff56fc650f31d60f13bd9
687e6358ecef5c9c594ad5d0f963181056039eb530dbd00000000049483045022100e5d3b64aa1c7
a0602774154e859aa0a012c5ba38036a4b3aed32c976bfcea59c02207db9699330fde6643971cadd
08e950cf3f94ab2decdbd108a4474793fe49e8e201feffffff02e02fcd1d000000001976a9146efd049
09302aa705e3e1efa9fa4171452101e1e88ac00286bee000000001976a91442af3d99d89186fd82c
4cf9764925eec893517a988ac45010000"
```
}
```

9.5 【0701】获取交易不存在

```
# ./bitcoin-cli -regtest gettransaction
eb5c2da8c685ae39fbb988f99f5f206ab0dc7abb8354380f77332bbcd34e6b8d
error code: -5
error message:
Invalid or non-wallet transaction id
```

9.6 【0701】连接数变成 0

```
# ./bitcoin-cli -regtest getinfo
{
  "version": 149900,
  "protocolversion": 70015,
  "walletversion": 139900,
```

```
    "balance": 5009.99988680,
    "blocks": 325,
    "timeoffset": 0,
    "connections": 0,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499434061,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

9.7 【协会】获取交易不存在，新节点交易不被接受

```
# bitcoin-cli -regtest gettransaction
eb5c2da8c685ae39fbb988f99f5f206ab0dc7abb8354380f77332bbcd34e6b8d
error code: -5
error message:
Invalid or non-wallet transaction id
```

10 出现的问题是，分叉后的新节点，因为继承了旧块，导致不能新新通讯

11 加入网络白名单之后，通讯修复

【0630】查询目前区块链信息，与【0701】同步 ，与【协会】不同，协会是旧节点

```
# ./bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 4715.00003840,
    "blocks": 345,
    "timeoffset": 0,
    "connections": 2,
```

```
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

【0701】查询目前区块链信息，与【0630】同步 ，与【协会】不同，协会是旧节点

```
# ./bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 5009.99988680,
    "blocks": 345,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499434061,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

【协会】查询目前区块链信息，与【0630】【0701】均不同，证明分叉后两个新节点能同步，旧节点不能。

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 50.00000000,
    "blocks": 325,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
```

```
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```
【协会】挖矿 10

```
# bitcoin-cli -regtest generate 10
[
    "65b2a44801897a45320a9539a2787a0e4aa5085fd3681626d57149ff1fcf0780",
    "50759608ac248077d8aeb22c25b54217b353452cea0d53175fec36bd5ce1f8fe",
    "3556f741d94f363dab72dbb56a0be9cf5811c92c2d41b6f70744b16a15639b7f",
    "61501cb3ad427a88b15061a7ff39f3a25a748f2ff748459515f7a43a040c95a3",
    "1ebd8d42d5bb6b25f5778273573553e082ea7853f4372736c44afea4067184f4",
    "0f4c32ca5ea7cf250499a4b26fd8398eb222214371cb9ea11926a4633c6bc8bf",
    "5cb4ae8c60ae058fb8a83c3a586a3e2529d90df8cb118deeebd01c30b7c03d19",
    "085ed129c257d531ad62b17566cc585560b91d170d83d93de7701662970489ff",
    "0521b2c068e5a1ff2f06ebee1d382ea7f19a22c820cfee0ddd2426c48ef8120c",
    "347e12365508d2a3ce3f9304ccde937fdb37ef1585e8900001cb6c278a427bd5"
]
```
【协会】查看挖矿后区块链信息

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 50.00000000,
    "blocks": 335,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```
【0701】挖矿 20

```
# ./bitcoin-cli -regtest generate 20
[
```

    "1fd41a7803f23b10092b8d31146d5a1a30966ad9877ec5831d80f89152d4695a",
    "691d0847fc5597262c35d875cb80e799040a1e51fd3cf7ebcd573fb14b31d792",
    "58b5298ebcf4d95d03994b552c61ad11b9fd303ab9a80938404ea2ba0c8fb768",
    "345ee314c41247ae36edae0ad3d5363b41868d2c52efbfa7fdb2a2863e51c448",
    "6a6890158687a2bd1e3f5ec3d817a9d52c338e52a15dccae75e7bf86c7ae2060",
    "75cc3a9ceb1fd4457f76151224b0ee973965e07f9cab865c0e9ce005f85500c0",
    "6457209759e7bd071691e5b4ca0f934d378b128dce086f03c48412b27b99cd12",
    "0bfda280c58f6b20333b538d61c820b0c88bd751211b39d0946a76ca382576a5",
    "085ae2d870da78f73883179a208f0407422065da953c5022c0e3c3ba7d522a1d",
    "54cfd2c961de696466df6545a8655a2ddb216ba8895aac73bd1c2b6ba1094855",
    "2e5c07b701c3c63a45c049271a9161f288cf36cc851514f7a6d26d5ce60dc1af",
    "1885413c7d242cb3af8fdc05fed444137333a9d4d13bba95039619f153d9f7b7",
    "091d5eb4c5f251ae847ec28fb811d2193a2bbf70b230ec2a32e04cab585c71a1",
    "628bd6df3945f741e5094f238c2a313dec9582d738668f72409038f69ef07c65",
    "2cea0a80c8c5f6455d310263d989a28e0e94495f4b234fcb6cd71a65ef7e266b",
    "6cd37f5f372da24d73e9ea16e6b3533eee061864d2a348b7c0d9b43b4cd989da",
    "6629a316bb13648d53a8488a225e1ed2ec2bd98cf3c8c4b5f55da0c1bee47025",
    "3e3feaa5cfc7a965b34abd27fe72408f6cf4a3bcb3bf3697feb99bb3405450a8",
    "02f8c9cc03732200b9623f15cce10d751a56acaabddcea4f7c4a6ad2cb32ee2d",
    "18a4117d68d638445bf942e9ca6cd27e855e47fa0f75724607405decfc6cbd7a"
]

【0701】查看挖矿后区块链信息

./bitcoin-cli -regtest getinfo

```
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 5009.99988680,
    "blocks": 365,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499434061,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

【0630】查看挖矿后区块信息

./bitcoin-cli -regtest getinfo

```
{
```

```
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 5215.00003840,
    "blocks": 365,
    "timeoffset": 0,
    "connections": 2,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

【0701】查询地址
./bitcoin-cli -regtest getaddressesbyaccount ""
```
[
    "mmbYpeVLs9n4uEDg8NZRDUgoaym243ZaxR",
    "mvieTGUTTpWj7WaY3UVVi7sDNWam5y94dD",
    "mwQDivLEgCYE4Mx7GBdx7uZ1sJsdNMWL3q"
]
```
【0630】向【0701】转账 10
./bitcoin-cli -regtest sendtoaddress mwQDivLEgCYE4Mx7GBdx7uZ1sJsdNMWL3q 10
a705026828423c3aeb5b6f22ce9d7661be146141d8c59b0f017dc3924951b258
【0630】查询交易，转账成功
./bitcoin-cli -regtest gettransaction
a705026828423c3aeb5b6f22ce9d7661be146141d8c59b0f017dc3924951b258
```
{
    "amount": -10.00000000,
    "fee": -0.00003840,
    "confirmations": 0,
    "trusted": true,
    "txid": "a705026828423c3aeb5b6f22ce9d7661be146141d8c59b0f017dc3924951b258",
    "walletconflicts": [
    ],
    "time": 1499478333,
    "timereceived": 1499478333,
    "bip125-replaceable": "no",
    "details": [
        {
```

```
        "account": "",
        "address": "mwQDivLEgCYE4Mx7GBdx7uZ1sJsdNMWL3q",
        "category": "send",
        "amount": -10.00000000,
        "vout": 1,
        "fee": -0.00003840,
        "abandoned": false
      }
  ],
  "hex":
```
"020000000100ee7cc85c2f4e7e3c2b1364e0105eb9c13d8b006852577993db2abf0395885f00000
00049483045022100aea7ce49b96a4b1f37786e0c16c97eba6c5c3a64ca077f3e833de302fd456eb
f02207e429fb51bc4393ffae95c50a4c0358f525faa65186656227c2689863c95664c01feffffff02002
0685900000000001976a91496184a18bd0a2e097a9586be7a4bc17b7627251488ac00ca9a3b00000
0001976a914ae3bfae562c3254bfb7208c206021aa4b30fc8c188ac6d010000"

```
}
```

【0701】查询交易，转账成功

./bitcoin-cli -regtest gettransaction
a705026828423c3aeb5b6f22ce9d7661be146141d8c59b0f017dc3924951b258

```
{
  "amount": 10.00000000,
  "confirmations": 0,
  "trusted": false,
  "txid": "a705026828423c3aeb5b6f22ce9d7661be146141d8c59b0f017dc3924951b258",
  "walletconflicts": [
  ],
  "time": 1499478327,
  "timereceived": 1499478327,
  "bip125-replaceable": "no",
  "details": [
    {
      "account": "",
      "address": "mwQDivLEgCYE4Mx7GBdx7uZ1sJsdNMWL3q",
      "category": "receive",
      "amount": 10.00000000,
      "label": "",
      "vout": 1
    }
  ],
  "hex":
```
"020000000100ee7cc85c2f4e7e3c2b1364e0105eb9c13d8b006852577993db2abf0395885f00000
00049483045022100aea7ce49b96a4b1f37786e0c16c97eba6c5c3a64ca077f3e833de302fd456eb
f02207e429fb51bc4393ffae95c50a4c0358f525faa65186656227c2689863c95664c01feffffff02002
0685900000000001976a91496184a18bd0a2e097a9586be7a4bc17b7627251488ac00ca9a3b00000

0001976a914ae3bfae562c3254bfb7208c206021aa4b30fc8c188ac6d010000"
}
【0701】挖矿确认
./bitcoin-cli -regtest generate 1
[
    "06ed1641e3fb7026ce743ae83b131b9deb2149a9293ec25add9f889500094d55"
]
【0701】查询区块，证实交易被打包
./bitcoin-cli -regtest getblock
06ed1641e3fb7026ce743ae83b131b9deb2149a9293ec25add9f889500094d55
{
    "hash": "06ed1641e3fb7026ce743ae83b131b9deb2149a9293ec25add9f889500094d55",
    "confirmations": 2,
    "strippedsize": 420,
    "size": 420,
    "weight": 1680,
    "height": 366,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "d29432bf6f9fecf5055438117784a2d9dba030698c14f7f7fbef867540286939",
    "tx": [
        "155b8f687c95aa379dfca9b70228100a4fc63796c3c35f8e2f3a2b19cd4647b3",
        "a705026828423c3aeb5b6f22ce9d7661be146141d8c59b0f017dc3924951b258"
    ],
    "time": 1499478413,
    "mediantime": 1499478222,
    "nonce": 3,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"00000000000000000000000000000000000000000000000000000000000002de",
    "previousblockhash":
"18a4117d68d638445bf942e9ca6cd27e855e47fa0f75724607405decfc6cbd7a",
    "nextblockhash":
"460afad8892278319fcdf49c3e80cbe297ef0a0df68330a2e40a3171ae7eb73d"
}
【0701】查询区块链信息
# ./bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 5019.99988680,
    "blocks": 366,

```
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499434061,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

【0630】查询区块信息，与【0701】同步

```
# ./bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 5230.00000000,
    "blocks": 366,
    "timeoffset": 0,
    "connections": 2,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

【协会】查询区块信息，与【0630】【0701】不同步

```
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 50.00000000,
    "blocks": 335,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
```

```
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

【0630】查询地址

```
# ./bitcoin-cli -regtest getaddressesbyaccount ""
[
    "mzAbTivWNU4Mzs4UdrG23iYySSYBPSEGsH",
    "n13aSoi3U1DuG1xmKtzruGPhkGCVr9EVXs"
]
```

【0701】向 0630 转账 30

```
# ./bitcoin-cli -regtest sendtoaddress n13aSoi3U1DuG1xmKtzruGPhkGCVr9EVXs 30
4e534b871cc392bcf0bcd9c1fb82a5d1aa187a61f94f01fe2c106355bcc5fdf9
```

【0701】查询交易，转账成功

```
# ./bitcoin-cli -regtest gettransaction
4e534b871cc392bcf0bcd9c1fb82a5d1aa187a61f94f01fe2c106355bcc5fdf9
{
    "amount": -30.00000000,
    "fee": -0.00003840,
    "confirmations": 0,
    "trusted": true,
    "txid": "4e534b871cc392bcf0bcd9c1fb82a5d1aa187a61f94f01fe2c106355bcc5fdf9",
    "walletconflicts": [
    ],
    "time": 1499478534,
    "timereceived": 1499478534,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "n13aSoi3U1DuG1xmKtzruGPhkGCVr9EVXs",
            "category": "send",
            "amount": -30.00000000,
            "vout": 0,
            "fee": -0.00003840,
            "abandoned": false
        }
    ],
    "hex":
"02000000014faac993e023a5ad3e674c75f840113a8819603285f4c5184ff3eb46b20058fc000000
```

0048473044022039e153c694455e3023d87b3e24c34bb28e67e09c2a2532d6c17748e14055d70f0
2207bd7b81447790408014d8ac3caa12ab58dce1e7b8923070695019a37b1aa097d01feffffff0200
5ed0b2000000001976a914d6350bc65e510c5fa87ff111722b0bcfee99034c88ac00853577000000
001976a914c015ec8c31dea663458f300f548346aa4a1c969988ac6e010000"
}
【0630】查询交易，转账成功
./bitcoin-cli -regtest gettransaction
4e534b871cc392bcf0bcd9c1fb82a5d1aa187a61f94f01fe2c106355bcc5fdf9
{
    "amount": 30.00000000,
    "confirmations": 0,
    "trusted": false,
    "txid": "4e534b871cc392bcf0bcd9c1fb82a5d1aa187a61f94f01fe2c106355bcc5fdf9",
    "walletconflicts": [
    ],
    "time": 1499478541,
    "timereceived": 1499478541,
    "bip125-replaceable": "no",
    "details": [
       {
          "account": "",
          "address": "n13aSoi3U1DuG1xmKtzruGPhkGCVr9EVXs",
          "category": "receive",
          "amount": 30.00000000,
          "label": "",
          "vout": 0
       }
    ],
    "hex":
"02000000014faac993e023a5ad3e674c75f840113a8819603285f4c5184ff3eb46b20058fc000000
0048473044022039e153c694455e3023d87b3e24c34bb28e67e09c2a2532d6c17748e14055d70f0
2207bd7b81447790408014d8ac3caa12ab58dce1e7b8923070695019a37b1aa097d01feffffff0200
5ed0b2000000001976a914d6350bc65e510c5fa87ff111722b0bcfee99034c88ac00853577000000
001976a914c015ec8c31dea663458f300f548346aa4a1c969988ac6e010000"
}

【0630】挖矿确认
./bitcoin-cli -regtest generate 1
[
    "460afad8892278319fcdf49c3e80cbe297ef0a0df68330a2e40a3171ae7eb73d"
]
【0630】查询区块，交易被打包
./bitcoin-cli -regtest getblock
460afad8892278319fcdf49c3e80cbe297ef0a0df68330a2e40a3171ae7eb73d

```
{
    "hash": "460afad8892278319fcdf49c3e80cbe297ef0a0df68330a2e40a3171ae7eb73d",
    "confirmations": 1,
    "strippedsize": 419,
    "size": 419,
    "weight": 1676,
    "height": 367,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "a41c683eea1a497d8d0d54c02fa5b9249264c7de270c142c4dc55572542a7696",
    "tx": [
        "a6082eea355d7313c49de6e5f26d364a65f79b73908b21f08ccd9524cd456495",
        "4e534b871cc392bcf0bcd9c1fb82a5d1aa187a61f94f01fe2c106355bcc5fdf9"
    ],
    "time": 1499478593,
    "mediantime": 1499478222,
    "nonce": 1,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"00000000000000000000000000000000000000000000000000000000000002e0",
    "previousblockhash":
"06ed1641e3fb7026ce743ae83b131b9deb2149a9293ec25add9f889500094d55"
}
```

【0630】查询区块链信息

`# ./bitcoin-cli -regtest getinfo`

```
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 5285.00000000,
    "blocks": 367,
    "timeoffset": 0,
    "connections": 2,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```

【0701】查询区块，交易被打包

```
# ./bitcoin-cli -regtest getblock
460afad8892278319fcdf49c3e80cbe297ef0a0df68330a2e40a3171ae7eb73d
{
    "hash": "460afad8892278319fcdf49c3e80cbe297ef0a0df68330a2e40a3171ae7eb73d",
    "confirmations": 1,
    "strippedsize": 419,
    "size": 419,
    "weight": 1676,
    "height": 367,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "a41c683eea1a497d8d0d54c02fa5b9249264c7de270c142c4dc55572542a7696",
    "tx": [
        "a6082eea355d7313c49de6e5f26d364a65f79b73908b21f08ccd9524cd456495",
        "4e534b871cc392bcf0bcd9c1fb82a5d1aa187a61f94f01fe2c106355bcc5fdf9"
    ],
    "time": 1499478593,
    "mediantime": 1499478222,
    "nonce": 1,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork": "00000000000000000000000000000000000000000000000000000000000002e0",
    "previousblockhash": "06ed1641e3fb7026ce743ae83b131b9deb2149a9293ec25add9f889500094d55"
}
```

【0701】查询区块链信息，与【0630】同步

```
# ./bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 4989.99984840,
    "blocks": 367,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499434061,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
```

"errors": "This is a pre-release test build - use at your own risk - do not use for mining or merchant applications"
}
【协会】查询区块信息，与【0630】【0701】不同步
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 50.00000000,
    "blocks": 335,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or merchant applications"
}

【协会】查询地址
bitcoin-cli -regtest getaddressesbyaccount ""
[
    "mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr",
    "mxUk2GJTrVbLd3tzc24Hzkd8wMLK1rKcyA"
]
【协会】给自己转账 20
bitcoin-cli -regtest sendtoaddress mxUk2GJTrVbLd3tzc24Hzkd8wMLK1rKcyA 20
31f7f7d72a7b2c926f41c89aa4127e539fc6bbd193cf3781cfb1e624426363a7
【协会】查询交易，转账成功
bitcoin-cli -regtest gettransaction
31f7f7d72a7b2c926f41c89aa4127e539fc6bbd193cf3781cfb1e624426363a7
{
    "amount": 0.00000000,
    "fee": -0.00004520,
    "confirmations": 0,
    "trusted": true,
    "txid": "31f7f7d72a7b2c926f41c89aa4127e539fc6bbd193cf3781cfb1e624426363a7",
    "walletconflicts": [
    ],

```
    "time": 1499478774,
    "timereceived": 1499478774,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "mxUk2GJTrVbLd3tzc24Hzkd8wMLK1rKcyA",
            "category": "send",
            "amount": -20.00000000,
            "label": "",
            "vout": 1,
            "fee": -0.00004520,
            "abandoned": false
        },
        {
            "account": "",
            "address": "mxUk2GJTrVbLd3tzc24Hzkd8wMLK1rKcyA",
            "category": "receive",
            "amount": 20.00000000,
            "label": "",
            "vout": 1
        }
    ],
    "hex":
```
"02000000013cb1056f164eda53d7c54d8f0e5dfc615350bf52d37d538457f1e868b5adb35901000
0006a4730440220717a92e00b1f6bdaf69cdd108c5be1296dccffeeee9b667e6899b65f2e07fcc002
2056cc30d097ca5c172b1746ff624bce67e5ee0a1adb2286ff9d5a6d7439e80b350121027aebbda6
24d43d5c18a28bb5671d80cdcc54b2ace11ec8baf6bcac97cc497f8bfeffffff02584cd0b2000000001
976a914809a79407265f235e2bedcbfa7eedbdf0628f04288ac0094357700000001976a914ba0f0f
e30b8719458061835283d5c0ae24ac018388ac49010000"
```
}
```
【协会】挖矿确认
bitcoin-cli -regtest generate 1
```
[
    "31eea8bc6b5c6d3911771239680e677c85bf56090327dd6605f1262dd17f9f84"
]
```
【协会】查询区块，交易被打包
bitcoin-cli -regtest getblock
31eea8bc6b5c6d3911771239680e677c85bf56090327dd6605f1262dd17f9f84
```
{
    "hash": "31eea8bc6b5c6d3911771239680e677c85bf56090327dd6605f1262dd17f9f84",
    "confirmations": 1,
    "strippedsize": 453,
    "size": 453,
```

    "weight": 1812,
    "height": 336,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot":
"d783140177621217064c75bae38c3575b0849fd52fa4baa2c659ae56ab402033",
    "tx": [
        "4947896c9e8affba07139a6c3b0f8edf955a842fb57b3b7df598950e310a159f",
        "31f7f7d72a7b2c926f41c89aa4127e539fc6bbd193cf3781cfb1e624426363a7"
    ],
    "time": 1499478816,
    "mediantime": 1499478173,
    "nonce": 0,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"00000000000000000000000000000000000000000000000000000000000002a2",
    "previousblockhash":
"347e12365508d2a3ce3f9304ccde937fdb37ef1585e8900001cb6c278a427bd5"
}
【协会】查询区块信息，与【0630】【0701】不同步
# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 49.99995480,
    "blocks": 336,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
到此，可证明新、旧两链可以各自交易、挖矿。

12 验证新旧链可双向防御重放攻击

root@iZ2zegchn2k04hhikcn4yjZ:/usr/local/bin_new# ./bitcoin-cli -regtest sendtoaddress mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr 50

9abe9e8a537ea8fa3ddb96825fa4480693d57653429cab58e5cce1dbcf349b50

root@iZ2zegchn2k04hhikcn4yjZ:/usr/local/bin_new# ./bitcoin-cli -regtest gettransaction 9abe9e8a537ea8fa3ddb96825fa4480693d57653429cab58e5cce1dbcf349b50

```
{
    "amount": -50.00000000,
    "fee": -0.00006800,
    "confirmations": 0,
    "trusted": true,
    "txid": "9abe9e8a537ea8fa3ddb96825fa4480693d57653429cab58e5cce1dbcf349b50",
    "walletconflicts": [
    ],
    "time": 1499482491,
    "timereceived": 1499482491,
    "bip125-replaceable": "no",
    "details": [
        {
            "account": "",
            "address": "mhzQ9qwgmNMAzBwtpZSYeR9dSbXiGeYTHr",
            "category": "send",
            "amount": -50.00000000,
            "vout": 0,
            "fee": -0.00006800,
            "abandoned": false
        }
    ],
    "hex":
```

"020000000258b2514992c37d010f9bc5d8416114be61769dce226f5beb3a3c4228680205a70000 00006b483045022100da0864f2c32be838f03fccd00cffa43525adb11d0f31d3acf7b785a55161a12 7022037894597b810dded6c7c69d8c1d27152be9a9d1f688162f9d1211293b8efba5501210313e5 42c47c6984976bdd1a7b99edcdf76b6911d983c1e9556624d8742654d003feffffff83f2c48393eacb 6b8d98f863543bdfb0efddfad145454690a294653e81cf63e0000000049483045022100effd490da 265a1961afeee2b06f8ee2049dec0d96cc6ff9bd43c74ca1cfda6e002200227af0ee5952aa5f608155 34d665b1318f53734cc01e30746a9bdf6aa2f187e01feffffff0200f2052a010000001976a9141b2111 6e632a7ee182e13e99be34ad580893d20d88ac70056859000000001976a914647a15d3b041533c 70d4d3bacd9f2d253ead972f88ac6f010000"

```
}
```

root@iZ2zegchn2k04hhikcn4yjZ:/usr/local/bin_new# ./bitcoin-cli -regtest generate 1

```
[
    "5d59e89f395321e6830146588c3537ab3f1fb5db0b2bc30d2a98229c01f7a3a4"
```

```
]
root@iZ2zegchn2k04hhikcn4yjZ:/usr/local/bin_new#      ./bitcoin-cli    -regtest     getblock
5d59e89f395321e6830146588c3537ab3f1fb5db0b2bc30d2a98229c01f7a3a4
{
    "hash": "5d59e89f395321e6830146588c3537ab3f1fb5db0b2bc30d2a98229c01f7a3a4",
    "confirmations": 1,
    "strippedsize": 568,
    "size": 568,
    "weight": 2272,
    "height": 368,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot":
"40e908e67004454c22d4ecd04bd4f60d12244b243e5b4647cc029693e7a26a8d",
    "tx": [
        "f044543f92a3b70dfee171c28e2bd887afac14085e6950841ace49df0aff1dee",
        "9abe9e8a537ea8fa3ddb96825fa4480693d57653429cab58e5cce1dbcf349b50"
    ],
    "time": 1499482534,
    "mediantime": 1499478222,
    "nonce": 1,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"00000000000000000000000000000000000000000000000000000000000002e2",
    "previousblockhash":
"460afad8892278319fcdf49c3e80cbe297ef0a0df68330a2e40a3171ae7eb73d"
}
root@iZ2zegchn2k04hhikcn4yjZ:/usr/local/bin_new# ./bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 5259.99993200,
    "blocks": 368,
    "timeoffset": 0,
    "connections": 2,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426460,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
```

        "errors": "This is a pre-release test build - use at your own risk - do not use for mining or merchant applications"
}

root@iZ2zef6h0o28akb:/usr/local/bin_new# ./bitcoin-cli -regtest gettransaction 9abe9e8a537ea8fa3ddb96825fa4480693d57653429cab58e5cce1dbcf349b50
error code: -5
error message:
Invalid or non-wallet transaction id
root@iZ2zef6h0o28akb:/usr/local/bin_new# ./bitcoin-cli -regtest getinfo
{
        "version": 149900,
        "protocolversion": 70015,
        "walletversion": 139900,
        "balance": 4989.99984840,
        "blocks": 368,
        "timeoffset": 0,
        "connections": 3,
        "proxy": "",
        "difficulty": 4.656542373906925e-10,
        "testnet": false,
        "keypoololdest": 1499434061,
        "keypoolsize": 199,
        "paytxfee": 0.00000000,
        "relayfee": 0.00001000,
        "errors": "This is a pre-release test build - use at your own risk - do not use for mining or merchant applications"
}
root@iZ2zef6h0o28akb:/usr/local/bin_new# ./bitcoin-cli -regtest getblock 5d59e89f395321e6830146588c3537ab3f1fb5db0b2bc30d2a98229c01f7a3a4
{
        "hash": "5d59e89f395321e6830146588c3537ab3f1fb5db0b2bc30d2a98229c01f7a3a4",
        "confirmations": 1,
        "strippedsize": 568,
        "size": 568,
        "weight": 2272,
        "height": 368,
        "version": 805306371,
        "versionHex": "30000003",
        "merkleroot":
"40e908e67004454c22d4ecd04bd4f60d12244b243e5b4647cc029693e7a26a8d",
        "tx": [
            "f044543f92a3b70dfee171c28e2bd887afac14085e6950841ace49df0aff1dee",
            "9abe9e8a537ea8fa3ddb96825fa4480693d57653429cab58e5cce1dbcf349b50"

```
    ],
    "time": 1499482534,
    "mediantime": 1499478222,
    "nonce": 1,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"00000000000000000000000000000000000000000000000000000000000002e2",
    "previousblockhash":
"460afad8892278319fcdf49c3e80cbe297ef0a0df68330a2e40a3171ae7eb73d"
}
root@iZ2ze4wxzv9g5i5r69vu06Z:~/bitcoin# bitcoin-cli -regtest gettransaction
9abe9e8a537ea8fa3ddb96825fa4480693d57653429cab58e5cce1dbcf349b50
error code: -5
error message:
Invalid or non-wallet transaction id
root@iZ2ze4wxzv9g5i5r69vu06Z:~/bitcoin# bitcoin-cli -regtest getblock
5d59e89f395321e6830146588c3537ab3f1fb5db0b2bc30d2a98229c01f7a3a4
error code: -5
error message:
Block not found
root@iZ2ze4wxzv9g5i5r69vu06Z:~/bitcoin# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 49.99995480,
    "blocks": 336,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
root@iZ2zef6h0o28akb:/usr/local/bin_new# ./bitcoin-cli -regtest getnewaddress
mqoM8qUVj9mQj2upPju4eqyRVySPrCsQCa
root@iZ2ze4wxzv9g5i5r69vu06Z:~/bitcoin# bitcoin-cli -regtest sendtoaddress
mqoM8qUVj9mQj2upPju4eqyRVySPrCsQCa 10
```

d851ad79a02d90c3ef3d46b317d1fee1b9337e7da36385b19c2cbc12f46547b5
root@iZ2ze4wxzv9g5i5r69vu06Z:~/bitcoin# bitcoin-cli -regtest gettransaction
d851ad79a02d90c3ef3d46b317d1fee1b9337e7da36385b19c2cbc12f46547b5
{
   "amount": -10.00000000,
   "fee": -0.00004520,
   "confirmations": 0,
   "trusted": true,
   "txid": "d851ad79a02d90c3ef3d46b317d1fee1b9337e7da36385b19c2cbc12f46547b5",
   "walletconflicts": [
   ],
   "time": 1499483260,
   "timereceived": 1499483260,
   "bip125-replaceable": "no",
   "details": [
     {
       "account": "",
       "address": "mqoM8qUVj9mQj2upPju4eqyRVySPrCsQCa",
       "category": "send",
       "amount": -10.00000000,
       "vout": 1,
       "fee": -0.00004520,
       "abandoned": false
     }
   ],
   "hex":

"0200000001a763634224e6b1cf8137cf93d1bbc69f537e12a49ac8416f922c7b2ad7f7f731010000
006a473044022045f98ece30b3fd777366a9fbbec33d7762b690387b8b87ffb30cbf06e072a3d402
2034431cf79d7c26968d0bbc1798de3fabdf8335624d0c6273427c3d1f0e208b01012102b561ce9c
7e905a474fdc7a0c5924ff5996483ca6a97f022608dde2696b439a6afeffffff0258b89a3b000000001
976a9141c21cc7e1abed11d09dc32acb62f8e3e0d16857588ac00ca9a3b000000001976a91470caf
ae12fbaed5df31b708dd236d51b87d02b3d88ac12010000"
}
root@iZ2ze4wxzv9g5i5r69vu06Z:~/bitcoin# bitcoin-cli -regtest generate 1
[
   "0b205e46aa717327ef63d08a7e66247684410957831b615b51950dc830b94e0f"
]
root@iZ2ze4wxzv9g5i5r69vu06Z:~/bitcoin# bitcoin-cli -regtest getblock
0b205e46aa717327ef63d08a7e66247684410957831b615b51950dc830b94e0f
{
   "hash": "0b205e46aa717327ef63d08a7e66247684410957831b615b51950dc830b94e0f",
   "confirmations": 1,
   "strippedsize": 453,
   "size": 453,

```
    "weight": 1812,
    "height": 337,
    "version": 805306371,
    "versionHex": "30000003",
    "merkleroot": "cf5569e032d5d9fa910b943e673cae9705e608e4e154137206734c8f671d4462",
    "tx": [
        "fb75fc32e79b2b458dcf4d24d80ab13d0484786a56139f2e15a5f190da21ad10",
        "d851ad79a02d90c3ef3d46b317d1fee1b9337e7da36385b19c2cbc12f46547b5"
    ],
    "time": 1499483314,
    "mediantime": 1499478174,
    "nonce": 1,
    "bits": "207fffff",
    "difficulty": 4.656542373906925e-10,
    "chainwork":
"00000000000000000000000000000000000000000000000000000000000002a4",
    "previousblockhash":
"31eea8bc6b5c6d3911771239680e677c85bf56090327dd6605f1262dd17f9f84"
}
root@iZ2ze4wxzv9g5i5r69vu06Z:~/bitcoin# bitcoin-cli -regtest getinfo
{
    "version": 149900,
    "protocolversion": 70015,
    "walletversion": 139900,
    "balance": 39.99990960,
    "blocks": 337,
    "timeoffset": 0,
    "connections": 3,
    "proxy": "",
    "difficulty": 4.656542373906925e-10,
    "testnet": false,
    "keypoololdest": 1499426197,
    "keypoolsize": 199,
    "paytxfee": 0.00000000,
    "relayfee": 0.00001000,
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
root@iZ2zef6h0o28akb:/usr/local/bin_new# ./bitcoin-cli -regtest gettransaction
d851ad79a02d90c3ef3d46b317d1fee1b9337e7da36385b19c2cbc12f46547b5
error code: -5
error message:
Invalid or non-wallet transaction id
root@iZ2zef6h0o28akb:/usr/local/bin_new# ./bitcoin-cli -regtest getblock
```

0b205e46aa717327ef63d08a7e66247684410957831b615b51950dc830b94e0f

error code: -5

error message:

Block not found

root@iZ2zef6h0o28akb:/usr/local/bin_new# ./bitcoin-cli -regtest getinfo

{

   "version": 149900,

   "protocolversion": 70015,

   "walletversion": 139900,

   "balance": 4939.99978040,

   "blocks": 368,

   "timeoffset": 0,

   "connections": 3,

   "proxy": "",

   "difficulty": 4.656542373906925e-10,

   "testnet": false,

   "keypoololdest": 1499434061,

   "keypoolsize": 199,

   "paytxfee": 0.00000000,

   "relayfee": 0.00001000,

   "errors": "This is a pre-release test build - use at your own risk - do not use for mining or merchant applications"

}

root@iZ2zegchn2k04hhikcn4yjZ:/usr/local/bin_new# ./bitcoin-cli -regtest getblock

0b205e46aa717327ef63d08a7e66247684410957831b615b51950dc830b94e0f

error code: -1

error message:

Block not found on disk

root@iZ2zegchn2k04hhikcn4yjZ:/usr/local/bin_new# ./bitcoin-cli -regtest getinfo

{

   "version": 149900,

   "protocolversion": 70015,

   "walletversion": 139900,

   "balance": 5259.99993200,

   "blocks": 368,

   "timeoffset": 0,

   "connections": 2,

   "proxy": "",

   "difficulty": 4.656542373906925e-10,

   "testnet": false,

   "keypoololdest": 1499426460,

   "keypoolsize": 199,

   "paytxfee": 0.00000000,

   "relayfee": 0.00001000,

```
    "errors": "This is a pre-release test build - use at your own risk - do not use for mining or
merchant applications"
}
```