

Testnet Halt 95

March 2020 Testnet Halt 95

- Chain id:
- `enigma-testnet`
- Date:
- 16/03/2020 3am UTC
- Related issues:
- <https://github.com/scribblelabs/SecretNetwork/issues/95>
-

Description

On the 15 Mar 2020, around 9pm UTC the following param-change proposal was submitted:

...

```
Copy { "title": "Rwd Change", "description": "This is transaction to test a parameter-change for rewards.", "changes": [ {
"subspace": "distribution", "key": "baseproposerreward", "value": "0.999000000000000000" } ], "deposit": [ { "denom": "uscrt",
"amount": "10000000" } ] }
```

...

At around 3am UTC of the following night the proposal got accepted, and as a result the network halted, with following error:

...

```
Copy Mar 16 05:02:52 ip-172-31-44-28 enigmad[20612]: I[2020-03-16|05:02:52.767] Executed block module=state
height=171146 validTxs=0 invalidTxs=0 Mar 16 05:02:52 ip-172-31-44-28 enigmad[20612]: I[2020-03-16|05:02:52.780]
Committed state module=state height=171146 txs=0
appHash=FB4739B6F0D4FED77D431922E340B95B8144BF37483D3C1225431311A5BB229D Mar 16 05:02:58 ip-172-31-
44-28 enigmad[20612]: E[2020-03-16|05:02:58.075] CONSENSUS FAILURE!!! module=consensus err="negative coin
amount" stack="goroutine 1419 [running]:\nruntime/debug.Stack(0xc0012c2ce0, 0x1115f40, 0x16671b0)\n\tusr/lib/go-
1.13/src/runtime/debug/stack.go:24 +0x9d\ngithub.com/tendermint/tendermint/consensus.
(State).receiveRoutine.func2(0xc002741c00,
0x149b478)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:613
+0x57\npanic(0x1115f40, 0x16671b0)\n\tusr/lib/go-1.13/src/runtime/panic.go:679 +0x1b2\ngithub.com/cosmos/cosmos-
sdk/types.DecCoins.Sub(...)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/cosmos/cosmos-
sdk@v0.38.1/types/dec_coin.go:307\ngithub.com/cosmos/cosmos-
sdk/x/distribution/keeper.Keeper.AllocateTokens(0x169cf60, 0xc000eab5b0, 0xc000ab8460, 0xc000ab8460, 0x169cf60,
0xc000eab5e0, 0x169cfa0, 0xc000eab630, 0xc000e9f9e0, 0xc,
...)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/cosmos/cosmos-sdk@v0.38.1/x/distribution/keeper/allocation.go:66
+0x1589\ngithub.com/cosmos/cosmos-sdk/x/distribution.BeginBlocker(0x16ad9a0, 0xc000034048, 0x16c2100,
0xc005382800, 0xa, 0x0, 0x0, 0x0, 0x0, 0x0, ...) \n\t/home/assafmo/workspace/go/pkg/mod/github.com/cosmos/cosmos-
sdk@v0.38.1/x/distribution/abci.go:26 +0x2e6\ngithub.com/cosmos/cosmos-
sdk/x/distribution.AppModule.BeginBlock(...)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/cosmos/cosmos-
sdk@v0.38.1/x/distribution/module.go:147\ngithub.com/cosmos/cosmos-sdk/types/module.
(Manager).BeginBlock(0xc000ab9030, 0x16ad9a0, 0xc000034048, 0x16c2100, 0xc005382800, 0xa, 0x0, 0x0, 0x0, 0x0,
...)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/cosmos/cosmos-sdk@v0.38.1/types/module/module.go:297
+0x1ca\ngithub.com/enigmampc/SecretNetwork.
(EnigmaChainApp).BeginBlocker(...)\n\t/home/assafmo/workspace/enigmachain/app.go:391\ngithub.com/cosmos/cosmos-
sdk/baseapp.(BaseApp).BeginBlock(0xc000d197c0, 0xc004071c00, 0x20, 0x20, 0xa, 0x0, 0x0, 0x0, 0x0, 0x0,
...)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/cosmos/cosmos-sdk@v0.38.1/baseapp/abci.go:136
+0x469\ngithub.com/tendermint/tendermint/abci/client.(localClient).BeginBlockSync(0xc000e7cd20, 0xc004071c00, 0x20,
0x20, 0xa, 0x0, 0x0, 0x0, 0x0, 0x0,
...)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/abci/client/local_client.go:231
+0x101\ngithub.com/tendermint/tendermint/proxy.(appConnConsensus).BeginBlockSync(0xc000eab1b0, 0xc004071c00,
0x20, 0x20, 0xa, 0x0, 0x0, 0x0, 0x0, 0x0,
...)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/proxy/app_conn.go:69
+0x6b\ngithub.com/tendermint/tendermint/state.execBlockOnProxyApp(0x16ae3a0, 0xc0027fa9a0, 0x16bb520,
0xc000eab1b0, 0xc003dc3a40, 0x16c4080, 0xc000011138, 0x6, 0xc00272a9a0,
0xe)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/state/execution.go:280
+0x3e1\ngithub.com/tendermint/tendermint/state.(BlockExecutor).ApplyBlock(0xc0000fce00, 0xa, 0x0, 0xc00272a980, 0x6,
0xc00272a9a0, 0xe, 0x29c8a, 0xc0038a1660, 0x20,
```

```

...)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/state/execution.go:131
+0x17a\ngithub.com/tendermint/tendermint/consensus.(State).finalizeCommit(0xc002741c00,
0x29c8b)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:1431
+0x8f5\ngithub.com/tendermint/tendermint/consensus.(State).tryFinalizeCommit(0xc002741c00,
0x29c8b)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:1350
+0x383\ngithub.com/tendermint/tendermint/consensus.(State).enterCommit.func1(0xc002741c00, 0x0,
0x29c8b)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:1285
+0x90\ngithub.com/tendermint/tendermint/consensus.(State).enterCommit(0xc002741c00, 0x29c8b,
0x0)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:1322
+0x61a\ngithub.com/tendermint/tendermint/consensus.(State).addVote(0xc002741c00, 0xc005087c20, 0xc003fd0b70, 0x28,
0xc0012c9a38, 0xd31f92,
0x0)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:1819
+0xa39\ngithub.com/tendermint/tendermint/consensus.(State).tryAddVote(0xc002741c00, 0xc005087c20, 0xc003fd0b70,
0x28, 0xf136b9f2d600ff82, 0x108,
0x100)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:1642
+0x59\ngithub.com/tendermint/tendermint/consensus.(State).handleMsg(0xc002741c00, 0x168b640, 0xc0028f4538,
0xc003fd0b70,
0x28)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:709
+0x252\ngithub.com/tendermint/tendermint/consensus.(State).receiveRoutine(0xc002741c00,
0x0)\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:644
+0x6eb\ncreated by github.com/tendermint/tendermint/consensus.
(State).OnStart\n\t/home/assafmo/workspace/go/pkg/mod/github.com/tendermint/tendermint@v0.33.0/consensus/state.go:335
+0x13a\n" Mar 16 05:36:48 ip-172-31-44-28 enigmad[20612]: E[2020-03-16|05:36:48.395] Connection failed @ sendRoutine
module=p2p peer=842822b88cb5762ba99cee50a37156c6d0a6c452@149.248.55.89:60440
conn=MConn{149.248.55.89:60440} err="pong timeout" Mar 16 05:36:48 ip-172-31-44-28 enigmad[20612]: E[2020-03-
16|05:36:48.402] Stopping peer for error module=p2p peer="Peer{MConn{149.248.55.89:60440}
842822b88cb5762ba99cee50a37156c6d0a6c452 in}" err="pong timeout"

```

...

When the vote passed, the distribution module parameters changed to:

...

```

Copy community_tax:"0.020000000000000000" base_proposer_reward:"0.999000000000000000"
bonus_proposer_reward:"0.040000000000000000" withdraw_addr_enabled:true

```

...

- The problem occurred because the sum of base proposer reward and bonus proposer reward
- can't be greater than 1 i.e. $0.999 + 0.04 > 1$
- This results in miscalculations of the rewards and fees.
- The cause is a bug in Cosmos SDK in the parameter value validation, causing the proposal to pass despite being invalid. More on that here: <https://github.com/cosmos/cosmos-sdk/issues/5808>
-

Additional Notes

Another invalid proposal was on voting period, and by itself would have caused the network to halt as well:

...

```

Copy "changes": [ { "subspace": "distribution", "key": "bonusproposerreward", "value": "\"0.999000000000000000\"" } ]

```

...

Action Items

- <https://github.com/scrtlabs/SecretNetwork/issues/95>
- <https://github.com/scrtlabs/SecretNetwork/issues/97>
- <https://github.com/scrtlabs/SecretNetwork/issues/104>
-

Recovery Process

1. Logged in to the testnet bootstrap machine.
2. Exported state from the last "rounded" block height:

3.

...

Copy `enigmadexport--for-zero-height--height=170000>state_export.json`

...

1. Removed all references to proposal ids4
2. and5
3. in:
- 4.

...

Copy `"gov":{ "deposits":[...], "proposals":[...], "votes":[...], ... }`

...

1. Made sure the distribution
2. parameters still make sense:
- 3.

...

Copy `"distribution":{ "params":{ "base_proposer_reward":"0.010000000000000000",
"bonus_proposer_reward":"0.040000000000000000", "community_tax":"0.020000000000000000",
"withdraw_addr_enabled":true }, ... }`

...

1. Erased the coins
2. in possession of the gov
3. ModuleAccount:
- 4.

...

Copy `"auth":{ "accounts":[{ "type":"cosmos-sdk/ModuleAccount", "value":{ "coins":[{ "name":"gov" }], ... }, ... }`

...

1. "Refund" coins to the account that deposited to these proposals on the first place i.e. added to account's balance in:
- 2.

...

Copy `"app_state":{ "auth":{ "accounts":[{ "value":{ "coins":[{ "amount":" }] }] } }`

...

1. A problem occurred with staking, described at: <https://github.com/cosmos/cosmos-sdk/issues/5818> Changed the following:
- 2.

...

Copy `"distribution":{ "delegator_starting_infos":[{ ..., "starting_info":{ "...", "stake":"999990000.000000000000000000" }, ... },
...], ... }`

...

To this:

...

Copy `"distribution":{ "delegator_starting_infos":[{ ..., "starting_info":{ "...", "stake":"990000000.000000000000000000" }, ... },
...], ... }`

...

1. Then a problem occurred with the compute
2. module:

3.

...

Copy panic:create wasm contract failed:WasmError:Filesystemerror:Fileexists (os error17)

...

This one got fixed when deleted the.enigmad/.compute directory.

1. Reset state:
- 2.

...

Copy enigmadunsafe-reset-all

...

1. Restarted the node.
- 2.

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