**FACTOM**

**COMMUNITY**

**MEETING MINUTES**

**Factom Guides**

**Meeting #19-**35

**201**9**-**08-26

|  |  |
| --- | --- |
| **Date and time of meeting** | 2019-08-26, 20:00 UTC |
| **Date minutes drafted** | 2019-08-26 |
| **Date minutes approved** |  |
| **Organization/Team** | Factom Guides |
| **Attendees** | Centis BV (Niels), DBGrow (Nic), Factom Inc (Brian Deery), The 42nd Factoid (Tor), Trgg3r LLC (Nolan) |
| **Members not in attendance** | None |
| **Other attendees** |  |
| **Meeting Leader** | TRGG3R LLC (Nolan) |
| **Meeting Secretary** | DBGrow (Nic Robinette) |

|  |  |
| --- | --- |
| **Subject 0** | * Roll call - [All Present] * Approval of meeting minutes from previous meeting (#34)   TRGG3R LLC makes motion to approve Minutes #19-34; Centis BV seconds. All say “Aye”, except for 42nd Factoid (who abstains due to absence in prior meeting). Minutes approved by 4/5ths majority. |
| **Discussion** |  |
| **Conclusion** |  |
| **Follow up** |  |

|  |  |
| --- | --- |
| **Subject 1** | Announcements/Reminders/Process timeline |
| **Discussion** | * Current ongoing processes: * New ANO election/demotion process * Doc 001 - Will need to be ratified should the ANO election/demotion process be accepted. We will move Doc 001 forward in the timeline. -- *Amendments to be made here per result of election/demotion discussion.* * Doc 109 - Newly up on Factomize for discussion. * Testnet governance - working group lead by Mike (Cube3) and Alex (Factoshi) has concluded planning of the content and has started typing up the actual testnet governance document. * [Process discussion / document ratification timeline:](https://docs.google.com/spreadsheets/d/15QMJrxErMetSgpzwQUKQ_OjmccqfTNvuImdOLjruvlc/edit?usp=sharing)     *Testnet governance - Should be included in the timeline, going forward.* |
| **Conclusion** |  |
| **Follow up** | Add testnet governance to spreadsheet |

|  |  |
| --- | --- |
| Subject 2 | Network Update (Brian) |
| Discussion | Brian: Congrats everyone and all the ANO’s for putting in lots of time and energy to make the network a success. I am pleased to be part of this incredible community that is so passionate about making this network successful. We will talk about some of the things that got us to where we are, and what we found, and so there were a handful of things going on:   The Parchment release had a fix in it to correctly calculate the balance of the FCT’s. When the patch was made, a minority of ANO’s were seeing the balance issue, and so it seemed safe to not make an emergency of the issue and let normal the network update fix the bug. The bugfix was put into the Parchment release, 6.3.3; during the partial rollout of that with the Core Committee, there were some Follower issues that we found that were suspicious and concerning. Despite a successful testnet rollout, there were some follower issues on mainnet. The PegNet miners also saw some of the follower issues. Despite the latent balance bug everything seemed to be going along “okay” with the federated servers, so no action was taken to upgrade the entire network to Parchment. When the release for the Grants came along, the standing policy is to apply the Grants to whichever version of the code most ANO’s are running (which was Bond, 6.3.2), so the Grants were issued on that release which did not have the fix for the balance miscalculation?  It has yet to be determined at this point which caused the stall, so that will probably take a few days to comb through logs, or whatever else, to find the root cause, but the normal solution to restart the network did not work initially because of this bug which was fixed in Parchment, but was not present in Bond which would correct the balances in the state. More servers had developed balance errors in the intervening weeks since the bug was discovered, which resulted in the panic of the too few FCT’s. To get the network started, upgrades to Parchment were completed by the ANOs. This version of software had been tested on testnet, and was known to fix the prevailing issue. After the upgrade to 6.3.3, several attempted restarts proved to be unsuccessful. There were a few theories about why it was happening at the time. A new release of factomd was prepared and were applied as a patch on top of the Grants release. The patch fixed the too few FCT balance issues, and secondarily to increase the amount of time that messages are allowable. It also fixed a problem with saving of the savestate when booting.  It turned out that the expansion of that timeframe may have helped, but did not completely fix the issue. Thus, after more analysis, and a few more reboot tries, the conclusion was that when Followers don’t download a block for more than an hour, they will stop propagating messages. The Followers were not helping to propagate messages between Leaders. During the later boot times, more Followers were rebooted along with federated servers. More messages were also propagated due to probabilistic reasons (we got lucky) which was able to get the Federated Servers to pass messages between each other in order to move forward to continue building blocks.  After a few blocks, there were enough blocks received by Followers, that these Followers were able to realize that they are behind, and re-set their message filter, which allowed leaders to move forward. One of the other problems was the missing message protocol that was used. When a node (follower or leader) doesn’t know or thinks they’re missing something, and they want to ask their peers to see if they can find the thing, they will ask a random peer, and then they will wait 30 seconds until they ask another peer. And if there’s a lot of the network that does not have the message you’re asking for, such as when a Follower has been sitting for more than an hour, then when Leaders are asking other nodes, there’s a high probability they will not receive the message they’re missing in time in order to keep up with the network, which means the leader falls behind, gets faulted out, and cannot participate.   Third thing discovered - It is a good thing that the network had upgraded to 6.3.3 before going to 6.4.1, so it turns out that 6.4.1 (in some circumstances) will not create new save-state files when booting up from disc, and this is a race condition that has always existed, and these race conditions make it so that when other parts of the code were sped up, it makes it such that the point to save the block does not get there in time, so the state is not saved. Investigating that caused a delay for about 1.5 hours between when we were applying the patch between 6.4.0 and 6.4.1. So, one of the other takeaways is that that race condition needs to be investigated, such that Federated Servers not lucky enough to upgrade to Parchment and upgrade to the 6.4.1 to have their save-state be in a more recent stage.   4 Takeaways:  1) Change around some of the backhaul network - 4 nodes all the ANO’s connect to that were initially set up to ease broadcasting of messages. Turns out the broadcasting of messages, while it may have gotten easier and more reliable in the past, in today’s code the blend of followers on the network makes it more reliable to have dedicated nodes that the federated servers connect to. Causing those to be chattier will allow the network to boot in a more efficient manner when Followers have issues around the network.  2) Change this message filter to respond and reset to more then just forward movement of the blockchain to also reset during more common ANO things. For example, hard messages which would happen when the servers are started, but before the blockchain is moving forward.  3) Reduce the period when asking for missing messages, so that nodes can catch up quicker when a lot of the network is missing the things they’re asking for, so they can more rapidly find the thing they’re missing.  4) To fix the save-state race condition.  These are the four things to get the network in a more imminently stable state. Happy to answer questions.  Niels: No question; happy to not be scribing :)  Tor: 6.3.2 now with the Grants added; can we upgrade to Parchment right away?   Brian: This is a better question for the Core Committee. There are still many updates and fixes that Xuan is preparing; Xuan was the release building on Parchment, so the question is, do we get the current version that the network is running into a more stable state, or also look at Xuan; we will have to figure out what these changes are and the benefits Xuan gives; as far as the Followers following, some of the stuff we have seen from Pegnet -- one of the bugs that had been slowing down followers from following has been fixed in Xuan, but another one with similar symptoms has popped up. I asked Clay earlier today, and he was not confident with Xuan’s ability to be deployed imminently. It is a matter of fixing Xuan at this point.  Tor: We will skip Parchment and move onto Xuan?  Brian: We did not skip Parchment; it ran for a few hours.  Tor: We will follow up with Core Committee.  Niels: Related - I think one block ago, we had activation of the Grant round as well, so in roughly 7 days, the Grants will be paid out.  Brian: Was supposed to happen earlier, but the network pausing pushed back the Grant pay release date.  Niels: We are roughly one day late, so it will occur roughly on the 2nd of September.  Brian: 207329 (building block) -- 3 blocks past the critical block, so at this point we can congratulate everyone that the Grants have activated! It is a lot less risky for the next week Grants coming into effect.  Nolan: Anything else? Anyone in the community?  Brian: Taking questions in #governance-chat channel or on the floor via voice.  Nolan: Nothing yet, but we will circle back. Thank you, Brian.  Brian: Clay is prepping a written report, as well, so less mystery this time. |
| Conclusion |  |
| Follow up |  |

|  |  |
| --- | --- |
| **Subject** 3 | **Follow up: tasks from last meeting / upcoming tasks** |
| **Discussion** | Nic:  (Text from previous meeting begins)   * Finalizing internal committee framework (Doc 109) and achieving consensus   (Text from previous meeting ends  Worked on this week:   * Reviewed and provided commentary and feedback to the “Bi-Annual Factom ANO Terms” (created by Tor and Niels + David). This process will incentivize ANO’s to maintain Support and will provide a means for prospective ANO’s to be voted in via Support either by way of expansion of the Authority Set as decided by the Guides or by ANO’s losing Support and prospective ANO’s achieving Support replace those ANO’s who lost Support. * Determined that committee framework will be posted on Factomize now that Grant round discussion period is ending.   Next week:   * Discuss Doc 109 - committee framework with community. - Has been posted to Factomize. * Discuss “Bi-Annual Factom ANO Terms” with the community.   **To**r:  (Text from previous meeting begins)   * (Not in attendance)   (Text from previous meeting ends)  Worked on this week:   * Coordination of the network restart efforts during pause -- *Thank you ANO’s for getting up in the middle of the night for helping out; absolutely a group effort to re-start, and I am proud of everyone in that process. I also worked with the pull request for the Grants for this round, and I want to thank Factomize for making it extremely simple by making an auto-generated template which can be exported directly into the Grant Go file. This is much more simple than previously.* * Provided input in multiple factomize discussions regarding our new processes and community matters * Created the pull request to add the grants to factomd * Did not get around to providing input on Committee restructuring.   Next week:   * Comment on committee restructuring. * Continue to discuss ANO terms document with community and hopefully put it up for ratification.   Nolan**:**  (Text from previous meeting begins)  (Text from previous meeting ends)  *\*\* Thank you David for the hard work! (Says Sam and Nolan) \*\**  Worked on this week:   * New ANO election/demotion process -- *Added edits and suggestions* * Various Factomize discussions -- *Good discussions will continue participating* * Responded/monitored network pause -- *We all powered through this and was a great demonstration of ANO’s working together to get the network back up and running again.* * Montor Grant Factomd release - *major milestone with this passing*   Next week:   * Continue with New ANO election/demotion process discussion * Doc 109 discussion * Doc 001 initial edits * Alert system test with some ANOs -- *working with a handful of ANO’s on this.*   Brian**:**  **(Text from previous meeting begins)**   * Release for grants - working on new version of factomd, so that there is software to activate those. * BI-Annual ANO Review feedback * Doc 109 Committee Framework feedback   **(Text from previous meeting ends)**  Worked on this past week:   * Network Restart * Release for grants - working on new version of factomd, so that there is software to activate those. -- *Not as much time in feedback on ANO Review or community feedback as I had anticipated; following some of the committee resignations and associated things.* * Community resignations   Next week:   * Changes to new release with the Core Committee -- *trying to figure out the best way forward with this* * BI-Annual ANO Review feedback * Doc 109 Committee Framework feedback * Doc-001 if appropriate   Niels:  (Text from previous meeting begins)   * BI-Annual Factom terms - Discussed technicalities with Factomize forum. Posted discussion thread. Lots of feedback already; Niels plans to reply tomorrow and throughout the week to the thread. * Grant round election * Report on bug-bounty and get back to 1 submitter. Will get in touch with a resource owner about potential Security related issues which Core Committee will disclose at a later time, with info necessary for others to digest. * Grant round questions and feedback * Feedback for maxlambda on roadmap probably if he has questions   (Text from previous meeting ends)  *\* Niels was sick this past week\**  Worked on this week:   * BI-Annual Factom terms * Bug-bounty and get in touch with owner of a certain resource -- *Niels to do immediately after this meeting. Wants more formal review of these items, because as of now it has been an informal, small discussion; I hope to formalize this a bit more.* * Working group and committee (doc 109) -- *Will review this.*   Next week:   * ANO support voting & ANO candidates document changes -- *“Bi-Annual Terms” document; there is a new proposed change. Hopefully we can get some new feedback on this. We will need to amend it.* * Bug-bounty and get in touch with owner of a certain resource * Working group and committee (doc 109) |
| - |  |
| **Follow up (until next meeting)** |  |
|  |  |

|  |  |
| --- | --- |
| **Subject** 5 | Open Floor |
| **Discussion** | No discussion at this time. |
| **Conclusion** |  |
| **Follow up** |  |

Motion made by TRGG3R LLC; seconded by 42nd Factoid. All say “Aye”.

Meeting adjourned at 20:35 UTC. --