00:28

I joined the right meeting this time.

00:29

Yay.

00:32

Sorry about the last time, Alex.

00:36

This meeting is being recorded.

00:40

Okay, sure. So I don't know if anyone else caught this, but in my opinion, Tyler and Alex Miller are identical voice twins.

01:09

Now that you say it, I've not.

01:13

Actually spoken to Tyler yet, so I.

01:15

Have no like they are.

01:19

I agree.

01:22

This is all just a long con for us to work together to steal your bitcoins. There you go.

01:38

Will we have a new blockchain engineer joining this call? If he's probably on the waiting list, his name's Christopher.

01:46

Okay, great.

01:53

I believe I received that request last week and added them to the call.

02:03

I just invited him to the okay, great. So it's officially AR now.

02:26

Yeah, I think it's sticking, at least internally. All right, let's get started. So this is going to be like probably a more organic sprint planning meeting than we normally have. I received a lot of specific updates from individuals about the plans for this coming sprint, but obviously with the, I guess as we refer to it, the Nakamoto flip occurring at the end of the week last week, there's inevitably going to be a lot of rearchitecting and technical planning that occurs during this sprint. So that's all happening in the backdrop. But I did want to go ahead and make sure that we had a chance to talk through each of the four principal working groups and see where the conversation goes from there. So Martin, we'll start with you and then stepan, you created this issue of the revamped scope for SBTC Alpha, the Dr or Alpha Romeo.

04:00

So there's the obvious need to sort of go through, make sure that all the documentation, the roadmap reflects the revised scope of this developer release for testnet public testnet. Maybe we could start with you all and just walk us through this list and where you're at in the process of just converging on what the complexion of this release is going to look like.

04:34

Yeah, sure. So basically what me and Martin discussed yesterday was how to approach Alpha if you're going to try to improve it or do it again. And the biggest issue was always this very complicated logic on, okay, we get a deposit, now we know what to do. But if, for example, we fail during the minting phase or for example, for the withdrawals, we can fail both in the burn phase, but also in the fulfillment phase. And when you want to tie everything together, that becomes complicated very fast and is what you spend the most time on, the first version of the Alpha. So this time we wanted to try to decouple those separate components as much as possible. And the approach that we want to explore is basically separating the deposit logic into something we call an actor. We are not actually using kind of the actor framework, but something like that.

05:38

And basically they should communicate with clearly defined events. And when you want to codify logic through those events, it becomes much clearer and much easier to do compared to so let me start from the yeah, so the first one was to document all of this. Martin is working on this today, I believe. So this should be ready either today or tomorrow. Maybe Martin can say more about that. But also we started work on the Skeleton implementation today, which is something like a very minimal proof of concept that we'll either know today or tomorrow if this is going to work or not. But after a couple of calls today and a lot of paired programming, we think it's going to work and it's going to be much better than before. And yeah, after that, we need to port the SPDC CLI so we can actually test this, that it's working correctly, create some deposits, withdrawals, and everything that we need.

06:38

We'll also basically just pull the Bitcoin client implementations and the Stacks client implementations from the original alpha. And most of the code for these actors will basically just be copy pasted from the original alpha, with some improvements changes, because we've changed the viral formats for the deposits and withdrawals. But all of that logic is already kind of there in the SPDC core package. So it's just a matter of gluing everything together and seeing if you're going to come across any blockers, although we don't think so. And yeah, that's about it. Everything except the bottom two recorder and the replayer are like those two are optional. But that would also be interesting to have if you are able to because we will be able to define a list of events like deposit, withdrawals and know exactly what happens when we get a deposit while we are in a particular state.

07:42

And we are trying to bake in as much of the instrumentation to kind of look deep into the state of.

07:51

This SPDC, which piece I'm passing incorrectly.

07:57

Sorry.

08:00

I think that was someone that joined Cole. Wasn't on mute. Go ahead, Stephanie.

08:05

Yeah, so we are basically trying to bake in as much tooling as we can into this. So we have a really deep insight on what happens when we get a deposit while we are in this state or that state. And that's where we kind of spent the most time fixing bugs before. So we are kind of tactically approaching this, changing only the parts that kind of had the most issues with before, but everything else that's probably like most of it can be pulled out from the previous alpha solution. And yeah, that's about it. I'm not sure if Martin wants to chime into something about the documentation.

08:41

Yeah, exactly about the documentation.

08:43

So there are two sides of it. One is the sort of SPDC documentation. And I think from that perspective, when we're talking about the actor model and event system, that's sort of the internal way of achieving a good separation of concern, making sure we can work on these pieces in parallel, making sure that it's testable and all that, and the whole sort of architecture of this specific implementation. Then we have the whole user interface, which is already documented. And that's important to have developer documentation. And developer documentation is important too. How does it work? What is the context? What is the purpose? What is the high level roadmap, which I will initially sort of update to create sort of visibility into the project. And then we will link the like anyone's interested in the technical, nitty gritty details, like, which are the actors, how does the events look?

09:32

I want to run this particular thing and I want to look under the hood. That documentation will, of course, keep very close to the code, so that should be README files, code documentation, which we'll also prioritize for this effort. Also, I know Sarala mentioned, like Actionable, Sprint goal, and something potentially to demo. So we've been talking about timelines for this. We know that it's very important to have this in place by October. I know it can seem daunting when you see all the components laid out here, but it's an exhaustive list, essentially, because we know the system and it's a relatively simple system, so it looks more complex than it is. And we believe that it's achievable by the end of this Sprint to demo a working deposit flow. So that is, we're going to prioritize the actors and the components that will give us the deposit end to end, and hopefully we will have that demo.

10:30

That's what we're working.

10:36

Jesus. Well, actually, Jacinta, could you just educate us? I don't see signer noted anywhere on here. How does this change in approach impact the role of the signer?

10:55

I don't think she's here right now.

11:02

Okay, well, I don't know.

11:06

Under the assumption that Jacinta and Sayak would help with the Nakamoto stream for the signer stuff. So if there's any additional signer work on the SPTC for Alpha Romeo, we need to list that here. But maybe martin, do you know if there's any signer changes on the SPTC.

11:23

Side that will take alpha Romeo is.

11:26

Not going to have a signer. That's one of the complexities we're cutting out. So there's a lot of signer work to be done in Nakamuro. And the purpose one of the big ideas of this change is that we're still able to deliver a developer release on testnet while we can focus 100% of the signer work on the Nakamoto Consensus rules instead of building two signers in parallel. And that's also going to enhance code use. Since Justin is so much up to speed on the SPTC requirements, the Nakamoto signer is going to be built with the SPDC requirements in mind so that we can reuse 80% of that code for the consensus breaking SPDC change.

12:07

So my question to Martin before we move on to Jesus. Do you see any potential risks? At what point would you think that would feel maybe six weeks, let's say optimistically four weeks, practically six weeks that it could extend the alpha testnet release could extend beyond that, or do you foresee any risks at all?

12:30

Are you confident?

12:31

Yeah, definitely. There's always implementation risks that I mean, we have been trying to find the best way forward, but the processing model, as soon as you dive down into details, when you have chains that can fork and you want to make sure that the processing model is as good as possible while still achieving something that's sort of pragmatic, like the current architecture is the sort of middle ground. It's not going to have perfect guarantees if you have deep bitcoin forks. That's something that we're sort of cutting out right now. I see those development risks. I think we have a pretty decent Mitigation plan because we do have an SBDC Alpha system running on testnet right now. And that testnet, I'm not super confident in it, and debugging is a pain there. That's why we're focusing on a system that's sort of easier to maintain and debuggable.

13:24

But we should, of course, keep track of how things are progressing and make sure to cut down as much as possible in case we risk derailing because the timeline is still relatively tight. But this is also something that there aren't so many unknowns here because we've already delivered SBDC Alpha and what we're doing right now is simpler than what we did before. Although we are having a better processing model, it was very naive what we did previously, so that was a long answer. I hope it sort of covered what.

14:00

You were looking for.

14:02

Yeah, kind of.

14:07

Great.

14:08

Heather, anything you want to say on the clarity front in terms of this shift from many to Alpha romance?

14:19

Yeah, so I'll go ahead and say our group probably has the most shift that's happening. So my first priority was to write a nice summary so that everyone can get on the same page, even if it's async. So I updated the work stream meeting notes with a nice little write up that I'll post here in case anyone wants to read how our group is affected is we basically have some immediate priorities which are assisting Alpha in whatever ways are needed. From preliminary talks with Martin, it seems like we're not going to be needed on alpha much at all, if not at all. So that's not too much of a worry. Next worry is Nakamoto and the long term plans for that. My current observation is that we almost have two different tracks in parallel that I want to stay cognizant of. First one is everything that has to do with the contracts, specifically what contracts persist, what boot contracts need to be updated, and what contracts are completely missing for Nakamoto that weren't part of mini the second track has to do with much more testing and integration.

15:27

I don't want to do the same thing where went sequentially, finished the work, and then everyone scrambled to sort of figure out testing, and very little got done. So how I want to not split up, but how I want to deal with the Clarity group moving forward is we're going to have these two parallel tracks where few of us are going to be focused just on the contracts immediately for Nakamoto and the research for it. And then a few of us are going to be focused just on the testing suite for Nakamoto and how integration testing is going to happen, including Clarity and SBTC. So a little long winded, but that's updates in my end. I do have one quick question. I keep on hearing the new SPTC is going to be on testnet. I'm curious as to why that is. If the current SPTC Alpha is on.

16:15

Mainet, the current SPDC Alpha is on Testnet. It's not Mainet quality. The SPDC Alpha we're building could potentially be Mainet quality. Then it's also like we've learned so much more about legal requirements. I'm not sure we can put a custodial system on Mainet. Just arbitrarily.

16:33

Hold on. That link I just posted is not SDPC Alpha, then?

16:46

No.

16:47

This is probably a very early version of the contract that was deployed on testnet, but there are no calls to it.

16:58

Yeah, this is Mainnet, and this is in one of the repos in the docs that's linked in. So I'm definitely going to flag that and send that to you.

17:06

Okay, yeah, please let me know where it's written. That sounds very inaccurate. SPDC Alpha is not on mainnet.

17:15

Okay, so this must be just like some obscure contract someone deployed.

17:19

It's probably like it looks like the potential early version of it.

17:26

Cool.

17:27

Yeah, there's no calls to it, so okay.

17:29

It was probably just it hasn't been used and it hasn't done anything.

17:32

Okay, cool.

17:33

Yeah, it must have been just linked wrong in the doc. So I'll flag those docs now.

17:40

In the chat about testing and integration. So we hit the reset button as of yesterday, and we're trying to restructure that working group. And Ashton is working with Erin and others, I think worth connecting you or plugging you into that working group. Will, what do you think?

18:00

Yeah, I was just going to ask, is there someone you had identified? Has this lead track to the testing integration?

18:08

Yeah, I think it's going to be either or who? I think from a main skill set, and I have not asked, so I'm not throwing them under the bus on a public. It would be probably Jose, Marvin, and Nicos. So Nicos just joined our work group a little bit, and I think those three are the ones who are more focused on testing, security, et cetera.

18:33

Yeah.

18:34

Can I jump in quickly to kind of describe what the restructure is? Because I think that can aid a little bit of clarity know? Originally the Testing and Hardening Group was kind of its own little silo and the accidental implications sometimes felt like the Testing and Hardening Group was going to be riding everyone's unit tests, which of course isn't the case. So the way that we're going to try to restructure and we're hoping this works is instead of it being a testing and Hardening group, it's essentially we're changing the name to Quality of Life group. And the idea is that we'll meet once every two weeks and talk about the testing and quality of life and DevOps stuff that's happening and then ultimately that big group is going to be split off such that there's a section of Quality of life people in each working group.

19:27

So from what you're saying, if path of the Clarity working group is going to be people who are just dedicated to testing, that's exactly the idea that we're trying to now implement with the.

19:37

Quality of Life group.

19:38

Does that make sense?

19:40

Yeah, it does and I'm taking notes on this in our work stream doc. So yeah, I'm following along and we can connect after to figure out who's going to be part of that. But yeah, that makes perfect sense to.

19:54

Shouldn'T be that shouldn't be too disruptive.

19:55

To what we're currently doing. Just more organized.

20:01

Mike and Byrne on the UX UI focus. I know that there was just a call prior to this regarding the product, the impact on the bridge. I got a couple of updates from you all here. I don't know if there's anything that you want to flag for the rest of the group.

20:21

Not for me personally. It's pretty straightforward switch I think.

20:26

So we're already supporting Alpha, the Alpha release.

20:29

Okay.

20:32

Yes.

20:33

My end. The consequences of recent actions I don't think really change much of a signer. If anything, it pushes back even more. And so still I think bigger focus is just documentation and taking what the higher brand activity is saying and just kind of putting it for the rest of us from a stackjs point of view. The priority for at least I thinking for the hackathon in October is going to be able to give the utility and helper functions for developers to almost build their own bridge. So kind of building what Mike originally made and compartment metal eggs in that for helper functions.

21:10

Great.

21:12

And then rounding out with our product lead Andre yeah.

21:18

Plus one to what Mike and Verne.

21:20

Just said, a lot of the focus.

21:21

For this Sprint is getting the bridge product in a good place that we can actually release it on a more public test set. So we have a hackathon deadline of roughly October 20 that we are aiming for to be able to release this in a more public way. So working with the ecosystem, making sure that all the comms is consistent with the applications that are going to be supporting Alpha. We have about a dozen or so applications and startups that we've identified that we need to make sure that they're ready for this and starting to integrate it.

21:53

So doing a lot of work there.

21:55

To just make sure that the go to market of Alpha Romeo goes smoothly in updating any supporting materials there. Additionally, I'll be working to publish an update of the longer term roadmap for this. Definitely looking to work with Sarala. I know you're working on fleshing out the engineering roadmap, so working to make sure that all that's consistent and the way that we're communicating it out to the ecosystem just reflects some of the changes that are in Nakamoto Flip.

22:27

Great.

22:29

Speaking of Nakamoto Flip, Jude and Aaron. So I guess we'll start with obviously you're working on the rearchitecting of the testing plan and deployment plan right now. Again, just to go back to what Sirlin noted, I don't know that Sayek or Jacinta are online today, but I guess really just trying to make sure that they can plug in and add value right away, if possible, on the block producer signer and stacker signer. And then Aaron, you had noted a couple of other Sprint goals that you had in mind here. Anything that you want to elaborate on for the group and what will you be demoing?

23:21

Yeah, good question. So I would say first, I guess high level update is that Jude and I synced yesterday on the updated plan. Maybe I'd call it more of an implementation plan, but implementation and testing plan for a first milestone. This document is very near stage ready, so I'll probably have a GitHub discussion posted very shortly after this call that just sort of outlines basically all of the features that would be required for a Makamoto node. And the details on these features should be enough that almost all of them are sort of small to medium sized tasks. And so once that discussion is up, I think that we should be able to find stuff where Jacinta and SYK can contribute immediately. And then yeah, so that's the update on that stuff. In terms of what is demoable, almost all of these features are pretty demoable.

25:01

So one of the first things that I think we will want is initial asynchronous RPC endpoints that will get consumed by the block producer. So these are things like block template assembly, block assembly templates, and block validation. Both of those are very demo. They're RPC endpoints. So you can spin up a node and then query those endpoints and see that it works.

25:30

Yeah.

25:34

Very cool. Thank you.

25:37

Jude, anything you want to add?

25:41

Not really.

25:41

It's pretty much where we are.

25:42

Right.

25:46

Guys? What should we keep in mind just from a clarity, consistency point of view? Aaron, the revised implementation testing plan gets added as a discussion to GitHub. Downstream of that, should we be waiting for that to be validated before updating the technical specification document to reflect that or how would you like that to play out?

26:23

I don't have strong thoughts on the technical specification document. I think that the discussion can be pretty readily translated into issues for each of those features and then we can mark them all, like milestone one, and then just track progress towards that milestone using kanban of those issues. That should provide pretty good visibility into what's going on, especially because each of these issues should be kind of like individually verifiable testable demoable.

27:10

Did you have aspect taxpec in mind or is there an existing one that you were indicating? Well.

27:19

We have that existing document that's on the Stacks network one. That's what we're referencing in the hackathon. And I suppose, yeah, I can work with Jesse to make sure that we submit an update to that so that it's the single point of reference for people and there's no confusion. Bryce awesome.

27:58

Yeah, so those are our three main goals, basically organizing what we have right now for interacting with the runtime portion of it. So right now it's kind of a bunch of ad hoc stuff stuck into our testing environment and kind of hacked into Clarinet. So organizing that into what will be the final crate for the runtime with nice clean interfaces. And then two and three are basically just adding additional features. So the big one being cross contract call support, which actually, as we've gotten into it, maybe even easier than initially thought, and then adding support for more operations. So, like, what we have now is a pretty small subset of the complete set of operations available in Clarity, and we'll just keep on adding to those. So the demo at the end of this will be showing executing a more complex Clarity contract in Clarinet and potentially also showing something in the Stacks node interacting with this runtime.

29:19

Awesome.

29:21

Ashton and Jesse so I've hinted at yesterday, we had a call to try to right size the quality of life testing and Hardening working group. I think just trying to make it very focused. We're deprecating the name testing and hardening so that people don't have the impression that this is like a standalone group that's doing all the testing for folks, but it's more about really identifying what these best practices are. Trying to sort of socialize those best practices by embedding members of that advisory group or working group on all the other working groups. And so, Ashton, some things that you pulled out yesterday is like trying to differentiate what the requirements or recommendations should be for testing a mature system versus one in active development, and then also working with the individuals that are contributing to that effort to identify what their concrete deliverables are going to be.

30:39

So I guess, Ashton, you'll be wearing a bit of a management hat trying to get this all organized, anything that you want to say with regards to this effort?

30:54

Yeah, I think that there's been a bit of work all across the board right now that's been a bit disruptive. Just the rug has been pulled out from under us on a number of things that we've been working on and that was fully necessary. When it comes to testing and hardening, that work has been really hard to track. And I think the biggest issue to that really has been that testing and hardening is not separate from the development, it is actually part of the development. So the way that we've decided to restructure ultimately is instead of it being where there's this one working group and everyone's trying to make better testing for this mature thing, really the thing that we need to be testing are the things that we are actively rolling out because we're trying to move quickly. We want to make sure that it's robust as we do it.

31:41

So basically the reason we've chosen to reorganize like this is it will allow for a more lean process. And the hope is, instead of us just hoping that each one of us is. When I say us, I mean all. Developers understand what our hopes are for unit testing and property testing that we are able to have. Sort of these members of each group.

32:05

That ultimately are part of the Quality.

32:08

Life group, that can help all the developers know what the standards are and what we should be doing. So that's sort of what we've decided to do. I'm going to be tracking that and making sure that's going the way that we want it to and hopefully it works better than the current process, but we'll see what happens.

32:28

Jesse, I know your stated goal is to merge the large PR of CI changes to Master.

32:39

Yeah, that's my main goal for this burnt is just to get that merged.

32:46

Can you help unpack for people what's included in that?

32:52

Yeah, basically it rips out the current way that we test during our GitHub actions for the blockchain and reworks every single test so they run much faster all around, remove several bottlenecks, just other various improvements. Different tools are used to reduce the testing times. For example, unit tests I can run now in about 30 to 40 minutes versus several hours currently.

33:25

And then could either of you identify something that we could highlight at the conclusion of the sprint in like a demo or presentation just as an artifact of work in progress or something that gets completed during the sprint?

33:47

For this, I mean, the completion is just that the PR is merged and we start using it. So once core developers start creating PRS and making changes, we'll see it in action.

34:02

And I think for the overall working group, hopefully the deliverables would be both a defined standard of what testing looks like. And I get the sense we may already have one, but just making sure that we formalized it. For the group, and then also, hopefully, somewhere where we're able to track kind of what's going on as far as testing across the groups.

34:22

That's my hope.

34:26

Go ahead.

34:26

Sorell, do you think spinning up the node and the testing node for the Nakamoto deployment, would that be ambitious one a question for you and Aaron together on that. I guess.

34:42

I mean it's definitely doable. I don't know much about it at this point, but mean you all know me if we need it'll get done.

34:55

What do you think, Aaron? Does the team have enough at this point to spin up? That.

35:03

Probably not quite yet, but maybe.

35:10

Soon we'll see that's more contingent on.

35:14

The state of the node than the state.

35:17

Yeah, probably a stretch goal.

35:22

Nevertheless, Aaron, if you feel we're ready, let me know and we'll make it happen.

35:28

Cool.

35:40

All right.

35:43

Is there anything well, Christopher, I see you join the call. Welcome.

35:57

Yeah, he's our blockchain engineer from Hero team. He will be working with Bryce on the clarity WASM workstream. This is his first day. Probably overwhelming seeing everyone but everyone. So you might want to introduce yourself quickly to the group.

36:16

Yeah, sure. Yeah. I am Christopher and I've been working in the blockchain space or in the kind of distributed network space for the last since 2015 more or less with IPFS and I've been through some other like with Parity for a while and latest with Dusk Network with a focus on WebAssembly runtimes, more or less. And so I hope to be able to contribute to your current projects now and I sure do have the experience to do that.

36:55

Very cool.

36:56

Well, welcome. Nice to have you on board.

37:00

Thank you.

37:01

We're very thrilled for the Carti welcome working stream as well as for Hero and for the entire blockchain team. Welcome. I don't think he's met most of the Hero team. He's just starting outside in at the moment.

37:18

Great.

37:21

That was all that I had on the agenda for today. We could give people a little time back unless there's other items that folks would like to discuss.

37:36

All right, just real quick, I commented in the chat there I wanted to put a plug in for the tech talk that's coming up after this at noon Eastern Time talking about property testing on SBTC. I'm excited for that one.

37:52

Can you share a link?

37:53

Which calendar is that in? It's in the Trust Machine core engineering calendar. Yeah, I'll share a link here.

38:06

Is it being recorded for those of us who might not be able to make it?

38:10

I don't know.

38:10

Yeah, send invitation. I can record it.

38:15

Awesome, thank you.

38:16

Great. Jose.

38:18

Yeah, thank you for setting that up. Could you give us a brief summary of what you hope to cover and I guess expected outcomes of the call?

38:34

So the presentation is by Nicos. He was interested in he has a testing grant. And he has an approach called property testing. He has been working on that last year, and now he has a grant and he will give a 30 minutes presentation about applying this approach to clarinet testing. And then we're going to have 50 minutes of questions.

39:08

Is this related to conversation that him and Aaron were having on GitHub, I'm presuming?

39:16

I don't know.

39:23

We'll find out. All right, I will see you soon. Remember to keep posting your daily updates. That's super helpful. Yeah, it just provides a lot of visibility and it's easy for me to go through and summarize in these calls if I have better reference. Okay, talk to you soon. Goodbye. Good.