Chia Pools for Pool Operators

06-02-2021

Agenda

- Introductions
- Current Status
- Technical Overview of Pooling
- Testnet Demo
- Update on release date
- Technical Q&A
- One Last Thing

Introductions - Roles and Responsibilities

Bram - CEO | *Designed Pool Protocol*

@hoffmang - President & COO | *Product Manager for pools*

@onemoretime1996 - VP of Engineering | *Leads all engineering efforts for pools*

@jde5011 - Director of Devops | *Maintains testnet for pools*

@sorgente711 - Engineer | *Lead programmer on pool server reference code*

@matt_howard - Engineer | *Lead programmer on Pool NFT (singleton)*

@adamkelly - Engineer | *Lead integration programmer for pools*

@seeden - Engineer | *Lead programmer on pools GUI*

@efishcent - Keybase Mod & Community Dev | *Lead mod in #pools channel*

(Reminder: Please do not @ or DM devs or mods. Unsolicited messages may be ignored)

Current Status

- We’re almost ready to release to testnet, pending a few last touches!
- We have a working demo to share with everyone today, showing the core pooling protocol in action on Testnet.
- Instructions on how you can recreate your own testing version of this Testnet demo are available in the pool-reference repo. Please note this is only a demo, and not production ready without additional development work on behalf of pool operators.

Technical Overview of Pooling

Chia Pools Design Principles

- **Security for Farmers** - The Farmer always holds their keys, never has to trust the pool with them.
- **Security for Pool** - Plots are cryptographically tied to a smart contract which is pointed to a pool, so the farmer can't cheat the pool. The 1.75/.25 reward splits also ensure against pool vs pool attacks and other shenanigans.
- **Separated Block Creation** - Farmers can choose to run their own full node and choose their own transactions which increases decentralization, alternatively a pool can run the full node for Farmers to use.
- **Pool Switching** - The farmer can choose to switch at any time to another pool, without having to replot (but with protections in place to keep farmers from cheating pools out of rewards). There should be no pool registration and no pool user/password.
- **Configless Blockchain Backup** - A user can enter their 24 words on another machine, sync up, and their farmer will automatically begin pooling.

What's in the Plots?

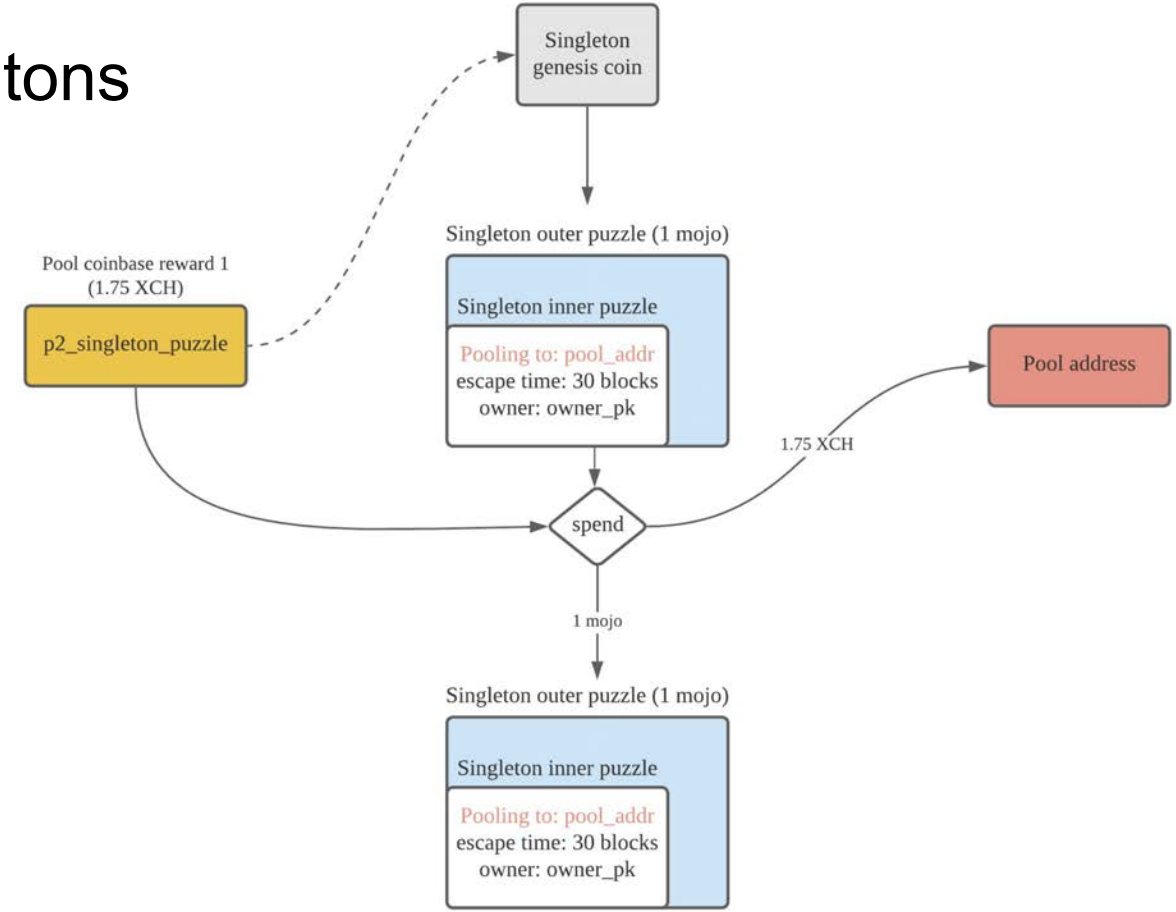
Original ppk plots

1. Farmer public key
2. Pool public key

New pooling plots

1. Farmer public key
2. Pool contract address (AKA pay to singleton address)

Singletons



Pool Protocol

`GET /pool_info`

Obtain static information about the pool.

`POST /partials`

Submit a partial proof of space from the farmer to the pool.

`GET /login`

Log in to a web interface on the pool, for configuration, metrics, etc. Optional for pools to implement.

https://github.com/Chia-Network/pool-reference

Testnet Demo

Updated Date - no more dates

We will no longer be issuing specific target dates. We will instead be tracking pooling support in stages, and communicating what stage we are currently in as work progresses.

- **Testnet Launch** - Iterative releases to testnet to allow Chia Devs, Community Devs and Pool Operators to find and fix bugs on the reference code, pooling servers and infrastructure.
- **Pool Self-Validation** - Chia Devs does final testing of pool reference code. Operational testing of integrated pools on testnet by pool operators and intrepid community members.
- **Mainet Launch** - Pooling launched for public use.

Portable Plots Stability and Viability

- Portable plots created using testnet singleton *will be tied forever to testnet*.
- Portable plots created using mainnet singleton will be tied forever for mainnet.
- Using testnet builds to create mainnet singleton will have high risk in **testnet stage (before mainnet release), and is highly discouraged**!
- If we find (and correct) bugs in the testnet builds' smart contracts, all previous singletons pre-fix may have limited or broken functionality; e.g. can't claim pooling rewards.
- As we progress through Pool Self-Validation Stage, portable plots viability for mainnet will increase as code stabilizes.
- You will need to replace experimental plots and replot against mainnet code if you want guaranteed 100% viable portable plots.

Release Stages - Target Audience and Portable Plots Viability

Stage	**Target Audience**	**Portable Plots Viability**
Testnet Launch	Chia Devs, Community Devs, Pool Operators	Testnet plots: won't work on mainnet Mainnet plots: < 10% chance viable
Pool Self-Validation	Chia Devs, Pool Operators, Intrepid Community Members	Testnet plots: won't work on mainnet Mainnet plots: < 75% chance viable
Mainnet Launch	Everyone	Testnet plots: won't work on mainnet Mainnet plots: 100% viable

Technical Q&A

One Last Thing

As soon as Chia Dev validates the pool reference code has no critical bugs and works properly end to end for 3 days in testnet we will launch to mainnet.