WHITE PAPER

Maya

A future inspired in our past

Maya 1.0

How we started

INTRODUCTION

How we started

The impressive feat of first designing and building a technically viable, completely decentralized, permissionless exchange is credited to THORChain and its relentless team of developers. Maya Protocol was meant to be nothing more than an effort to create a backup system, an alternative to $RUNE and to THORChain, for several fundamental reasons outlined below.

Maya Protocol's team believes there have been four technological breakthroughs that will soon change how our current economic systems work, they are:

- Bitcoin's Proof of Work
- Ethereum's Smart Contracts
- Tendermint's simple BFT Proof of Stake - easily programmable with Cosmos SDK
- THORChain sovereign blockchain - open-source and cross-chain

Like THORChain, Maya Protocol is a CosmosSDK-powered, replicated state machine to overwatch and coordinate the movement of digital assets, swaps or stakes without the need to wrap or peg any of them. In our own way, we are validating THORChain's lead and paying tribute to it. The idea to create Maya Protocol was born when a developer of THORChain publicly mentioned that he expected the market to be filled with at least 3 to 5 similar protocols in the future.

Maya will be the second to market.

Maya Protocol has its own native token called $CACAO. Why this name? We all know cacao is the main ingredient used for making chocolate nowadays but, in antiquity, this seed was also used as a medium of exchange and commerce by the Maya civilization in what today is the Yucatán Peninsula and Central America.

Here is an overview of why we think THORChain cannot and should not be the only cross-chain DEX out there:

- They need backup as a universal backend provider.
- THORChain cannot grow fast enough to capture all the addressable market.
- THORChain will eventually hit its TPS limit.
- The technology needs validation.
- Collaboration instead of competition.
- Focus on different target markets.
- Compatibility.
- They should not be dancing alone!
- Version Stability.
- Two minds are better than one.

Let's go through each one of them:

01 Backup as a universal backend provider.

We believe that Cross-Chain Decentralized Liquidity Protocols will serve as the backend to most of the volume moving across wallets, central exchanges, protocols and crypto businesses. It is very important to have a backup to any such system in case any problem could affect it and to prevent critical failure across the market. Think of somebody carrying a Visa and a Mastercard, both networks generate loads of transaction volume when people use their debit or credit cards to pay for goods and services but, if for any reason the Visa network stopped working, then all those users could still use their Mastercard instead. If THORChain was Visa, then Maya would be MasterCard.

02 THORChain cannot grow fast enough to capture all the market.

This is not a lack of trust in THORChain's ability to grow, rather a statement that stems from the understanding of the protocol. THORChain (and Maya) have some sort of a virtuous cycle that cannot be artificially accelerated: the growth of their security and the growth of their liquidity. One cannot grow without the other and this creates a constant "chicken and egg" problem. Security scales as more nodes join, bonding bigger amounts of $RUNE —$CACAO, in our case — but if the bonds grow too much then the protocol becomes very capital inefficient. On the other side, if too much liquidity is provided relative to the bonded capital, then the system becomes riskier. This process is continuously being optimized by specialized economic incentives, but it takes time to do so. We believe there is more demand for liquidity in the market and people willing to provide the underlying necessary bonds than the speed at which THORChain can currently capture it.

03 THORChain will eventually hit its TPS limit.

Even when THORChain continuously increases the liquidity in the protocol, eventually they will hit the Transactions Per Second limit, which sits around 100 - 500 t/s. At that point, swappers will either start clogging the network or will need to rely on another protocol, this is where Maya comes in.

Providing validation to the technology.

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There are still naysayers of what THORChain has created. Once more protocols, like Maya, enter the picture and continue with the mission that THORChain set out to do, we will provide validation to the market and increase the confidence in this product. Our mission is clear: for Decentralized Exchanges to manage more liquidity than Centralized ones. Former smart contract DEXes do not have what it takes, we need a new generation of cross-chain Layer Zero DEXes that actually and definitively handle the majority of the market's transaction volume in an efficient, simple, quick and instantly-final fashion.

Collaboration instead of competition.

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Some people might think we are competing with THORChain and some THORChain supporters might feel threatened by Maya, but this is completely unfounded: our real competition comes from CEXs and traditional DEXs. Any user that we bring from those alleys is a net positive for both THORChain and Maya. In other words, this is a game of adoption, and Maya will help drive this adoption forward!.

Any user that comes from a CEX to Maya and then switches to THORChain for any given reason will still make us very happy. We also believe that increases in THORChain's market share will help Maya Protocol, and that the reverse will also hold true!

Focus on different target markets.

06

The Market is huge and although there might be commonality with some of THORChain's users —especially hardcore yield seekers— Maya will be focused in the LATAM market and into much less technically oriented audiences.

Maya's emphasis is geared towards DeFi education, even using marketing channels like Tiktok and Instagram, to inform a segment of crypto users that has not been addressed by THORChain or anybody else - yet.

Compatibility.

07

We believe big institutional liquidity investors and swappers will take advantage of the compatibility between both protocols and that the same will be true for wallets, exchanges, and other platforms. Having code compatibility —due to the forked nature of Maya— will lead to easy implementation for bigger players that cannot rely on only one option. We believe most end users will eventually use THORChain and Maya interchangeably and unknowingly, kind of how we can use VISA and MasterCard with the same user experience. Every E-Commerce handles both since coded solutions support both.

Becoming price leaders together.

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Simply put, today THORChain is dancing in an empty room. The arbitrage opportunities are constantly big since they have to be carried out against centralized exchanges and order books. This in turn creates more impermanent loss on THORChain's books, which although insured through Impermanent Loss Protection, still have a negative effect on the protocol's economy.

Having a second identical twin with whom to dance will create tighter arbitrage, distributed amongst both protocols and creating a smaller percentage of economic capture. We believe eventually an ecosystem of *Thorlikes* will exist that will dictate the actual prices of assets in a decentralized fashion. This would further drive down arbitrage value capture as a percentage of Total Value Locked in the protocols, protecting the liquidity capital of both Maya and THORChain. The objective is to create a network of L0's like Maya, THORChain and others who together become price leaders over CEXes. At that point, impermanent losses would be negligible.

Version Stability.

09

Some users look for new features and opportunities, others look for reliability and dependability. The first group will probably not choose Maya over THORChain since we will always lag behind them in updates and versions, making sure the implemented upgrades have been battle-tested first. These users will be using THORChain to take advantage of its exciting opportunities and rapid pace, but there will always be room for both groups.

Two minds are better than one.

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Our community will grow in parallel to THORChain's and in turn bring more developers to both networks. Our teams and driving forces can help increase the rate of improvement of the THORChain ecosystem through both cooperation and competition. Additionally, we have come up with ways to further improve the protocol with an innovative multi-chain approach. Although we will be followers of the THORChain technology, we want to have a proactive approach as well, creating some cool first-mover advantages with new technologies and ideas we have developed like Stable Pools and Liquidity Nodes — more on this later.

Maya 2.0
Where we are going

Where we are going

THORChain paved the way with their cleverly designed Proof of Bond protocol using Tendermint's powerful consensus algorithm along with excellent economic incentives for an ultra-secure Layer-0 protocol. Maya seeks to go even further by increasing the implied capital efficiency, by having more uses for its native currency, $CACAO, and by using the high security of Maya's node infrastructure for other valuable functionalities. It is important to mention that Maya will be backwards compatible with THORChain, which essentially means that Maya will inherit ThorFi - into MayaFi. We have been very selective with the changes that we do to our protocol, taking care of this compatibility with any future upgrades to the protocols we are emulating. This is very powerful, since Maya will be able to enjoy its own improvements plus the improvements of the other protocols included in its network.

Maya takes security very seriously, which is why the most sensitive aspects of the THORChain protocol, such as Bifröst, were left untouched. Additionally, audits will be conducted both before and after our launch —periodically— to ensure the security of all funds. The safer a protocol is, the more funds it attracts, especially from institutional entities.

Maya is not only committed to security, it is also committed to decentralization and censorship resistance, especially by governmental bodies, that are ever more involved in how we use cryptocurrencies. Because of this, our team will remain pseudonymous and our nodes will always be encouraged to remain anonymous.

It is our belief that delegation in protocols does not enhance security but rather harms it. Delegation creates artificially bonded nodes which have a higher incentive to become bad actors and an incentive for the node operators to reveal and promote their identities, decreasing overall censorship resistance. For these reasons, Maya Protocol and its multiple components will always work without delegation.

Besides, $CACAO holders will have other better uses for their tokens, like generating yield through liquidity providing or lending.

So what are we bringing to the table to achieve this mission? First, we will make the fairest launch possible by holding a Liquidity Auction, where all $CACAO ever to exist is shared in one event at the same discovered price by everyone, from the smallest investor to the largest whale. The team, investors and key strategic individuals will earn through their share of tokenized fees, which essentially means we only earn if we create value for $CACAO holders, liquidity providers and nodes. The Maya team then designed a whole different economic model for Nodes to increase Capital Efficiency without compromising Security, called Liquidity Nodes. This Security will be used to secure other algorithms, through our Security Node design. This feature will secure a popular Burn & Mint algorithm for truly decentralized and safe Stablecoins and Smart Contract compatibility. Some of these stablecoins can be made eligible as a trading pair in Maya for a more stable investment and to create deeper pools with decreased slippage.

We hope that the crypto community throughout the world will understand the huge implications of what we have designed and that they understand the importance and necessity of a decentralized, wide base and permissionless network of cross-chain alternatives. Centralized services in the cryptocurrency world will remain the cheapest option until a critical mass of adoption is reached, Maya Protocol is our team's shot at making this future more likely. Join us in the mission to topple Centralize Exchanges for good.

Read along each of the chapters of this whitepaper to see what we bring to the table. They cover our six unique features in detail and they all include sections such as an Introduction, Explain me like I'm five (ELI5), Philosophical perspective, Economic overview, Technical overview and Code.

Part 1. Fair Launch

No complex IDO, Maya will launch $CACAO with our own Liquidity Auction design!

Maya has aimed to maintain its motto from the beginning: a **multi-chain liquidity protocol** in the hands of the community, protected by code and open to exchange. Initially we felt that the most successful way to achieve this goal was through an Airdrop allocation, but **it's time to upgrade to something that will boost liquidity** in the system even further: a Liquidity Auction.

ELI5

1. Different strategies are used to raise funds everytime a new crypto/DeFi project is born. Some models might be better than others but that really depends on the team's needs and creativity. There are many different ways in which DeFi projects can distribute their tokens to their users or community, some examples include holding public sales — 2017 ICOs are the classic example — Airdrops, farm rewards and more.

2. Maya Protocol's token distribution will work using a Liquidity Auction with the following cool pros:

- Lots of transparency – everybody knows when everything is happening and how.
- Permissionless – anybody can participate, there are no prohibitive minimum amounts or whitelists.
- Reduced volatility – there is symmetry of information, no one is excluded or earns less because they participated later.

3. "Liquidity Auction" sounds sophisticated but it is actually very simple:

- Anybody can contribute supported assets, such as $BTC, $BNB, $ETH, $LUNA, $UST and even $RUNE, to the auction during a 21-day timeframe by sending them to a specified address. No KYC or registration of any kind is required, except creating a Maya wallet beforehand (User Interfaces can do this for you). Also, no swaps and no withdrawals will be allowed during this period, only adding and withdrawing liquidity!

After the auction finishes, all the $CACAO tokens to ever exist —100M— are distributed to the participants proportional to their liquidity contributions. For example: if $BTC is 40% of the liquidity raised, that pool receives 40% of the $CACAO allocation.

That's it! Participants end up being Liquidity Providers by having their contributed assets + their new $CACAO tokens deposited inside Maya's pools, facilitating swaps to other users and earning a share of the fees generated.

Philosophical perspective

We truly believe that our Fair Launch process is one to be proud of. Learning from the experience of other protocols and DAOs, we came across what we think is something really open to anybody in the DeFi space to participate in. Compared to an IDO where investors with large amounts of tokens can manipulate the price and cause disadvantages for the rest, in Maya there is no minimum entry ticket, there is no previous whitelist, no special allocation for larger investors and the time range is wide and pre-announced.

In the end, we are pushing towards the objective of having one more protocol in a network of decentralized, Layer Zero cross-chain facilitators that dictate prices over the market. We want to concentrate the markets' liquidity there, instead of how it currently concentrates around centralized venues, and that is why we are looking to attract a diverse and wide user base that will become part of a community from the moment they get their first tokens.

The process also takes advantage of the built-in Asymmetrical Liquidity functionality from the THORChain codebase. We aim to:

A. Reduce Founding Team risks.
B. Make a decentralized protocol that is completely owned by its community.
C. Create incentives for the Founding Team to continue developing over the long-term.
D. Bootstrap the largest amount of external asset liquidity possible to secure the sustainable future of our protocol.

How does the Liquidity Auction tackle these issues? Let's look at its advantages:

01 The community ends up owning the token.

So the system governance is decentralized and permissionless. No founding person or investor can pump & dump, rugpull, etc. The team gets only a percentage of the fees, which means we only earn money if the community does. The team simply cannot create sell pressures for the token.

02 Symmetry of information.

Everyone has the same chances to participate during the 21 days duration of the auction. There are no discounts, no privileged information, front running or unfair allocations. Everyone essentially gets a 2x ROI during the launch, regardless of how much money is raised and what kind of assets they contributed with. There are no disincentives to share the liquidity auction details with other people, since everyone gets the same terms regardless of participation size and depth.

03 No inflation.

Which would lead to better and more attractive price action. Because we can have users and investors earn fees through the L1 codebase, it is no longer necessary to have an inflationary asset to incentivize staking. People can earn nice APY's or simply hold to keep a valuable non-inflationary asset. This will generate a more liquidity demand-sensitive system.

Large incentives to participate.

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Remember there will not be any other $CACAO issuances, so anybody that wants to own the token will have to acquire it from somebody that got it during this mint. It is very likely that $CACAO's price will be the cheapest ever (in $BTC terms) right after the auction. This makes it more attractive for people to invest heavily during the liquidity auction - which is of course what we want, as it leads to deeper pools, reduced slippage and slip fees, attractive arbing opportunities, and overall liquidity depth. Deep liquidity attracts swap volume.

Simplicity.

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Only one open permissionless cross-chain liquidity event to rule them all. The rules are clear: there are no KYC processes, people will have to understand and use Maya to participate - the Liquidity Auction will serve as a live Demo to our target participants - , the whole thing happens during an extended period of time and everyone participates under the same conditions. Everything is also managed directly in the Maya Blockchain, so it becomes very secure and everyone ends up being a liquidity provider!

A Liquidity Auction simply makes sense to secure the long-term future of Maya. It keeps us honest as a team, it gives everyone a fair set of rules to participate in and it will surely raise significant resources to start up a virtuous cycle for our liquidity blackhole. By having only one event, we are making sure it will be simple, interesting, and even urgent for anyone to participate, while helping Maya jump into the big leagues!

Economic overview

Under normal operational conditions (after the Liquidity Auction finishes), all of Maya's AMM pools will have a 1:1 ratio between native assets and $CACAO, which means that anybody wanting to participate in the protocol would ideally have to match their native asset contributions with the same amount denominated in $CACAO tokens; this is called "symmetric liquidity".

If for some reason we would want to add only one of the two assets - "asymmetric liquidity" - a slip fee would be charged because imbalances would be generated within the liquidity pool.

During the liquidity auction, all the external liquidity provided will be asymmetric because nobody has had the possibility of buying $CACAO yet - it virtually does not exist yet! Particularly interesting is that users can participate in the auction by contributing $RUNE into our $RUNE / $CACAO pool and the effects that this pool will have for the Maya <> THORChain interconnection, presenting many arbitrage opportunities and inviting traders and bots to bridge between the two protocols continuously to take advantage of them (the first step in our vision of a network of L0's becoming price leaders in the crypto market!).

It is important to mention that, because $CACAO is a native coin to a CosmosSDK blockchain, it would be very easy to integrate into any wallet or exchange that can already handle $RUNE, $LUNA, $ATOM, $OSMO and many others. $CACAO enjoys the rest of the ecosystem's advantages as well, such as cheap transaction costs, fast settlement times (<10s), ease of use and secure wallet/transaction systems. Any exchange that wished to list our coin would be able to do so quickly and easily.

Technical overview

I. Liquidity Auction

To make the Liquidity Auction work, we will use already existing attributes of Ixmu - our equivalent for Mimir, in THORChain — plus some of our own. These attributes will control the actions that all liquidity providers can take on a specified time frame in order to successfully execute our Fair Launch.

Using Ixmu Key terms, we want to accomplish the following:

1. Users should only add/withdraw liquidity.
2. Users should not be able to swap or send.
3. Users should not be able to get $CACAO until the end of the Liquidity Auction.

The process we will follow starts by enabling the new “LiquidityAuction” Ixmu attribute which stops users from being able to swap between any assets, because all swaps between native assets without $CACAO would be discarded. This behavior will work for 21 days, after which the $CACAO is distributed and “LiquidityAuction” is disabled.

Here are the already existing transactions, along with the new ones and the specific actions that they disable:

ATTRIBUTE	SEND	SWAP	ADD	WHITDRAW
HaltChainGlobal	✓	✗	✗	✗
PauseLP	✓	✓	✗	✗
HaltTrading	✓	✗	✗	✓
LiquidityAuction	✓	✗	✓	✓

Maya

Distributing $CACAO tokens after the Auction process is simple and will require the use of the “Donate” message to dispense them into our pools, proportionally to their depth in USD terms, using an End-of-Auction over-all market price snapshot.

Any user that contributed their native assets ends up having their original assets plus their newly earned $CACAO. Any and all UI’s supporting the Maya Stagenet —and therefore our Mainnet— can host the Liquidity Auction. Code Savvy individuals may also use the API/Transaction Memos directly.

User stories:

1. As a user I should only be able to provide asymmetric liquidity throughout the Fair Launch, so that I can get $CACAO in the Liquidity Auction.

Acceptance criteria:

1.1 Users should only add/withdraw liquidity.
1.2 Users should not be able to swap or send.
1.3 Users should not be able to get $CACAO until the end of the Liquidity Auction.

2. As a Liquidity Provider I should be able to withdraw my liquidity at any point in time, so that I can recover my money if I no longer want to participate in the Auction.

II. Genesis Nodes

Our first nodes will be called “Genesis Nodes”, and there will be six of them. Because they will start running the protocol with no $CACAO bonds — remember there will still be no $CACAO tokens until after the Liquidity Auction is finished — we will need them to already have some dependable reputation, which is why they will need to be pseudo-doxxed nodes, run by decentralized organizations close to Maya.
Once our chain and systems have been started, these initial nodes will exit over time as other nodes enter the network.

Genesis nodes will be approved using a specific custom-made token for this purpose, they will not be entitled to any fees, special allocations or pre-mines of any kind. For more details on our Genesis Nodes please refer to Part 4: Security Nodes of this document.

User story:

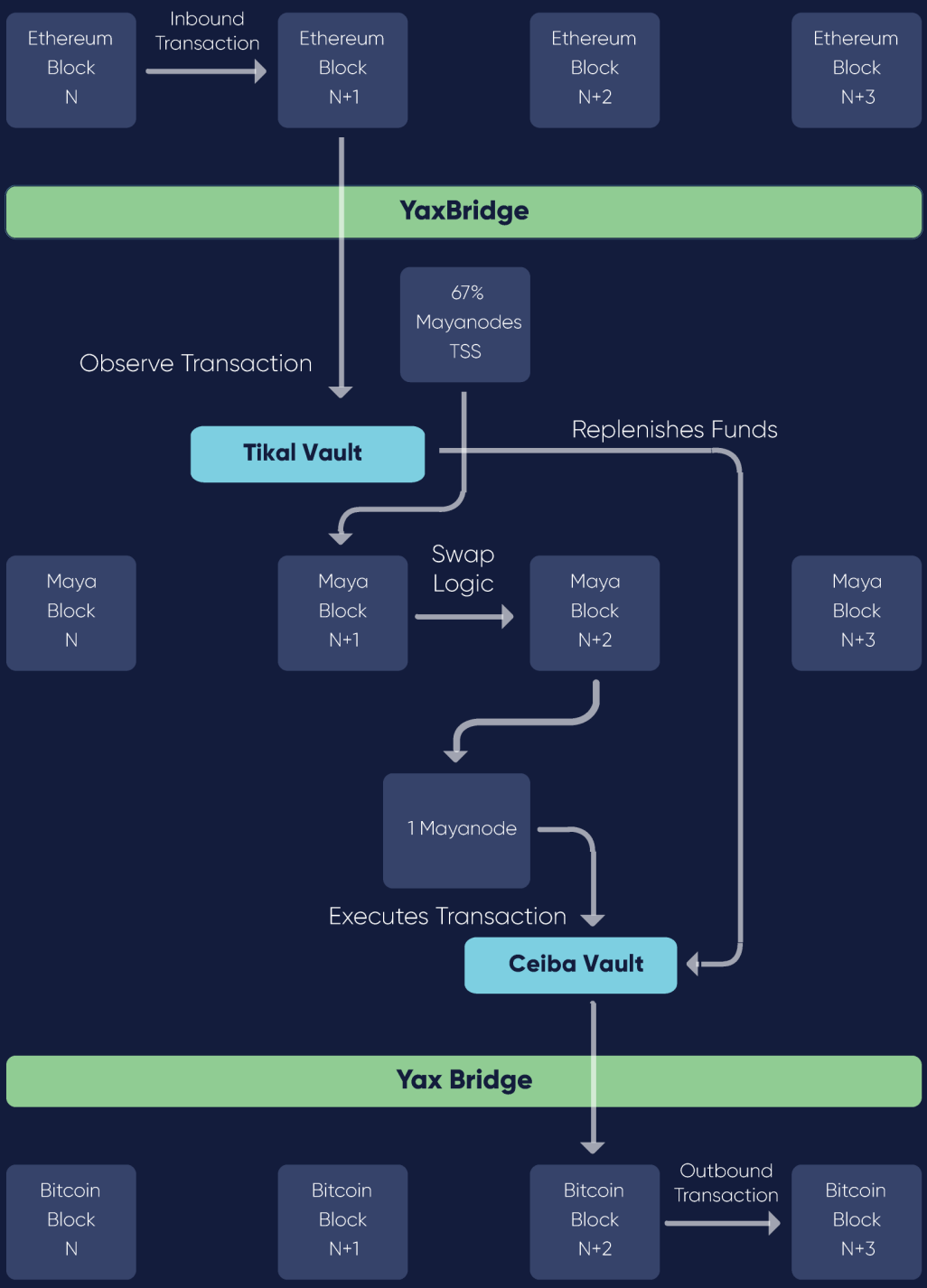
1. As a genesis node, I should be able to be a validator in the chain without contributing economically and without affecting the $CACAO supply. Also, I should not get any sort of pre-mine or reward during this period.

III. $RUNE

THORChain uses Bifröst, a module that makes it possible to generate a native asset exchange network. The Maya equivalent is Yax bridge. We are fully capable of receiving $RUNE transactions and have this token incorporated into our pool offering by adding our own THORChain client to the Yax bridge.

User story:

1. As a user, I should be able to add and withdraw $RUNE liquidity on Maya during and after the Liquidity Auction.
2. As a user, I should be able to swap $RUNE for any other asset in Maya after the end of the Liquidity Auction.



CODE

1. Liquidity Auction

https://gitlab.com/mayachain/thornode/-/issues/32
https://gitlab.com/mayachain/thornode/-/issues/34

2. Genesis Nodes

https://gitlab.com/mayachain/thornode/-/issues/33

3. $RUNE - Yax Bridge

https://gitlab.com/mayachain/thornode/-/issues/37

TO BE CONTINUED...
WAIT FOR:

Part 2. $MAYA Token

NEXT THURSDAY (MAY 12TH)

Maya