protocol-guild

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Mar 28, 2024

CONTENTS

- A collective of Ethereum contributors
- working to boost the incentives around stewarding the core protocol
- by maintaining an onchain registry of its membership
- which allows ecosystem sponsors to directly fund the membership, their work, the public good.

"And, Ebling, there's another, greater purpose. Hari Seldon founded two Foundations three centuries ago; one at each end of the Galaxy. You must find that Second Foundation." Foundation, Isaac Asimov

CHAPTER

ONE

SPONSOR THE PILOT

We're running a 1 year pilot (read more here) to test our assumptions about the Protocol Guild's funding mechanism and how to operate it.

Information about the smart contracts and how you can help fund public goods and their contributors can be found here.

If you have additional questions about the project, please reach out to @ProtocolGuild or any of the members.

Donate Now	
Pilot Vesting Contract	Learn more
Split Contract	Learn more

CHAPTER

TWO

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The Protocol Guild is a mechanism that learns and adapts - this documentation is regularly updated.

2.1 1. Proposal Rationale

How can we give core protocol contributors exposure to the broader success of the projects building on top of Ethereum? This has been a recurring topic for many years in our community. When the latest discussion resurfaced in Oct 2021, we started researching existing public goods funding mechanisms, to see if any offered a solution. Ultimately, we concluded that a new mechanism was needed.

What follows is a description of three main motivations as to why there should be a new mechanism, the individual challenges related to each, and the resulting design objectives for creating a new mechanism.

2.1.1 1.1 Curation is Difficult

Apps/L2s want to sponsor, but curation of the contributor set is difficult. Protocol contributors are interested in token upside, but self-organizing is hard.

- There is no existing solution that collects all protocol contributors into one funding mechanism and consistently updates it. Expecting a single organization to curate and maintain this list by themselves is a pretty big ask when they're not already involved in this work.
- Design objective: Existing contributors should self-curate a list.
- Existing solutions usually favor teams.
- A meta-goal is to avoid governance and intermediation, giving as much agency to independent contributors as possible.
- Design objective: Avoid intermediation, individuals are the atomic unit.

2.1.2 1.2 Incentives are Imbalanced

Financial incentives are skewed towards projects built on top of the protocol.

- As a credibly neutral infrastructure with no block reward, Ethereum doesn't offer the same token incentives with the same upside as apps/L2s. However, it still needs to attract and retain talent to continue to evolve the protocol.
- As the Ethereum ecosystem continues to grow, competition for talented individuals will only increase. This isn't to fault individuals for rationally weighting financial incentives, or protocols for leveraging the power of tokens - this is just the reality of our current situation.

- We acknowledge that financial motivations aren't the only or best motivator for people, it's just one tool in our toolset that might be underleveraged.
- Design objective: Nudge balance back to the protocol by getting sponsors to send tokens.

2.1.3 1.3 Too Much Contributor Turnover is Negative

There's a steep learning curve for contributors to deliver value. It can take a while to be onboarded to a team, understand a client codebase, and start making meaningful contributions.

- Design objective: Protocol contributors must be active for 6 months before becoming eligible for membership.
- Contributor value grows over time, but there is less incentive for them to stay once they are experts.
- Design objective: Assets should vest to reduce churn in the contributor set, to help transfer knowledge between cohorts.
- Design objective: Weight contributor allocations according to time.

2.1.4 1.4 Summary

The new funding mechanism must provide autonomous funding and nudge the incentive balance towards the protocol. Sponsors who opt-in will be Ethereum-based applications, protocols, and individuals - this aligns well with our community's existing voluntaryist mindset towards public goods funding.

Over the course of this ideation process, we realized that we cannot answer the original question (how to give contributors exposure to the success of the application layer), without answering a more general question: what would a mechanism to trustlessly fund protocol contributors look like? We believe the design of the Protocol Guild as described here is a strong approach to addressing both these questions.

2.2 2. Tradeoffs of Existing Mechanisms

The existing suite of protocol funding mechanisms have so far adequately supported the ecosystem, but come with their own tradeoffs:

- Typically not forward looking, eg. they are usually retroactive
- Tend to favor projects/teams instead of individuals
- Formed around mediating institutions
- Do not typically give exposure to the upside of application layer

In the future, there will certainly be ways for these existing funding mechanisms to collaborate and interoperate with the Protocol Guild.

2.2.1 2.1 Grants

Grants are a very common funding mechanism, seen in Gitcoin, the EF's Ecosystem Support Program (ESP) and Ongoing Development teams, as well as application ecosystem programs like the Uniswap Grants Program (UGP). They tend to be best at rewarding contributions from the near-past to near-future. While these mechanisms may be well suited to their current applications, there are some limitations to their direct use in something like the Protocol Guild.

For Gitcoin Grants, it can be challenging to ensure accountability for grantees due to the amount of time and expertise it takes to perform due diligence. In addition, because round participants are effectively competing against each other for the same matching funds, it necessitates some amount of self-promotion. This wouldn't work for large groups of individuals doing similar work like core developers, many of whom are more low profile. Collections (a curated set of Gitcoin profiles) could accomplish some of our objectives, but still does not include vesting, and doesn't resolve issues related to custody and membership management. Finally, any prospective funder from the application layer has to rely on a mediating institution (e.g. the Ethereum Foundation, Gitcoin) to facilitate discovery, processing, and due diligence.

2.2.2 2.2 Retroactive Funding Programs

An explicitly historic-looking variant of grants includes Optimism's RPG. These can account for past work, but are usually scoped to measure the contributions of teams or projects, instead of individuals. Furthermore, there is no guarantee of consistent funding, as there is a possibility of omission from subsequent rounds. In Gitcoin's case, it can take a while for past contributions to be recognized and rewarded due to how discovery and grant promotion cycles work.

2.2.3 2.3 Independent Non-Profits

Some teams may opt to establish their own non-profit entities, e.g. the Nomic Foundation which stewards ongoing maintenance of Hardhat and other initiatives, announced in Q1 2022. The challenge is that the overhead to create a legal entity can be very high for a small team, and impossible for pseudonymous individual contributors. Additionally, the recurring burden of fundraising inevitably pits them in competition against each other, while further disadvantaging individual contributors.

2.2.4 2.4 Salaries

Salaries *do* target individuals, but are limited in that they can only account for the present and near future. Further, they are tied to a single legal organization, and can never be a good proxy for ecosystem value creation.

2.3 3. Smart Contract Architecture

As part of the design process for the Protocol Guild, we researched a number of smart contracts and ultimately settled on the Split and Vesting contracts from **0xSplits**. Learn more about that project here.

2.3.1 3.1 0xSplits Contracts

Both the Vesting and Split contract can directly receive ETH and ERC-20 tokens. The Vesting contract gradually makes vested tokens transferable to the Split contract. The contract only accepts ETH and ERC-20s: DO NOT SEND NFTs (ERC-721s), they will not vest, cannot be split, and will be unrecoverable. Below are recommendations for which types of contributions to send to which contract.

Pilot Vesting Contract

- Best for larger entities participating in the pilot.
- Funds sent here will vest over 1 year.
- **0xSplits interface** / Etherscan
- Verify that the full address being sent to is 0xF29F...f1a9. In the future, there may be additional vesting contracts with different vesting schedules. -Note that there are two steps: depositing and starting the stream. See the documentation for more information.

Split Contract

- Best for smaller donations outside of the pilot, or regular periodic contributions.
- Funds sent to this contract will not vest, instead they'll be immediately available for withdrawal by the core contributors listed in the contract.
- **0xSplits interface** / Etherscan
- Verify that the full address being sent to is 0x84af...8ea1. While the addresses and weights contained in the contract are mutable, the address of the contract itself will be used in perpetuity and will not change. Outside of the unlikely case that the Split management (multisig) gets compromised, it's reasonable for sponsors to assume that this address will never change, to facilitate automatic or recurring contributions. If this changes, we will be sure to communicate this publicly.

The diagram below illustrates a set of 0xSplits contracts and how the Guild intends to operate them.

Out of all the existing mechanisms we explored, 0xSplits fulfills many of our original design objectives.

- Accepts common asset types
  - To preserve the upside potential of donated assets, it's crucial that the split accepts ERC-20s in addition to ETH.
- Immutable distribution
  - No individual can redirect assets outside of what is dictated by the split membership and its vesting parameters for each period. The terms of the vesting length, past members and their weights cannot be modified once deployed. However, it should be noted that if the Guild's multisig were to be compromised, any unvested amounts could be stolen.
- Non-custodial
  - No member should have even temporary discretion over vested or unvested funds, a designated address holds funds before a member manually sends them on to another component.
- Mutable membership
  - It should be possible to add and remove beneficiaries from the split. Managing additions and removals would be the responsibility of the membership. Updates are important because the contributor set will change over time. If we can't add newcomers to this list, then the recurring cost to redeploy the contract and redirect the split would become an unnecessary expense.

- Includes vesting
  - In order to provide long-term incentives, donated assets should be subject to a vesting period. The vesting schedule for the pilot will be ~1 year, while subsequent vesting periods will likely last 4 years. This should be discussed and set by the split beneficiaries, with consideration for the expectations of donating entities. The vesting terms deployed with the contract should not be modifiable by any party.
  - 0xSplits allows the Guild to deploy the initial contract with optionality over desired launch date, vesting time, etc.
  - The same vesting contract can be reused for many donations, either from the same org or different ones. The avoids unnecessary gas + time costs to sponsors. The vesting terms are the same for each donation.
- Multi-claims are straightforward
  - Members are able to claim their allocation from multiple eligibility windows and multiple assets in a single transaction.
- Members decide when to take custody/withdraw
  - Members should be able to decide when and how they withdraw funds from the mechanism, to suite the tax framework of the jurisdiction they reside within.
- Donations have finality
  - It is not possible to remove donated assets from the Vesting Contract by anyone other than the beneficiaries.

2.3.2 3.2 Guild Multisig

While it's possible for the contract to be "set and forget," we plan to fully leverage its mutable capabilities. For longer vesting schedules (e.g. 4 years), there will definitely be changes to the contributor set that will need to be accounted for.

We have deployed a 6/10 Gnosis Safe here to take on a few key tasks that cannot be handled autonomously. This includes updating the membership list, and possibly deploying new vesting contracts (though this can also be done by unrelated EOAs with no reduction in trust).

Members and sponsors should be aware that if a malicious entity were to compromise enough signers, they could steal any assets that haven't been released (4a in the diagram above) and distributed (4b) to beneficiaries of the Split contract. For this reason we won't disclose the name of signers and will regularly rotate them, expanding the set of signers when possible. Further, releases and distributions should occur on a regular cadence (quarterly) to limit the impact of the multisig being compromised.

Beyond that, we're exploring options to make this process completely trustless in the future, similar to Moloch's permissionless proposals.

See **4.13 Signers** for the obligations of multisig signers.

2.4 4. Roles & Expectations

2.4.1 4.1 The Protocol Guild

The Protocol Guild's core output is a curated membership registry, with weights assigned to each member.

The registry is comprised of individuals who are actively contributing to Ethereum's core protocol development, while the weights are calculated based on how long each member has been actively contributing.

This registry is tied to a single Ethereum address, which anyone can send funds to, and whose funds will be vested to the membership over time, proportionally to members' normalized weighting.

By providing this registry and address, Ethereum's ecosystem and its community get access to a highly effective and frictionless way to support core protocol contributors. At sufficient scale, this has the downstream effect of boosting the long-term incentives associated with core protocol work.

It should be noted that the Guild as an entity does not directly manage or participate in the day-to-day stewardship of the Ethereum protocol. This remains the responsibility of the existing organizations, teams and individuals whose ongoing focus it is to do so. Similarly, the Guild abstractly as well as its online spaces (Twitter, Discord, GitHub etc.) are not intended as forums for protocol decision-making, nor is it a bloc to coerce alignment among core contributors. Decision-making in Ethereum is by rough consensus and should remain so, and in this vein, the Guild should be as credibly neutral about this area of protocol stewardship as the Ethereum network is about the usecases built on top of it.

2.4.2 4.2 Members

For the Pilot, members of the Protocol Guild will have up to three different functions: slot holders, curators and signers.

4.21 Slot Holders

Slot holders are members of the Guild who have qualified for a placement (slot) in the split contract. Estimated to be around 150-200 individuals, however the actual number may be higher or lower. There is no cap or target for number of slots. Slots can be set to any Ethereum address, including the individual's own, a charity, or another split contract.

Qualifications

Note 1: these guidelines will change over time, i.e. become more restrictive in some places and more permissive in others.

Note 2: contributing to the projects/repos referenced below is necessary but does not guarantee Guild eligibility. While this list tries to be explicit by linking to example repos, there are some research areas which can't be linked to a single repo.

Qualifying contributions *must* be:

- Fully open source, i.e. both "source available" and free to fork, modify, redistribute
- The full focus of the individual (anything less receives a partial weighting, see 6.3 weighting)
- Continuous for at least 6 months ahead of inclusion and ongoing. Any contribution breaks for an existing member must be shorter than 1 quarter / 3 months - Beyond this length, the member should be moved to "Inactive" status until contribution resumes.

Qualifying contributions *must* target at least one of the following projects/areas:

1. Ethereum core protocol maintenance and development:

- Contributors to open-source, tested, technically differentiated and production-ready Ethereum mainnet client implementations with a regular presence in R&D or governance venues, such as specifications (e.g. `consensus-specs`, `execution-specs`, `execution-apis`, etc.), research posts (e.g. ethresear.ch), feature prototyping (e.g. EIPs, devnets, etc.) , and regular protocol calls (e.g. AllCoreDevs, testing/interop calls, etc.). Currently, this includes Erigon, EthereumJS, Geth, Hyperledger Besu, Lighthouse, Lodestar, Nethermind, Nimbus, Prysm, Reth, Teku
- Client testing/security/infra which supports these implementations: ethereum/tests ethereum/execution-spec-tests
- Coordination related to upgrades and maintenance: ethereum/pm

2. Research and implementation experiments related to potential protocol changes/refinements

- Verkle tries (Verge)
- Portal Network (Purge)
- EVM improvements: Ipsilon
- Consensus work
- Cryptography
- Mechanism design
- Resource pricing

3. Spec work resulting from the above (should be implementation agnostic, unopinionated)

- Execution specs (EELS)
- Consensus specs

There may also be exceptional cases where members are added for contributing to Protocol Guild itself:

- General comms
- Fundraising
- Research related to the evolution of the Guild itself
- Internal maintenance for the Guild membership

Independent or unaffiliated contributors are considered by the same guidelines as any contributors "officially" part of teams/projects.

See 6.4 Modifying Projects and Members for guidelines on adding/removing eligible projects and members.

Expectations

Members must notify each other if their contribution status changes, or if the work that afforded eligibility breaks one of the guidelines above. If you're unsure about whether a new focus is still qualified, please ask the broader membership.

At least once per year, members must prove ownership of the supplied address: members can claim vested funds or sign a message with their private key. This limits the impact of compromised wallets or lost keys.

Please note that the membership list will be publicly available in order to maintain transparency and mutual trust with both the broader community and sponsors. However, addresses and their associated weights will not be shared.

Members are strongly encouraged to participate in the Guild beyond the aforementioned expectations. Without deep member engagement, the Guild will not reach its full potential as a voice for core developers and the Ethereum protocol more broadly. The Guild may have trouble growing the membership or evolving norms if only a small minority are engaged in consensus building. Other modes of participation include:

- Suggesting Guild improvements
- Refining eligibility requirements
- Vetting potential members
- Managing the Discord
- Helping with comms
- Outreach and awareness to potential/existing sponsors

4.22 Curators

Curators are members of the Guild who maintain the list and weights of eligible members.

Qualifications

All Guild members are qualified and expected to participate as curators.

Expectations

Given the ambitious scope of this mechanism and the significant trust given by both sponsors and the community, it is vital for the membership list to accurately reflect active contributors. This ensures the legitimacy of the mechanism is maintained, and increased, in the eyes of non-member participants. In this sense, the Guild must be a garden which tends itself. Each of its members are peer stewards of a self-regulating plot. When the allocation of nutrients, sunlight or water become imbalanced, it's up to the membership to recognize and adjust. Members should only commit if they are aligned with this expectation.

Self-curation is a crucial component of the project. While other public goods funding mechanisms have used external councils (e.g. Optimism's RPG) or the donors (e.g. Gitcoin) to curate the beneficiary set, this wouldn't work for our purposes. Any external council would have to be deeply embedded within the core protocol sphere in order to properly curate, to the extreme degree that it would become impractical to do much else. Instead, we will leverage the perspectives and daily interactions of people that are already embedded: the core contributors themselves.

Practically, this means signaling to the broader membership when they, a team member, or an independent contributor they interface with, have changed their contribution status, e.g. by joining or leaving core protocol work. Members should have regular contact with new members they propose. Bias or conflicts of interest should be disclosed, if they exist, e.g. where one is an advisor to the other's side project.

We believe it is incentive compatible that curators are drawn from the beneficiaries because:

- Adding ineligible beneficiaries removes future vested value from existing members, i.e. they will more carefully consider potential members and their contributions. An external council would not feel this constraint so directly.
- The mechanism *must* accept all legitimate contributors, which prevents the set from ossifying or getting captured. Potential members which fit established guidelines need to be added to maintain credible neutrality to participants and sponsors. If sponsors think that the set is not inclusive enough, they will not feel incentivized to contribute.

Beyond this basic expectation, members should consider mentoring through something like the Ethereum Protocol Fellowship (EPF) to surface a wide variety of contributor backgrounds, and help them on their journey. As global internet infrastructure, it would be a disappointment if Ethereum forever remained the domain of a small, homogeneous set of developers.

4.23 Signers

Signers are Guild members who act as key holders for the multisig, which can update the membership and their weights in the weighting contract. The 6/10 Gnosis Safe can be seen here. These should be well regarded figures from the Ethereum community. They should agree to follow strong security practices, and make themselves available to sign and deploy membership updates at the agreed upon cadence (e.g. quarterly). Similarly to curatorship, overlapping signers and beneficiaries allows for more efficient self-governance vs. the overhead that comes with a set of external signers. It should be noted that signers never have custody over vested funds. To learn more about how the multisig and the weighting contract interact, see section Smart Contract Architecture.

2.4.3 4.3 Sponsors

> "A main promise of DAOs lies in their ability not only to bring many people together, but many organizations - this is when they'll really shine" - *Kei Kreutler*

Sponsors includes any project which depends on the continued maintenance and evolution of Ethereum to be successful, and is interested in supporting said maintenance and evolution.

Ethereum has a rich culture of experimenting with radical new ideas: it's what makes our community one of the most vibrant in the space. We've seen many DeFi, NFT, DAO, and Layer 2 projects build amazing things on top of Ethereum's credibly neutral public infrastructure. To maintain and increase core protocol contributions long into the future, the financial incentives available to core contributors should meaningfully balance the lucrative pull of the app/Layer 2 token space. Giving current and future contributors a stake in the successes of these projects produces a powerful incentive alignment between maintainers and those that depend on their work. To accomplish this, we invite sponsors to contribute:

- Governance tokens
- Layer 2 sequencer fees
- Recurring protocol fee revenue
- Interest bearing tokens
- Fractionalized NFTs
- Good old-fashioned ETH

In order to be effective, we suggest that new projects consider allocating 1% of total project tokens to the Protocol Guild - see Case Studies for more explorations on this.

Finally, it should be noted that just as protocol maintenance is an ongoing effort, so too is sponsor support. New vesting contracts will need to be deployed and sponsored periodically to maintain future incentives to contribute to the protocol.

2.4.4 4.4 The Community

Even when the Guild is live, it will require consistent efforts from the broader community to ensure its long-term success. This includes application developers, users, investors, enthusiasts, and builders of all kinds. They will be instrumental in:

- Introducing and maintaining public norms about contributions, through regular advocacy for the initiative.
- Writing governance proposals to get protocols to sponsor the Guild: even if protocols are aware of the split contract and on board with the norms, additional work may be needed to follow each community's process.
- Ensuring the curators are responsibly neutral in their management of the protocol and its quarterly updates. If this is not the case, it is the responsibility of the community to call this out and advocate for change.

2.5 5. Pilot: May '22 - May '23

2.5.1 5.1 Before Launch

To prepare for launch, there are a few tasks we wanted to properly complete:

- Perform an informal audit of the 0xSplits contracts by members.
- Verify the 0xSplits contracts and frontend on testnet.
- Deploy the 6/10 multisig, the Split contract itself, and the Vesting Module.

- Onboard as many eligible members as possible.
- Broadcast the intent of the Protocol Guild to the broader community and potential sponsors, including getting a precommitment of funds where possible.
- Refine and document the operating process, which includes curating and deliberating on potential members, as well as onboarding them.

2.5.2 5.2 Pilot Characteristics

As of May 8th 2022, all of the above tasks have been completed. What follows is an overview of how the pilot is structured.

- Sponsoring assets will vest for one year (365 days) from stream initialization. Sponsoring streams may overlap with the next iteration of the vesting contract by a few months.
- We are targeting between $10-20mm in sponsorships. If you're interested in being part of this initial cohort of sponsors, you can permissionlessly send funds to the vesting contract 0xF29…1a9. If you or your project have questions, please reach out on Twitter or to any of the existing members.
- We will plan to update the membership list and weights ideally once per quarter, barring any special cases.
- The beneficiary split has been launched with 111 beneficiary addresses - see the contract through the 0xsplits interface. The initial set of pilot beneficiaries include:
  - Diviners (Researchers / Spec Writers / Client Tinkerers): Responsible for divining the future needs of the protocol.
  - Framers (Client Maintainers): In dialogue with the previous set, responsible for manifesting the best fit frameworks to hold these needs in balance with each other.
  - Guides (Ecosystem relations, client tinkerers): In dialogue with both previous sets and responsible for guiding both of their paths of divination and manifestation.
  - The donations.0xSplits.eth address, which represents the 0xSplits team and some of their public goods dependencies.

2.5.3 5.3 Documenting Process

Funding Requests

- Successful: 2mm LDO from the Lido community
- Successful: 200k ENS from the ENS community
- Successful: 500k UNI from the Uniswap community
- Successful: 500 ETH from Nouns
- Successful: 500 ETH from MolochDAO
- Failed: 2mm CRV from Curve Finance. approached through the wrong funding mechanism

Dune Dashboard

An overview of pilot finances can be explored via this Dune Analytics dashboard: Protocol Guild Finances

2.5.4 5.4 Documenting Outcomes

Throughout the pilot, special attention should be given to evaluating outcomes related to the aforementioned **Pilot Characteristics**. The information gathered should be archived in the docs as a cohesive report for the edification of future members and operational adjustments. The report should include the following topics:

Timing

- Was one year the right length for the pilot?
- What should the standard vesting period be post-pilot?
- What's the earliest the next iteration should launch ahead of the pilot concluding?

Funding

- Were funding targets hit ahead of launch?
- How were the funds impacted by asset price fluctuations during the pilot?
- Was the initial raise too low/high?
- Was there a healthy number and variety of sponsors?

Operations

- What sort of operating procedures worked? Which ones didn't?
- What role did voting play in decision-making, if any?
- What were the best practices that emerged with regard to voting, onboarding, curation?
- Should the weighting be modified e.g. more granular, more subjective measures?
- Were there any issues with compromised wallets, contracts or multisigs during the pilot?

Communications

- What sort of communication activities were carried out by the Guild during the pilot?
- What was the engagement level of said communications with Guild members, sponsors and the community more broadly?
- What sort of questions, feedback or concerns (if any), did Guild members, sponsors, or the community have during the pilot?

Membership

- Did the Guild start with an accurate representation of protocol contributors?
- What areas in the ecosystem should eligibility be expanded to after the pilot? Are there areas where eligibility should be restricted?
- What were the notable membership changes/disputes, if any?
- What is the general state of the membership?
- Has the presence of the Guild lead to negative or positive affects to relationships, the progress of regular projects?
- What frequency has someone's decision to join or remain in core protocol work cited the Guild as a compelling benefit?
- Have any Guild members participated in mentorship programs to support diverse array of future contributors?

2.5.5 5.5 Mid-Pilot Update (Dec. 7 2022)

With the Protocol Guild's 1-year pilot just about halfway done, we wanted to share an update on how the pilot is going, and what's next. But first, a quick reminder of what this is all about:

The Protocol Guild is building towards the future of Public Goods funding. Today, this area still has a few challenges to overcome. Discovery is fragmented: not every contributor or team maintains a profile in the same services, if they exist at all. Simultaneously, it's not straightforward for larger sponsors to fund the core protocol over long time horizons. Curation and distribution is centralized around a few large entities.

The Guild addresses these issues with a single high-signal mechanism the ecosystem can direct Public Goods funding towards. We use a self-curated membership registry and vesting to make sustainable long-term protocol funding as simple as possible. Instead of relying on a select few generous / well-capitalized entities to fund important infrastructure, Protocol Guild allows for applications, L2s or individuals to sponsor the people building the base layer they depend on.

The Guild launched a 1-year pilot in May 2022, and subsequently raised ~$9m in funds from Lido, Uniswap, ENS, Nouns DAO and Moloch DAO.

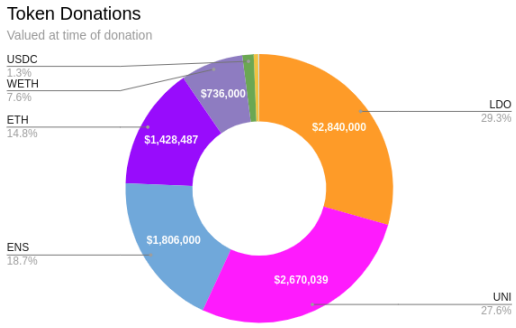
Now let's take a look at the last 6 months!

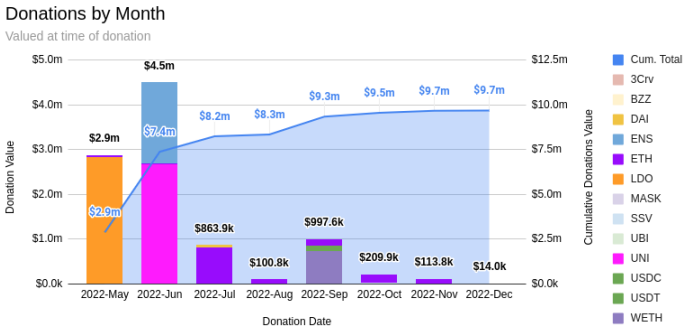
Pilot Stats

Data from Dec 7, 2022 @ 9.15 UTC.

Fundraising

- $9.7m has been donated to the Guild so far (valued at the time of donation)
- 91% of donated funds ($8.8m) came from five governance proposals: Lido ($2.8m), Uniswap ($2.7m), ENS ($1.8m), Nouns DAO ($0.8m) and Moloch DAO ($0.8m)
- Five tokens account for 98% of all donations: LDO (29%), UNI (28%), ENS (19%), ETH (15%) and WETH (8%)
- There have been 3.8k individual donations, from 185 unique donors
- The MergeFractals NFT project accounted for 88% of all individual donations, with 3.4k donations (totaling $41k)
- While the average donation value is $2.5k, this is skewed by significant high-value outliers (from the governance proposals), as indicated by the median donation being $12

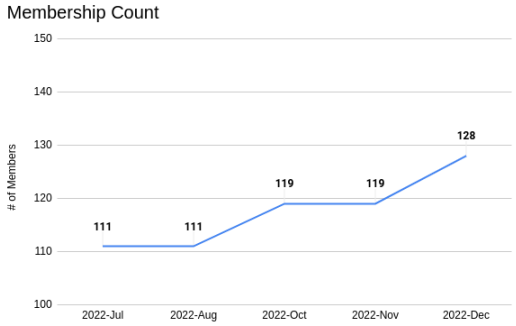


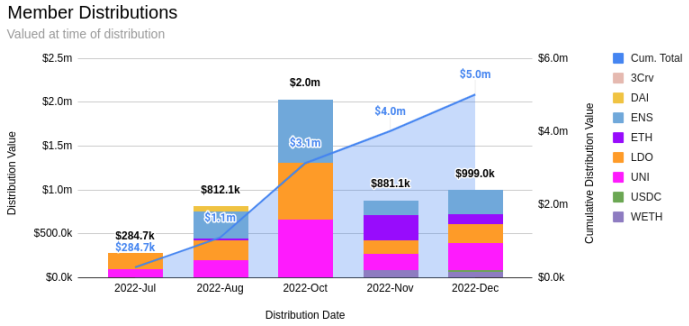


A very big THANK YOU to all donors - you're demonstrating what important norms we should be aiming for.

Distributions

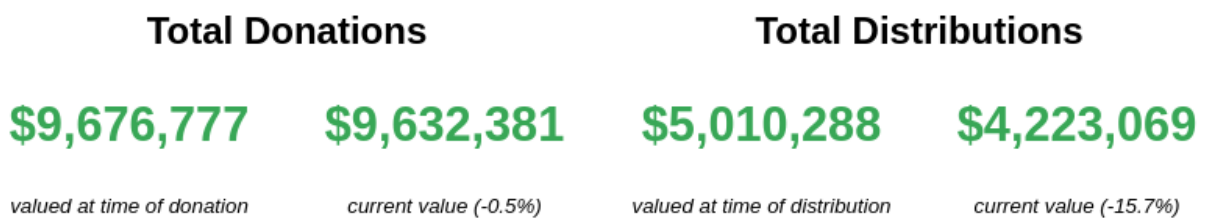
- Today the Guild has 128 members, up from 90 at the start
- $5m has been distributed to members so far (valued at the time of distribution)
- On average each member has received $39k, or $5.6k per month
- The most a single *active* member has received over this period is $79k, while the minimum is $13k
- $5.4m is still vesting in the Guild's treasury (during the pilot, each donation vests for 1 year)





Price Fluctuations

- The value of all donated funds are roughly even with the original donation value (-0.5%), mainly because ENS and UNI token prices are up 47% and 11% respectively since being donated in June '22. Almost all other token prices (including ETH) are down ~20%.
- The value of all distributed funds are down almost 16% since being distributed. That might seem counterintuitive considering that the value of donated funds are relatively equal since being donated, but this can be explained by the fact that funds are not distributed when the donated is received, rather they are unlocked gradually (i.e. vested) over time. And overall, all token prices have been experiencing a downtrend since August '22. For example, although ENS and UNI token prices are up 47% and 11% respectively since being donated in June '22, they are down 7% and 30% respectively since the start of Aug '22.
- Volatility was exacerbated by the fact that stablecoins (specifically DAI, USDC and USDT) account for just 1.9% of all donated funds.



Mid-Pilot Reflection

Mission

At the half-way point of the pilot, has the Guild proven itself as an effective mechanism to fund core protocol development? We consider the preliminary results to be quite promising, however there is still much work to be done.

The Protocol Guild was initially conceived as a way to "boost the incentives around stewarding the core protocol". In retrospect, this goal was perhaps not ambitious enough. A significant portion of core protocol development is currently being funded by centralized - and potentially unsustainable - sources, including the Ethereum Foundation (EF), Consensys and a few others. To secure the future of Ethereum's core development work, we need to create a new equilibrium in core protocol funding, sustained by the ecosystem built on top of it.

Accordingly, the Protocol Guild's goals have expanded as follows:

1. To serve as a counterbalance to EF / corporate-funded core protocol development, or at worst, a funder of last resort
2. To enable a one-stop-shop for funding the entire core protocol (research, implementation, coordination, testing)
3. To normalize setting aside a portion of ecosystem revenues to fund core protocol development
4. To help retain existing core protocol developers over the long term
5. To incentivize new contributors to join core protocol development

Achieving the above in a sustainable and decentralized way will be a years-long process, and require buy-in from across the Ethereum ecosystem. Fortunately, it's the exact kind of challenge that our community is uniquely suited to rally around!

Member Accomplishments

Here's an incomplete list of what Guild members have been busy with over the last year:

- Implement proof-of-stake consensus mechanism
  - Ethereum successfully transitioned from proof-of-work to proof-of-stake (i.e. the merge), giving it the foundation it needs for future scalability upgrades while simultaneously reducing energy consumption by ~99.95%! Read more takes here.
  - Next step is to enable withdrawals, which is scheduled for the next hard fork (Shanghai).
  - Research is also underway to enable distributed validators and single slot finality.
- Increase transaction throughput
  - EIP-4844, aka Proto-Danksharding, will reduce rollup transaction fees by an order of magnitude, by introducing a new transaction type which rollups can use to (temporarily) post data in a much more cost-effective way.

  - The EIP-4844 development process has been supported by various ecosystem entities, and today has reached the stage where discussions are underway as to which of the upcoming hard forks to include it in.

- Maintain credible neutrality
  - The OFAC sanctioning of Tornado Cash transactions has spurred a large debate around transaction inclusion, especially as it relates to stakers using MEV techniques to supplement their staking rewards by using censoring relays.
  - Proposal-Builder Separation (PBS) could mitigate these concerns, with features that include forcing the inclusion of censored transactions (while also enabling tremendous scalability upgrades by making it easier to implement Danksharding).
- Make it much easier to verify blocks
  - Removing reliance on centralized service providers to verify blocks is another core focus for researchers, which will be enabled by introducing Verkle trees. Also known as "Stateless Ethereum", work is underway to write and implement the specification for this.
- Make Ethereum leaner by pruning old history
  - Progress is being made to implement EIP-4444, which proposes to bound historical data in execution clients, to help reduce computation, bandwidth and storage requirements for node operators.
- Upgrades to Ethereum's EVM
  - Comprised of five different EIPs, the introduction of the EVM Object Format (EOF) will enable a swath of improvements to the EVM, including adding versioning to EVM code, separating code and data, while also enabling significant gas savings for contract deployment. Similar to EIP-4484, EOF is also a candidate to include in one of the upcoming hard forks.
- Events members attended and shared research at;
  - Devconnect
  - Devcon Bogotá
  - Stanford Blockchain Conference
  - Columbia CryptoEconomics Workshop
  - And many more!

To be clear, this isn't to say that the Guild was responsible for these accomplishments or directed the work. All credit to the individuals and the teams / projects they work on to maintain Ethereum today and in the future!

Operations

To date the Guild has been using a private GitHub repository to coordinate changes to membership. And, while this process has been sufficient to make multiple updates, adopting a more public process would help boost transparency.

In terms of smart contract tooling, 0xSplits has been used to automate both the vesting of donated funds and distribution of vested funds to members, and has worked without issues so far. We intend to continue using this tool for the foreseeable future.

However, the way the Guild *interacts with* the 0xSplits contracts can certainly be improved. Today, a 6/10 multisig is used to interact with the 0xSplits front-end, specifically to add / remove members and update member allocations (based on their weighting). This process entails an excessive amount of manual entry, and is potentially susceptible to errors in the future.

Another place to improve is the use of stateful.eth to receive funding on Layer 2's. This process should be made as trustless and automated as possible to avoid manual effort and prevent errors / abuse.

Fortunately, we've already started work to address these bottlenecks!

Current Focus

V2 Architecture

The Guild should aim to be the industry standard for how to leverage blockchains for Public Goods funding. As such, all the aforementioned operational inefficiencies and dependencies need to be resolved for the next iteration of the Guild, post-pilot.

To remove the need for a multisig, we are in the process of specing out how to convert the Guild's membership governance into an onchain process. We are currently leaning towards Moloch v3, due to its dual-token functionality (one for voting, one for treasury claims), as well as its ability to execute external contracts via proposals. Voting will be used for proposals to add / remove members, while weights can be automatically distributed without the need for manual updates.

These changes will then be pushed to 0xSplits via so-called "Shamans" - essentially programmable DAO proposals which can interact with external contracts. From there, 0xSplits will be used as today to automate the vesting of donated funds and distribute vested funds to members.

Finally, we hope to use L2 forwarding contracts to automatically forward funds from L2s to mainnet once certain value thresholds are reached. For this, we are currently considering Mimic.

Below is a preliminary diagram for what the new architecture of the Guild could look like:

If you have any suggestions for the Guild's v2 architecture, please reach out!

Fundraising

One of the primary Guild's goals is to normalize setting aside a portion of ecosystem revenues to fund core protocol development. In an ideal world, we would love to see all entities that rely on Ethereum donate 1% of their revenue / profits/ initial token supply.

Over the next six months we will begin fundraising outreach in line with the above, and have already started drafting governance proposals. We will of course continue to leverage crowdfunding avenues such as Gitcoin Grants in tandem.

Overall, we aim to get funding commitments for at least $100m over four years from the end of the pilot (May '23). This corresponds to 2.5x more per year than during the pilot. Although this number is ambitious, recall that almost 10% of that was raised for the pilot from just five Ethereum projects (Lido, Uniswap, ENS, Nouns DAO and Moloch DAO). We have faith that the Ethereum community will again come through in support of our goals.

Communications

A key goal of our communications strategy going forward will be to ensure the Guild's purpose captures a larger mindshare across the Ethereum community. We want to get to a place where new projects instinctively think about donating a portion of funds in support of core protocol development.

Furthermore, in a future where the Ethereum ecosystem is directing substantial funds through the Guild for this purpose, it will remain important for the Guild to operate as transparently as possible, so that its effectiveness and credible neutrality cannot be called into question.

While we will take steps to preserve member privacy where possible, the Guild itself will otherwise aim to operate much in the same way as Ethereum's core protocol devs (public Discords, calls etc.).

As part of this, reports such as this one will be more frequent going forward, and not just alongside Gitcoin Grants rounds. These reports will summarize everything going on within the Guild, including changes to membership, funding,

architecture, notable accomplishments of members etc. These reports will be refined over time to contain exactly the kind of information the Ethereum community requires.

—

And that's it! Our next big update will drop in time for Gitcoin Grants Round 16 in January '23. In the meantime, if you have any questions or comments please engage with us either on Twitter or Discord. Thank you for your continued support!

2.6 6. Operating Guidelines

What follows is an outline for how we plan to start, recommendations, and guidelines for regular operation scenarios.

The Guild should transition to regular operations before the end of the initial pilot, but only after the summary report has made meaningful progress in assessing the Guild's evolving characteristics. Activities during regular operations should map directly to the obligations described in **3. Roles & Expectations**. Some things will change regularly, like the current set of sponsors at a specific time, or the membership over time.

2.6.1 6.1 Comms

- Broadcast to the community and prospective sponsors when vesting periods are set to start and end

2.6.2 6.2 Parameter Setting

- Length of each new vesting period
- How much of a raise to target for each vesting pool
- Number of months contributing to core development before being eligible for membership
- Number of multisig signers, whether it should be proportional to number of members
- How often signers should be required to prove address control
- How frequently membership will be updated

2.6.3 6.3 Weighting

Antifragility and non-gameability emerge from simple frameworks. This limits the time spent deciding appropriate categories, the methods for collecting and verifying as well as the time spent weighting contributors. Additionally, this should limit cases of ambiguity gaming that might come up in complicated weighting schemes. Based on member feedback, we've settled on these guidelines: SQRT((`eligibleMonths` - `monthsOnBreak`) * `timeWeighting`)

- Historic contributions are considered in weightings
- `timeWeighting` can be either 1.0 for full-time or .5 for part-time contributors
- Existing contributors get "diluted" as newcomers come in
- Continuing contributors get additional weight per month they are active. This means historic contributors don't maintain their split weighting if they leave protocol development
- Anyone who stops contributing should remove themselves from the membership, and may be removed via periodic curation reviews

2.6.4 6.4 Modifying Projects and Members

Modifying eligible projects and active membership should be proposed separately in the case both are being considered. Both should be shared with the membership at least two weeks in advance of any onchain update.

Adding/removing Projects

Changing the list of eligible projects can be made through a PR to the docs repo. This PR should add the project in the appropriate section, along with the following info:

- Name of project/research area
- Summary of why this project/research area should be considered eligible

Adding Members

Changing the current membership can be done by an existing member making a PR in the membership repo (currently private to members only).

When adding a new member, the PR should add the individual to the member list, along with the accompanying info:

- Name / Identifier
- Project
- Link to relevant work, eg. GitHub, research
- Summary of their work and eligibility

Discussion should be open for at least one week to give members time to review and discuss. This can be with reacts on the proposal / or written thoughts on why the proposed member fits the eligibility or not.

Once one week has passed, if no objections, the PR can be merged.

Removing Members/adjusting weights/changing project affiliation

Ideally this PR should come from the member themselves, in keeping with the spirit and mutual trust of self-curation. Where this isn't possible, the member should be notified or tagged on the PR so they are aware of the changes.

2.6.5 6.5 Onboarding new members

Eligible and confirmed members should be given an onboarding form link to be added to the split contract at the next quarterly update. They should also be added to the Protocol Guild's Discord and given the proper `Guild Member` / Team roles.

When introducing the concept to potential members or onboarding accepted ones, it should be noted that the submitted address should refer to an individual's personal wallet and *not* their employer's. If teams were the atomic unit, all team members would have to agree on whether to accept or decline membership, likely decreasing the number of participants.

2.7 7. Anticipated Concerns

While we can't conceive of every scenario, we've tried to think critically about deficiencies when they've presented themselves. If you see a devious edge case, an organizational pitfall - please join the **Protocol Guild Discord** to discuss, and hopefully add it here!

2.7.1 7.1 Related to Operations

What happens in the case of stolen/exploited funds being sent to the mechanism?

- To the best of our knowledge this has not happened to any other public goods project or individual, but that doesn't mean it wont happen, however unlikely. While the membership will ultimately decide how to handle each scenario individually, each should be carefully considered. It might play out something like this: Contract receives illicit funds > Membership collectively decides to claim/burn the specific funds in the contract > The affected parties deploy a recovery contract with a snapshot at each exploit and restore the funds via said contract.

Shouldn't one-off contributions be considered for membership?

- Every mechanism has its limit. The Protocol Guild may meet its at the edges of contribution, where someone has meaningfully contributed to a project, but does not work on it consistently, or produces something as a one-off. This remains an open question, and might be considered for a future weighting scheme if there are no major issues.

Why are weightings not more granular?

- While it's true that some people are objectively more productive in their work / valuable to the protocol, adding a weighting scheme to a membership this large would introduce complexity with each membership update. There would also be unknown, probably negative social dynamics related to valuing contributions of peers.
- It's worth a note of caution against heading too far down the path of data and hyper-specificity when it comes to evaluating contributions. We suspect this would lead to the introduction of a public facing component, which would privilege people who have previously been working on the protocol. Such individuals would have the benefit of additional time to form themselves into the shape the political and social structures are looking to latch onto. Metrics, rubrics breed subtle exploits, entrench power.
- Ideally, under any weighting scheme, the margin between contributor profile should not be overly large relative to the others.

How can curators or signers abuse their position of trust?

- Fundamentally, this is a political tool. In negative outcomes, whoever maintains the member eligibility can influence research areas and interests people have in certain sections of the protocol. Want to get the merge done? Add more client implementers at the expense of other ecosystem categories. This kind of manipulation is unlikely to actually happen as it would harm the mechanism's legitimacy.
- Or worse, the existing signers decide not to honor the agreed upon outcomes from weighting deliberations, go slightly rogue. In this case, we can imagine some contributors deciding to ride it out until vesting has completed. In other situations, a significant portion of the members could collectively abandon the stream in solidarity. Or, they could claim and send the wrapped tokens to the burn address as a gesture of protest.

How can this be gamed?

- As the mechanism scales, it's inevitable that the amount of attention given by a core group of Guild members will eventually fall, become less thorough. At a sufficiently high number of members, unscrupulous developers might invent phantom co-workers and redirect the split shares to themselves. This is one area where the mechanism relies on mutual trust to avoid abuse.

What happens if a large percent of infrastructure contributors decide not to participate? Or, what if a significant number of contributors join and then decide to leave the split?

- The mechanism's legitimacy is predicated on broad participation. If enough contributors decline, this may not be an appropriate tool for incentivizing work on public goods. In the latter case, the vesting would still continue but it may be difficult to solicit additional donations.

How will members handle conflicts about list inclusion, eg. when someone starts doing well-intentioned but poorly executed work?

- Eligibility criteria should be given special care, as much as the contract or the outreach to donating entities. These should be communicated publicly and frequently with change history, eg. GitHub. Any decisions which sidestep transparent processes undermines the mechanism's legitimacy.

What other failure modes have not been explored in-depth yet?

- The membership is updated to only include addresses controlled by the attackers.
- More cleverly, they only dilute the existing membership a little bit, or adjusting the weights just enough to favor certain set of contributors.
- Members selling early access to their shares to capitalize early into a stream, or taking a loan against them and committing to stay at least as long as their agreements dictate.

What happens when enough signers get compromised?

- This would damage the trust donating entities put into the members, as well as any future efforts to restart something similar.

What are the tax implications of participation?

- We are not tax lawyers, each participant should seek experts for their jurisdiction.

What use cases can you anticipate wanting in the future that 0xSplits can't facilitate today?

- Lending markets built into the vesting stream
- Programmatically dripping membership
- Extensions that let users automate a custom functions like "claim and sell to DAI"

What are some ways that curation can fail?

- There are edge cases which should be considered. For example, where the marginal legitimacy lost by excluding a given contributor is too low to get curators to push for their inclusion.
- The initial set of curators fails to expand beyond their social graphs, but still accumulates enough members to accomplish a state of "good enough" legitimacy.
- The social norms that build up around the mechanism are sufficiently powerful to draw in continued donations even though it just barely hits the "good enough" threshold.

2.7.2 7.2 Related to the Broader Community

Will this replace existing salaries?

- No, this should be perceived as a bonus on top of current pay: employers/DAOs should pretend as though it doesn't exist. Furthermore, employers/DAOs won't be able to tell whether members have submitted their own address, or that of a charity. It would not be ethical to compel charity disclosures. **What if this ends up being a significant amount?**
- If this mechanism *doesn't* accrue significant funds, then it's not really working properly. Vested donations should be significant enough to inspire new contributors to join core development. However, there should be deeper incentive analyses and the thresholds at which they get funky.

Why don't contributors ask for some multiple of their current salary?

- As discussed in "2. Tradeoffs of Existing Mechanisms," traditional orgs will never be able to match the upside that comes from working on a novel tokenized application or L2.

Aren't donated assets a form of bribe?

- No. This would be a very inefficient form of bribing, as the large membership distribution dilutes any targeted intent. It would be much more effective to bribe individuals, which can already happen today without a split contract. It could even be argued that this mechanism makes bribes less effective, because bribes are most effective in situations of relative wealth inequality. By raising the holdings of core developers, they are less likely to be swayed by individual financial offers. Of course, this is completely opt-in and protocol contributors are welcome to redirect their share to e.g. other public goods projects. Only when there are relatively few donating entities could the mechanism become more susceptible to bribes. Or, if the relative amount donated by one entity dwarfs that given by others.

What about including past protocol contributors?

- Not advisable, as this would complicate inclusion decisions. The split is supposed to incentivize current and future contributors.

Will this compete with Gitcoin or other similar efforts?

- We feel that this mechanism is differentiated enough (ie. forward looking, core protocol focused, vested, biases towards native tokens as opposed to USD) that the overlap may appear larger than it actually is. However, there may be some donating entities that feel like they are already "doing their part" with donations to one initiative and may not feel obligated to contribute to the other. We believe that it's healthy to have a number of autonomous & differentiated funding approaches towards public goods.

2.7.3 7.3 Culture / Big Questions

How long should the Protocol Guild exist?

- It's unclear when, but at some point it should probably cease to exist. It may end up no longer being an effective draw to retain talent, or may become corrupted or otherwise coopted, or may even become unnecessary if (when) the protocol completes its evolutionary course. However, members present in the lead up to that possible future should be attentive to the signs of negative outcomes. The inertia to maintain itself will be self-animating, an egregore harnessed by the mystic capabilities of core Ethereum development. Inasmuch, the egregore desires to continue living and will therefore recognize attempts to curtail its growth. Members would do well to remember that this has been the case from the beginning, and remind new cohorts of developers of this reality as they are onboarded.

Why hasn't anyone built this before?

- It's unlikely that one project from the ecosystem would have the capacity to take responsibility for all the coordination efforts related to collecting and maintaining a list of contributors. If it did happen, the project would eventually find themselves with an immense amount of power as the gatekeeping curator.
- The contacts did not exist until now (0xSplits).
- Core devs are largely too focused on other things to coordinate such an effort

Broadly, how will this design fail?

- If voluntaryism and donation-based funding does not scale sufficiently to the levels this mechanism needs in order to be effective.
- If developers reject the responsibilities and pressures associated with self-governing an asset stream.

Will long-term vesting lead to stagnation in core development roles?

- In the sense of gatekeeping/groupthink/capture, we sincerely hope not. There's certainly a possibility that previously effective people may get stuck in a position if the incentive is significant enough. However, this is no

different from any other job with performance requirements, crypto or otherwise. If someone is not performing adequately, they will be removed from their job and then from the list. If anything, the infusion of new perspectives as the set grows will be a healthy process.

- With the conclusion of each vesting period, everyone starts at 0 again, having to convince other members (and more broadly, the public), that they are legitimate heirs to the Protocol Guild name and legacy. Competition for scarce political purchase means there will be alliances, intrigue, rebalances. Anyone can copy this blueprint and create their own competing versions. We anticipate that even the initial cohort now will unavoidably have its own political undercurrents! A blooming society actively evolves their systems to avoid settling into patterns too soon. So we should continue - see the approaching Leviathan peeking over the horizon, pull ourselves towards well considered implementations, norms, visions. Subtle frameworks like this interface between the social and the economic resources a group traffics in. They are dense confluences of swirling power - what we're doing is preempting inevitability.

2.8 8. Case Studies

NOTE: What follows are theoretical high-impact scenarios. This is not a claim that funding will reach these amounts, only an exploration of possibilities.

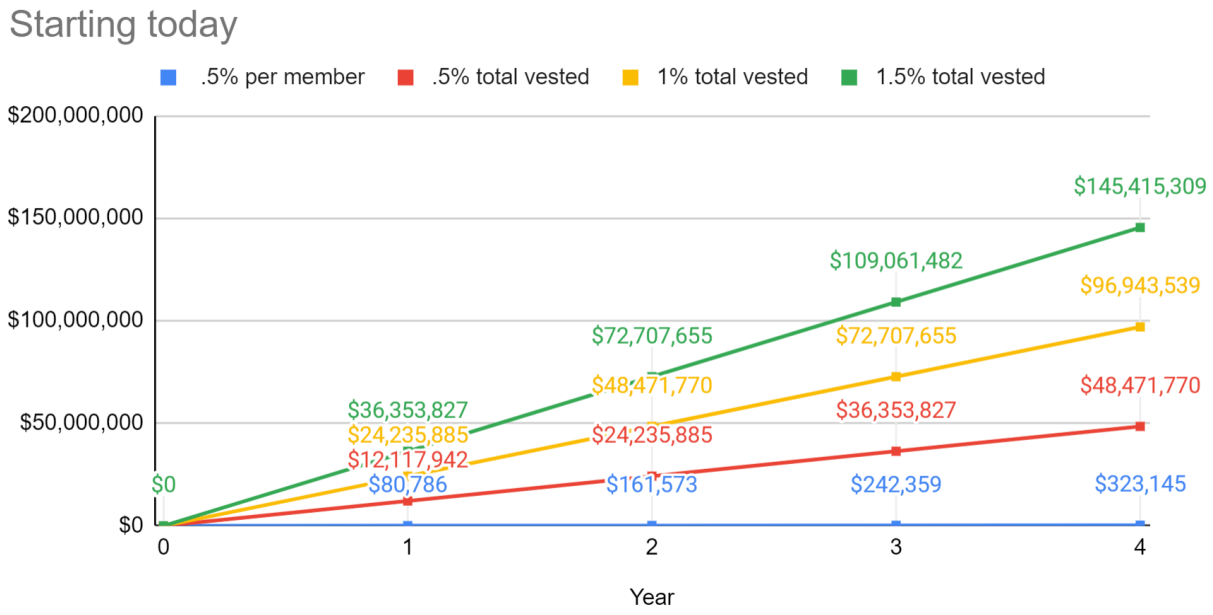
2.8.1 8.1 Vested Assets in DAO Treasuries

Projects which previously launched a token could donate a portion of the tokens currently controlled by governance. Here's a rough sample of what this might look like in practice, using the top 20 projects by unvested DAO holdings. (data taken from Open-Orgs.info by David Mihal on Nov. 11 2021). This is not meant to be a comprehensive survey. See the data behind the below charts here.

Name	Unvested Treasury	Vested Treasury
Uniswap	$11,032,128,273	$4,467,296,235
Lido	$1,013,369,806	$1,013,369,806
Aave	$710,995,680	$710,995,680
Olympus DAO	$695,596,511	$695,596,511
Synthetix	$459,754,748	$459,754,748
ENS	$4,814,784,391	$398,406,844
MakerDAO	$315,896,435	$315,896,435
Badger	$281,435,598	$281,435,598
Gitcoin	$643,282,372	$212,022,218
Yearn	$162,664,196	$162,664,196
SushiSwap	$143,079,883	$143,079,883
Alchemix	$124,448,531	$124,448,531
Balancer	$113,243,653	$113,243,653
DXdao	$112,487,482	$112,487,482
API3	$109,938,536	$109,938,536
BarnBridge	$108,304,172	$108,304,172
Nouns DAO	$67,661,963	$67,661,963
Index Coop	$65,258,192	$65,258,192
mStable	$51,208,814	$51,208,814
Nexus Mutual	$43,478,269	$43,478,269
Compound	$1,019,076,566	$37,806,182

	.5% Donation	1% Donation	1.5% Donation
SUM	$48,471,770	$96,943,539	$145,415,309

Already we can see the significant benefit these donations would have. For these scenarios, we include 150 members on the split contract plus a 4 year vesting period.

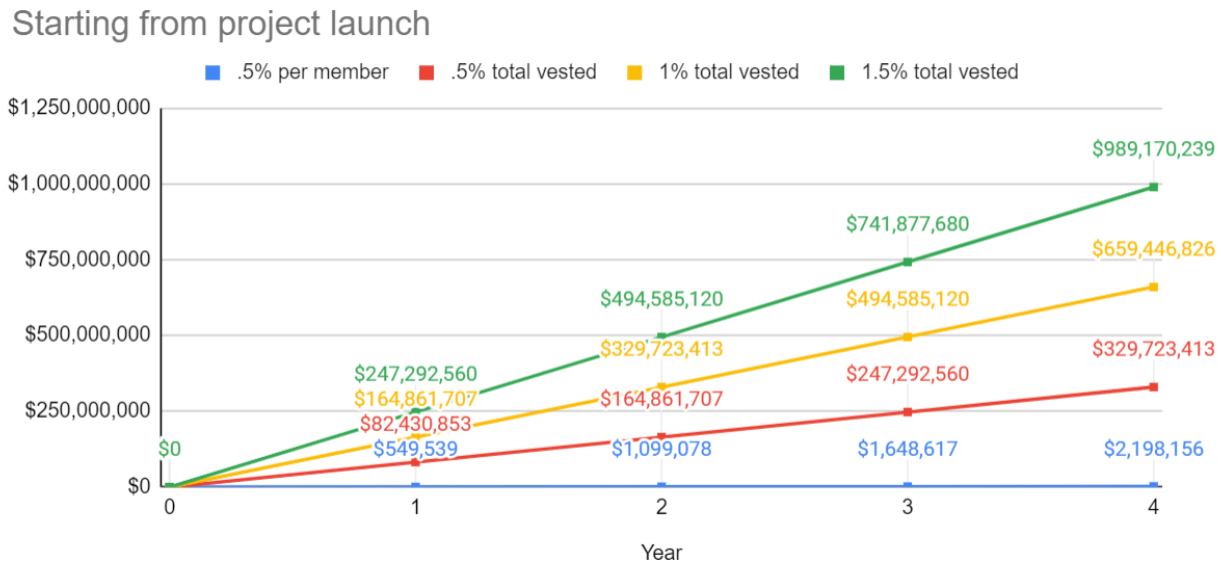


2.8.2 8.2 Donations at Launch

The Protocol Guild really starts to show its promise when considering that projects start to include funding as part of launch parameters. The chart below takes the same 20 projects and distributes a portion of what the max supply would have been at launch. Of course, this is just an illustration - they didn't all launch and contribute to the split at the same time.

Name	Max Supply at Launch	Price, Nov. 11
Uniswap	1,000,000,000	$25.71
Lido	1,000,000,000	$4.27
Aave	16,000,000	$312.93
Olympus DAO	5,041,746	$878.69
Synthetix	237,694,162	$9.99
ENS	100,000,000	$58.09
MakerDAO	1,005,577	$3,025.46
Badger	21,000,000	$32.40
Gitcoin	100,000,000	$9.36
Yearn	36,666	$33,903.79
SushiSwap	250,000,000	$11.23
Alchemix	2,393,060	$453.89
Balancer	100,000,000	$24.74
DXdao	148,976	$777.09
API3	106,940,994	$5.56
BarnBridge	10,000,000	$35.06
Index Coop	10,000,000	$28.64
mStable	100,000,000	$1.13
Nexus Mutual	6,898,110	$181.95
Compound	10,000,000	$335.91

	.5% Donation	1% Donation	1.5% Donation
SUM	$329,723,413	$659,446,826	$989,170,239



We believe $2M-6.5M vested over 4 years to potential contributors will be a step in the right direction. The beauty of the mechanism is that there is no application process to participate as a sponsor: any entity can just send funds to the split contract, and the rest will happen without their involvement.

2.9 9. Membership

Internal tool to propose new members, remove inactive members, and modify full/part-time multipliers via PR.

2.9.1 Adding a new member

An existing member should make a PR to this repo with team, name (+ link to work), and time-weight

- Any new additions should have been contributing **at least 6 months** before being proposed
- use a single PR per person
- share the PR in the discord so other members are aware

Include the following in the comment:

- Name / identifier
- Team
- Link to some work
- Short summary of their work / eligibility
- start date of relevant projects
- proposed weight (full or partial)

Discussion should be open for ~1 week to give members time to review and contribute to the discussion. This can be either with / , but also ideally some writing on why you think the proposed member fits the eligibility or not.

2.9.2 Remove an existing member or update weights

- if the individual under consideration is not making the PR themselves (eg. from a team member or collaborator), please have them acknowledge the change on the PR or in the discord
- use a single PR per person
- share the link to the PR in the PG discord membership channel so other members are aware

2.9.3 Add a team/project

If someone is doing work you feel should be eligible but is not currently listed in the qualifying contributions: see the section 6.4 Modifying Projects and Members.

Team	Name / Link to work	Multiplier
EF DevOps	Parithosh Jayanthi	1
EF DevOps	Rafael Matias	0.5
EF DevOps	Sam Calder-Mason	1
EF DevOps	Barnabas Busa	1
EF DevOps	Andrew Davis	1
EF DevOps	pk910	1
EF Geth	Gary Rong	1
EF Geth	Guillaume Ballet	1

continues on next page

Table 1 – continued from previous page

Team	Name / Link to work	Multiplier
EF Geth	Felix Lange	1
EF Geth	Jared Wasinger	1
EF Geth	Marius van der Wijden	1
EF Geth	Martin Holst Swende	1
EF Geth	Matt Garnett	1
EF Geth	Peter Szilagyi	1
EF Geth	Sina Mahmoodi	1
EF Ipsilon	Alex Beregszaszi	1
EF Ipsilon	Andrei Maiboroda	1
EF Ipsilon	Jose Hugo de la cruz Romero	0.5
EF Ipsilon	Paweł Bylica	1
EF Ipsilon	Radosław Zagórowicz	1
EF Ipsilon	Piotr Dobaczewski	1
EF JavaScript	Amir Ghorbanian	1
EF JavaScript	Andrew Day	1
EF JavaScript	Gabriel	0.5
EF JavaScript	Holger Drewes	0.5
EF JavaScript	Jochem	1
EF JavaScript	Scotty Poi	1
EF Portal	Jacob Kaufmann	1
EF Portal	Jason Carver	1
EF Portal	Kolby Moroz Liebl	1
EF Portal	Mike Ferris	1
EF Portal	Ognyan Genev	1
EF Portal	Piper Merriam	1
EF Portal	Nick Gheorghita	1
EF Protocol Support	Danny Ryan	1
EF Protocol Support	Guru	1
EF Protocol Support	Mário Havel	1
EF Protocol Support	Peter Davies	1
EF Protocol Support	Sam Wilson	1
EF Protocol Support	Tim Beiko	1
EF Protocol Support	Trenton Van Epps	1
EF Cryptography	Arantxa Zapico	1
EF Cryptography	Mary Maller	0.5
EF Research	Alex Stokes	1
EF Research	Ansgar Dietrichs	1
EF Research	Antonio Sanso	1
EF Research	Carl Beekhuizen	1
EF Research	Dankrad Feist	1
EF Research	Dmitry Khovratovich	1
EF Research	Domothy	1
EF Research	Francesco D'Amato	1
EF Research	George Kadianakis	1
EF Research	Hsiao-Wei Wang	1
EF Research	Justin Drake	1
EF Research	Luca Zanolini	1
EF Research	Mark Simkin	1
EF Research	Mike Neuder	1
EF Research	Pop Chunhapanya	1

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Team	Name / Link to work	Multiplier
EF Research	Toni Wahrstätter	1
EF Research	Zhenfei Zhang	0.5
EF Robust Incentives Group (RIG)	Anders	1
EF Robust Incentives Group (RIG)	Barnabé Monnot	1
EF Robust Incentives Group (RIG)	Caspar Schwarz-Schilling	1
EF Robust Incentives Group (RIG)	Davide Crapis	1
EF Robust Incentives Group (RIG)	Thomas Thiery	1
EF Robust Incentives Group (RIG)	Julian Ma	1
EF Security	David Theodore	1
EF Security	Fredrik Svantes	1
EF Security	Justin Traglia	1
EF Security	Tyler Holmes	1
EF Security	Yoav Weiss	1
EF Stateless Consensus	Kevaundray	1
EF Stateless Consensus	Ignacio Hagopian	1
EF Stateless Consensus	Josh Rudolf	1
EF Testing	danceratopz	1
EF Testing	Mario Vega	1
EF Testing	Spencer Taylor-Brown	1
Erigon	Alex Sharov	1
Erigon	Andrey Ashikhmin	1
Erigon	Artem Tsebrovskii	1
Erigon	Daniel Lazarenko	0.5
Erigon	Giulio Rebuffo	1
Erigon	lupin012	0.5
Erigon	Kairat Abylkasymov	1
Erigon	Michelangelo Riccobene	0.5
Erigon	Somnath Banerjee	1
Erigon	Tullio Canepa	1
Ethereum Cat Herders	Pooja Ranjan	1
Hyperledger Besu	Ameziane	1
Hyperledger Besu	Daniel Lehrner	1
Hyperledger Besu	Danno Ferrin	1
Hyperledger Besu	Fabio di Fabio	1
Hyperledger Besu	Gary Schulte	1
Hyperledger Besu	Gabriel Fukushima	1
Hyperledger Besu	Gabriel Trintinalia	1
Hyperledger Besu	Jason Frame	1
Hyperledger Besu	Justin Florentine	1
Hyperledger Besu	pinges	1
Hyperledger Besu	Sally Macfarlane	1
Hyperledger Besu	Simon Dudley	1
Hyperledger Besu	Karim Taam	1
Independent	Cheeky-gorilla	1
Independent	Jim mcDonald	0.5
Lighthouse	Adrian Manning	0.5
Lighthouse	Mac Ladson	1
Lighthouse	Mark Mackey	1
Lighthouse	Mehdi Zerouali	0.5
Lighthouse	Michael Sproul	1

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Team	Name / Link to work	Multiplier
Lighthouse	Paul Hauner	0.5
Lighthouse	Pawan Dhananjay Ravi	1
Lighthouse	Sean Anderson	1
Lighthouse	Anton Delaruelle	1
Lighthouse	Jimmy Chen	1
Lighthouse	João Oliveira	1
Lighthouse	dapplion	1
Lodestar	Cayman Nava	1
Lodestar	Gajinder Singh	1
Lodestar	Matthew Keil	1
Lodestar	NC	1
Lodestar	Nazar Hussain	1
Lodestar	Nico Flaig	1
Lodestar	Phil Ngo	1
Lodestar	Tuyen Nguyen	1
Nethermind	Ahmad Bitar	0.5
Nethermind	Alexey Osipov	1
Nethermind	Ayman Bouchareb	1
Nethermind	Ben Adams	0.5
Nethermind	Daniel Celeda	1
Nethermind	Jorge Mederos	0.5
Nethermind	Kamil Chodoła	1
Nethermind	Łukasz Rozmej	1
Nethermind	Marcin Sobczak	1
Nethermind	Marek Moraczyński	1
Nethermind	Mateusz Jędrzejewski	0.5
Nethermind	Muhammad Amirul Ashraf	1
Nethermind	Ruben Buniatyan	0.5
Nethermind	Tanishq Jasoria	1
Nethermind	Tomasz Stanczak	0.5
Offchain Labs / Independent	Aditya Asgaonkar	0.5
Prysmatic	James He	1
Prysmatic	Kasey Kirkham	1
Prysmatic	Nishant Das	1
Prysmatic	potuz	1
Prysmatic	Preston Van Loon	0.5
Prysmatic	Radosław Kapka	1
Prysmatic	Raul Jordan	0.5
Prysmatic	Sammy Rosso	1
Prysmatic	Taran Singh	0.5
Prysmatic	Terence Tsao	1
Prysmatic	Manu Nalepa	1
Reth	Alexey Shekhirin	1
Reth	Dan Cline	1
Reth	Dragan Rakita	1
Reth	Matthias Seitz	1
Reth	Emilia Hane	1
Reth	Roman Krasiuk	1
Reth	joshie	1
Status	Dmitriy Ryajov	0.5

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Table 1 – continued from previous page

Team	Name / Link to work	Multiplier
Status	Csaba Kiraly	0.5
Status	Dustin Brody	1
Status	Etan Kissling	1
Status	Eugene Kabanov	1
Status	Jacek Sieka	1
Status	Jordan Hrycaj	1
Status	Kim De Mey	1
Status	Leonardo Bautista-Gomez	0.5
Status	Zahary Karadzhov	1
Teku	Courtney Hunter	1
Teku	Dmitry Shmatko	1
Teku	Enrico Del Fante	1
Teku	Mehdi Aouadi	1
Teku	Lucas Saldanha	1
Teku	Paul Harris	1
Teku	Stefan Bratanov	1
TXRX	Alex Vlasov	1
TXRX	Anton Nashatyrev	1
TXRX	Mikhail Kalinin	1
ConsenSys DDS	Roberto Saltini	1
ConsenSys DDS	Chenyi Zhang	0.5

2.9.4 Addresses and Weights

Member addresses and weights can be seen in the Split contract. Note that these addresses and weights will change over time as members change from full-time to part-time (or vice-versa), and as members are on/offboarded. Read more about how weighting is determined in 6.3 Weighting.

2.9.5 Quotes

We asked members why they think the Guild is important for Ethereum. Last updated Feb 21 2024

Adrian Manning (Lighthouse) - "Lighthouse is the Rust implementation of Ethereum Beacon Chain, a key component in Ethereum's transition to PoS Although Lighthouse is one of a few major production Eth2 clients, it's imperative that more than 1 production client is used in the space to avoid the chain collapsing if bugs/vulnerabilities are found in a single client. Protocol Guild supports the teams working on minority clients, which is an important initiative." **Alex Stokes (EF ARG)** - "The Protocol Guild is an experiment in public goods funding that aims to align the incentives of core protocol contributors with the continued stewardship of the ecosystem by allowing these contributors to share in the value created by their hard work. This mechanism is important for the future of Ethereum as it ensures continuity of protocol direction, maintenance, and growth amongst a set of dedicated individuals who deeply care about realizing the collective vision that inspires everyone who interacts with our community." **Alex Vlasov (TXRX)** - "Ethereum - and blockchains, in general - unveils tremendous opportunities and one of them is building a more fair world. Protocol Guild serves several purposes: 1. It's an instrument for public goods funding, which is often underrated 2. It's a research and an exploration of innovative social mechanisms 3. It aims to support Ethereum Protocol contributors" **Ansgar Dietrichs (EF Research)** - "I strongly believe that not enshrining a contributor funding mechanism into the base chain was the correct choice for Ethereum (crucial for its credible neutrality). But in order to keep attracting top level talent to the core dev space, we need to experiment with out-of-protocol ways of funding. Protocol Guild is a very exciting project in that regard and hopefully a first step towards a sustainable funding structure." **Anton Nashatyrev (TXRX)** - "I would really love to see Guild as an instrument for long term incentivisation of people who just want to develop Ethereum and don't want to worry about buying food for themselves tomorrow " **Carl Beekhuizen**

(EF Research) - "As researchers we spend a lot of time worrying about incentive compatibility. This guild nudges us towards a better incentive landscape for those working on the protocol." **Core Contributor** - "A diversified community will certainly benefit the entire Ethereum ecosystem in the long-term. I believe protocol guild is the right place to be for attracting multi-dimensional talents from various areas of strength, which is an ideal way that helps to maintain a healthy eco-system for the days to come." **Core Contributor** - "A huge ecosystem is building up upon the base Ethereum protocol. If we want this base layer to remain independent and maintained like a true public good, incentive alignment is a key factor. Let's make the Protocol Guild an inspiring and successful experiment! " **Core Contributor** - "Decentralized Apps. Decentralized Ecosystem. Decentralized Funding." **Core Contributor** - "Decentralized ecosystems are hard to build, and client diversity is harder but super important for a robust social *code* consensus on a protocol. That requires *on-par* commitment, perseverance, continuous innovation, learning and contributions. And not to mention community support!" **Core Contributor** - "Decentralized open source funding - what's not to love? Another example of the ethereum ecosystem paving the path for the future - this time for funding." **Core Contributor** - "Ethereum base layer is a core part of the Ethereum ecosystem. Incentivising people to keep contributing to the protocol will ensure the longevity of the network as well as let applications built on top of Ethereum thrive and become more accessible to the wide public. The Protocol Guild is a good start and I am excited to be part of it." **Core Contributor** - "Ethereum is bigger than the Ethereum Foundation - there's an entire community of teams and individuals doing important work. However, many depend on salaries from an entity they are associated with. The PG project fills this vacancy and lets the community fund protocol devs. This decentralized funding mechanism will be critical for attracting and retaining Ethereum protocol builders." **Core Contributor** - "Ethereum is public infrastructure for the world. Building infrastructure is hard, because everyone wants to enjoy it, but no one wants to be the chump left paying the bill, which often induces zero-sum thinking and protecting one's own interests rather than contributing. Protocol Guild ensures stability for those who choose to contribute and creates an environment of positive-sum thinking, powered entirely by the Ethereum ecosystem and the value it brings to the world." **Core Contributor** - "I believe Protocol Guild will produce good incentives for Core Devs to stay focused on building the protocol." **Core Contributor** - "I believe that the Protocol Guild will help to retain and attract the talent necessary for building and maintaining the foundation of the Ethereum ecosystem." **Core Contributor** - "I believe this experiment will result in a great precedent on how to keep the core values of the Ethereum protocol alive and relevant." **Core Contributor** - "I think open source is really important today and is one of the pillars of the world today, and it is going to be more and more important in future, but as today a proper way to reward its developers is missing, so I hope that this experiment will create the basis for a wider approach that could improve the sustainability of open source development." **Core Contributor** - "Incentive alignment is one of the core issues that impact the long term health of a software/network. I think the Protocol Guild helps solve a part of the incentive alignment problem by allowing members to gain exposure to the network they are developing. I feel like it will go a long way in helping keep and onboard new core developers, as well as ensure everyone has skin in the game." **Core Contributor** - "It is an interesting concept to fund the Ethereum project, provides both funds and incentives/reward for core devs to do more, and that in my opinion set this open source community a part from the rest." **Core Contributor** - "It is important that we allow those that contribute to the core protocol the opportunity to be financially rewarded on a similar scale as those that choose to operate in the private sector. Without such a mechanism, the choice to work on the core protocol is also a choice to forfeit monetary rewards offered elsewhere, which in many cases, will lead to continual attrition of talent into the private sector." **Core Contributor** - "It is important to retain talent in this industry, and the Protocol Guild provides a mechanism for doing so. Decentralized public goods funding of the researchers and developers that build the underlying technology have good chances of benefitting the applications built on top, long term." **Core Contributor** - "It should help to bring and keep talents in the Ethereum core dev group." **Core Contributor** - "It's great to see the incentive problem trying to be solved for existing and also new core contributors." **Core Contributor** - "It's sad that those who develop open technologies have historically profited far less than those who build on top of open technologies. I think that the Protocol Guild is the start of something very important to Ethereum." **Core Contributor** - "Let's make base layer r&d long term sexy!" **Core Contributor** - "Material funding makes developers feel as a part of something big and important. In turn, this motivates them to do a better job, which contributes to progress." **Core Contributor** - "maybe the log4j exploit might not have happened with more funding, let's try to make the same not happening on Ethereum." **Core Contributor** - "Motivating talent towards Ethereum development is critical to stay competitive in this dynamic industry." **Core Contributor** - "PG is a powerful mechanism as it essentially decentralises funding for protocol work, and empowers anyone to step up and contribute." **Core Contributor** - "PG is one of the only ways of funding open-source software that seems like it will both actually scale, and meaningfully compensate contributors. Ethereum is built on open source software. Sustainably supporting its development is an achievement in itself, and required for Ethereum to succeed." **Core Contributor** -

"Protocol contributors enable the creation of value. Rewarding them proportionally to the value created can sustain their work and attract additional talent. Token contributions from successful projects is a great way to achieve that." **Core Contributor** - "Protocol guild encourages the various contributors to stay in the project for a long time, work hard and gain more and more experience to achieve the agreed objectives. " **Core Contributor** - "Protocol Guild is a great way to reward Ethereum core developers for the infrastructure work that they are doing." **Core Contributor** - "Protocol Guild is a platform for the community to acknowledge and appreciate the talent and dedication that keeps Ethereum going." **Core Contributor** - "Protocol Guild is one of the most important efforts within Ethereum right now because it creates an independent parallel structure for supporting core development. This is very unique across the whole crypto ecosystem where we see many projects struggling from lack of decentralized support of contributors. " **Core Contributor** - "Prysm implements the ethereum beacon chain proof of stake protocol. The beacon chain is important because eliminating proof of work is a moral imperative. Multiple implementations of the beacon chain do and should exist for the resilience of the network. prysm is written in go, which is a language designed to minimize the complexity of strongly typed, highly concurrent source code. This means that prysm can be performant, have good support for safety and correctness, while also being built from source code that is easier to read and audit than other system languages. More eyes on the implementation should lead to greater understanding of how the system works and more confidence in the network." **Core Contributor** - "The backbone of Ethereum is its diversity and the resilience it fosters. In order to safeguard its evolution, it's crucial to maintain a broad array of contributors who work in sync towards common goals. The Protocol Guild underlines this approach, by establishing a sustainable incentive model that supports those committed to the continued development and protection of Ethereum's open-source protocol. This initiative plays an instrumental role in ensuring a healthy, robust, and fair landscape for Ethereum's future." **Core Contributor** - "The domain is inherently complicated, so there need to be incentive to attract capable developer. Relatively speaking, it also requires pretty beefy equiptment (large capacity ssd) whose cost can add up." **Core Contributor** - "The Ethereum Foundation, however successful beyond what might have been reasonably expected of it, still comprises a single point of failure. The protocol guild can help ensure the values the foundation has helped shepherd can sustainably adapt in a decentralized fashion consistent with Ethereum's core principles." **Core Contributor** - "The Ethereum Protocol needs careful and long-term thinking. Despite core-devs are very value driven, their short lifetime (compared to the pretended Ethereum lifetime) introduces some economic opportunity costs which can put Ethereum development at risk. Funding is just a problem that gets in the way between the protocol development and core-devs. I wish PG can fix this problem!" **Core Contributor** - "The Guild is a great way to assure the high quality of contributions while diversifying the set of contributors, leading to solid and always-improving protocols for the whole ecosystem." **Core Contributor** - "The Guild will help retain existing and attract new talented contributors to the Ethereum revolution." **Core Contributor** - "The Protocol Guild plays a vital role in expanding the Ethereum ecosystem by attracting skilled individuals to the blockchain space. By rewarding highly engaged participants, it provides an additional incentive to drive continuous improvement. Furthermore, the Guild fosters collaboration among key stakeholders within Ethereum, facilitating crucial discussions on pressing topics. This collective effort ultimately unites contributors under a shared objective: to enhance the decentralized world for the better." **Core Contributor** - "The Protocol Guild will help ensure Ethereum provides the world with the decentralized future it needs." **Core Contributor** - "The whole is greater than the sum of the parts. But without the parts there is no whole. This project addresses the parts without diminishing the whole." **Core Contributor** - "This type of a public funding should be main source of funds for such a projects like Ethereum blockchain research and development." **Core Contributor** - "With its rewards beyond casual wages or project grants, Protocol Guild inspires members to apply their efforts to the Ethereum development in unrehearsed ways and directions where forces of EF and big companies are missed. It preserves the strong community engagement over major pathways, which safeguards Ethereum's decentralization." **danceratopz (EF Testing)** - "I believe the Protocol Guild will play an important role in helping ensure a sustainable future for Ethereum as a foundational public good. Its infrastructure enables Ethereum projects to channel funds into the protocol's continuous enhancement, thereby incentivizing and helping retain the dedicated individuals who work on its development. This system of support allows Ethereum's growth without reliance on a single or a collective group of entities. It even paves the way for core developers to operate independently of any organization, sustained by Guild-facilitated funding." **Danny Ryan (EF Research)** - "Public goods are hard." **Davide Crapis (EF RIG)** - "Public goods are the backbone of a thriving ecosystem." **Dmitry Khovratovich (EF Cryptography)** - "We work on a number of projects: VDFs, zero knowledge protocols, validator secure selection, – which all make Ethereum 2.0 faster, secure, and simple. We are taking the best from the most advanced cryptographic schemes today, and sometimes invent new ones." **Fredrik Svantes (EF Security)** - "Funding public goods/FOSS, especially on an individual level, is hard. Protocol Guild helps make this easier for individuals from across the world to partake in the future of Ethereum without also having to be part of a larger organization. By creating

this sustainable effort, the Protocol Guild is helping to further provide long term health of the protocol layer, which is crucial for the applications running on top of it, by rewarding those who help build it." **Gabriel (EF JavaScript)** - "The sustainable and community-driven funding mechanic introduced by the Protocol guild will increasingly become, I believe, a foundation ensuring the perennity of the Ethereum ecosystem. It aligns us with our core decentralization ethos while at the same time rewarding and incentivizing long-term contributions to a groundbreaking public good." **Gary Schulte (Hyperledger Besu)** - "Narrowing the incentive gap between Ethereum core-protocol work and the more lucrative application space is an important effort worth putting time and resources into. " **Holger Drewes (EF JavaScript)** - "The Protocol Guild is a great chance to align core protocol incentivization with the core values Ethereum stands for." **Jason Carver (EF Portal)** - "We should explore many approaches for supporting collaboration. It's a valuable and hard problem to generate and maintain public goods." **Jimmy Chen (Lighthouse)** - "Protocol Guild is an exciting, well-planned initiative, offering core protocol contributors in an open-source ecosystem the chance to share in its ongoing success. Its self-curated approach aligns incentives and values among members, which is key to the sustainability of Ethereum's development." **Jordan Hrycaj (Nimbus)** - "Giving as much agency to independent contributors as possible." **Justin Florentine (Hyperledger Besu)** - "Funding public goods is a hard problem, I look forward to making some mistakes along the way so others can learn from us. Someone's gotta try!" **Mark Mackey (Lighthouse)** - "Every core developer I've talked to is well aware that they can earn significantly more working in other fields or even just at the application layer. I personally couldn't even afford to join this effort until I was able to subsidize myself. This is strange for an industry acutely aware of incentive structures. If we care about the long-term heath of the base layer, it is important we mitigate this so we can attract and retain talent." **Matthew Keil (Lodestar)** - "We live under a shadow that few in the world know exists. Blockchain is a key to shining a light into the dark corners of society, and to bring trust to the forefront. Open-source will move us toward the egalitarian utopia we all dream of, and we are the warriors to write those lines of code!" **Michael Sproul (Lighthouse)** - "I love that Protocol Guild centers individual contributors ahead of organisations, and in doing so grants autonomy to all of the people working on Ethereum's base layer. We have an opportunity to prove the viability of an alternative funding model for public goods, which I hope will inspire many more experiments in radical economic coordination." **Mike Neuder (EF ARG)** - "I love the idea of public goods developers and maintainers receiving some of the financial upside of the projects that are built on that foundation. It helps align incentives and motivates important foundational work to continue!" **Nazar Hussain (Lodestar)** - "Mass adoption is the fundamental requirement for any disruptive innovation that could change the world. And for that infrastructure involving that innovation is the key pillar. The Protocol Guild can strengthen that pillar and hence will prove to be the best operational strategy for the betterment of the Ethereum Ecosystem. " **Nishant Das (Prysm)** - "The Protocol Guild helps keep core developers focused on protocol work rather than jumping to the application layer where the upside is significantly more. Having a sustainable source of funding for public goods such as protocol work is valuable. " **Phil Ngo (Lodestar)** - "Protocol developers and researchers create the base foundation for which Ethereum stands upon. The amount of responsibility bestowed upon them is not necessarily incentivized monetarily nor does value generated on Ethereum trickle down to the base layer for protocol development. The protocol guild is a valuable experiment to incentivize great minds to contribute to the long-term future of Ethereum while having their basic needs met." **Pooja Ranjan (Ethereum Cat Herders)** - "Incentivizing contributors is a great way to keep them motivated for ongoing work. Many of us started as volunteers and I am expecting more to join in the future. Protocol Guild is a well planned initiative to incentivize community contributors to the Ethereum protocol development work." **potuz (Prysm)** - "End user applications stand on the shoulders of core development. In a world with multiple competing personal and institutional interests, this project helps keeping those interests as far away from core Ethereum development as possible." **Preston Van Loon (Prysm)** - "Client software powers the Ethereum network! Crafting mechanisms to support the teams working on it long into the future is an important project." **Raul Jordan (Prysm)** - "The Ethereum Foundation has a philosophy of subtraction. That is, it aims to be irrelevant over time as grassroots teams take over development, research, and community. We started working on a consensus client because of the immense potential we see in introducing new engineers to build public goods for Ethereum, just as we did. We believe being an independent team that has built a popular client helps inspire others to do the same and grow the ethos of Ethereum's decentralized development. hopefully the Protocol Guild will also inspire more contributors to join us in maintaining the core protocol." **Somnath Banerjee (Erigon)** - "While individual contributors may always find a way to contribute to the Ethereum protocol, a streamlined funding project like the Guild would ensure sustained collective participation of talent. This is also necessary when we dive into more ambitious goals in the future, and we need the additional set of resources beyond the current teams and (possibly) L2s" **Taran Singh (Prysm)** - "I believe a future with a sustainable financial system is only possible when the people behind its success are working towards a common purpose without restriction and strings attached." **Tim Beiko (EF Protocol Support)** - "Aligning

the incentives of the people supporting the Ethereum protocol with the success of the applications built on top of it allows these motivated contributors to keep doing what they do best, building Ethereum, while also being rewarded with some of the value they help create. " **Tomasz Stanczak (Nethermind)** - "Protocol Guild is a well planned and honestly designed experiment for protocol development." **Toni Wahrstätter (EF ARG)** - "The Protocol Guild's significance in the Ethereum ecosystem cannot be overstated. It represents a vital mechanism for ensuring continuous improvement and innovation within Ethereum. By providing focused funding and support, the Guild empowers researchers and developers to continuously improve on the status quo without the constraints of financial limitations. This dedicated funding stream is crucial in attracting and retaining top talent, who are essential for driving Ethereum's evolution. The Guild's role in underpinning Ethereum's advancement lies in its ability to sustain a fertile ground for breakthrough ideas and implementations, ensuring that Ethereum not only maintains its pioneering status but also keeps evolving to meet future challenges and opportunities." **Trenton Van Epps (EF Protocol Support)** - "The Protocol Guild is Ethereum itself beginning to comprehend its agency - I'm happy to be part of such an important initiative. Long-term maintenance of foundational internet infrastructure should accrue material social, cultural and financial benefits to contributors." **Zahary Karadzhov (Nimbus)** - "This project can empower many individual contributors to start working on Ethereum without the backing of a large corporate sponsor."

2.10 10. Donate

2.10.1 10.1 Individual Donations

The Protocol Guild's funding mechanism was designed to remove all friction associated with supporting Ethereum's core protocol development, by providing a single onchain address which vests funds to all active core protocol contributors over time. Anyone can donate ETH and ERC-20 tokens to the following address:

theprotocolguild.eth 0xF29Ff96aaEa6C9A1fBa851f74737f3c069d4f1a9

Funds sent to the above address will be held in the Guild's Vesting contract, which vests funds over 1 year (during the pilot), before being moved to the Guild's Split contract, for distribution to members. You can read more about the Protocol Guild's smart contract architecture here.

2.10.2 10.2 Donate a Portion of Staking Rewards

If you complete this guide, join the Protocol Guild Discord and share your Split contract to get a special "Sponsor" role!

The Protocol Guild joined EthStaker for a community call in December, to talk about how the Guild has created a mechanism which enables Ethereum's ecosystem and community to help fund core protocol development in an efficient and sustainable way.

Below we will detail how stakers can take part in this public goods funding experiment, by using onchain smart contracts to trustlessly route a portion of staking rewards (specifically execution rewards) to the Guild.

This guide will describe how stakers can use 0xSplits to create a so-called "Split contract", which is "an open-source, audited, non-upgradeable set of contracts that efficiently split onchain income". The address of this Split contract will then be used as the "fee recipient" for receiving the staker's execution rewards, to split rewards between the staker and the Guild. The percent allocation of the split will be determined by the staker, who can also modify it at any time. 0xSplits has been a crucial component of the Guild's smart contract architecture, and has been used to manage $10m of funds donated to Ethereum's core protocol contributors.

There are three steps to this guide, which shouldn't take more than 30 mins to complete:

1. Create Split Contract
2. Test the Split Contract Distribute Function
3. Set New Fee Recipient

Note: Completing this guide will ONLY share execution rewards (block proposal tips or MEV) with the Guild, full and partial withdrawals will NOT be shared.

This is assured because only the "fee recipient" income will be shared with the Guild, which is used for execution rewards, and nothing else. The "fee recipient" is completely separate from the "withdrawal credential", which is used to receive full and partial withdrawals.

When withdrawals are enabled later this year (after the Shanghai/Capella upgrade), all stakers will be able to set a "withdrawal credential" for full and partial withdrawals (if they haven't already). As a reminder, a full withdrawal involves exiting a validator and retrieving all staked funds, while partial withdrawals will happen automatically to retrieve all consensus rewards (related to attestations, proposals and sync committees).

As long as stakers do *not* use their Split contract address as the withdrawal credential, full and partial withdrawals will not be shared with the Guild. If a staker accidentally sets their Split contract address as the withdrawal credential, the staker can still amend their Split contract to share 0% with the Guild (so the staker keeps 100% of any withdrawn funds).

If you want to learn more about how withdrawals will work, please see PEEPanEIP #94: Staked ETH Withdrawal (Testing) with Potuz & Hsiao-Wei Wang.

1. Create Split Contract

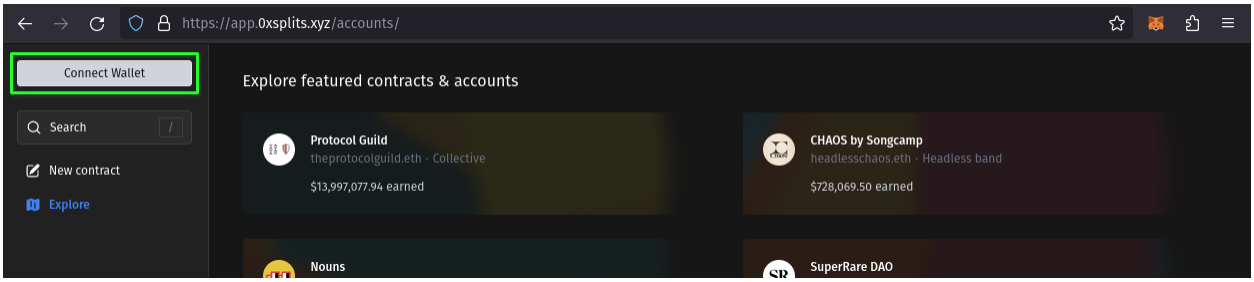
Creating a Split contract requires ETH for gas, and you will have to use Ethereum mainnet. If gas is around 15 Gwei, creating the Split contract will cost ~$2.30. At 40 Gwei it'll cost ~$6. If gas fees are too high, consider waiting until they're lower (e.g. over the weekend).

Ready? Let's go!

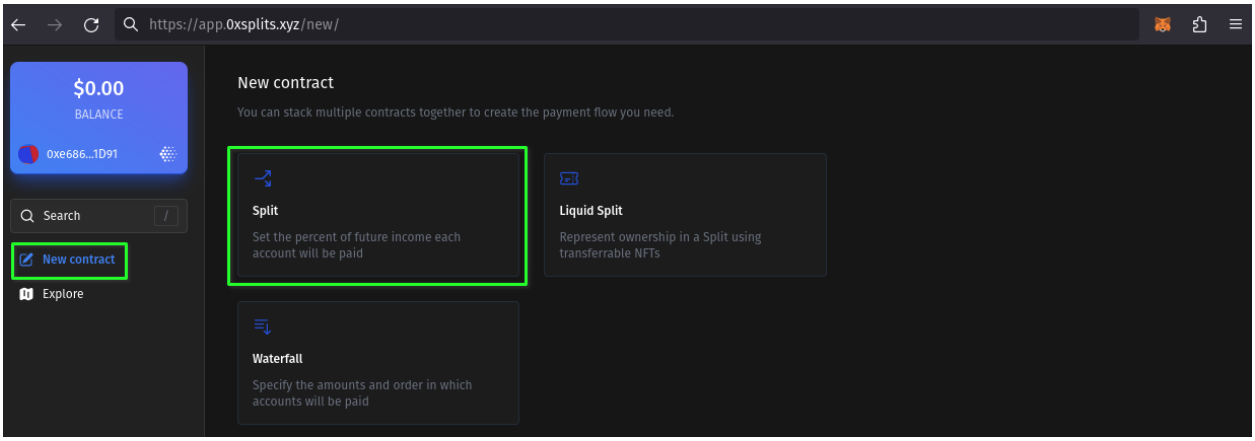
Open the 0xSplits app in your browser and connect your Ethereum wallet. (Stay on the default "Ethereum" network.)

The address you connect will ultimately be used to create the Split contract, and if you want, can also be used as a recipient for the Split's funds, as well as the controller of the Split contract. During the setup process, you'll be able to choose different recipient / controller addresses if desired. Ideally the recipient and controller address should be secured

via a hardware wallet. In the following screenshots, the address 0xe686…1D91 was used as the creator, recipient and controller of the Split contract. When you go through these steps, you should use your own address(es) instead!



Once your wallet is connected, click "New contract" in the navigation bar, then click "Split".



You will now be presented with a form with various options. We will go through all options section by section.

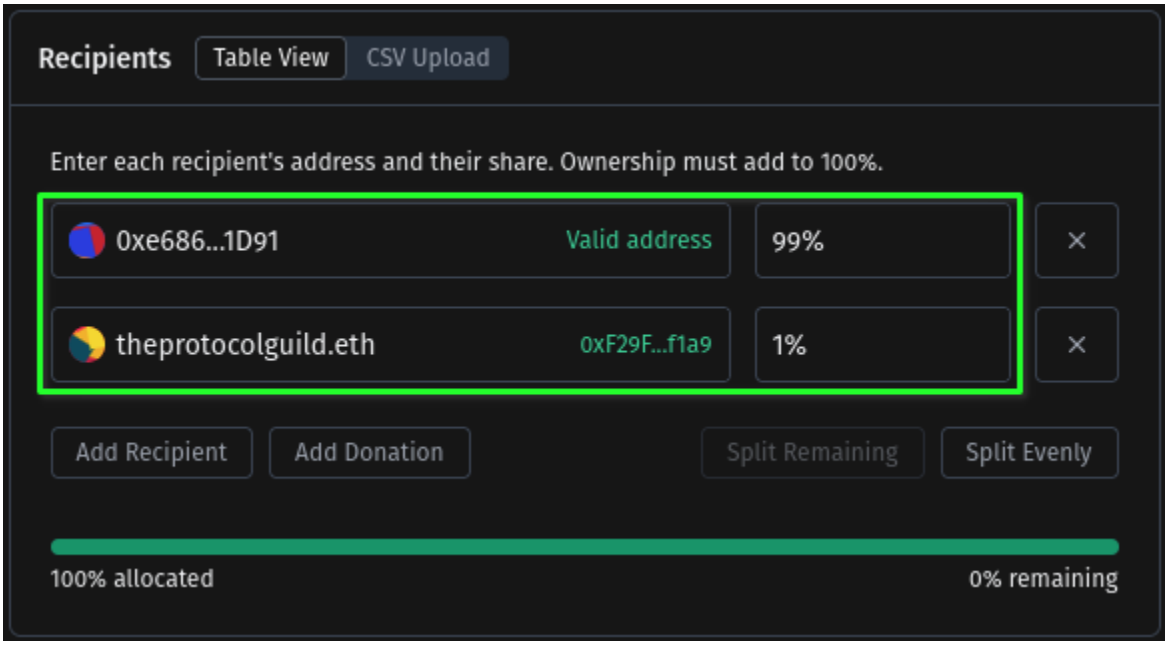
Select "Mutable Split" ("mutable" means changeable, which allows the Split controller to update the Split contract in the future).

Recipients: Add at least two addresses, 1) the address where *you* want to receive your staking rewards and 2) the Protocol Guild's address ("theprotocolguild.eth"). Determine the percentage allocation to each, e.g. 99% to yourself and 1% to the Guild.

How much should I allocate to the Guild? According to ultrasound.money, stakers who opt in to MEV will earn ~2.3 ETH per validator per year. Of that, execution rewards account for around 43%, or 1 ETH per validator per year (0.7 ETH from tips and 0.3 ETH from MEV).

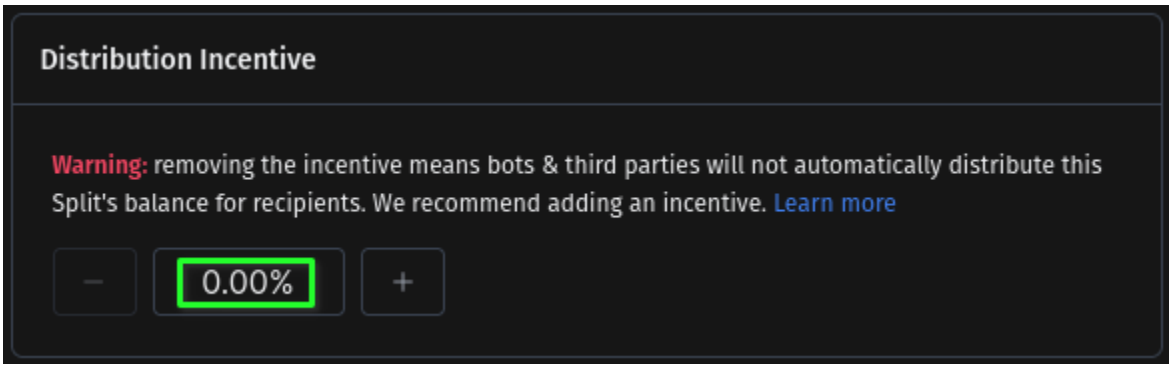
So, if you allocate 1% of your execution rewards to the Guild, that's 0.010 ETH per validator per year. 5% would equal 0.05 ETH. Of course, the actual amount will fluctuate based on demand for Ethereum blockspace.

Any amount you donate is appreciated, and signals your support for all the work that goes into building the Ethereum protocol.



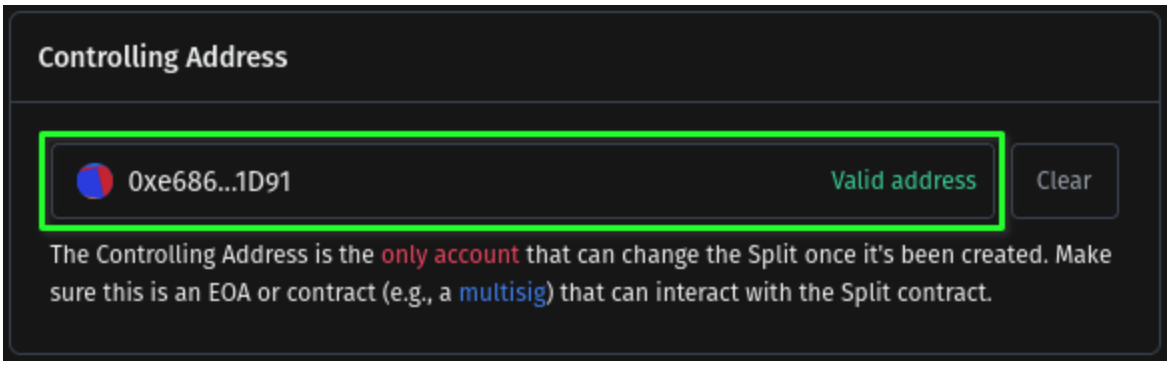
Distribution Incentive: Set to 0%.

All funds sent to a Split contract are stored in a contract account until they are distributed to the Split's recipients. Distributions do not happen automatically, as this requires interacting with the contract, which requires gas. With 0xSplits, you can set a distribution incentive, to give a percentage cut to whoever pays the gas needed to trigger the distribution. By default this is set to 1%. If you don't mind paying and prefer to be hands-off, you can leave this as-is. Otherwise, you can set it to 0%.

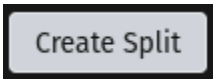


Controlling Address: Leave as-is (defaults to connected address), or choose another address that you control.

The controlling address is able to modify the Split contract after its been created, meaning it can add / remove recipients, update shares, modify the distribution incentive and even make the Split immutable (i.e. remove the controller altogether).



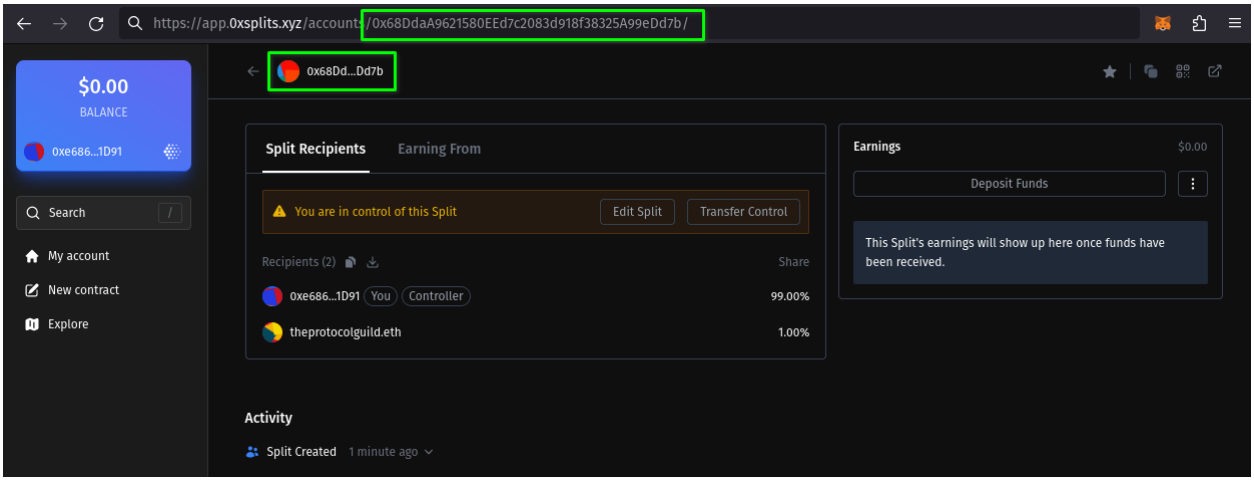
Once you're ready (check everything twice, though the controller can always update everything if needed), click the "Create Split" button. You will be prompted to confirm one transaction.



Once the transaction is successful, you will be forwarded to a new page with your Split contract details. You can bookmark the URL for easy access in the future!

The important thing to take note of is the address that's highlighted in green below. This is your new Split contract address, and all funds sent here will be shared among the Split's recipients.

If you are the controller, you will also see an option to "Edit Split" or "Transfer Control" (highlighted in orange).



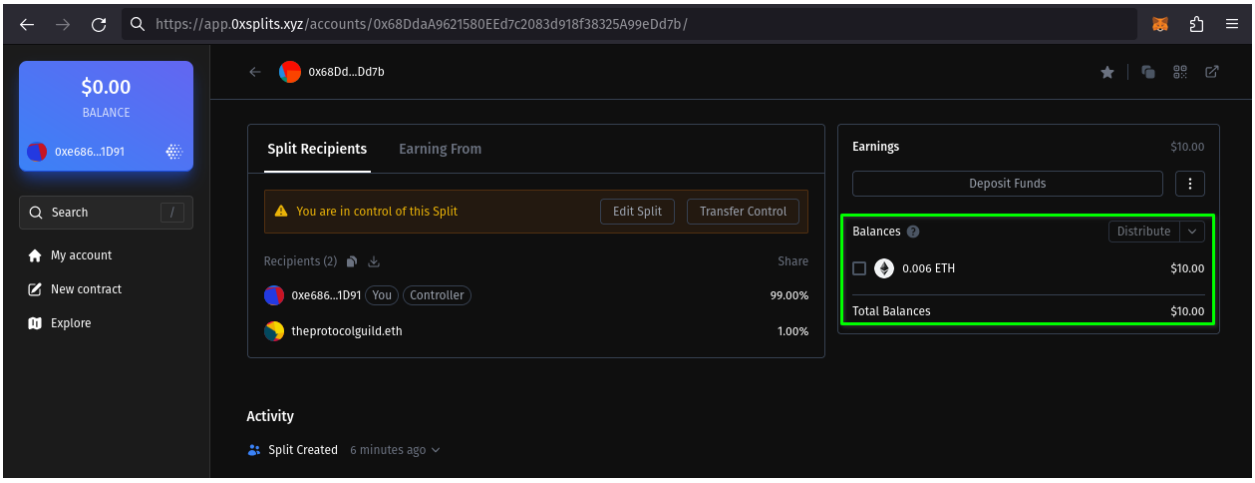
Congrats, you've set up a Split contract, and now have a new Split address! Note that this address can receive ETH and ERC-20 tokens, but cannot process NFTs (i.e. ERC-721 tokens). Any NFTs sent to this address will be lost!

With your Split address in hand, we'll now cover the process of managing funds sent to that address.

2. Test the Split Contract Distribute Function

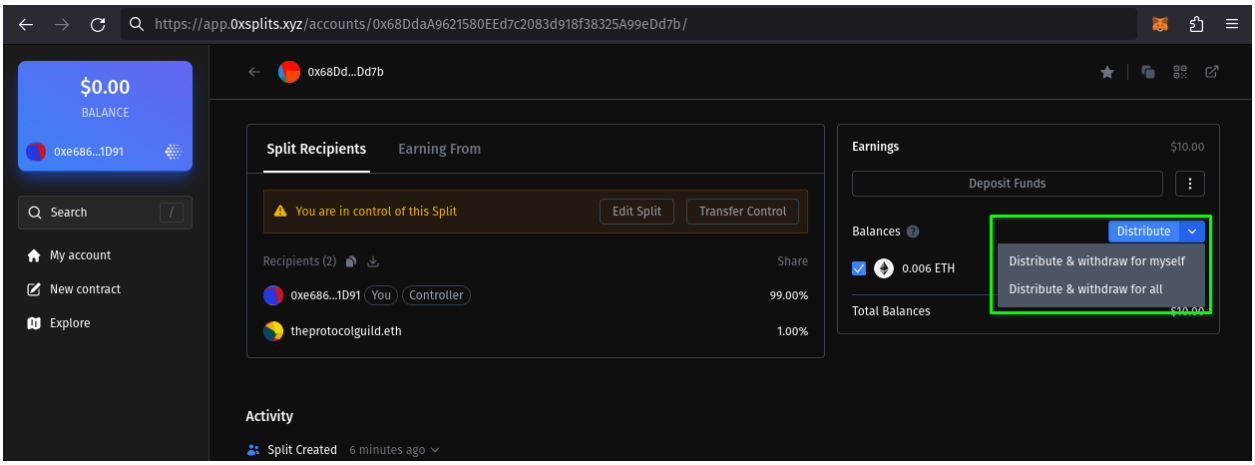
In this section we will go through the process of distributing the funds sent to your Split address. This section is optional, it is just meant for you to familiarize yourself with the process. You can jump to step 3 if you'd prefer.

For this example, $10 worth of ETH has been sent to a Split address. All funds will be visible in the "Balances" section of your Split contract interface.

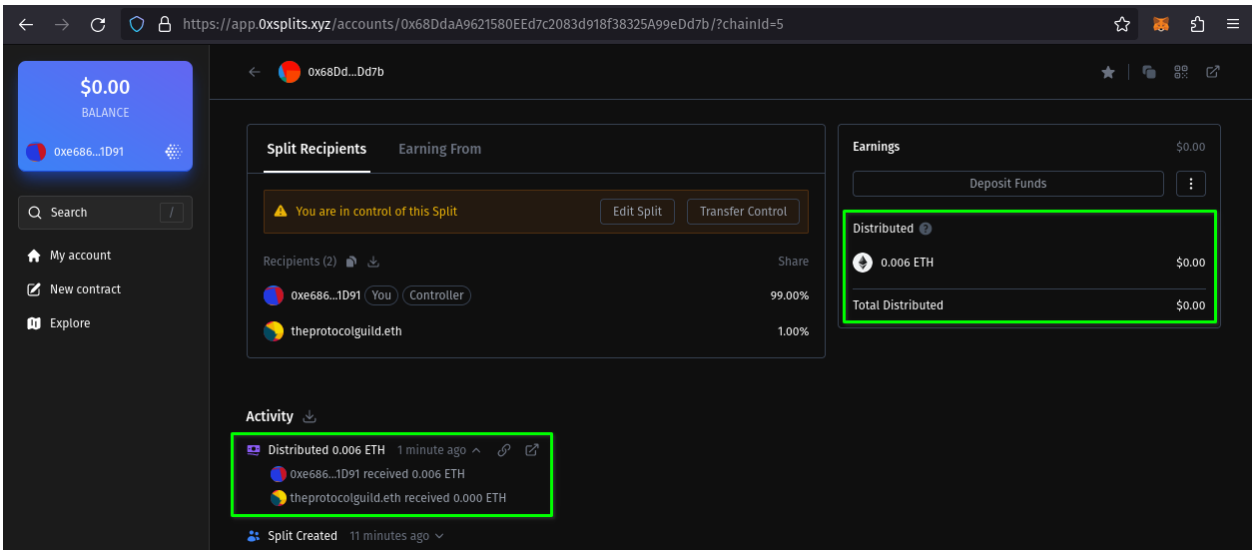


To get these funds, 0xSplits requires you to "Distribute" the funds (among the Split's recipients), and then "Withdraw" the funds (into your wallet). You can combine the two actions via the "Distribute & withdraw for myself" function in the "Distribute" submenu. Selecting this will prompt you to confirm a transaction (will cost around $1.10 with gas at 12 Gwei).

There's also an option to "Distribute & withdraw for all", which also withdraws the funds for the Protocol Guild. This uses a bit more gas than just withdrawing for yourself (around $1.30 with gas at 12 Gwei). Save yourself the gas and just withdraw for yourself!



Once that transaction has been processed, your address will receive your share of the funds (will show up under "Internal Txns" in Etherscan). The Splits contract interface will also show you the "Total Distributed", as well as the history of distributions.



Note that any Ethereum account willing to pay the gas can "Withdraw and distribute for all", not just the recipients / controllers of the Split.

If you're comfortable with this process, then you can proceed with using your Split address as your new validator fee recipient!

3. Set New Fee Recipient

In preparation for the merge, all stakers should already have set a fee recipient to receive execution rewards (block proposal tips or MEV). Replacing your current fee recipient with your new Split address is relatively simple - just repeat that same process!

This shouldn't take more than 1 minute, but if you're worried about downtime, you can always combine it with the next time you update your consensus client.

The instructions to change the fee recipient will vary depending on which consensus client you are running; Lighthouse, Lodestar, Nimbus, Prysm or Teku. Below are instructions for each consensus client, using Somer's guides and CoinCashew.

Lighthouse

Official Lighthouse documentation - "Suggested Fee Recipient"

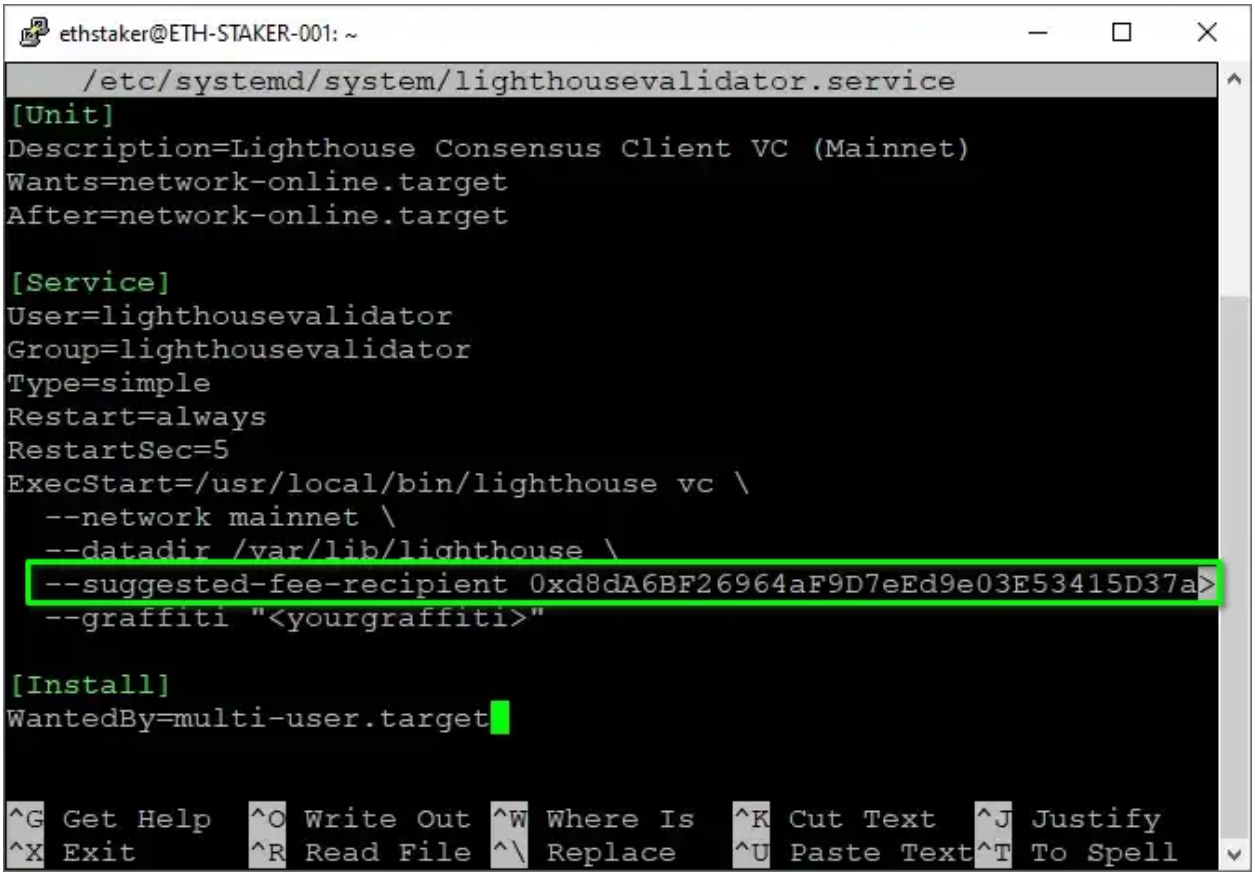
Somer's "Guide to Staking on Ethereum (Ubuntu/Lighthouse)" - "Step 12 — Configure the Validator Service"

- `$ sudo systemctl stop lighthousevalidator`
- `$ sudo systemctl status lighthousevalidator`

Verify that Lighthouse is no longer running.

- `$ sudo nano /etc/systemd/system/lighthousevalidator.service`

Find the "`--suggested-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.



- `$ sudo systemctl daemon-reload`
- `$ sudo systemctl start lighthousevalidator`
- `$ sudo journalctl -fu lighthousevalidator`

Verify that Lighthouse started correctly, without errors in the logs.

CoinCashew

- `$ sudo systemctl stop validator`
- `$ sudo systemctl status validator`

Verify that Lighthouse is no longer running.

- `$ sudo nano /etc/systemd/system/validator.service`

Find the "`--suggested-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

- `$ sudo systemctl daemon-reload`
- `$ sudo systemctl start validator`
- `$ journalctl -fu validator`

Verify that Lighthouse started correctly, without errors in the logs.

Lodestar

Official Lodestar documentation - "Configuring the fee recipient address"

CoinCashew

- `$ sudo systemctl stop beacon-chain`
- `$ sudo systemctl stop validator`
- `$ sudo systemctl status beacon-chain`
- `$ sudo systemctl status validator`

Verify that both instances of Lodestar are no longer running.

- `$ sudo nano /etc/systemd/system/beacon-chain.service`

Find the "`--suggestedFeeRecipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

- `$ sudo nano /etc/systemd/system/validator.service`

Find the "`--suggestedFeeRecipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

- `$ sudo systemctl daemon-reload`
- `$ sudo systemctl start beacon-chain`
- `$ sudo systemctl start validator`
- `$ journalctl -fu beacon-chain`
- `$ journalctl -fu validator`

Verify that both instances of Lodestar have started correctly, without errors in the logs.

Nimbus

Official Nimbus documentation - "Set up suggested fee recipient"

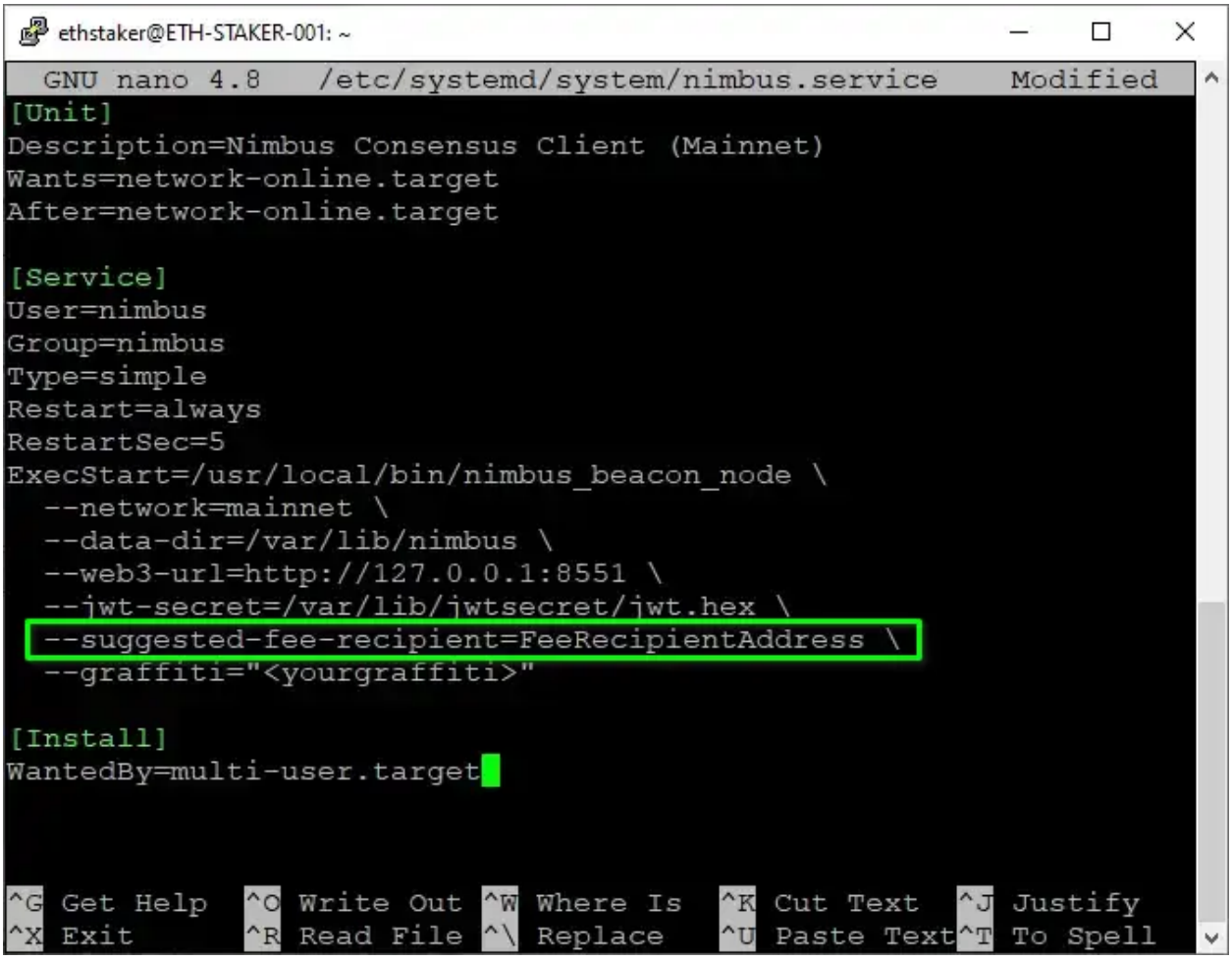
Somer's "Guide to Staking on Ethereum (Ubuntu/Nimbus)" - "Step 12 — Configure the Nimbus Service"

- `$ sudo systemctl stop nimbus`
- `$ sudo systemctl status nimbus`

Verify that Nimbus is no longer running.

- `$ sudo nano /etc/systemd/system/nimbus.service`

Find the "`--suggested-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.



- `$ sudo systemctl daemon-reload`
- `$ sudo systemctl start nimbus`
- `$ sudo journalctl -fu nimbus`

Verify that Nimbus started correctly, without errors in the logs.

CoinCashew

- `$ sudo systemctl stop beacon-chain`
- `$ sudo systemctl status beacon-chain`

Verify that Nimbus is no longer running.

- `$ sudo nano /etc/systemd/system/validator.service`

Find the "`--suggested-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

- `$ sudo systemctl daemon-reload`
- `$ sudo systemctl start beacon-chain`
- `$ journalctl -fu beacon-chain`

Verify that Nimbus started correctly, without errors in the logs.

Prysm

Official Prysm documentation - "Configure fee recipient"

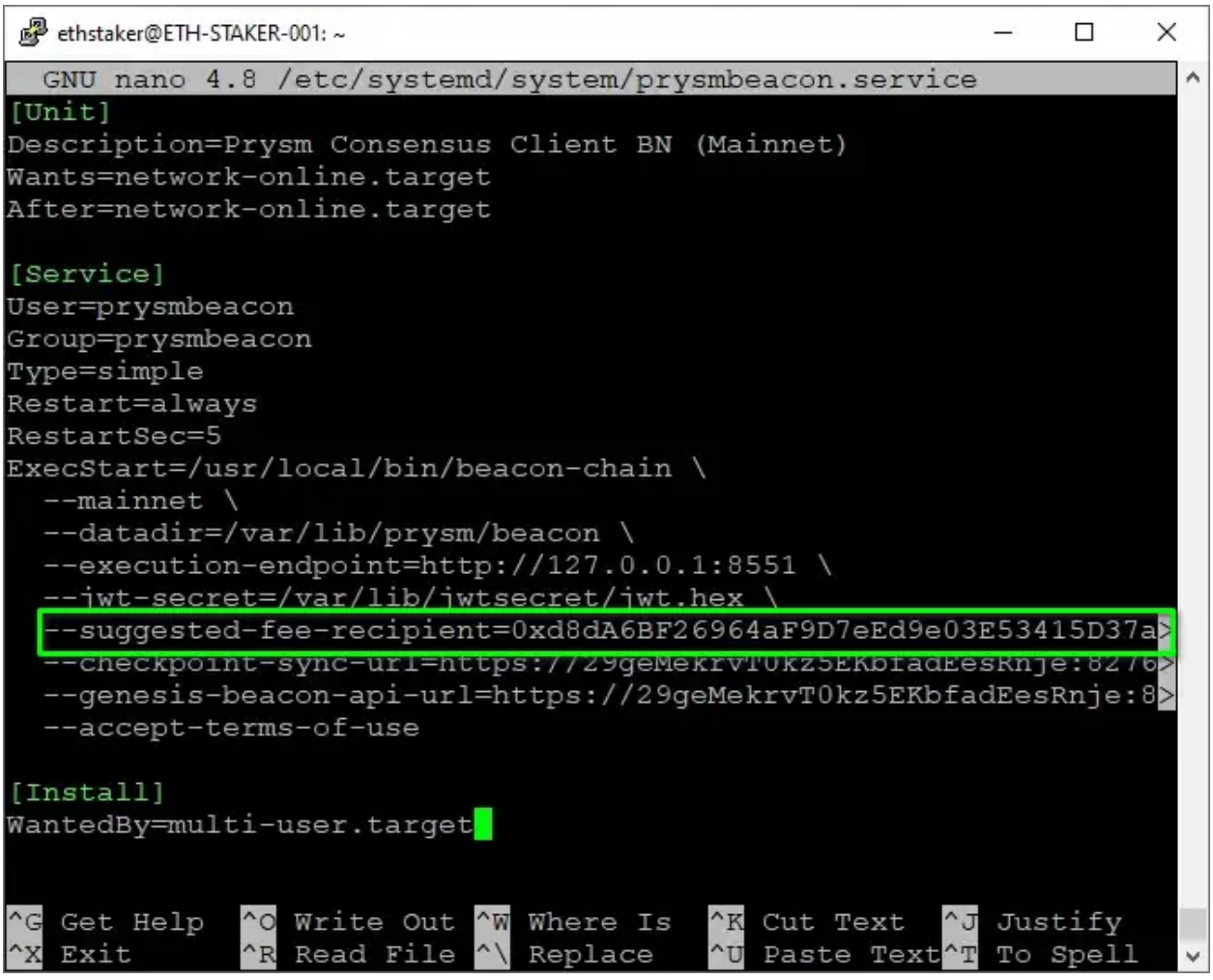
Somer's "Guide to Staking on Ethereum (Ubuntu/Prysm)" - "Step 11 — Configure the Beacon Node Service" + "Step 12 — Configure the Validator Service"

- `$ sudo systemctl stop prysmbeacon`
- `$ sudo systemctl stop prysmvalidator`
- `$ sudo systemctl status prysmbeacon`
- `$ sudo systemctl status prysmvalidator`

Verify that both instances of Prysm are no longer running.

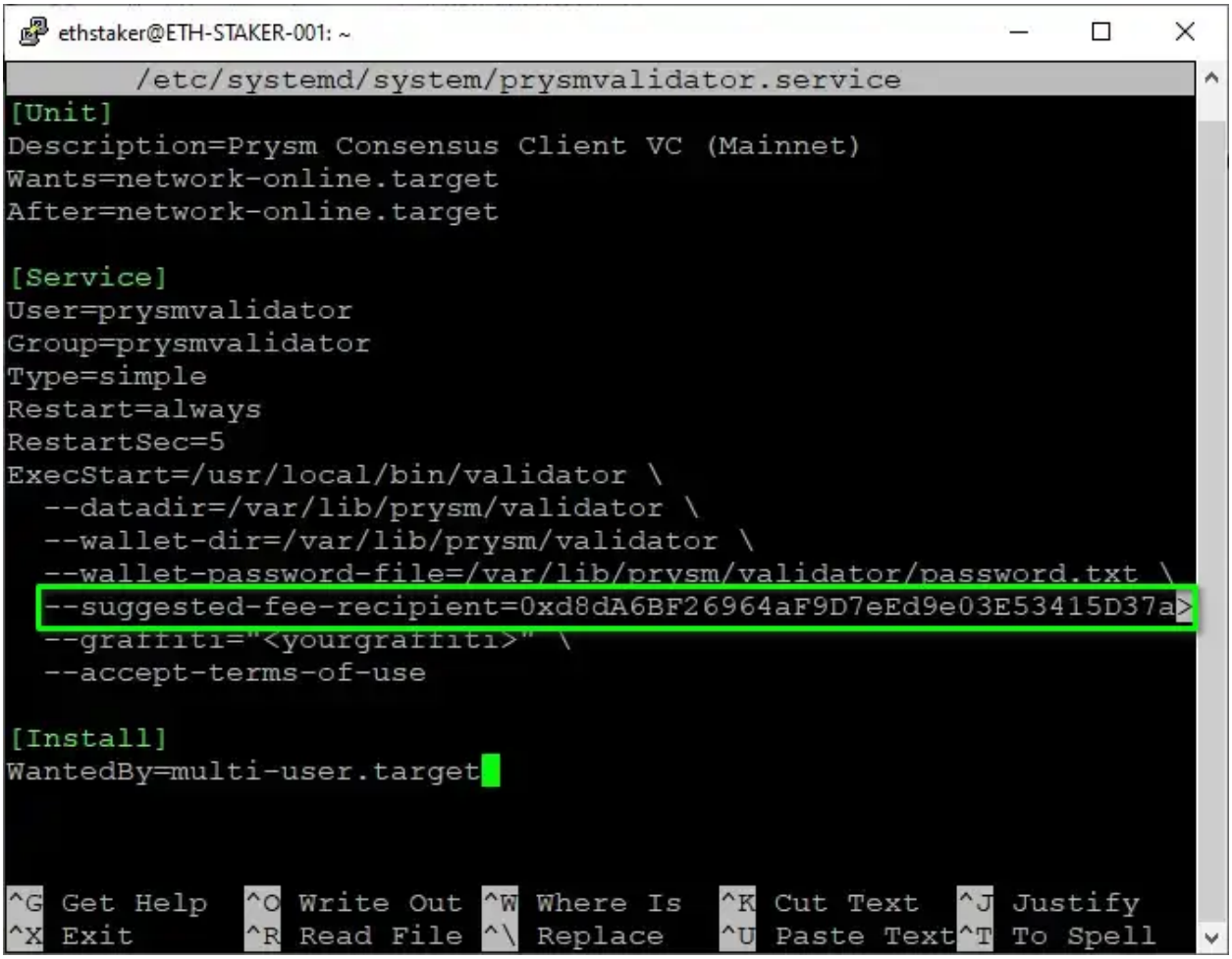
- `$ sudo nano /etc/systemd/system/prysmbeacon.service`

Find the "`--suggested-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.



- `$ sudo nano /etc/systemd/system/prysmvalidator.service`

Find the "`--suggested-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.



- $ sudo systemctl daemon-reload
- $ sudo systemctl start prysmbeacon
- $ sudo systemctl start prysmvalidator
- $ sudo journalctl -fu prysmbeacon
- $ sudo journalctl -fu prysmvalidator

Verify that both instances of Prysm have started correctly, without errors in the logs.

CoinCashew

- $ sudo systemctl stop beacon-chain
- $ sudo systemctl stop validator
- $ sudo systemctl status beacon-chain
- $ sudo systemctl status validator

Verify that both instances of Prysm are no longer running.

- $ sudo nano /etc/systemd/system/beacon-chain.service

Find the "--suggested-fee-recipient" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

- $ sudo nano /etc/systemd/system/validator.service

Find the "`--suggested-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

- `$ sudo systemctl daemon-reload`
- `$ sudo systemctl start beacon-chain`
- `$ sudo systemctl start validator`
- `$ journalctl -fu beacon-chain`
- `$ journalctl -fu validator`

Verify that both instances of Prysm have started correctly, without errors in the logs.

Teku

Official Teku documentation - "Configure the fee recipient"

Somer's "Guide to Staking on Ethereum (Ubuntu/Teku)" - "Step 11 — Configure the Teku Service"

- `$ sudo systemctl stop teku`
- `$ sudo systemctl status teku`

Verify that Teku is no longer running.

- `$ sudo nano /etc/systemd/system/teku.service`

Find the "`--validators-proposer-default-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

- `$ sudo systemctl daemon-reload`
- `$ sudo systemctl start teku`
- `$ sudo journalctl -fu teku`

Verify that Teku started correctly, without errors in the logs.

CoinCashew

- `$ sudo systemctl stop beacon-chain`
- `$ sudo systemctl stop validator`
- `$ sudo systemctl status beacon-chain`
- `$ sudo systemctl status validator`

Verify that both instances of Teku are no longer running.

If your Teku client is configured by passing in a TOML file (i.e. teku.yaml):

- `$ sudo nano /etc/teku/teku.yaml`

Find "`validators-proposer-default-fee-recipient`", and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

If your Teku client is configured by –parameters in the systemd service file:

- `$ sudo nano /etc/systemd/system/beacon-chain.service`

Find the "`--validators-proposer-default-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

Only if running Teku in validator in a separate client:

- `$ sudo nano /etc/systemd/system/validator.service`

Find the "`--validators-proposer-default-fee-recipient`" flag, and replace the existing address with your new Split contract address (don't change anything else). Double-check the address is correct. Then press + X then Y then to save and exit.

- `$ sudo systemctl daemon-reload`
- `$ sudo systemctl start beacon-chain`
- `$ sudo systemctl start validator`
- `$ journalctl -fu beacon-chain`
- `$ journalctl -fu validator`

Verify that both instances of Teku have started correctly, without errors in the logs.

And that's it! From now on, all your validator execution rewards will be sent to your Split address, which will then be shared between the addresses in your Split contract. All funds donated to the Guild will be vested to Ethereum's active core protocol distributors over time.

Run into any issues? Hit us up on Discord!

Make sure you join the Protocol Guild Discord and share your Split contract to get a special "Sponsor" role!

Know any other stakers? Tell them about the Protocol Guild! Each additional participating validator paves the path towards the long-term health and sustainability of Ethereum's core protocol development. THANK YOU for your support and belief in this movement.

Special thanks to Alex Stokes, ladislaus.eth and the EthStaker team for reviewing this guide!

2.11 11. Resources

2.11.1 Links

- Pilot Vesting contract
- Pilot Split contract
- theprotocolguild.eth ENS
- Twitter
- Discord
- Dune dashboard

Multisigs:

- Mainnet Safe multisig
- Arbitrum Safe multisig
- Base Safe multisig
- Optimism Safe multisig

- Polygon Safe multisig
- Zora Safe multisig

2.11.2 Media

Want to get up to speed quickly? Check out these three videos:

1. Linux & Ethereum: Commoning vs Commodifying
2. Safeguarding Ethereum's Soul
3. Funding Core Protocol Stewardship

All media in chronological order:

Title	Event	Date
Protocol Guild: Funding Core Protocol Stewardship	EthDenver 2024	Mar 01 2024
Protocol Guild: Funding Core Protocol Stewardship	Avail Hot Take	Feb 26 2024
Protocol Guild Pledge Unlocking the future of Ethereum	PWN DAO X Space	Feb 20 2024
Taking the Protocol Guild Pledge	Taiko X Space	Feb 15 2024
Chatting with Epoch Two Public Goods	Octant X Space	Jan 29 2024
Safeguarding Ethereum's Soul with Trent Van Epps	Blockchain Socialist	Dec 10 2023
Octant's Epoch 1 Public Goods Funding Initiative	Gitcoin X Space	Oct 11 2023
Credibly Neutral Public Goods Funding w/ Trent	Strange Water Podcast	Oct 05 2023
Why We're Donating 10% of Profits to PG	VanEck X Space	Oct 04 2023
Linux & Ethereum: Commoning vs Commodifying	Protocol Berg	Sep 15 2023
Funding Ethereum's Core Protocol Work	FtC Berlin 2023	Sep 09 2023
The RetroPGF Podcast #8: Protocol Guild	Blockchain Guy X Space	Aug 31 2023
Funding & Incentivising Ethereum's Core Protocol Dev.	EthCC 2023	Jul 18 2023
Octant's EpochZero: Meet the Projects	Giveth X Space	Jul 10 2023
Funding & Incentivising Ethereum's Core Protocol Dev.	ETHPrague 2023	Jun 09 2023
Funding & Incentivising Ethereum's Core Protocol Dev.	SpaghettETH 2023	May 25 2023
Funding + Incentivizing Core Protocol Work	EDCON 2023	May 21 2023
Protocol Guild: 1 Year In with Tim and Cheeky	Green Pill Podcast	May 12 2023
Protocol Guild: Funding Ethereum's Core Protocol Work	Zuzalu	Apr 12 2023
Public Goodies: Protocol Guild w/ Trent	ENS X Space	Apr 12 2023
Protocol Guild: 1 year old by Trent	Shelling Point	Mar 02 2023
Tech Video: 0xSplit setup for Protocol Guild	EthStaker Live Stream	Feb 06 2023
Community Call #24: Protocol Guild	EthStaker Community Call	Dec 12 2022
Lunch with Protocol Guild	DAOhouse DAOcember	Dec 05 2022
Funding Ethereum with the Protocol Guild	Devcon 6	Oct 12 2022
Funding Ethereum with the Protocol Guild	Funding the Commons	Jun 24 2022
Funding Ethereum Core Development	I Pledge Allegiance Podcast	Jun 20 2022
The Protocol Guild - The Daily Gwei #481	The Daily Gwei #481	May 13 2022
The Protocol Guild with Trent Van Epps	Green Pill Podcast #10	Apr 25 2022
Funding Ethereum Public Goods with the Protocol Guild	ETHDay (Devconnect)	Apr 18 2022
Overview of the Protocol Guild	Shelling Point	Feb 17 2022
Announcement post	Mirror	Dec 31 2021