

Growth Experiments Grant: BTC holders bridge to Ethereum in a trust-minimized way

## Basic Details

Project name:

Threshold tBTC

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Which Voting Cycle are you applying for?

Season 3, Cycle 11

## Project Details

What are you building?

tBTC is a decentralized, permissionless, and censorship-resistant Bitcoin bridge. However, Bitcoin holders cannot leverage their BTC in the Optimism ecosystem in a trust-minimized way.

With the [launch of tBTC v2](#) it's now possible to bridge Bitcoin to Ethereum in a trust-minimized way. We propose a solution to bridge tBTC to Optimism in the near-term.

To make the user experience of bridging tBTC from L1 to Optimism as seamless as possible and to avoid the proliferation of non-compatible wrapped tBTC tokens resulting in fragmented liquidity, Threshold will implement a minter contract that delegates restricted minting authority to the native Optimism bridge, along with a short-list of ecosystem bridges (e.g. Wormhole, L0, etc.).

This contract will have a minting authority for tBTC on Optimism but can be paused by any one of n

tBTC guardians ([Threshold tBTC Guardians - General - Threshold Network](#)), allowing avoidance of contagion in case of a chain- or bridge-specific incident.

Later, Threshold may implement the ability to mint tBTC directly from Bitcoin on Optimism, without Ethereum L1 as an interim step, if it is sensible to do so.

Please see a full discussion of the approach here: [https://github.com/keep-network/tbtc-v2/pull/542/files?short\\_path=1eac321#diff-1eac3218e60358ae0a0073e86b51a233f1b9294b6d0b441a534d41f92c983f7c](https://github.com/keep-network/tbtc-v2/pull/542/files?short_path=1eac321#diff-1eac3218e60358ae0a0073e86b51a233f1b9294b6d0b441a534d41f92c983f7c)

Why do you believe what you are building is going to succeed?

Threshold is the network formed by the first-ever decentralized network “merger” between [NuCypher](#) and [Keep](#). Version 1 of tBTC went live in April 2020 and hit a peak of ~\$300M TVL, but the security model of stakers providing 150% collateralization in ETH was very capital inefficient.

Combining networks, communities and stakers, we launched tBTC v2 on January 31st. In the several month period before permissionless minting, a nominated group of “Minters” (in partnership with Curve DAO), Yearn.Finance, Synthetix, Connex and Alchemix) make the decision to mint tBTC instead of stakers, with a failsafe group of “Guardians” (Catalog, BadgerDAO, Stake Capital, Entropy, and many community members) given the opportunity to cancel fraudulent or improper mints.

If this grant is approved, the solution will bridge Optimism to the largest digital asset in a trust-minimized way, enabling BTC to be used as collateral in the lending protocols, AMMs, and derivatives platforms on Optimism.

How many users does your project have currently? Please include how you arrived at this estimate:

Version 1 of tBTC went live in April 2020 and hit a peak of ~\$300M TVL. Key metrics for v2 are available here: <https://dune.com/threshold/tbtc>

How will receiving a grant enable you to further the mission of maximizing the number of users interacting with Optimism?

Please include a step-by-step flow of how you imagine this grant can lead to a greater number of user interactions with Optimism:

We propose to deploy a canonical tBTC contract on Optimism that is flexible enough to:

- Delegate restricted minting authority to a short list of ecosystem bridges
- Delegate restricted minting authority to the native Optimism bridge, in the future
- Be paused by any one of n guardians, allowing avoidance of contagion in case of a chain- or bridge-specific incident.
- Be governed by the Threshold Council until we can land on a longer-term cross-chain governance mechanism.

Rather than change our L1 implementation to be aware of L2s and sidechains, we'll start as simply as possible. Every tBTC mint will continue to require transactions on Ethereum from the user — first a deposit reveal, then a lock to bridge to Optimism.

Tell us about the users you plan to target with this grant. Include any defining characteristics that will help you identify and target them.

tBTC targets Bitcoin holders who want to do more with the asset by participating in DeFi. Defining characteristics include a strong preference for decentralized solutions over the highly centralized WBTC with its custodied asset approach by BitGo and selected merchants.

How would these users interact with Optimism? For how long?

The process of bridging from L1 to Optimism would look as follows:

1. There is a tBTC holder on L1. The holder goes to the Wormhole Portal and selects Optimism.
2. The holder submits one transaction to L1 locking their tBTC tokens in the bridge's smart contract. After the transaction is mined, they wait about 15 minutes for the Ethereum block finality.
3. The holder submits one transaction to tBTC on Optimism. After that transaction is mined, they have their tBTC on Optimism.

The process of bridging from Optimism to L1 looks as follows:

1. There is a tBTC holder on Optimism. That holder goes to the Wormhole Portal and selects Optimism.
2. The holder submits one transaction to tBTC on Optimism that is burning the token. After the transaction is mined, they wait about 15 minutes for block finality.
3. The holder submits one transaction to L1 unlocking their tBTC tokens from the bridge's smart contract. After that transaction is mined, they have their tBTC on L1.

This smart contract is integrated with step 3 of L1->L2 bridging and step 1 of L2->L1 or L2->L2 bridging. When the user redeems token on Optimism, this contract receives the Wormhole tBTC representation and mints the canonical tBTC in an equal amount. When the user sends their token from L1, this contract burns the canonical tBTC and sends Wormhole tBTC representation through the bridge in an equal amount.

Provide us with links to any of the following for the project:

- Demo: [tBTC Minting Demo Video]

Permissionlessly Bridge your Bitcoin to Ethereum DeFi with tBTC](<https://www.youtube.com/watch?v=0ELHL28efp8>)

- Website: <https://threshold.network/>
- Twitter: <https://twitter.com/TheTNetwork>, [https://twitter.com/tBTC\\_project](https://twitter.com/tBTC_project)
- Discord/Discourse/Community: [Threshold Network](#) 🏠
- Github: [GitHub - threshold-network/threshold: Threshold Network tooling.](#)
- Technical/Economic Documentation: <https://docs.threshold.network/>
- Threshold DAO Notion site: <https://www.notion.so/thresholdnetwork/Welcome-to-the-Threshold-DAO-3e51fdedbd804ff1b11f00a7c750b118>

Do you have any metrics on the project currently? (TVL, transactions, volume, unique addresses, etc. Optimism metrics preferred; please link to public sources such as Dune Analytics, etc.):

Version 1 of tBTC went live in April 2020 and hit a peak of ~\$300M TVL. Key metrics for v2 are available here: <https://dune.com/threshold/tbtc>

Who are your competitors, and are they on Optimism?

tBTC is the decentralized alternative to wBTC, renBTC, BTC.b, and multiBTC. wBTC is on Optimism, but the bridge is centralized (BitGo custodies the BTC deposited and controls the minting) and thus requires more trust assumptions. renBTC was on Optimism but the 1.0 network was shut down in December when funding from Alameda stopped.

Please link to code audits (if any):

Links to Least Authority, CertiK and Chain Security audits here: [Threshold - About](#)

Links to ConsenSys, Trail of Bits and Sergi Delgado audits of tBTC v1 here <https://keep.network/info/>

Team

Who are your founders?

Threshold is the network formed by the first-ever decentralized network “merger” between [NuCypher](#) and [Keep](#). The founders of NuCypher are [MacLane Wilkison](#) and [Mikhail Egorov](#), who later founded Curve Finance. The founder of Keep is [Matt Luongo](#).

What makes your team well-suited to carry out the project described in this proposal?

Threshold contributors have a track record of shipping multiple Top 100 projects with meaningful adoption, as referenced above. Other projects built by former or current NuCypher/Keep core team members include [Fold](#), [Taho Wallet](#), [Curve Finance](#), [Entropy](#), and [Sunscreens](#).

Is this your first Web3 project?

No.

If not, what else have you built? (Share links, Github repository, or any other useful information.):

Please reference the previous answer above.

Grant Request

What is the size of the grant request? (250k OP max)

200,000 OP

How do you justify the size of the grant?

This is an appropriate amount given the enormity of the capital in Bitcoin and holders desire to lend, borrow, stake, etc. The OP tokens will be allocated as incentives on qualified protocols.

Roadmap and Distribution Plan

Describe in discrete steps how you will successfully implement your grant plan:

Minter contracts will be deployed to Optimism. The first ecosystem bridge will be whitelisted on the contract. A liquidity pool will be deployed on Curve and, potentially, Velodrome. After a sufficient amount of liquidity builds (facilitated by OP incentives), tBTC will become an interesting collateral for lending protocols like Sonne and Euler. Further use cases may be developed across the Optimism ecosystem, such as derivatives (e.g. Lyra, Synthetix v3).

How will the OP tokens be distributed? (please include % allocated to different initiatives such as user rewards/marketing/liquidity mining. Please also include a justification as to why each of these initiatives align with the problem statement this proposal is solving. Distribution should not include the sale of any tokens by the grantee or the use of tokens for compensation, protocol expenses, etc. See the [no sale rule here 1](#)):

To encourage the rapid development of tBTC TVL, 100% of the OP tokens will be distributed as incentives for users to mint/bridge tBTC on Optimism. The OP tokens will be allocated as incentives on qualified protocols potentially including Curve and Velodrome for liquidity, Sonne Finance and Euler for lending, and Lyra and Synthetix V3 (once new collateral types are enabled) for derivatives.

Over what period of time will the tokens be distributed for each initiative?

We propose distributing the OP tokens over 2-3 months towards qualified protocol (e.g. Curve, Velodrome, Sonne, Euler, Synthetix V3, Lyra).

Please define benchmark milestones for this project.

Baseline milestones:

- tBTC minter contract deployed on Optimism by May 1, 2023

- tBTC factory pool on Curve deployed on Optimism by May 15, 2023
- Integration with at least one lending protocol (e.g., Sonne or Euler) - timing dependent on that protocol's readiness

Please provide critical milestones for this project.

Remaining 60% of OP grant allocated after the following critical milestones have been reached:

- 100 tBTC bridged by July 15, 2023
- tBTC factory pool surpasses current size of sBTC/wBTC pool (66 BTC as of 3/13/23) by July 15, 2023
- Potentially integration with at least one derivatives protocol (e.g. Lyra or Synthetix V3)

If the OP tokens are for direct distribution to users, why will incentivized users and liquidity on Optimism remain after incentives dry up?

Liquidity begets liquidity. The OP incentives period will enable tBTC to bootstrap itself on Optimism via integrations with Curve, Velodrome, Lyra, etc. With a sufficient amount of tBTC bridged to Optimism, liquid spot + derivatives markets, and arbitrage opportunities between OP tBTC<>L1 tBTC<>native BTC continued organic usage of tBTC on Optimism is likely after incentives dry up.

Please provide any additional information that will facilitate accountability (smart contracts addresses relevant to the proposal, relevant organizational wallet addresses, etc.):

[docs.threshold.network](https://docs.threshold.network)

## **Ethereum Mainnet**

### Optimism Relationship

Does your project solve a problem for the Optimism ecosystem? If so how?

Bitcoin holders cannot leverage their BTC in the Optimism ecosystem in a trust-minimized way. tBTC on Optimism will provide the decentralized, permissionless, and censorship-resistant Bitcoin bridge that many Bitcoin holders prefer.

Why will this solution be a source of growth for the Optimism ecosystem?

tBTC's long-term goal is for 10-20% of Bitcoin to bridge to Ethereum. Our version 1 proved the demand in spite of its capital requirements, tBTC v2 is the best decentralized solution and many of our users will choose to bridge via Optimism.

Is your project Optimism Native?

No

### Confirmations

I confirm that I have read the landing pages for the Builders 28 and Growth Experiments 29 Sub-Committees and that I have determined my proposal is best suited to be reviewed by the Growth Experiments Sub-Committee:

Yes

I understand that Growth Experiments grants are subject to a "no sale rule," as explained in this post, and I have read the terms of the rule:

Yes