1. Background

This is the second iteration of the Spark Multichain Strategy in preparation for launching the NewStableToken (NST) rebrand. Phoenix Labs is releasing this to guide L2s and sidechains on how best to support the Maker ecosystem in the Endgame era.

2. Overview

Phoenix Labs believes that the road to growth is by going where the users are, and that is L2s + other chains. We propose a framework for expanding to other chains compatible with the new AllocatorDAO system.

First, some guiding rules for how the Spark community can evaluate the prioritization of Spark deployments:

1. Business case.

Blockchain teams should present a strong business case for why Allocators should provide debt capacity to the chain. If there is no product demand on that chain, Allocators will not provide any capacity.

1. Scale.

We are looking for domains that can support decent returns at large scale. This is of the order of hundreds of millions USD at decent yields.

1. Strategic Value.

We are looking for domains that have strong connections with Maker, or have the potential to develop these connections within the domains' ecosystem and community.

1. Security + Safety.

The riskier the venture, the stronger the junior capital requirements will be. To maximize profit we will prioritize those chains considered relatively safe as they will be able to receive larger debt ceilings.

3. Phased Rollout

A phased rollout strategy is proposed to increase parallelization. Phases 0 and 1 are designed to be entirely permissionless with domain teams encouraged to seed liquidity to demonstrate natural user demand.

Phase 0: Token Bridging

Any new chain should use its canonical standard token bridge to bridge recommended tokens as soon as possible (ideally at launch).

Before NST Launch:

Phoenix Labs recommends bridging DAI and optionally sDAI across the canonical token bridge. Using the L1 DAI DSR yield is entirely up to the domain team.

After NST Launch:

sNST is the interest-bearing version of NST which receives the DSR. Phoenix Labs recommends all protocols preferably use this token where possible.

Phoenix Labs will work with domain teams to provide a DSR Oracle as soon as possible to facilitate easy conversion in UIs and StableSwap pools for legacy token support.

Phase 1: Permissionless Deploy

Phase 1 is to deploy a fresh instance of SparkLend on the remote chain in coordination with the developer team of the chain. Admin access will be given to the Spark Executive Proxy on Ethereum to minimize user risk. This requires deploying a governance relay which is outlined below.

Before NST Launch:

A DAI market will be added. The DAI market will use the DSR Oracle to update the rate automatically.

After NST Launch:

Two markets will be added - sNST (borrow) and wsNST (collateral).

At least one other asset (usually ETH or staked ETH) must be added. Each market needs a price oracle feed that conforms to the Chainlink Feed Interface (it doesn't necessarily have to be Chainlink as the provider).

It is highly encouraged for the chain creators to seed liquidity via a temporary deposit, yield farming, etc. This simulates the effects from the user's perspective once the Allocator system is in place.

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Technical Requirements

1. Add support for relaying messages across your chain's canonical bridge here:XChainForwarders.sol
2. Add a XXXDomain.sol

into this directory where XXX is the name of your chain. This will allow us to do e2e testing across the canonical bridge. See OptimismDomain.sol as an example for Optimism.

1. Add an executor for your chainhere. See OptimismBridgeExecutor.sol as an example for Optimism.

When these are ready, Phoenix Labs will deploy the following:

- L2 Executor
- SparkLend Instance
- Activation (add initial reserves configuration) - Occurs in the next available spell window

Suggested Process for Deploying Spark in a new Domain

1. Interested domain should post in the forum, under the Spark SubDAO category. This post should contain the following information:

Background Information

- Who is the interested party for this new domain application?
- Provide a brief high-level overview of the chain
- Explain the business case of having Spark deployed in the new domain.

Technical Information

- Does your team can work on the cross-chain support for: L2 Executor, Crosschain Forwarder and Message Relay Testing Helpers.
- How long will this take?
- List other technical requirements

Collaterals Information

- What would be the initial proposed collaterals besides DAI. For each collateral please provide:
- List any possible oracle data sources for the proposed collateral.
- What is the market cap for the asset?
- Where does exchange for the asset occur? Provide exchange data on market liquidity, volume and order book depth.
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Liquidity information

- How are you planning to seed liquidity?
- Phoenix Labs will perform a domain assessment and provide recommendations to the DAO regarding the new domain and the collaterals to include.
- Initially, Spark will only onboard tokens that have been approved by Maker in the past. BlockAnalitica will perform a collateral assessment to provide suggested risk parameters for the collaterals in the new domain.
- Assessments of the domain and collateral will be published in the forum. These assessments will assist MKR holders in their decision to deploy Spark on a new domain.

Phase 2: SparkLend Conduit* Deploy

*Please note the SparkLend Conduit will be deployed once the Maker Allocation System is online in H1 2024

Phase 2 involves activating the cross-chain Conduit module to allow AllocatorDAOs to deposit and withdraw from the previously deployed SparkLend instance.

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Technical Requirements

The SparkLend Conduit needs to include support for the Domain's canonical messaging bridge. It will include accounting logic for the AllocatorDAOs .

When ready, the bridge will be deployed with admin access given to the Spark Proxy on the Ethereum side and the L2 Executor on the remote chain side.

Notes about Allocation

It is important to note that although the Spark SubDAO can provide the infrastructure to allow cross-chain deposits, this does not mean the domain will be allocated debt ceiling capacity. AllocatorDAOs are built to be competitive, so the yield produced from the L2 SparkLend instance needs to exceed what they will get elsewhere. Allocation is a zero-sum game.

4. Rebranding Launch Strategy

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NST Upgrade

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The above diagram shows how the transition between DAI and NST will occur for Spark. Previously, protocols have preferred using regular DAI due to the 0-yield DSR, but it makes sense to have all liquidity oriented around the Savings version of the token moving forward. Due to the need to redeploy from the rebrand, Phoenix Labs feels it is a perfect time to fix this problem.

For SparkLend, only sNST will be listed, and we will actively discourage other protocols from using the non-yielding NST. Of course, this may not always be possible due to compatibility, so each chain should support a StableSwap AMM to convert between all 4 assets (DAI, sDAI, NST and sNST). We will see if 3rd party LPs are sufficient to maintain this pool, but we may decide to add a Conduit if there is too much slippage and usage is popular. On mainnet this is not a problem because all 4 assets are fully fungible.

SparkLend will need to list 2 versions of the sNST market - one for borrow and one for collateral to provide a flat rate on the borrow market. Otherwise liquidation is problematic at 100% utilization which is normally deterred by high interest rates.

A nice property of using sNST instead of NST for debt is that the interest rate can be set to some fixed value and doesn't need to adjust along with the DSR changes on mainnet. This is because user debt is denominated in a DSR tokenization, so

a borrow rate of 0% on sNST means borrow rate = DSR in USD (NST). This will of course be redenominated in USD terms for users in the UI.

UIs such as Spark should treat all 4 tokenizations of NST as fungible and display this to the users in NST (USD) denomination as people think in USD terms. You can see examples of how the user will interact with the UI for the operations above in Spark (supply, withdraw, borrow, repay).

One issue that needs to be addressed when denominating everything in the savings version is an accurate oracle price for both off and on-chain conversion. The off-chain is required for UIs, but can be easily read from mainnet. The on-chain is used for algorithms like StableSwap to amplify liquidity into the proper price, as well as having a price on the same chain as you are using is nice. Because of this common need, Spark will provide a price feed for sNST sent through the standard Spark Conduit which also accounts for AllocatorDAO deposits into SparkLend on that chain. The price feed will be pushed through the canonical bridge for maximum security and can be accurate up to the second by combining the chi

, rho

and dsr

values from the pot

. It will only deviate slightly when the dsr

is changed.

*Please note the SparkLend Conduit will be deployed once the Maker Allocation System is online in H1 2024